

## ELECTRICAL DISTRIBUTION SYSTEM - MAINTENANCE PRACTICES

### 1. Description and Operation

- A. The electrical distribution system consists of a main power panel bus bar, two systems bus bars (No. 1 and No. 2) and two avionics bus bars (No. 1 and No. 2). The system bus bars are each divided into three segments with a tie bus connecting the segments.
- B. The system bus bars are connected to the power panel bus by three wires in parallel. Each wire has a current limiter at the power panel bus, and a pull-type circuit breaker at the system bus. The current limiters protect wires between the power panel bus and the system bus. Should one voltage limiter open, the system bus can still function on the remaining two wires. Should two limiters open, the airplane systems on that bus bar must be operated at a limited capacity.
- C. The avionics bus bars are each connected to a power panel bus by one wire with a current limiter at power panel bus, and a switch/circuit breaker at the avionics bus bar. A switch/circuit breaker between the two avionics bus bars enables the bus bars to operate on one limiter should the other limiter open.
- D. The airplane systems are controlled by individual switches for each system. Individual circuit breakers on the bus bars protect the individual systems.
- E. Maintenance of the distribution system consists of removal/installation of the circuit breakers, bus bars and switches.
- F. Airplane 208B2197 and Airplanes 208B5000 and On have a LED panel installed on the face of the circuit breaker panel. (Refer to Figure 201). Airplanes 20800127 and On and Airplanes 20800001 thru 20800126 Incorporating SK208-32 and Airplanes 208B0044 thru 208B2196 and Airplanes 208B2198 thru 208B4999 and Airplanes 208B0001 thru 208B0043 Incorporating SK208-32 have covers on the face of the circuit breaker panel. (Refer to Figure 201).

### 2. Circuit Breaker Removal/Installation

- A. Remove Circuit Breaker (Refer to Figure 201).
  - (1) Disconnect battery terminals. Display a maintenance warning tag stating:  
**WARNING: Do not connect battery terminals; maintenance in progress.**
  - (2) Remove screws securing circuit breaker panel to left side of airplane.
  - (3) Identify, tag and disconnect electrical lead from circuit breaker.
  - (4) Remove screw and washer securing bus bar to circuit breaker.
  - (5) Remove hex nut securing circuit breaker to panel and retain for reinstallation.
  - (6) Remove and retain lock washer and knurl nut from circuit breaker.
  - (7) Remove circuit breaker from panel.
- B. Install Circuit Breaker (Refer to Figure 201).
  - (1) Assemble knurl nut and lock washer on circuit breaker.
  - (2) Push circuit breaker thru panel and secure using hex nut.
  - (3) Secure bus bar to circuit breaker using screw and washer.
  - (4) Identify and connect electrical lead to circuit breaker using screw and washer.
  - (5) Position circuit breaker panel to side of airplane and secure using screws.
  - (6) Reconnect battery and remove maintenance warning tag from battery connector.

### 3. Bus Bar Removal/Installation

- A. Remove Bus Bar (Refer to Figure 201).
  - (1) Disconnect battery terminals. Display a maintenance warning tag stating:  
**WARNING: Do not connect battery terminals; maintenance in progress.**
  - (2) Remove screws securing circuit breaker panel to left side of airplane.
  - (3) Remove screws securing bus bar to circuit breakers and remove bus bar.
- B. Install Bus Bar (Refer to Figure 201).
  - (1) Position bus bar on circuit breakers.
  - (2) Install screws securing bus bar to circuit breakers.
  - (3) Position circuit breaker panel to side of airplane and secure using screws.

- (4) Reconnect battery and remove maintenance warning tag from battery connector.

