CHAPTER 39

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MULTIPURPOSE ELECTRICAL AND ELECTRONIC PARTS - DESCRIPTION AND OPERATION

1. DESCRIPTION

A. The multipurpose electrical and electronic parts are the trim switch panel, auxiliary relay panel, cabin climate and light panel, test switch panel, pilot's switch panel, squat switch relay panel, and quadrant.

B. The trim switch panel is installed in the pedestal. The trim switch panel houses the Steer Lock Switch, Pitch Trim Selector Switch, Secondary Pitch Trim Switch, Yaw Trim Switch, and associated electrical components and wiring. The panel incorporates electroluminescent lighting.

C. The auxiliary relay panel is installed beneath the RH seat floorboard between frames 13A and 13B and contains relays and a terminal board.

D. The cabin climate and light panel is installed below the copilot's instrument panel and houses cabin climate controls, the battery temperature indicator, several light switches, Vertical Gyro Switches and annunciator, and associated electrical components and wiring. The panel incorporates electroluminescent lighting.

E. The test switch panel incorporates various electrical system switches and is installed below the center instrument panel. The panel incorporates electroluminescent lighting.

F. The pilot's switch panel is installed below the pilot's instrument panel and incorporates anti-ice and avionics switches, fuel computer switches, and power and ignition switches. The panel incorporates electroluminescent lighting.

G. The squat switch relay panel is installed below the RH floorboard between frames 13B and 13C. The following systems are affected:

(1) Cabin pressurization and temperature control. (Refer to Chapter 21.)
(2) Autopilot system. (Refer to Chapter 22.)
(3) DC electrical power distribution. (Refer to Chapter 24.)
(4) Flight control systems. (Refer to Chapter 27.)
(5) Windshield anti-ice heat. (Refer to Chapter 30.)
(6) Gear extension and retraction system and nose wheel steering system. (Refer to Chapter 32.)
(7) Aural warning system. (Refer to applicable chapters.)

H. The forward pedestal and quadrant assembly houses a number of switches associated with the throttle, spoileron, and flap systems which are actuated by the changing throttle lever position, Engine Synchronizer Switches, and parking brake, emergency brake, and emergency gear extend controls, and on Aircraft modified per AAK 83-2, "Installation of FC-530 Autopilot," the Trim Overspeed/Trim Monitor Switch, and the Static Port Selector Switch. Refer to applicable chapter for removal of equipment from the forward pedestal and quadrant.

TRIM SWITCH PANEL - MAINTENANCE PRACTICES

1. REMOVAL/INSTALLATION

A. Remove Trim Switch Panel (See figure 201.)

(1) Remove electrical power from aircraft.

(2) Release panel assembly from pedestal assembly by loosening quick-attach fasteners.

(3) Slide trim switch panel assembly up and disconnect electrical connectors.

(4) Remove trim switch panel assembly.

