

892B

EXTENSION LAMPS AND CORDS TESTS AND INSPECTIONS

1. GENERAL

1.01 This section describes methods of testing and inspecting extension lamps and cords and the adapters sometimes used with them.

1.02 This section is reissued to add information on 3-wire grounding type cords and adapters and to bring the section up to date. Since this reissue covers a general revision, arrows ordinarily used to indicate changes have been omitted.

1.03 The tests covered are:

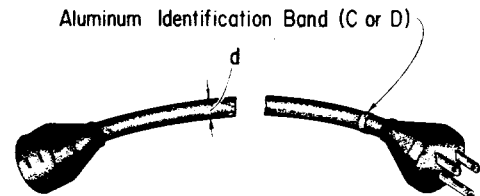
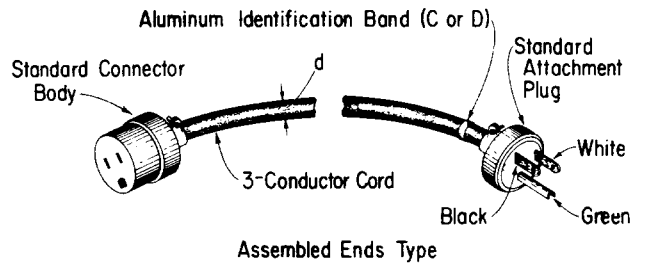
- A. *Inspection of Extension Lamps*
- B. *Inspection of Extension Cords*
- C. *Polarity Test — Extension Lamps*
- D. *Polarity Test — Polarized Extension Cords*

1.04 Extension lamps and cords which do not meet the requirements of this section shall be repaired or replaced.

1.05 An extension lamp consists of a portable lamp guard, such as KS-7118, connected to a flexible cord which is terminated in an attachment plug cap.

1.06 An extension cord consists of a flexible cord, one end of which is terminated in a parallel polarized, a radial polarized, or a 3-wire grounding type cord connector body. The other end is terminated in an attachment plug cap.

1.07 A cord, such as the C or D extension cord shown in Fig. 1, is used when an extension cord is required to connect a tool, test set, or other apparatus equipped with a 3-wire grounding type power cord.



C Extension Cord, $d = .35$ inches (Approx. $\frac{1}{3}$ inch.)
D Extension Cord, $d = .48$ inches (Approx. $\frac{1}{2}$ inch.)

Fig. 1

1.08 Flexible cords with molded rubber attachment plug caps have been furnished for use with extension lamps and 2-wire extension cords as follows:

| CODE | TYPE OF PLUG |
|---------|-----------------------|
| KS-7585 | Radial polarized |
| KS-7586 | Parallel nonpolarized |
| KS-7993 | Parallel polarized |

1.09 In some cases, the attachment plug cap of a device may not match the receptacle used, as in the case of apparatus used on more than one floor or in more than one building. In such cases, adapter assemblies or plug cap adapters may be required, as outlined below. The tests and inspections of the assemblies shall be made in a manner similar to that described for extension cords. The inspections of adapters shall be made as described in Part 4 for attachment plug caps.

(a) **Radial Polarized Caps — Parallel Polarized Receptacles** — Require the use of an adapter assembly to be made up of a cord with a molded rubber attachment plug cap per KS-7993, 6" long, with a Hubbell 7240 cord connector body connected to the other end.

(b) **Parallel Polarized Caps — Radial Polarized Receptacles** — Require the use of a Western Electric Company plug cap adapter R-1138.

(c) **3-Wire Grounding Type Cap — Parallel Polarized Receptacles** — Require the use of a Hubbell 5273-L adapter.

(d) **3-Wire Grounding Type Cap — Radial Polarized Receptacles** — Require the use of a Hubbell NY-12239 adapter.

1.10 The white conductor of a flexible cord shall be connected to the nickel or white metal terminal of an attachment plug cap, connector body, or lamp socket (Edison screw shell) for identification of the grounded side.

1.11 For parallel polarized devices, the white (identified grounded) terminal is the wide terminal and for radial polarized devices it is the radial terminal, as shown schematically in Fig. 2 and as covered on ED-91181-01.

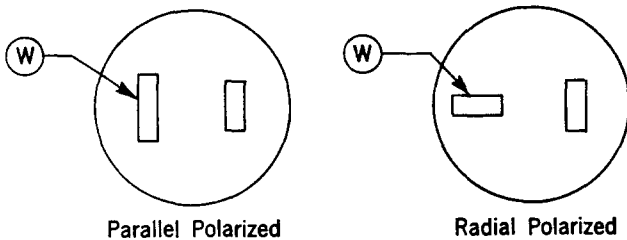


Fig. 2

1.12 If the extension cord is a 3-wire grounding type, the green conductor is used for equipment grounding and is connected to the

green terminal on both the attachment plug cap (U-shaped blade) and the cord connector (U-shaped slot).

1.13 **Lettered Steps:** A letter a, b, c, etc, added to a step number in Part 4 of this section, indicates an action which may or may not be required depending on local conditions. The condition under which a lettered step or a series of lettered steps should be made is given in the ACTION column, and all steps governed by the same condition are designated by the same letter within a test. Where a condition does not apply, all steps designated by that letter should be omitted.

