

# Maintenance Procedure

## No. P850

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<b>TASK DESCRIPTION</b>
INSPECT COMPANION AND TRACTION ALTERNATOR COLLECTOR RINGS, BRUSHES, AND BRUSH HOLDERS.
<b>BUILDER'S OR VENDOR'S MAINTENANCE INSTRUCTIONS</b>
MPI Locomotive Maintenance Manual, Section 8 F59 Service Manual, Section 8A EMD M.I. 3317-1
<b>SPECIAL TOOLS REQUIRED:</b>
<b>RELATED MAINTENANCE PROCEDURES MODIFICATIONS, POINTERS, ETC.</b>
<b>SAFETY PRECAUTIONS:</b>
CONTRACTOR TO ASSUME RESPONSIBILITY FOR SAFETY RULES AND COMPLIANCE.
<b>PREPARATION:</b>

### PROCEDURE

#### Companion and Traction Alternator Collector Rings

1. Look through the inspection passage at the collector rings for sparking. If the collector rings are sparking, refer to the collector ring sparking instructions of EMD M.I. 3317-1.
2. Correct sparking problems immediately to prevent failure of the alternator.
3. If sparking on collector rings is detected, check the following and take corrective measures as required immediately to prevent failure of the generator.
  - 3.1 Oil on surface of collector rings: If collector ring surfaces are oily, wipe off the surface of the rings and brushes with a clean, dry, lint less cloth.
  - 3.2 Brush holder loose. If a brush holder is not mounted securely to the brush holder stud or the stud itself is loose, it will allow the brushes to bounce on and off the collector ring resulting in sparking. Tighten all mounting bolts.
  - 3.3 Damaged brush holder: Make certain that brushes are free to move up and down in their slots. The spring pressure on constant pressure brush holders is present and cannot be adjusted. The pressure will remain constant throughout the brush life regardless of brush wear. Check that each brush is centered to within 1/16 in. of the

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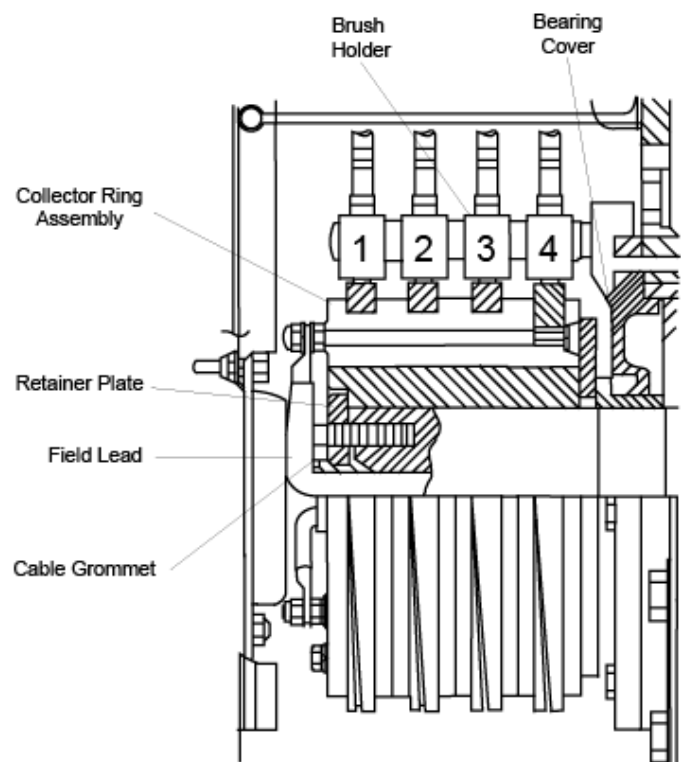
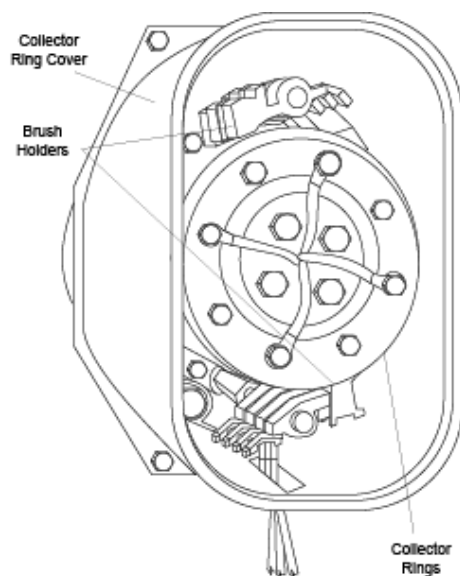
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mating collector ring. When facing the brush holders, the right hand side of all brush holders is set closer to the collector rings than the left side. Check that the right hand side is  $1/16$  in.  $\pm$   $1/32$  in. closer.

- 3.4 Eccentric or pitted collector rings: A rough or pitted collector ring surface will need to be either machined or renewed (refer to EMI M.I. 3317-1).

**Note:** *It is normal for the negative collector ring to wear more rapidly than the positive ring. The unequal wear can be minimized by reversing the polarity of the rings every six months.*



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