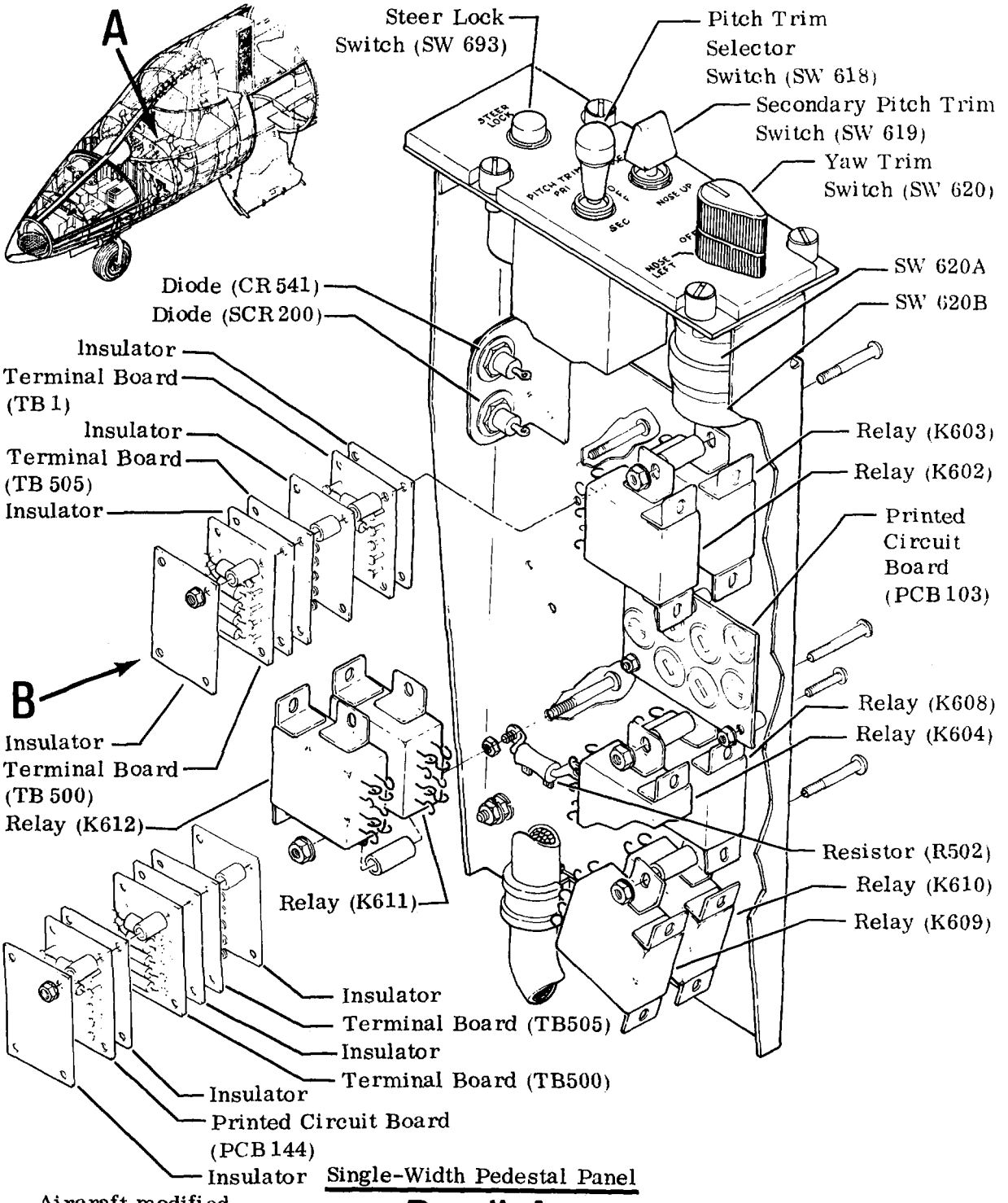
B. Install Trim Switch Panel (See figure 201.)

(1) Connect electrical connectors to switch panel assembly.

(2) Slide trim switch panel assembly down into pedestal assembly structure and secure with quick-attach fasteners.

(3) Restore electrical power to aircraft.

(4) Check all functions of trim switch panel assembly to ensure that all components of trim switch panel assembly operate properly. (Refer to Chapter 27.)



