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REPAIRING DAMAGED WIRE INSULATION

If the conductive portion of the wire is not damaged, locate the problem and apply tape around the wire. If the damage is more extensive, replace the faulty segment of the wire. Refer to Splicing Copper Wire Using Splice Clips and follow the instruction to repair the wire.

Wire Size Conversion

Metric Wire Sizes (mm 2)	AWG Sizes
0.22	24
0.35	22
0.5	20
0.8	18
1.0	16
2.0	14
3.0	12
5.0	10
8.0	8
13.0	6
19.0	4
32.0	2
50.0	1/0

FLAT WIRE REPAIRS

NOTE: The flat wire within the flex wiring harness is not serviceable. If an open or short exists within the flex wiring harness the complete harness must be replaced.

HEATED OXYGEN SENSOR (HO2S) WIRING REPAIRS

Tools Required

J-38125 Terminal Repair Kit. See **Special Tools and Equipment** .

NOTE: **Do not solder repairs under any circumstances as this could result in the air reference being obstructed.**

Heated Oxygen Sensor (HO2S) Wiring Repairs

If the heated oxygen sensor pigtail wiring, connector, or terminal is damaged the entire oxygen sensor assembly must be replaced. Do not attempt to repair the wiring, connector, or terminals. In order for the sensor to function properly it must have a clean air reference. This clean air reference is obtained by way of the oxygen sensor signal and heater wires. Any attempt to repair the wires, connectors or terminals could result in the obstruction of the air reference and degrade oxygen sensor performance.

The following guidelines should be used when servicing the heated oxygen sensor:

- Do not apply contact cleaner or other materials to the sensor or vehicle harness connectors. These materials may get into the sensor, causing poor performance. Also, the sensor pigtail and harness wires must not be damaged in such a way that the wires inside are exposed. This could provide a path for foreign materials to enter the sensor and cause performance problems.
- Neither the sensor nor vehicle lead wires should be bent sharply or kinked. Sharp bends, kinks, etc., could block the reference air path through the lead wire.
- Do not remove or defeat the oxygen sensor ground wire (where applicable). Vehicles that utilize the ground wire sensor may rely on this ground as the only ground contact to the sensor. Removal of the ground wire will also cause poor engine performance.
- To prevent damage due to water intrusion, be sure that the peripheral seal remains intact on the vehicle harness connector.

The engine harness may be repaired using the **J-38125** . See **Special Tools and Equipment** .

SPLICING COPPER WIRE USING SPLICE CLIPS

IMPORTANT: When making a splice in an area that may be exposed to moisture use a crimp and seal splice sleeve instead of a Splice Clip. Refer to **Splicing Copper Wire Using Splice Sleeves**

Tools Required

J-38125 Terminal Repair Kit. See **Special Tools and Equipment** .

Splicing Copper Wire Using Splice Clips

1. Open the harness.
 - If the harness is taped, remove the tape.
 - To avoid wiring insulation damage, use a sewing ripper in order to cut open the harness.
 - If the harness has a black plastic conduit, pull out the desired wire.
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