

**KS-8740, KS-14440, AND KS-14582 SOLDERING COPPERS
AND KS-16346 SOLDERING IRON (INCLUDING KS-16368 TRANSFORMER)
PIECE-PART DATA AND REPLACEMENT PROCEDURES**

1. GENERAL

1.01 This section covers the information necessary for ordering parts to be used in the maintenance of the KS-8740, KS-14440, and KS-14582 soldering coppers, and the KS-16346 soldering iron which includes the KS-16368 transformer. It also covers the approved procedures for replacing these parts.

1.02 This section is reissued to:

- Revise the ordering information and replacement procedures to cover the KS-8740 L33 and L34 soldering tips, and the KS-14440 L23 and L24 heater and tip assembly.

- Cover the installation of the new heater assembly.

- Revise Fig. 1, 2, 3, and 6.

- Revise Table A, B, and C.

1.03 ¶There are two types of heater assemblies which can be used interchangeably in the KS-8740 soldering copper. One type of heater assembly uses a cord strain insulator pin to secure the heater assembly to the shell and has solder lug terminals for making cord connections. The other type has a locking-spring arrangement to secure the heater assembly to the shell and has screw-type wire terminals for making cord connections.¶

TABLE A — REPLACEMENTS FOR KS-8740 SOLDERING COPPERS

SOLDERING COPPER LIST NO.	CORD AND PLUG LIST NO.	HEATER ASSEMBLY LIST NO.	SHELL ASSEMBLY LIST NO.
1	50 (20-ft cord w/rad pol plug)	70 (95w)	90 (95w)
2	51 (20-ft cord w/par nonpol plug)	70 (95w)	90 (95w)
3	52 (6-ft cord w/par nonpol plug)	70 (95w)	90 (95w)
10	54 (9-ft cord w/T pol plug)	70 (95w)	90 (95w)
11	55 (9-ft cord w/par nonpol plug)	70 (95w)	90 (95w)
13	56 (6-ft cord w/3 prong grding plug)	70 (95w)	90 (95w)
21	50 (20-ft cord w/T pol plug)	71 (95w)	91 (95w)
22	51 (20-ft cord w/par pol plug)	71 (95w)	91 (95w)

**TABLE B — REPLACEMENT PARTS FOR KS-14440
SOLDERING COPPERS**

SOLDERING COPPER LIST NO.	CORD AND PLUG LIST NO.	HEATER AND TIP ASSEMBLY LIST NO.*
1	40 (20-ft cord w/T pol plug)	20 (60w)
2	41 (20-ft cord w/par nonpol plug)	20 (60w)
3	42 (6-ft cord w/par nonpol plug)	20 (60w)
5	44 (6-ft cord w/3 prong gnd)	20 (60w)
11	40 (20-ft cord w/T pol plug)	21 (60w)
12	41 (20-ft cord w/par nonpol plug)	21 (60w)
		22 (60w) †
		23 (60w) †
		24 (60w) †
<p>* Dimensions of heater and tip assemblies shown in Fig. 4.</p> <p>† The KS-14440 L22, L23, and L24 heater and tip assemblies are not furnished as a part of the soldering copper and must be ordered separately.</p>		

TABLE C — REPLACEMENT PARTS FOR KS-16346 SOLDERING IRON

SOLDERING IRON LIST NO.	HANDLE LIST NO.	CABLE LIST NO.	HEATING UNIT AND TIP LIST NO.
1	41	21 (9-ft long)	31 (12w)
2	42	22 (19-ft long)	32 (12w)

1.04 Part 2 of this section covers the piece-part numbers and the corresponding names of the parts which it is practicable to replace in the field in the maintenance of the soldering coppers and iron. No attempt should be made to replace parts not designated. Part 2 also contains explanatory figures showing the different parts. This information is called Piece-Part Data.

1.05 Part 3 of this section covers the approved procedures for the replacement of parts covered in Part 2. This information is called Replacement Procedures.