Single-Width Pedestal Panel

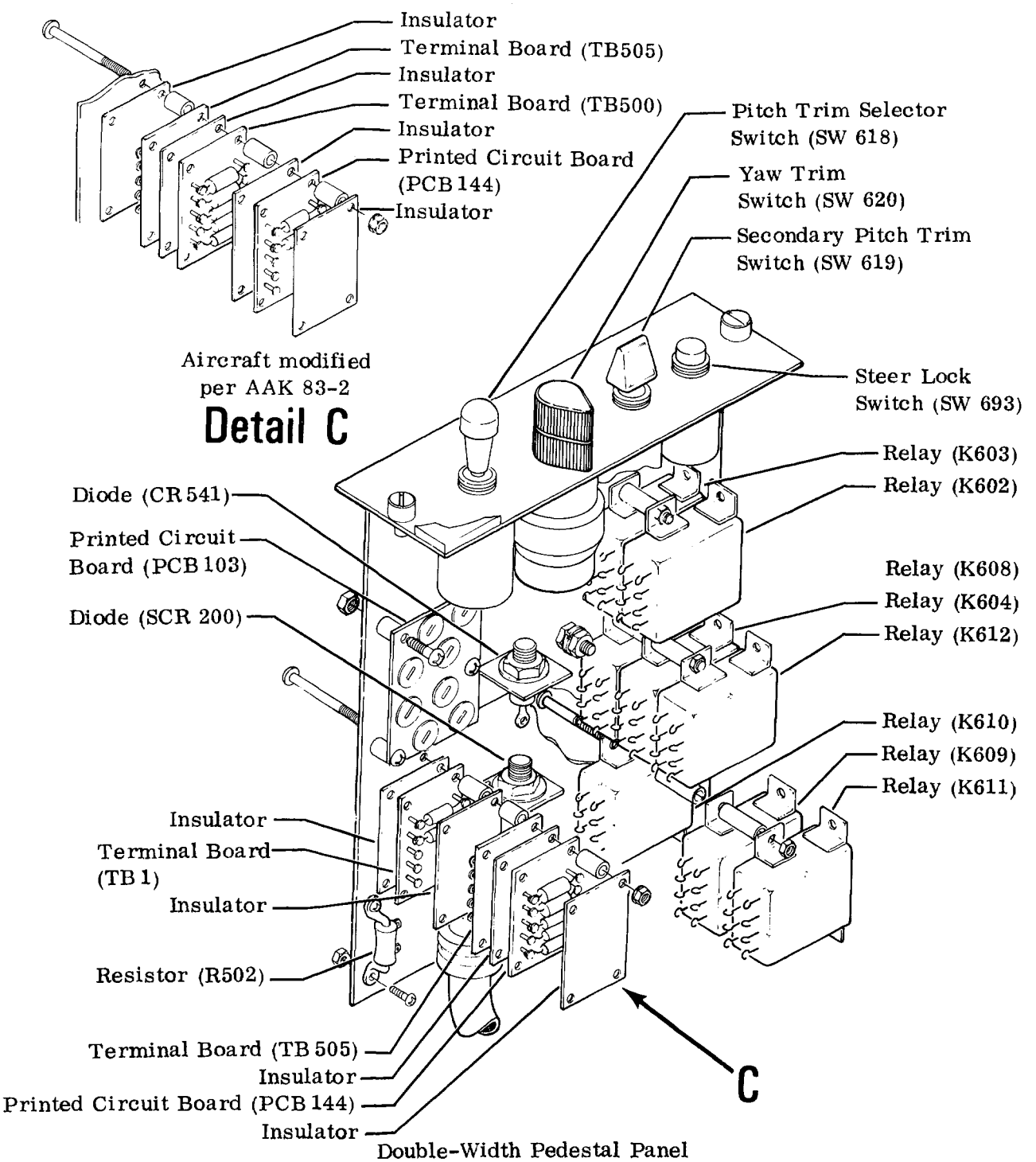
Detail A

Aircraft modified per AAK 83-2

Detail B

Trim Switch Panel Assembly
Figure 201 (Sheet 1 of 2)

16-8C



Trim Switch Panel Assembly
Figure 201 (Sheet 2 of 2)

16-8C-1

EFFECTIVITY: **35-506 and Subsequent, 36-054 and Subsequent and prior aircraft modified per AAK 83-2, "Installation of FC-530 Autopilot"**