#### 4. Switch Removal/Installation

##### A. Remove Switch (Refer to Figure 201).

- (1) Disconnect battery terminals. Display a maintenance warning tag stating:

**WARNING: Do not connect battery terminals; maintenance in progress.**

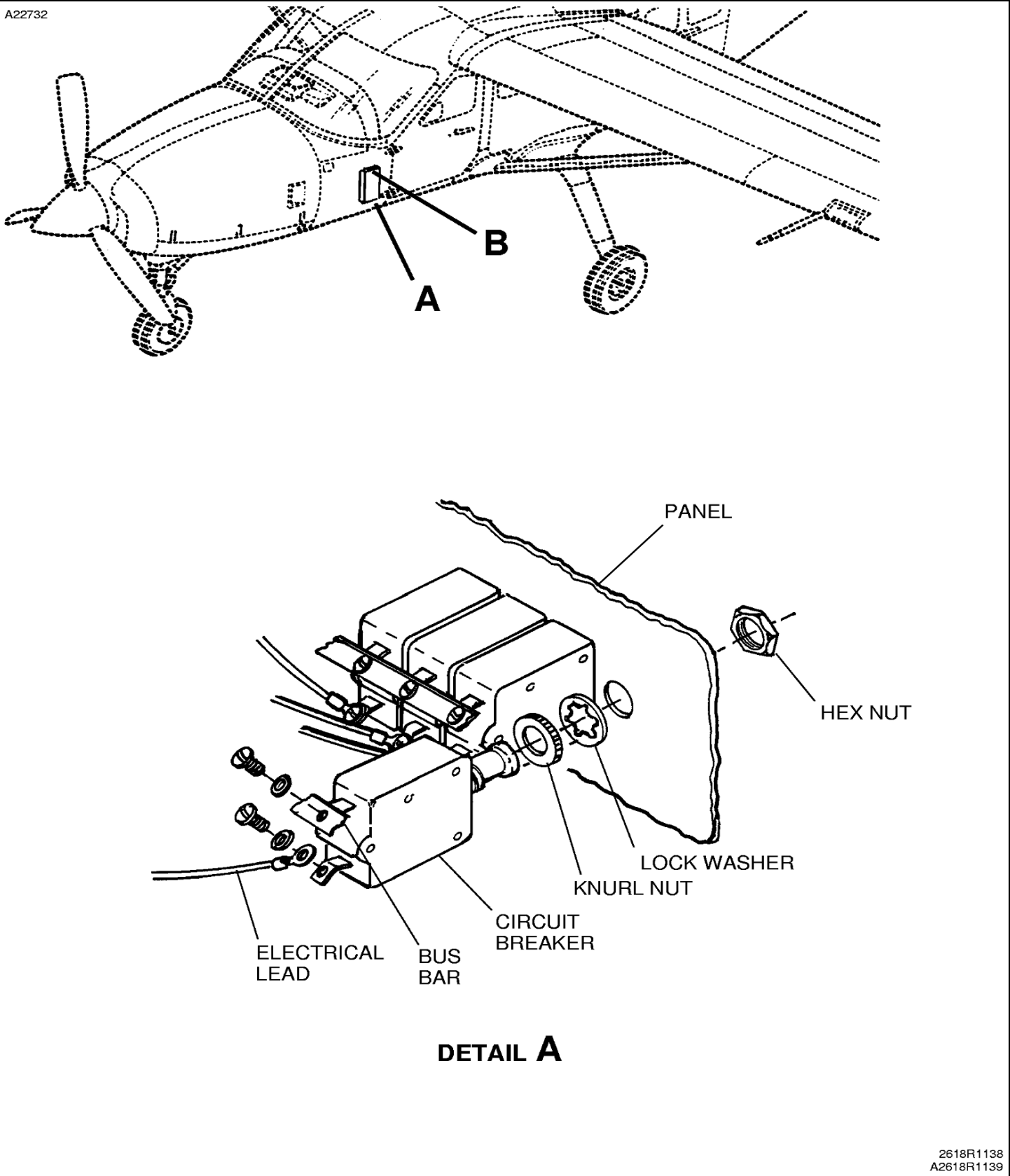
- (2) Remove screws securing circuit breaker panel to left side of airplane.
- (3) Remove screws securing switch panel to top of circuit breaker panel.
- (4) Identify, tag and disconnect electrical lead from switch.
- (5) Remove hex nut and guard, if installed, from switch. Remove switch from airplane.