1.06 Parts of soldering coppers or irons should be replaced only when the coppers or irons are cool. No work should be done on electric soldering coppers or irons while they are connected to power. In the case of the KS-14582 soldering copper, make sure that the heat unit chamber is empty before replacing any parts.

1.07 After making any replacement of parts, the electric soldering coppers shall meet the test and inspection requirements covered in Section 075-190-501. After making any replacement of parts on KS-14582 L1 or L2 soldering copper, the

copper should be fired using the KS-14768 heat unit, as covered in Section 075-190-811, to determine whether the copper is operating satisfactorily.

of the parts as listed by Western Electric Company, Incorporated, Merchandise Department,

2. PIECE-PART DATA

2.01 The figures included in this part of the section show the various piece parts in their proper relation to other parts of the soldering coppers or iron. The piece-part numbers of the various parts are given together with the names

2.02 When ordering parts for replacement purposes, give both the KS and list number and name of the part, for example: KS-8740 L70 Heater Assembly. If no list number is given, state the part number and the name of the part and refer to the soldering copper on which it is used. For example, B-124195 Washer for KS-14582 L1 Soldering Copper. Do not refer to the BSP number or to any information shown in parentheses following the piece-part number.

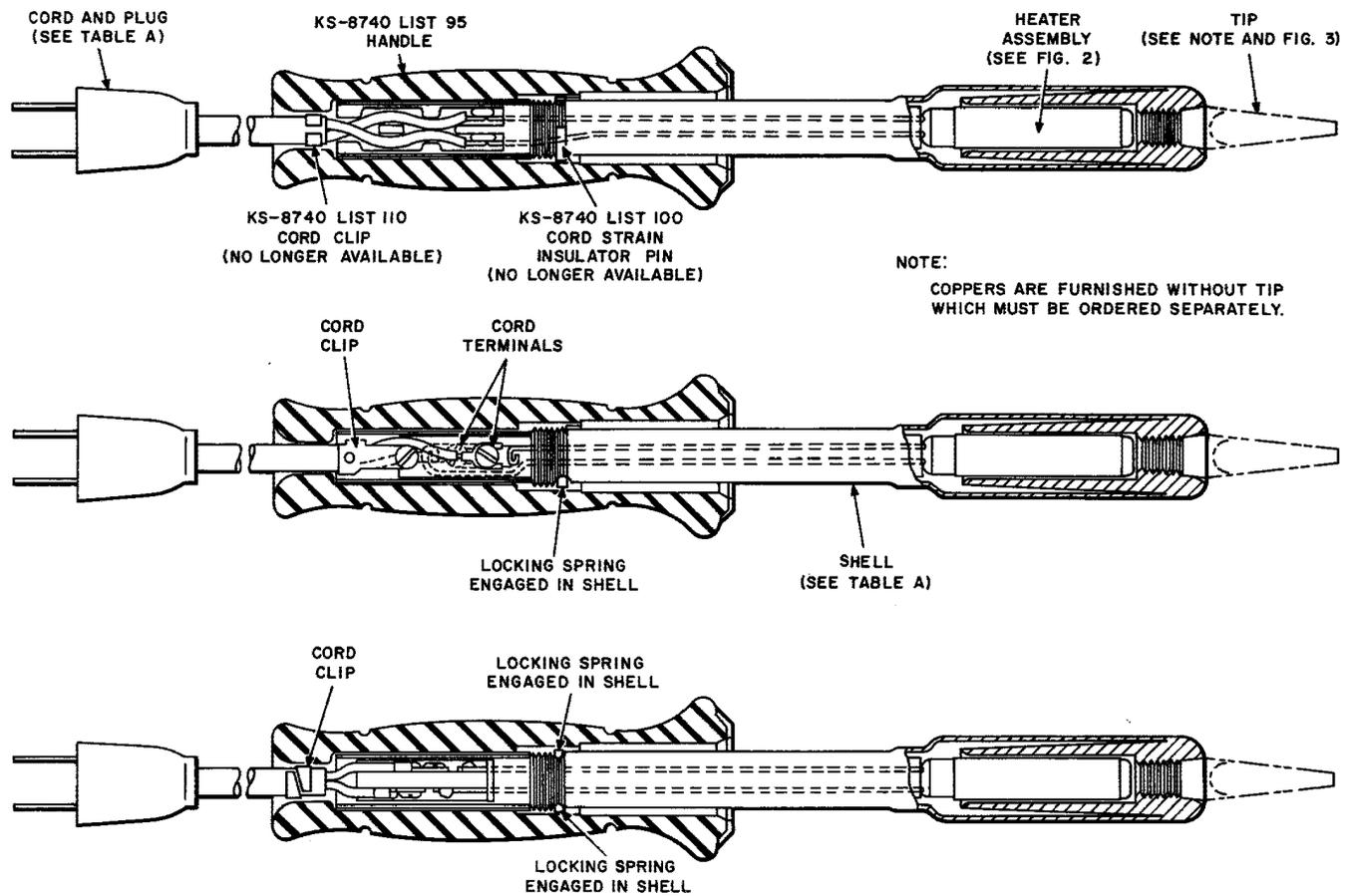


Fig. 1—KS-8740 Soldering Copper

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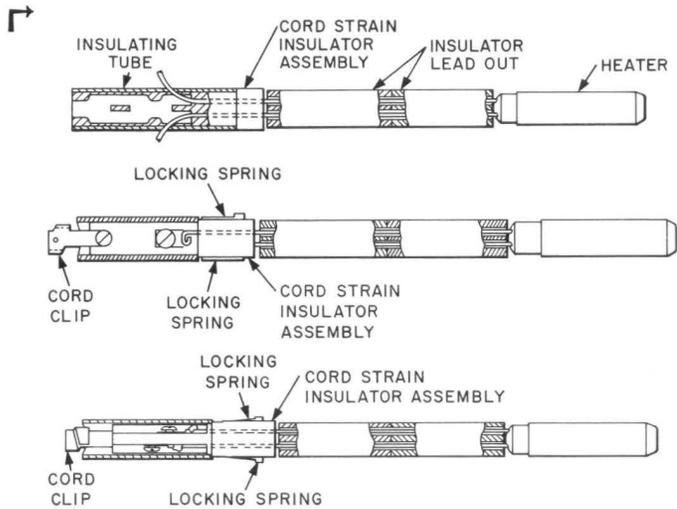


Fig. 2—Heater Assembly for KS-8740 Soldering Copper



KS-8740 L30B TIP
(CALORIZED COPPER TIP)
(4 INCH LONG, OVERALL)



KS-8740 L33 TIP
(SHORT TIP, IRON PLATED, INSULATED)
(2-3/8 INCH LONG OVERALL)



KS-8740 L34 TIP
(SMALL DIAMETER, IRON PLATED, INSULATED)
(2-3/8 INCH LONG OVERALL)

Fig. 3—Tips for KS-8740 Soldering Copper

3. REPLACEMENT PROCEDURES

3.01 List of Tools and Materials

CODE OR SPEC NO.	DESCRIPTION
TOOLS	
255	Grooved Pliers
KS-14164	Brush
R-5850	5/8- and 3/4-Inch Open Double-End Offset Wrench
—	P Long-Nose Pliers
—	Combination Pliers
—	3-Inch C Screwdriver
—	4-Inch E Screwdriver (or the replaced 4-inch regular screwdriver)
—	4-Ounce Riveting Hammer

MATERIALS

KS-6824	Sealing Compound
—	1/4-Inch Drill Rod, 8 Inches Long

KS-8740 SOLDERING COPPER

3.02 Tip: To remove the tip, place the shell of the soldering copper in a vise and unscrew the tip from the shell using the combination pliers placed as close as possible to the shell. **Do not use the pliers on the dielectric coated area of the L33 and L34 tips.** If the tip sticks and cannot be removed easily with the pliers, lightly tap the shell near the tip end with the 4-ounce riveting hammer to free the threads and then remove the tip as covered above. Mount the new tip.