AUXILIARY RELAY PANEL - MAINTENANCE PRACTICES

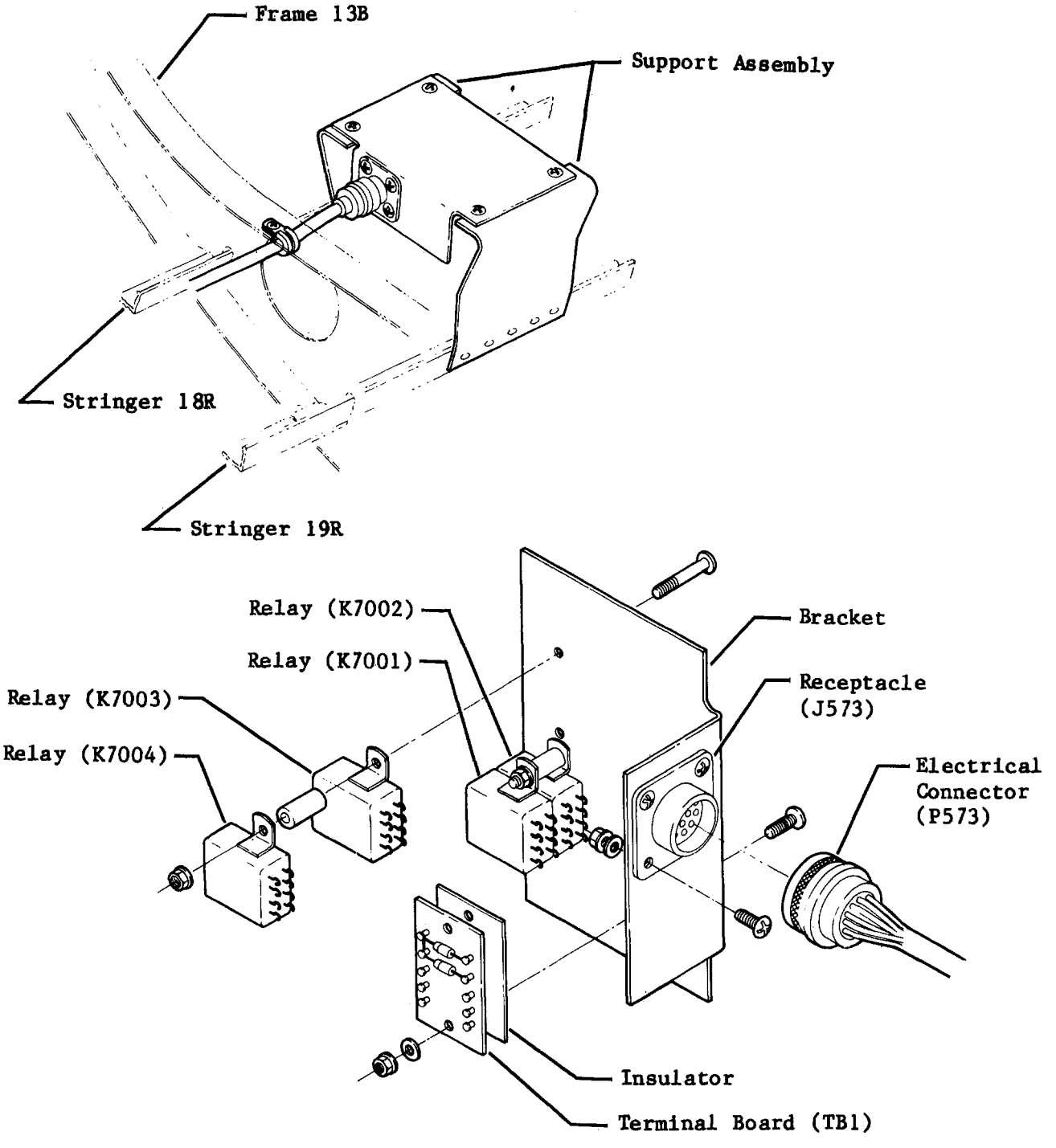
1. REMOVAL/INSTALLATION

A. Remove Auxiliary Relay Panel (See figure 201.)

(1) Remove equipment and upholstery as required to gain access to floorboard (No. 19. Refer to Chapter 53.) between frames 13A and 13B on RH side of aircraft.
(2) Remove attaching parts and floorboard.
(3) Remove electrical power from aircraft.
(4) Disconnect electrical connect from panel.
(5) Remove attaching parts and panel from aircraft.

B. Install Auxiliary Relay Panel (See figure 201.)

(1) Position panel on support assemblies and secure with attaching parts.
(2) Connect electrical connector to panel.
(3) Restore electrical power to aircraft.
(4) Position floorboard on structure and secure with attaching parts.
(5) Install upholstery and equipment previously removed.