##### B. Install Switch (Refer to Figure 201).

- (1) Position switch and guard, if required, through switch panel and secure using hex nut.
- (2) Connect electrical leads to switch. Ensure wires are connected properly.
- (3) Position switch panel on circuit breaker panel and install screws.
- (4) Position circuit breaker panel to side of airplane and secure using screws.
- (5) Reconnect battery and remove maintenance warning tag from battery connector.

Figure 201 : Sheet 1 : Electrical System Distribution Installation

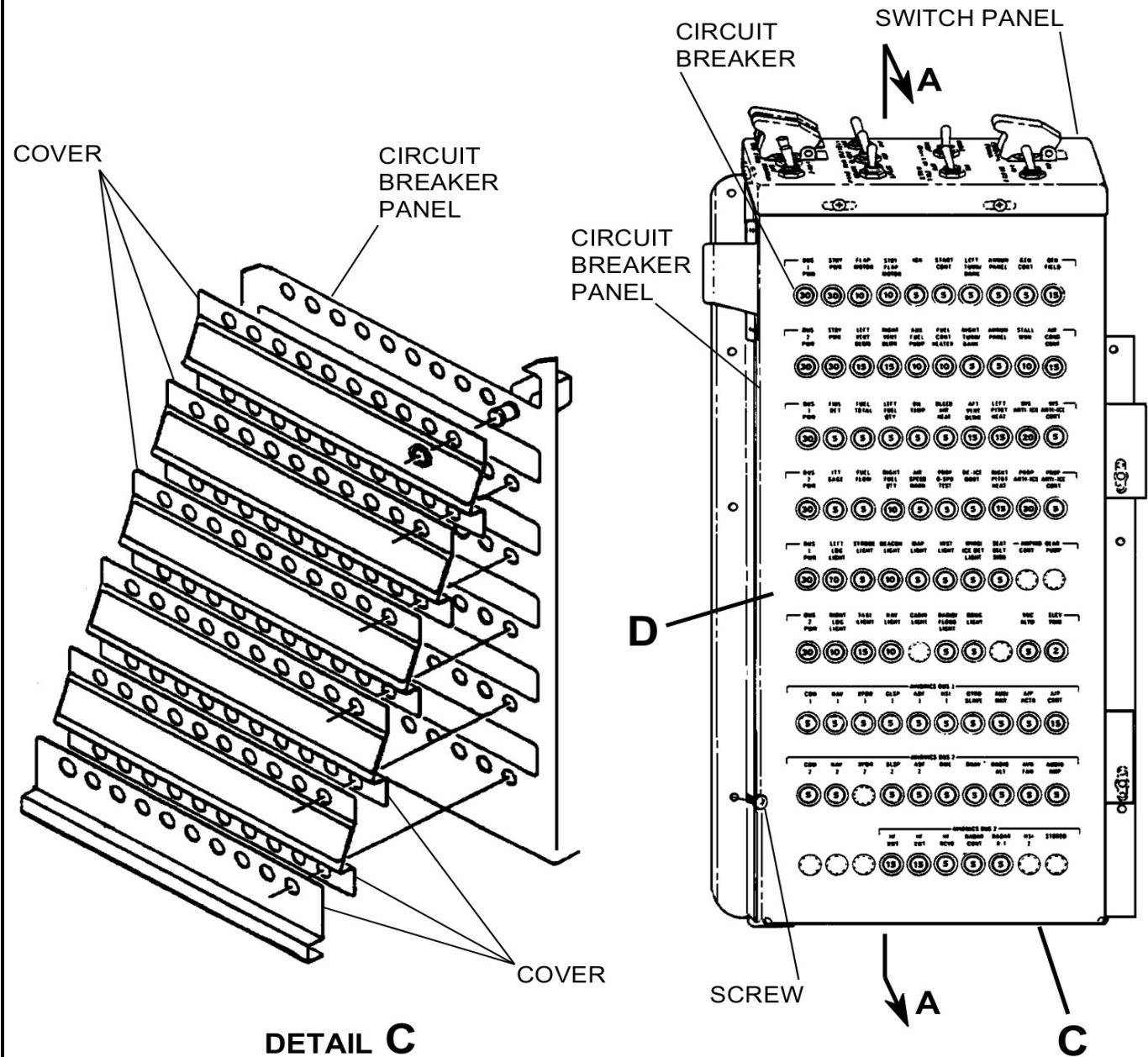
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Figure 201 : Sheet 2 : Electrical System Distribution Installation

