**Wiring Harness Repair or Overhaul**

**Checklist / Process Sheet**

Wiring Harness Part Number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Wiring Harness Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Wiring Harness Serial Number or Job Number:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Wiring Harness Manufacture Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Wiring Harness Manufacturer and CAGE Code: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name of Person Performing Evaluation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date of Evaluation: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Below are the six steps for repairing or overhauling wiring harnesses.*

1. Perform a visual technical review of the wiring harness. Note the following factors:
   1. Are any of the connectors corroded or damaged? A damaged connector may have the following problems: (a) connector inserts have cracks or cuts, (b) connector has cuts or nicks on the outside of it, or (c) connector locking mechanism is damaged and no longer works correctly. If any connector has any of these problems then that connector needs to be replaced. For the connector that needs to be replaced, note the part number and its associated reference designator.

List of connectors that need to be replaced:

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* 1. Are any of the backshells corroded or damaged? A damaged backshell may have the following problems: (a) backshell has cuts or nicks on the outside of it, (b) backshell is missing parts, or (c) backshell’s locking mechanism is damaged and no longer works correctly. If any backshell has any of these problems then that backshell needs to be replaced. For the backshell that needs to be replaced, note the part number and it’s associated reference designator.

List of backshells that need to be replaced:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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* 1. Are any of the wires damaged? A damaged wire may have the following problems: (a) nicks or cuts or (b) the insulation looks very old and worn. If any wire has any of these problems, then those wires need to be replaced. Note the part numbers of the wires that need to be replaced.

List of wires that need to be replaced:

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* 1. Are there any other damaged components on the wiring harness? A damaged component may have the following problems: (a) nicks or cuts, (b) missing small pieces, or (c) worn-out looking. If any other component has any of these problems then each component needs to be replaced. For each component that needs to be replaced, note the part number and it’s associated reference designator.

List of other components that need to be replaced:

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1. Perform an electrical test using a wiring analyzer such as a DITMCO or Eclipse tester. Continuity should be tested at 500mA with a maximum resistance of 4 ohms. Insulation resistance should be tested at 1500 Volts DC and the resistance should be greater than 100 Megohms. If the wiring harness fails any of these tests then troubleshoot the problem areas and decide which components are defective. Defective components can include: (a) connectors, (b) wires, or (c) component parts such as splices or terminals. If specialized components are part of the assembly, make sure none of these components are tested beyond their operating limits.

List of parts and their reference designators that need to be replaced based on the electrical test:

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1. Order all material that needs to be replaced.
2. Once the material arrives, replace all parts that need to be replaced.
3. Perform an electrical test of the repaired or overhauled wiring harness using a wiring analyzer such as a DITMCO or Eclipse tester. Continuity should be tested at 500mA with a maximum resistance of 4 ohms. Insulation resistance should be tested at 1500 Volts DC and the resistance should be greater than 100 Megohms. If specialized components are part of the assembly, make sure none of these components are tested beyond their operating limits.
4. If the wiring harness passes the test then the job is finished. If it does not then go through the process again starting with what areas of the wiring harness failed during testing.

Special Notes Taken During Inspection:

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