Auxiliary Relay Panel Installation
Figure 201

10-108B

CABIN CLIMATE AND LIGHT PANEL - MAINTENANCE PRACTICES

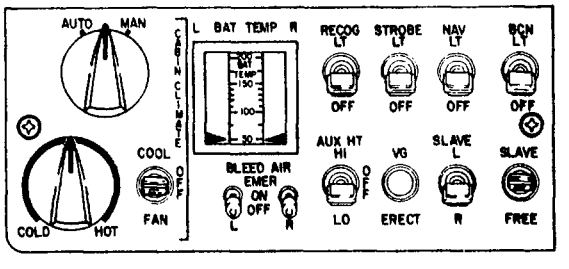
1. REMOVAL/INSTALLATION

A. Remove Cabin Climate and Light Panel (See figure 201.)

(1) Remove electrical power from aircraft.
(2) Disconnect electrical connector from panel.
(3) Remove attaching parts and panel from aircraft.

B. Install Cabin Climate and Light Panel (See figure 201.)

(1) Position panel on structure and secure with attaching parts.
(2) Connect electrical connector to panel.
(3) Restore electrical power to aircraft.



TYPICAL INSTALLATION

Cabin Climate and Light Panel
Figure 201

TEST SWITCH PANEL - MAINTENANCE PRACTICES

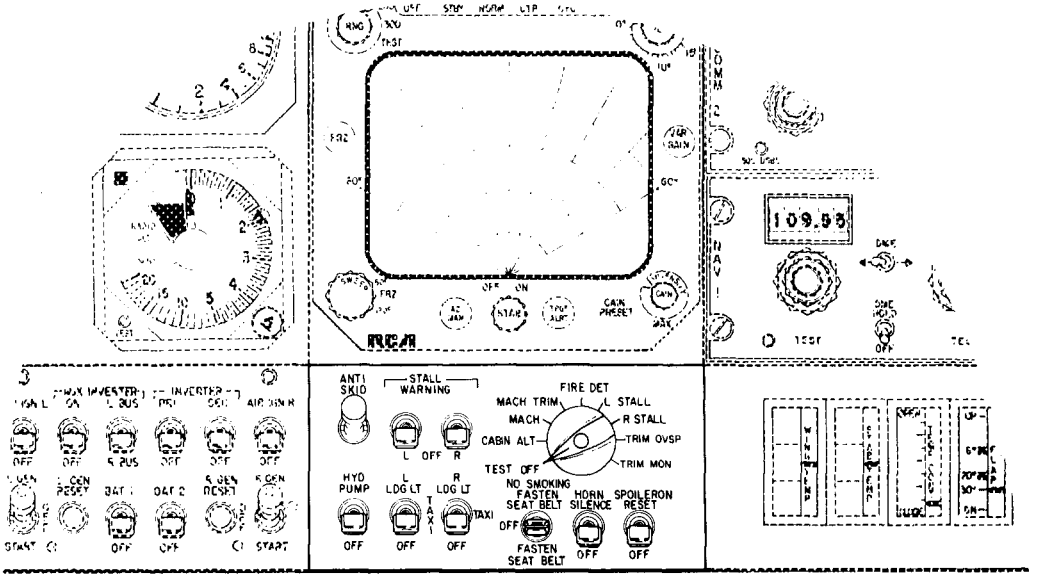
1. REMOVAL/INSTALLATION

A. Remove Test Switch Panel

(1) Remove electrical power from aircraft.
(2) Disconnect electrical connector from panel.
(3) Remove attaching parts and panel from aircraft.

B. Install Test Switch Panel

(1) Position panel on structure and secure with attaching parts.
(2) Connect electrical connectors to panel.
(3) Restore electrical power to aircraft.



Test Switch Panel
Figure 201

PILOT'S SWITCH PANEL - MAINTENANCE PRACTICES

1. REMOVAL/INSTALLATION

A. Remove Pilot's Switch Panel

(1) Remove electrical power from aircraft.

(2) Remove attaching parts and switch guard from lower side of switch panel.

