ELECTRICAL PROTECTION

TESTING 125 VOLT AC OUTLETS

Contents • Page

1. GENERAL

1.01 This appendix provides descriptive information for testing 125 volt ac outlets.

1.02 (Reserved for future use)

1.03 The three methods used requires one of the following equipment items:

- KS-14510, L1 Volt-ohm-milliammeter (VOM)
- Bryant, 5266-PT Outlet Tester
- AMP Circuit Analyzer PN-350659

2. KS-14510, L1 VOLT-OHM-MILLIAMMETER

2.01 Set VOM Selector switch to a range greater than 150 volts ac.

1. Connect the negative (—) test lead to the receptacle cover plate retaining screw.

   Note: If screw is nonmetallic, replace it with a metal screw.

2. Connect the positive (+) test lead to the short (hot) slot in the receptacle. (See Fig. 1 and 2.)

   a. If the meter reads 110-125 volts, ***polarity is correct.***

   b. If the meter reads zero (0) volts, ***polarity is reversed.***

   c. If the meter reads in excess of 130 volts, *DISCONTINUE TESTING.* Refer trouble to the appropriate Maintenance forces for correction.

2.02 Retain VOM Selector switch to a range greater than 150 volts ac. Connect the positive (+) test lead to the long (neutral) slot in the receptacle. (See Fig. 1 and 3.) If the meter reads zero (0), the polarity is correct.

Note: A voltage reading indicates reversed polarity.

2.03 *Ground Test.*

1. Remove the positive (+) test lead from the neutral slot of the receptacle and touch it to the negative (—) test lead.

2. Set VOM Selector switch to OHMS X1 the "zero" the meter.

3. Reconnect the positive (+) test lead to the long (neutral) slot in the receptacle. (See Fig. 1 and 3.)

   Note: Meter should read ***no more than 3 ohms.***

4. Reconnect the positive (+) test lead to the ground slot (Fig. 4), continuity should be read.

5. Set VOM Selector switch to a range above 150V ac, then connect the positive (+) test lead to the ground slot in the receptacle.

   Note: Meter should read zero (0) volts.