Caution: Do not clamp the tip in the vise and turn the shell as this may damage the cords leads inside the handle.

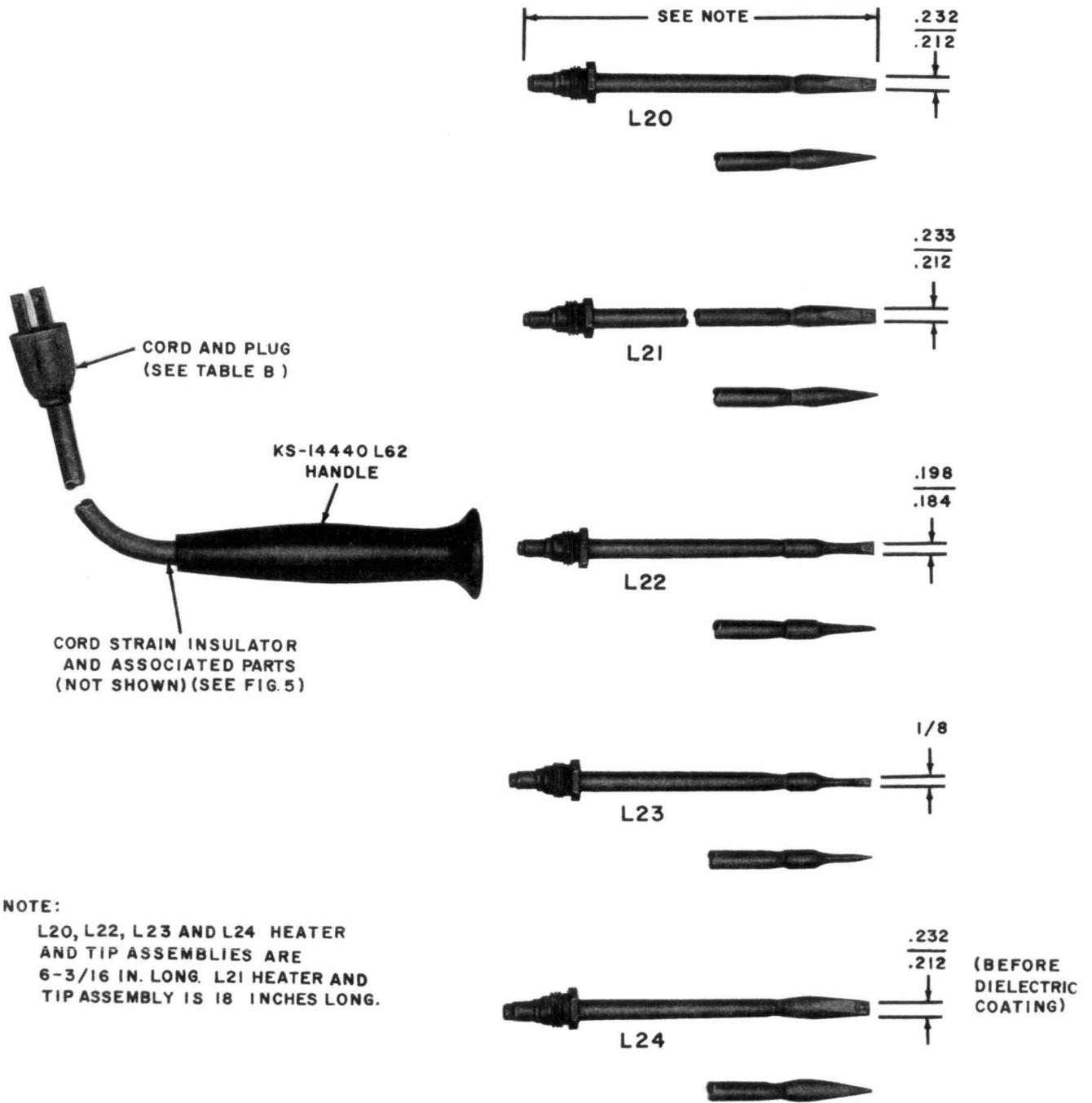


Fig. 4—KS-14440 Soldering Coppers

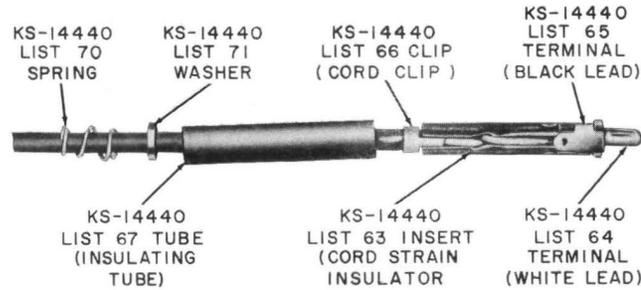
