FROM: Amateur Products Management, Cedar Rapids, Iowa 52406

516E-2 24/28-VDC POWER SUPPLY (522-0984-005)

SERVICED BULLETIN NO 1

SUBJECT: Add bleeder resistor to +260-Vdc line to improve safety features of power supply.

This modification is applicable to all 516E-2 24/28-VDC Power Supply units, Collins part number 522-0984-005, with serial number 355 and below. Production cut-in is serial number 356 and above.

The bleeder resistor is added to the +260-Vdc line to improve the safety features of the 516E-2 power supply.

The addition of a 100-kilohm, 2-watt bleeder resistor, R29, in parallel with capacitor C13, will eliminate the danger of a residual charge on the capacitor after the equipment has been turned off. Estimated time to perform this modification is .25 man-hour.

Modification component, carbon resistor, Collins part number 745-5736-000, is available for shipment 30 days after receipt of order at a price of $0.11 each (price subject to change without notice; minimum order charge is $25.00). The resistor may be obtained from Collins Radio Company, Service Parts Department, Cedar Rapids, Iowa 52406. All orders should specify the resistor part number and reference the 516E-2 Service Bulletin No 1.

No special tools or equipment are required for this modification.

The operation of the power supply is described in the 516E-2 28-volt Dc POWER SUPPLY Instruction Sheet (523-0704000).

MODIFICATION PROCEDURE

NOTE: Refer to figure 1 for component location and figure 2 for before and after modification schematic diagrams.

a. Remove two screws on each end of unit holding top shelf in place. Lift top shelf up and fold back on connecting wires.

b. Locate connection points E16 and E13 (figure 1) on underside of top shelf.
c. Connect 100-kilohm resistor (745-5736-000) R29 between connection points E13 and E16 on underside of top shelf.

**WARNING:** High voltage may exist across C13. Take necessary precautions when measuring voltage at connection E16.

d. Testing procedure:

  1. Turn power supply on and allow it to warm up to normal operating condition.
  2. Turn power supply off.
  3. Measure voltage at connection E16 for 0 volt.

c. Mark SB 1 on information chart (280-3778-010) and affix it to convenient location on chassis of the power supply.

**MATERIAL INFORMATION**

The part required to modify one 516E-2 24/28-VDC Power Supply is listed below.

<table>
<thead>
<tr>
<th>NEW COLLINS PART NUMBER</th>
<th>QTY</th>
<th>UNIT PRICE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>745-5736-000</td>
<td>1</td>
<td>$0.11</td>
<td>Resistor, carbon 100-kilohm ±10%, R29</td>
</tr>
<tr>
<td>*280-3778-010</td>
<td>1</td>
<td>$0.06</td>
<td>Chart, information</td>
</tr>
</tbody>
</table>

*Not part of kit. To be ordered if desired.*

**FIGURE 1. PARTIAL VIEW OF UNDERSIDE OF 516E-2 TOP SHELF SHOWING LOCATION FOR ADDITION OF BLEEDER RESISTOR R29.**

Page 2  Partial View of Underside of 516E-2 Top Shelf Showing  Location for Addition of Bleeder Resistor  Figure 1  22 February 1974
A. BEFORE MODIFICATION

B. AFTER MODIFICATION