(3) Disconnect and tag electrical connectors from panel.

(4) Remove attaching parts and switch panel assembly from aircraft.

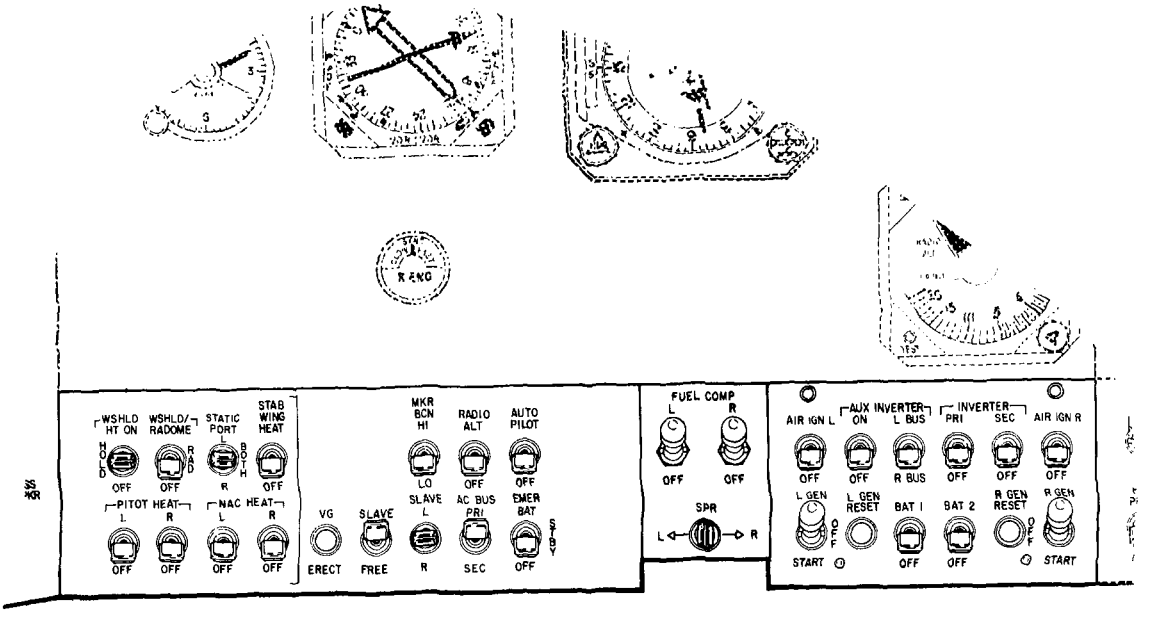
B. Install Pilot's Switch Panel

(1) Install switch panel and secure with attaching parts.

(2) Connect electrical connectors to panel.

(3) Install switch guard plates and secure with attaching parts.