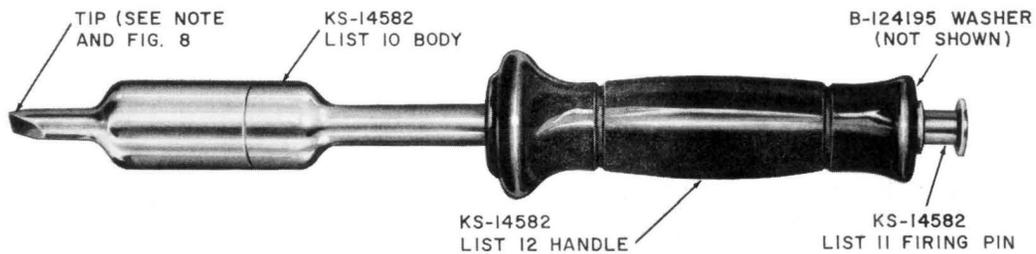
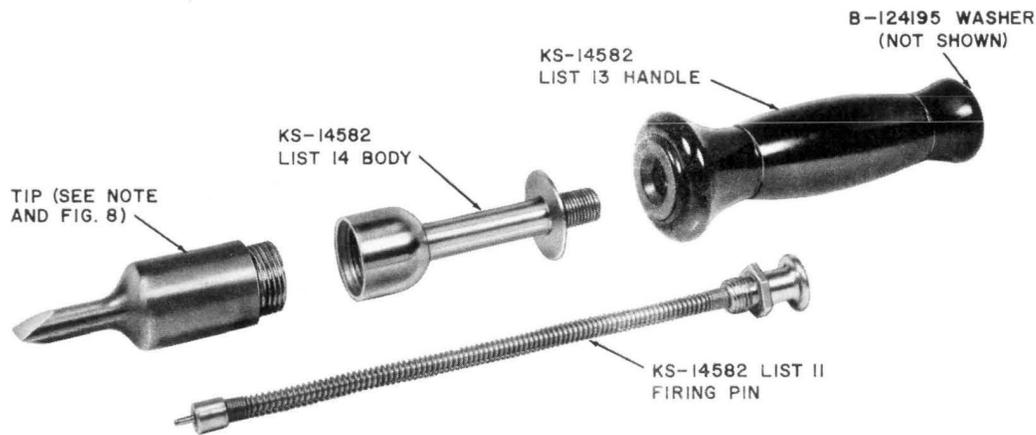


Fig. 5—Cord Strain Insulator and Associated Parts for KS-14440 Soldering Coppers



NOTE:
THE KS-14582 LIST I SOLDERING COPPER IS FURNISHED WITH TIP, WHICH MUST BE SPECIFIED IN THE ORDER.

