GROUND FAULT INTERRUPTER

1. GENERAL

1.01 This Section covers the description and use of the Ground Fault Interrupter.

1.02 This Section provides that all single phase 120 volt, 15 and 20 ampere, convenience outlets on aerial lifts, "electrified" vehicles, and power trailers be wired with a Ground Fault Interrupter (GFI).

1.03 The requirement of GFI protection is a supplement to present regulations concerning grounded three-wire systems and double insulated tools. The combination of the two systems will virtually eliminate shock hazards.

2. DESCRIPTION

2.01 The GFI is an electrical safety device designed to guard people against the hazard of line to ground faults. It does so by limiting to a short duration any fault current to ground which exceeds a preset threshold. A ground fault current may be caused by accidental contact between energized parts of electrical equipment and ground. It may also be caused by faulty insulation or improper wiring.

2.02 The GFI operates on the differential transformer principle. It monitors load current flowing to the protected circuit, comparing current flowing to the load with current flowing from the load. Leakage to ground (ground fault) appear as the difference between these currents. When this exceeds a preset level, the GFI interrupts the circuit.

2.03 GFI's have a built-in test circuit which impose an artificial ground fault on the load circuit to assure that the ground fault protection is functioning properly.

3. OPERATION AND USE

3.01 GFI devices should be the type that are permanently wired into the electrical circuits.

3.02 GFI's should be tested by operating the built-in test circuit before <u>each</u> use and monthly.

3.03 The GFI will shut off the circuit when more than 50ma of leakage current is electrically sensed. When this occurs, it will be necessary that you first attempt to turn the unit back on, being careful to look for possible danger to persons. If it will not turn on; for your safety, call a qualified technician to test the electrical circuit and apparatus connected to the circuit. The GFI is performing its intended "Safety" function.

4. SAFETY CONSIDERATIONS

4.01 Installation of the GFI should be made by a qualified technician.

4.02 This device is <u>only</u> to be used on grounded circuits.

4.03 This device does <u>not</u> guard against electrical shock hazard resulting from contact with both wires of the electrical circuit. <u>LET CAUTION PREVAIL</u>.