

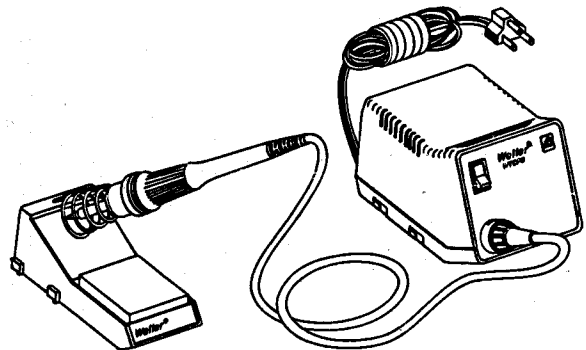
Weller® Tech Sheet

WTCPS

PRODUCT DESCRIPTION

A transformer powered soldering station, complete with a lightweight, heat insulated, low voltage, temperature controlled soldering pencil. The special Weller "closed loop" method of controlling maximum tip temperature is employed, thereby protecting temperature sensitive components while the grounded tip protects voltage and current sensitive components. The soldering pencil features a stainless steel plug in heating element construction, a non-burning silicon rubber cord, a large selection of iron plated tips in sizes from 1/64" diameter to 15/64" diameter with a choice of tip temperature of 600, 700 and 800°F.

The transformer case features an impact-resistant plastic for durability and protection against accidental damage, a quick connect/disconnect plug for the soldering iron, a lighted off-on switch, and a flat flexible 3-wire power cord.



The soldering iron tool holder can be used attached to either side of the transformer case or separated as shown. The tool holder incorporates a water reservoir with wick to keep the tip wiping sponge moist.

The soldering iron is normally provided with a PTA7 1/16" screwdriver 700°F tip. The complete WTCPS station is UL listed. The detachable stand contains a water reservoir with wick to keep the sponge wet. There are also places to store extra tips in the stand.

SPECIFICATION

POWER UNIT:

1. Power Input—(WTCPS) 120 v. 60 Hz. 60 w.
(WTCPSD) 240 v. 60 Hz. 60 w.
2. Transformer Output Voltage — 24 Volts
3. Power Unit Size — 4 1/2" x 5 7/8" x 3 5/8"
4. 3 Wire Power Cord

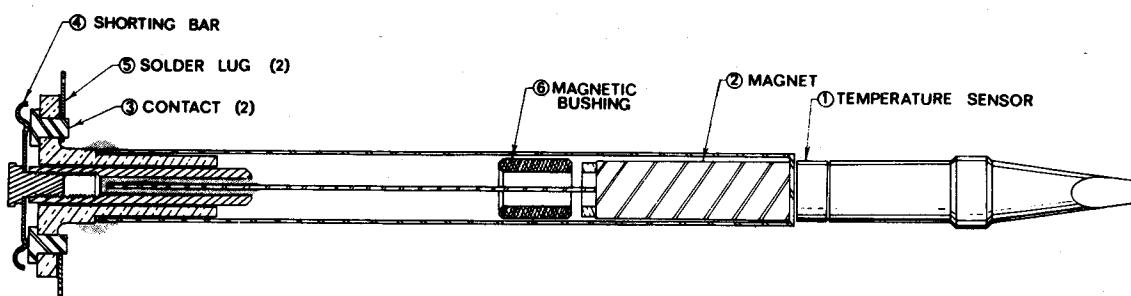
SOLDERING PENCIL:

1. Soldering Pencil Wattage — 42 watts
2. Tip Grounded
3. Pencil Weight — 2 oz.
4. Recovery Time (From 100°F Drop)
W/PTA7 Tip = 11 Sec.
5. Cord: Silicon Rubber — Burn Resistant—4 Ft.

PRINCIPLE OF OPERATION

When the soldering tip is cold, a ferromagnetic temperature sensor (1) attached to the tip attracts a permanent magnet (2). The magnet movement causes a shorting bar (4) to make contact with a set of isolated electrical contacts (3) thereby supplying power to the heating element through the solder lugs (5). When the tip reaches its idle temperature, the sensor becomes non-magnetic and no longer attracts the magnet. Then a magnetic bushing (6) attracts the magnet causing the shorting bar to break the circuit. In this manner, power to the heating element is turned on and off automatically.

CAUTION: TIP IS GROUNDED. DO NOT SOLDER IN AN ENERGIZED CIRCUIT.



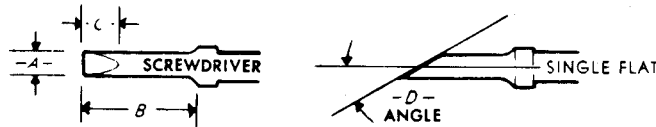
ABOUT WELLER SOLDERING PENCIL TIPS

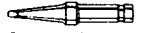




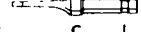
All Weller PT Series soldering pencil tips have been plated with an exclusive process that deposits three (3) protective coatings. The high conductivity copper tips are iron plated, then nickel plated and finally chromium plated on non-working surfaces. The working surface is then pre-tinned. The chromium and nickel plating of the tip prevents oxidation of the iron plating which can cause freezing of the tip in the pencil. The chromium also prevents solder "creep-up". Weller's "temperature-sensing" tips have a small ferromagnetic sensing element attached to the tip shank. The sensing element is coded with a number to indicate idle temperature in hundreds of degrees F. Thus a simple change of tips is all that is necessary to adapt the tool to an entirely different temperature range. **Use only original Weller soldering tips. Use of non-Weller components may void product warranty if the non-Weller component causes damage to the unit.**

SELECTION OF WELLER PT SERIES TIPS

1. Select a tip configuration with the maximum working surface, thickest cross section and shortest reach compatible with the size, the accessibility, and the visual restrictions of the solder joint.
2. Select a tip temperature based on the size of the solder joint, the temperature sensitivity of the components, and the production rate required. Please note that tip life is directly related to tip temperature — the lower the tip temperature the longer the tip life.