Fig. 6—KS-14582 L1 Soldering Copper (Manufacture Discontinued)



NOTE:
THE KS-14582 L2 SOLDERING COPPER IS FURNISHED WITH TIP, WHICH MUST BE SPECIFIED IN THE ORDER.

Fig. 7—KS-14582 L2 Soldering Copper

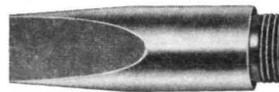
KS-14582
LIST 5 TIPKS-14582
LIST 4 TIP

Fig. 8—Tips for KS-14582 Soldering Copper

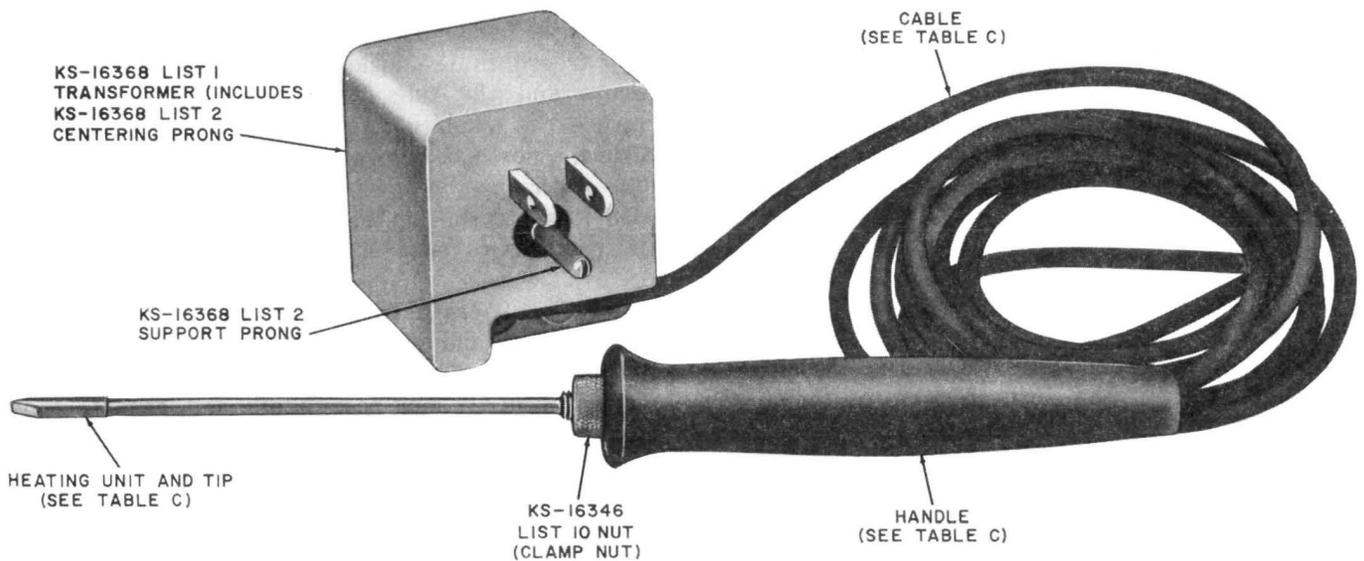


Fig. 9—KS-16346 Soldering Iron (Includes KS-16368 Transformer)

3.03 Shell: To remove the shell, remove the tip as covered in 3.02, manually unscrew the handle and slide it back on the cord. Depending on the type of heater assembly, proceed as follows:

- (a) Using the P long-nose pliers, grasp the bent down portion of the cord strain insulator pin and remove. Slide the shell from heater assembly.
- (b) Depress the locking spring until it is clear of the hole in the shell and remove the shell.