**Trademark of AMP Incorporated*

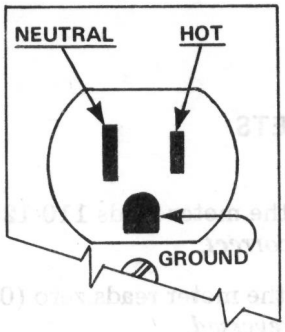


Fig. 1

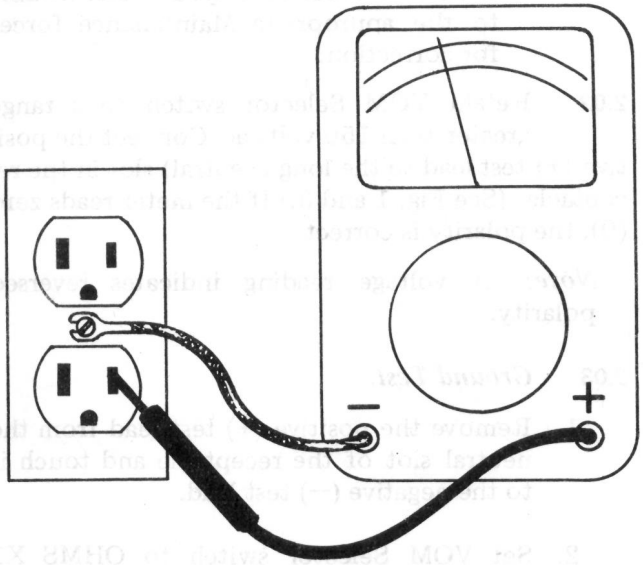


Fig. 2

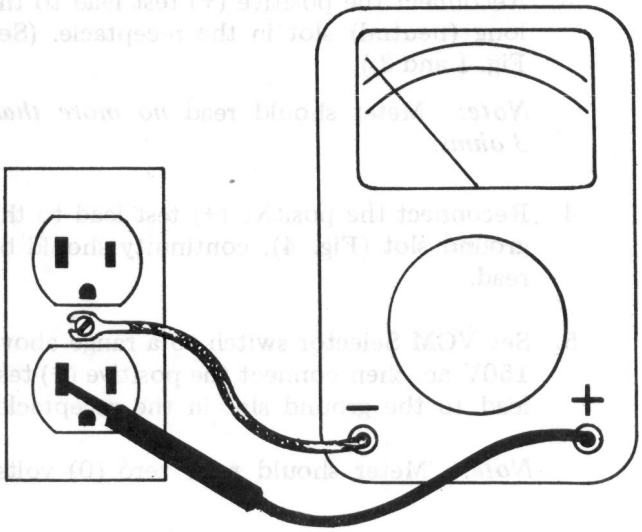


Fig. 3

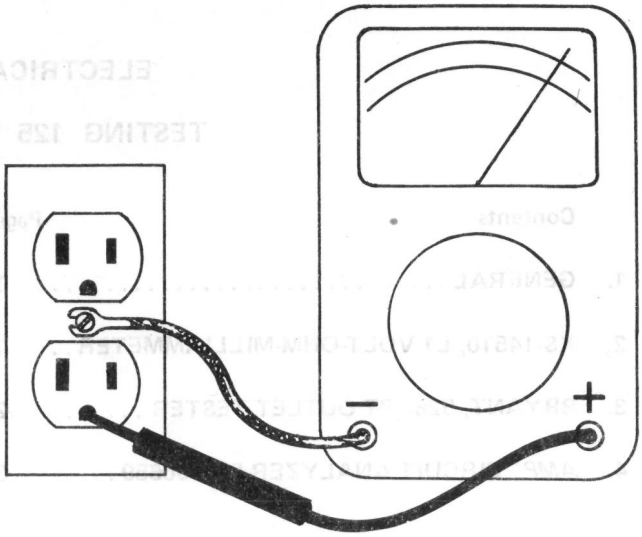


Fig. 4

3. BRYANT, 5266-PT OUTLET TESTER

3.01 The Bryant Tester (Fig. 5) plugs into only 3-wire receptacles. A combination of lights informs the user of the following ac receptacle conditions:

Lamp(s) On	Condition
Yellow and White	Correct Wiring
Yellow and Red	Reversed Polarity
Yellow	Open Ground
White	Open Neutral
None	Open Hot
White and Red	Hot and Ground Reversed
Red	Hot On Neutral, Hot Unwired

3.02 This tester will not check, ground and neutral reversed, two hot wires in outlet, quality of ground, and combinations of defects. If defect is found, correct and retest.

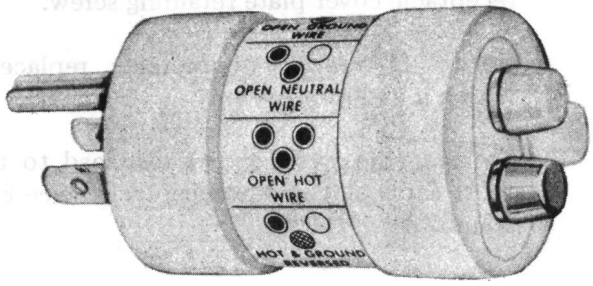


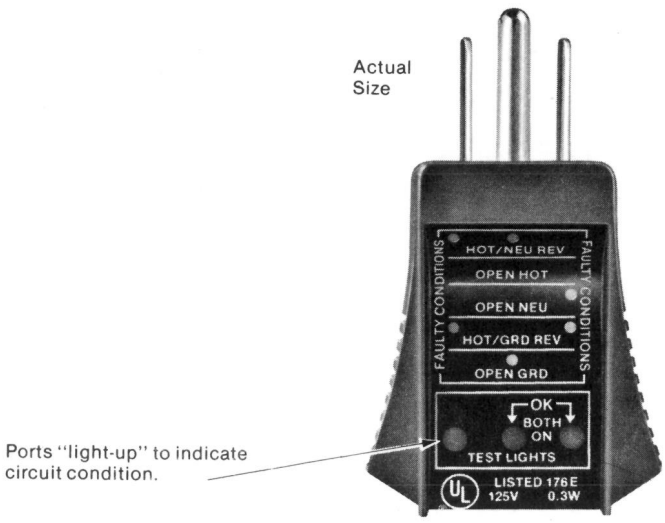
Fig. 5

4. AMP CIRCUIT ANALYZER PN-350659

4.01 The *AMP* Analyzer (Fig. 6) has indicator lights and a chart on both sides to describe the condition for each ac receptacle wiring arrangement. When plugged into any single phase 125 Vac 3-wire outlet, the following tests can be made:

- Open Ground
- Open Hot
- Open Neutral
- Hot/Ground — Reversed
- Hot/Neutral — Reversed
- Correct

4.02 This analyzer can be used to check 2-wire outlets with a polarized adaptor and ground wire (not supplied with analyzer.)



Part Number: 350659-1

Fig. 6