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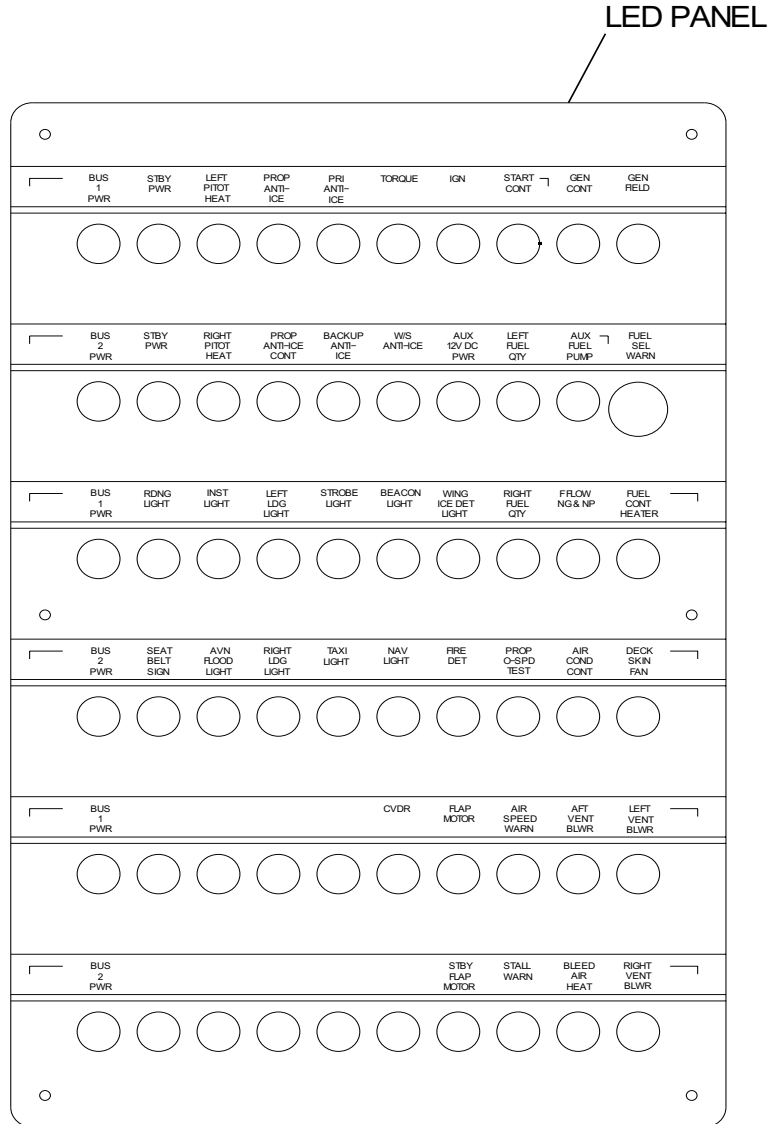


AIRPLANES 20800127 AND ON AND AIRPLANES 20800001 THRU 20800126 INCORPORATING SK208-32 AIRPLANES 208B0044 THRU 208B2196 AND AIRPLANES 208B2198 THRU 208B4999 AND AIRPLANES 208B0001 THRU 208B0043 INCORPORATING SK208-32

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Figure 201 : Sheet 3 : Electrical System Distribution Installation