If the shell cannot be removed easily, the heater assembly is probably frozen to the shell. In this

case, insert the 1/4-inch drill rod through the end of the shell and lightly tap the rod with the 4-ounce riveting hammer. If the heater assembly cannot be removed by light tapping, replace the heater assembly as well as the shell. In this case, transfer the leads to the new heating assembly as covered in 3.04. Before assembling parts, make sure the wattage rating marked on the shell is the same as that marked on the heating element of the heater assembly. To replace the shell on the first type of heater assembly, slide the shell over the heater assembly and position it so the holes adjacent to the threaded portion of the shell are in line with the groove in the cord strain insulator. Insert the cord strain insulator pin through the holes in the shell and the groove in the insulator. Tighten

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the handle and remount the tip. ♦To replace the shell on the latter type of heater assembly, depress the locking spring and slide the shell over the heater assembly until it engages hole in the shell. Replace the handle and tip as above.♦

3.04 Heater Assembly: To replace the heater assembly, remove the shell as covered in 3.03, slide the insulating tube back on the cord to gain access to the cord leads and depending on the type of heater assembly, proceed as follows:

(a) On the one type, note the position of the leads and cord clip in the cord strain insulator in order to ensure positioning them properly in the new insulator. Unsolder the leads and remove the heater assembly including the insulating tube. Slide the insulating tube of the new heater assembly on the cord leaving the leads free. Connect and solder the leads to the heater assembly making sure the insulation on the leads comes up to the terminals on the heater assembly. Properly position the leads in the cord strain insulator with the tongue of the cord clip in the groove of the insulator and slide the insulating tube over the leads. Mount the shell as covered in 3.03 and tighten the handle.

(b) ♦On the second type, slide the insulating tube back on the cord. Loosen the terminal screws to free the spade tips on the black and white leads. Remove screw holding cord clip to cord strain device. To assemble, fasten the cord clip crimped on the cord to the cord strain device. Connect the two leads equipped with spade tips to the terminals. Note that the longest lead goes to the furthest terminal. Slide the insulating tube over the leads, mount the shell as covered in 3.03, and tighten the handle. In this situation, the cord and insulating tube furnished with the new heater assembly are not needed.♦

(c) ♦To assemble the newer type heater assembly to the existing (old type) cord assembly, first, remove the L110 cord clip. Cut the black lead to leave 1-5/8 inch beyond the end of the jacket. Skin approximately 3/8-inch of the insulation from the conductor. Form the bared stranded conductors into a loop and solder strands into a solid conductor. Assemble to the furthest terminal of the cord strain device. Cut the white lead to leave 1-3/8 inch beyond the end of the cord jacket. Skin approximately 3/8-inch

of insulation from the conductor. Form the bared strands into a loop and solder strands into a solid conductor. Assemble to the second terminal. The cord clip assembled to the heater assembly may now be crimped around the jacket with gas pliers. The clip should assemble approximately 1/8-inch from the end of the jacket. Slide the insulator tube over the cord strain device, mount the shell and tighten the handle.♦

Caution: ♦*Before mounting the shell, make sure the insulating tube is mounted over the cord connections to the heater assembly.*♦

3.05 Handle: Remove the heater assembly as covered in 3.04. Remove the handle. In some cases the insulating tube of the heater assembly may freeze to the inside of the handle. If this occurs and the tube cannot be easily removed, replace the insulating tube as well as the handle. Slide the new handle over the cord with the smaller end of the handle toward the plug. Connect the cord leads to the heater assembly and reassemble the parts as covered in 3.04.

3.06 Cord Strain Insulator Pin: Unscrew the handle and slide it back on the cord. Grasp the bent down portion of the cord strain insulator pin with the P long-nose pliers and remove the pin. Position the shell with the holes adjacent to the threaded portion of the shell in line with the groove in the cord strain insulator. Insert the cord strain insulator pin through the hole in the shell and the groove in the insulator. Securely tighten the handle.