2. APPARATUS

2.01 The apparatus required for each test is shown in Table A. The details of each item are covered in the paragraph indicated by the number in parentheses.

TABLE A

| APPARATUS | TESTS | | | |
|--------------------|-------|---|---|---|
| | A | B | C | D |
| Receiver (2.02) | | | ✓ | ✓ |
| Cord (2.03) | | | ✓ | ✓ |
| Screwdriver (2.04) | ✓ | ✓ | ✓ | |
| Pliers (2.05) | ✓ | ✓ | | |
| Pliers (2.06) | ✓ | ✓ | | |

2.02 588 receiver, or equivalent, attached to a W2AB cord equipped with two 360A tools (2W21A cord), a 411A tool, and a KS-6278 tool.

2.03 W1U cord.

2.04 3" C screwdriver.

2.05 6-1/2" P long nose pliers.

2.06 5" V-notch diagonal pliers.

3. PREPARATION

| STEP | ACTION | VERIFICATION |
|------------------|---|---|
| All Tests | | |
| 1 | Disconnect from electric outlet item to be tested or inspected. | Conductors free from any electrical connection. |

4. METHOD

| STEP | ACTION | VERIFICATION |
|---|---|---|
| A. Inspection of Extension lamps | | |
| 2 | Remove lamp from socket. <i>Note:</i> First, ascertain that lamp is cool enough to touch safely. Then insert thumb and finger between upper openings of the lamp guard and carefully unscrew lamp from socket. | |
| 3 | Loosen, remove lamp guard cage assembly and lamp. | |
| 4 | Slip guard handle back on cord. | Socket, terminals, wires, exposed to view. |
| 5 | Examine wiring. | Insulation of wires comes up to fastening terminals on socket. No deterioration of rubber insulation. |
| 6 | Examine connections. | Connections tight, free from loose ends. |
| 7 | Examine cord strain device. | Cord securely fastened. |
| 8a | If no further test (for polarity) is to be made — Reassemble lamp, lamp guard in reverse order of disassembly. | |
| 9 | Examine entire length of cord. | No worn, broken, cracked insulation. |
| 10 | Examine attachment plug cap and, if provided, plug cap adapter. | No bent blades, cracks, other defects. <i>Note:</i> If the cord is equipped with a separate attachment plug instead of the molded type, verify that insulation of the wires comes up to the fastening terminals and that the connections are tight and free from loose ends. |

B. Inspection of Extension Cords

| | | |
|---|---|--|
| 2 | Disassemble cord connector body. | Wiring terminals exposed to view. |
| 3 | Examine cord connector body. | No cracks or other defects. |
| 4 | Examine wiring, connections at cord connector body. | Insulation of wires comes up to fastening terminals. No deterioration of rubber insulation. Connections tight, free from loose ends. |

| STEP | ACTION | VERIFICATION |
|------|---|--|
| 5 | Examine cord grip. | Cord grip grasps insulation firmly. |
| 6 | Reassemble cord connector body. | |
| 7 | Examine entire length of cord. | No worn, broken, cracked insulation. |
| 8 | Examine attachment plug cap and, if provided, plug cap adapter. | No bent blades, cracks, other defects. <i>Note:</i> If the cord is equipped with a separate attachment plug instead of the molded type, verify that insulation of the wires comes up to the fastening terminals and that the connections are tight and free from loose ends. If an adapter with a grounding lead is provided (such as the Hubbell 5273-L or NY-12239), check the lead wire for proper connection at the adapter and verify that the spade tip on the loose end is not bent or broken. |

C. Polarity Test — Extension Lamps

| | | |
|----|---|------------------------|
| 2a | If extension has not been disassembled — Disassemble as in Steps 2 through 4, Test A. | |
| 3 | Connect ground blade of attachment plug cap to ground, using W1U cord. | |
| 4 | Connect clip of test receiver to battery (24- or 48-volt). | |
| 5 | Momentarily touch test pick of receiver to shell of lamp socket. | Click heard. |
| 6 | Momentarily touch test pick of receiver to center contact of lamp socket. | No click heard. |
| 7 | Reassemble lamp, lamp guard. | Extension lamp normal. |
| 8 | Disconnect W1U cord, test receiver. | |

D. Polarity Test, Polarized Extension Cords

| | | |
|---|--|-----------------|
| 2 | Connect ground blade of attachment plug cap to ground, using W1U cord. | |
| 3 | Connect test clip of receiver to battery (24- or 48-volt). | |
| 4 | Momentarily touch test pick of receiver to polarized (ground) contact of connector body. | Click heard. |
| 5 | Momentarily touch test pick of receiver to nonpolarized contact of connector body. | No click heard. |

| STEP | ACTION | VERIFICATION |
|------|--|-----------------|
| 6a | If cord is 3-wire grounding type — Momentarily touch test pick of receiver to U grounding contact of cord connector body. | No click heard. |
| 7 | Disconnect ground from ground blade of attachment plug. | |
| 8a | If cord is 3-wire grounding type — Connect ground to U blade of attachment plug, using W1U cord. | |
| 9a | Momentarily touch test pick of receiver to U contact of cord connector. | Click heard. |
| 10a | Momentarily touch test pick of receiver to nonpolarized contact of cord connector. | No click heard. |
| 11 | Remove all test connections. | |