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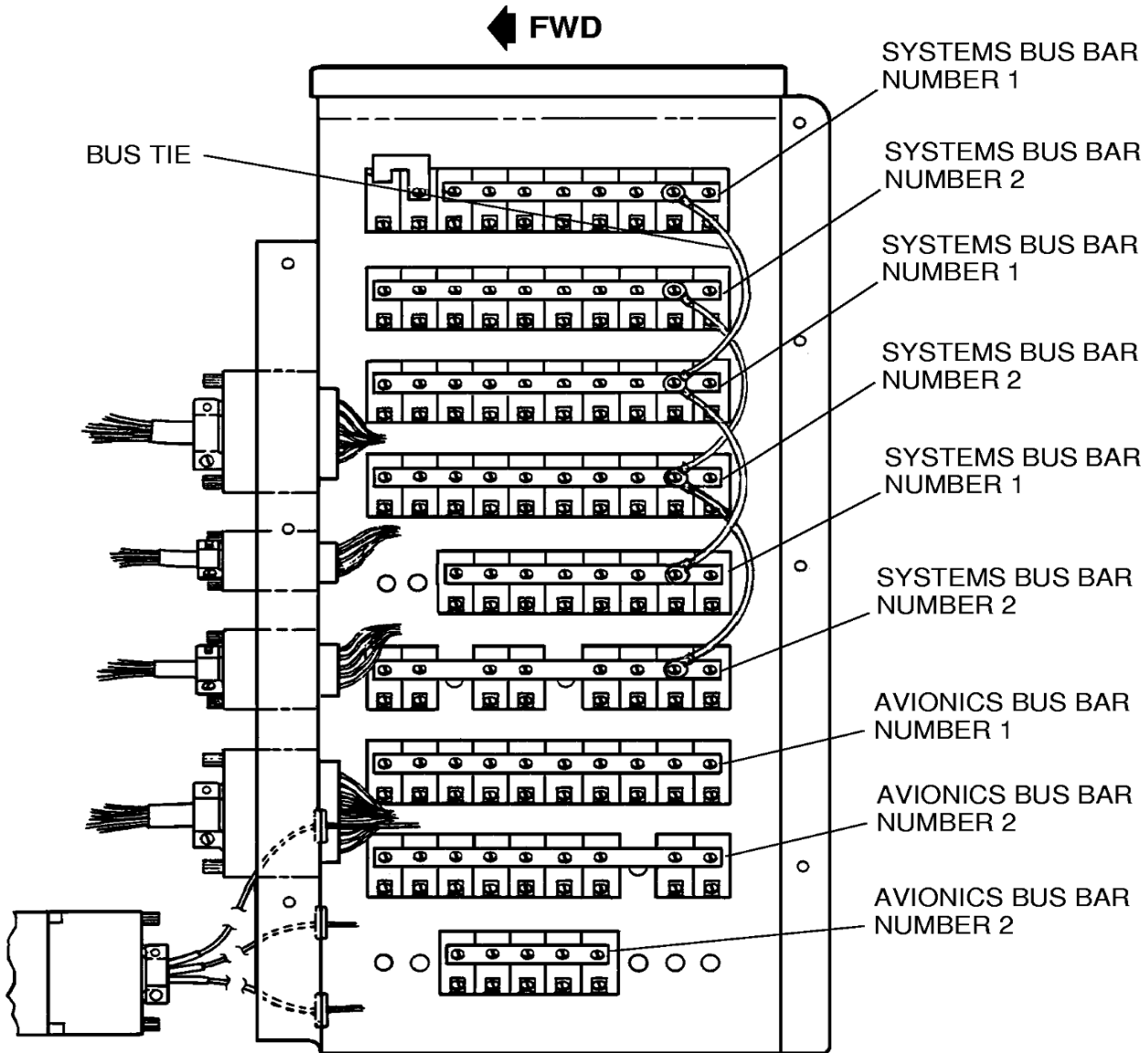


**DETAIL D**  
 AIRPLANE 208B2197 AND  
 AIRPLANES 208B5000 AND ON

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Figure 201 : Sheet 4 : Electrical System Distribution Installation

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**VIEW A-A**  
VIEW LOOKING INBOARD FROM  
LEFT SIDE OF AIRPLANE

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