3.07 Cord and Plug and Cord Clip: Remove the heater assembly as covered in 3.04. Remove the handle from the cord. Do not attempt to remove the cord clip from the old cord. Position the new cord clip on the end of the rubber insulation of the cord with the tongue of the clip toward the leads extending from the cord. Securely crimp the clip in position on the cord using the 255 pliers. Slide the handle on the new cord with the smaller end of the handle toward the plug. Connect the cord leads to the heater assembly and reassemble the parts as covered in 3.03 and 3.04. ♦The newer cord assemblies come equipped with precut leads ending in spade tips. These will not assemble to the heater assemblies equipped with solder lugs. In these cases, replace the heater assembly with the new type heater assembly. To replace a

defective plug when the cord is in good condition and still serviceable, cut off old plug and replace with suitable equivalent.¶

KS-14440 Soldering Copper

3.08 Heater and Tip: Grasp the handle firmly in one hand and with the other hand apply the R-5850 wrench to the hexagonal section of the heater and tip adjacent to the handle. Remove the heater and tip with the wrench. Mount the new heater and tip in the handle making sure the cylindrical contacting surface of the heater engages the concave side of the terminal in the handle. Securely tighten the heater and tip in the handle with the wrench.

3.09 Handle, Cord and Plug, Cord Strain Insulator, and Associated Parts: To replace any of these parts, remove the heater and tip as covered in 3.08. Slide the handle spring, washer, and insulating tube back on the cord so the terminals are accessible. Note the position of the leads and cord clip in the cord strain insulator in order to ensure positioning them properly in the insulator when the parts are reassembled. Unsolder the leads. Substitute new parts as required and assemble the parts in reverse order of removal. If the cord and plug is to be replaced, do not attempt to remove the cord clip from the old cord. Position a new cord clip on the end of the rubber insulation of the cord with the tongue of the clip toward the leads extending from the cord. Securely crimp the clip in position on the cord using the 255 pliers. Properly position the leads in the cord strain insulator with the tongue of the cord clip in the groove of the insulator. Connect and solder the leads. Slide the insulating tube over the cord strain insulator and pull the handle into position over the insulating tube. Remount the heater and tip as covered in 3.08.

Caution: Before mounting the handle, make sure the insulating tube is mounted over the leads in the cord strain insulator.

KS-14582 Soldering Copper

3.10 Tip: Remove the tip by manually unscrewing it from the body of the copper. If the tip

cannot be easily removed, hold the handle firmly in one hand and grasp the tip just behind the wedge-shaped end with the combination pliers. Loosen and remove the tip. Mount the new tip on the copper, fingertight.

3.11 Firing Pin and Washer: To replace either of these parts, hold the handle firmly in one hand and apply the R-5850 wrench to the hexagonal nut at the rear of the handle. Remove the firing pin and washer in the recessed end of the handle by turning the firing pin counterclockwise with the wrench. Substitute new parts as required and mount the parts in the reverse order of removal.

3.12 Handle: Remove the firing pin as covered in 3.11, taking care not to lose the washer in the recessed end of the handle. Remove the handle by unscrewing it from the body. If the handle cannot be easily removed, hold it firmly in one hand, grasp the body just forward of the handle with the combination pliers, and loosen the handle. Apply a small amount of KS-6824 sealing compound to the threads of the body that screw into the handle with the KS-14164 brush and mount the new handle. Remount the firing pin making sure the washer is in place in the recess in the handle.

3.13 Body: Remove the tip and handle as covered in 3.10 and 3.12. Substitute the new body, applying KS-6824 sealing compound to the threads that screw into the handle using the KS-14164 brush. Remount the parts in the reverse order of removal.

KS-16346 Soldering Iron

3.14 To replace any part of the KS-16346 soldering iron except the transformer, manually unscrew and remove the clamp nut. Slide the handle off the heating unit and tip. If the heating unit and tip is to be replaced, unsolder the lead to the unit and remove the unit tip from the cable anchor and terminal at the end of the cable. If the cable is to be replaced, disconnect the leads at the transformer using the 4-inch E screwdriver in addition to unsoldering the lead to the heating unit and tip. Substitute new parts as required and reassemble the parts in the reverse order of removal.