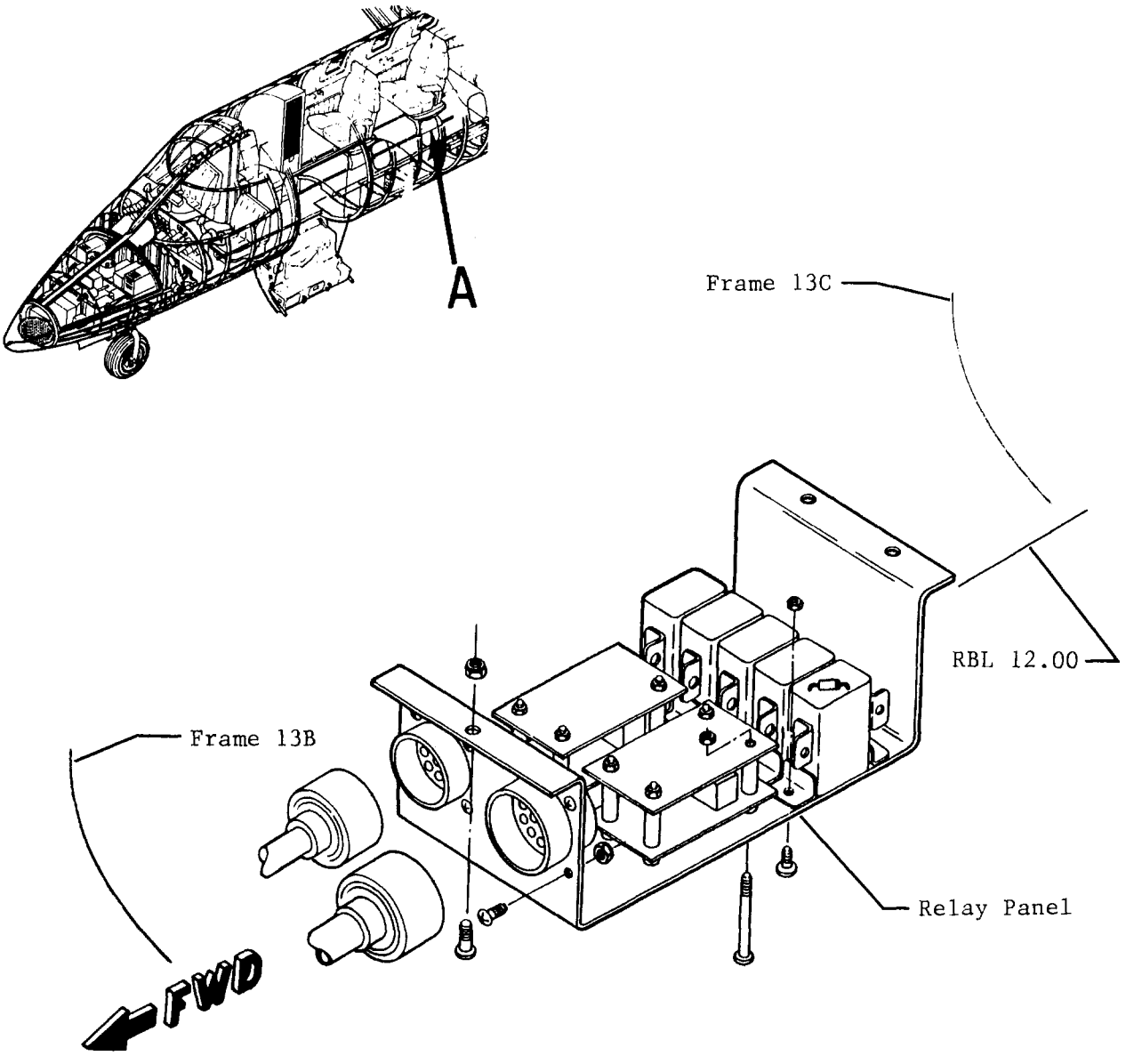
(4) Restore electrical power to aircraft.



Pilot's Switch Panel
Figure 201

SQUAT SWITCH RELAY PANEL - MAINTENANCE PRACTICES

1. **REMOVAL/INSTALLATION**
   - **A. Remove Squat Switch Relay Panel** (See figure 201.)
     - (1) Remove equipment, upholstery, and floorboard as required to gain access to squat switch relay panel.
     - (2) Remove electrical power from aircraft.
     - (3) Disconnect electrical connectors from relay panel.
     - (4) Remove and retain attaching parts securing relay panel and remove relay panel.
   - **B. Install Squat Switch Relay Panel** (See figure 201.)
     - (1) Install and secure squat switch relay panel with existing attaching parts.
     - (2) Connect electrical connectors to relay panel.
     - (3) Install floorboard and any other structure removed to gain access to relay panel.
     - (4) Install upholstery and equipment previously removed.
     - (5) Restore electrical power to aircraft.



- Refer to Wiring Manual for application of specific relays, diodes, and printed circuit boards.

- Refer to the Illustrated Parts Catalog for parts breakdown and part number.

TYPICAL INSTALLATION

Detail A

Squat Switch Relay Panel Installation
Figure 201

A9-109A-3

FORWARD PEDESTAL AND QUADRANT - MAINTENANCE PRACTICES

1. REMOVAL/INSTALLATION

A. Refer to Chapter 76 for quadrant maintenance practices.