POWER REGULATOR PROTECTION IMPROVEMENT

I. APPLICABILITY

This modification is applicable to all VPR-2A/2B's.

II. PURPOSE

To prevent catastrophic damage to the regulator assembly in case of -6/-12V rectifier failure.

III. DISCUSSION

Two additional fuses are added to the heat sink assembly, which will protect the regulator PWA from severe damage if the rectifier bridge and its associated components fail.

IV. PARTS REQUIRED

<table>
<thead>
<tr>
<th>Ampex Part Number</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>070-054</td>
<td>Fuse, Fast blow, 10A</td>
<td>2</td>
</tr>
<tr>
<td>103-054</td>
<td>Fuse, Holder</td>
<td>2</td>
</tr>
<tr>
<td>473-326</td>
<td>Screws, Pan Head</td>
<td>2</td>
</tr>
<tr>
<td>473-327</td>
<td>Screws, Mach., Pan Hd. 4-40 x 1/2 x Rec.</td>
<td>2</td>
</tr>
<tr>
<td>501-169</td>
<td>Washer, Flat #4</td>
<td>2</td>
</tr>
<tr>
<td>611-549</td>
<td>Wire, AWG-18</td>
<td>2</td>
</tr>
<tr>
<td>169-859</td>
<td>Contact, Pin 18-16 AWG</td>
<td>2</td>
</tr>
</tbody>
</table>
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IV. PARTS REQUIRED—continued

Parts required for this update may be purchased through Ampex. Installation assistance can be obtained through your local Ampex regional office at current Ampex Field Engineering rates.

V. PROCEDURE

1. Remove the back cover from the machine and the power supply regulator and heat sink assembly.

2. Remove the regulator PWA from the heat sink assembly.

3. Viewing the heat sink assembly with the fin's away from you, remove the small metal bracket on the right hand side of the heat sink.

   **NOTE**

   On power supply assemblies equipped with the crowbar kit, this bracket has (2) fuses mounted on it. Fuse must be removed first before the bracket can be removed from the heat sink assembly.

4. Using a 3/16 drill bit, drill a hole as shown in Figure 1.

   ![Figure 1](image-url)
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V. PROCEDURE—continued

5. On heat sink assembly equipped with the crowbar kit, drill 3 holes as shown in Figure 2. Use a drill size 43 for holes 1 & 2 and drill size 31, .1200 Dia. for hole 3.

6. Using a 4/40 tap size, tap holes on 1 and 2.

NOTE

On power supply assemblies not equipped with the crowbar kit, drill and tap holes 1 and 2 only.
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V. PROCEDURE—continued

7. On heat sink assemblies equipped with the crowbar kit, move the tie lug next to transistor Q003 and install it in the new hole designated Number 3.

8. Mount the bracket back on heat sink assembly and install the fuse holder, Part Number 130-054 using a screw, Part Number 473-327 in hole designated Number 1. Mount the holder in parallel with (Y), reference axis - (refer to Figure 2).

9. Mount the second fuse holder in position designated by hole 2, using a screw, Part Number 473-327, perpendicular to (Y), reference axis - (refer to Figure 2).

10. Remove the wire connecting J2, Pin 19 to regulator J3 Pins 23, AA.

11. Remove the wire connecting J2, Pin 23 to regulator J3 Pins 24, BB.

12. Using 18 AWG wire, Part Number 611-549, connect the fuse holders installed in step 8 as follows:

A. Connect terminal lug (A) of fuse (1) to J2 Pin 19 and terminal (B) of fuse to Pin regulator J3 Pin 23, AA.

B. Connect terminal lug (A) of fuse (2) to J2 Pin 23 and terminal lug (B) of fuse to regulator J3 Pins 24, BB.

Refer to Figure 3.

C. Install the 2 fuses, Part Number 070-054, in the new fuse holders.

NOTE

Use the Pin (169-859) on J2.
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V. PROCEDURE-continued

13. Reinstall the regulator PWA on the heat sink assembly and reinstall both assemblies in machine.

14. Check machine for proper operation.

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FIGURE 3