Weller industrial soldering tips have heavy iron plating with anti-oxidation coating.



	Catalog Numbers			Description	Dimension			
	600°F	700°F	800°F		A	B	C	D
	PTA6	PTA7	PTA8	Screwdriver	1/16"	5/8"	3/32"	15°
	PTAA6	PTAA7	PTAA8	Single Flat	1/16"	5/8"	3/32"	30°
	PTB6	PTB7	PTB8	Screwdriver	3/32"	5/8"	3/32"	22°
Screwdriver	PTBB6	PTBB7	PTBB8	Single Flat	3/32"	5/8"	3/32"	30°
	PTC6	PTC7	PTC8	Screwdriver	1/8"	5/8"	1/8"	22°
Conical	PTCC6	PTCC7	PTCC8	Single Flat	1/8"	5/8"	1/8"	30°
	PTD6	PTD7	PTD8	Screwdriver	3/16"	3/4"	3/16"	22°
Single Flat	PTDD6	PTDD7	PTDD8	Single Flat	3/16"	3/4"	3/16"	30°
	PTP6	PTP7	PTP8	Conical	1/32"	5/8"		
Long Scwdr.	PTK6	PTK7	PTK8	Long Scwdr.	3/64"	1"	7/16"	7°
	PTH6	PTH7	PTH8	Screwdriver	1/32"	5/8"	1/8"	15°
	PTL6	PTL7	PTL8	Long Scwdr.	5/64"	1"	1/2"	7°
Long Conical	PTF6	PTF7	PTF8	Conical Flat	1/32"	5/8"	1/32"	40°
	PTM6	PTM7	PTM8	Long Scwdr.	1/8"	1"	3/4"	7°
Narrow Scwdr.	PTR6	PTR7	PTR8	Narrow Scwdr.	1/16"	5/8"	1/8"	12°
	PTS6	PTS7	PTS8	Long Conical	1/64"	1"		
	PTO6	PTO7	PTO8	Long Conical	1/32"	1"		
	PTE6	PTE7	PTE8	Screwdriver	15/64"	3/4"	3/16"	22°

CARE OF WELLER PT SERIES TIPS

1. Keep tip tinned; wipe only before using.
2. Use rosin or activated rosin fluxes. Acid type fluxes will greatly reduce tip life.
3. Remove tip and clean w/suitable cleaner for flux used. The frequency of cleaning will depend on the type of work and usage. Tips in constant use should be cleaned at least once a week.
4. Don't try to clean tip with abrasive materials and never file tip, to do so will greatly reduce tip life. If the tip becomes unwettable, it may be cleaned with a soft iron or brass brush using solder flux as a solvent.
5. Don't remove excess solder from heated tip before storing. The excess solder will prevent oxidation of the wettable surface when tip is reheated.
6. Don't use anti-seize compounds on tips, they have been plated for oxidation protection.

WTCPS TROUBLESHOOTING GUIDE

CAUTION: 120 VAC (240 VAC for WTCPSD) is present inside power unit whenever unit is connected to power line.

I. TC201P hand tool will not heat.

- A. Check at Pin 1 and Pin 5 of power unit tool receptacle for 24 VAC. If not found, proceed to step C. If power unit tests good, TC201P is defective.
- B. TC201P Troubleshooting Guide* (Cold Tool).
 1. Tip Check—inspect tip for missing magnastat on tip or wrong type tip. Replace tip. Check tip spring action; there should be 1/16" minimum spring action.
 2. Heating Element Check—check resistance at Pin 1 and Pin 5 of tool plug (center and right hand pin), 12 to 14 ohms. If tool tests good, connector pins are worn or damaged and not making good contact. If tool tests bad, remove two screws from heating element flange. Grasp heater barrel and black heat insulator, pull heating element free from tool. Check resistance at two closely spaced pins on heating element (12 to 14 ohms).
 3. Magnastat Switch Check:
Place tool on workbench with flat at rear of handle up. Insert 3/16" flat blade screwdriver into slot at rear of handle. Compress cord by pushing downward and toward handle until cord is pushed into handle (do not pry on handle). This releases the strain relief catch. Slide handle down cord to expose switch terminals. Check for proper magnastat switch operation by testing for continuity across magnastat switch terminals with tip held against end of switch and loss of continuity when tip is removed. If magnastat switch checks good, check wiring for continuity. Refer to schematic.

C. PU120/PU240 Power Unit Troubleshooting Guide (No 24 VAC at Pin 1 & Pin 5 of tool receptacle.)

CAUTION: 120 VAC (240 VAC for WTCPSD) is present inside the power unit case whenever the line cord is connected to a line receptacle.

1. Remove four screws from case bottom, remove case bottom.
2. Check for on/off switch light when unit is turned on. If switch light is not on with unit turned on, on/off switch, line cord, or associated wiring is defective. Unplug unit from AC line and test wiring for continuity referring to schematic.
3. Check for 24 VAC at two transformer red wires with unit on and plugged into AC power. If transformer checks bad, replace PU120 (PU240).

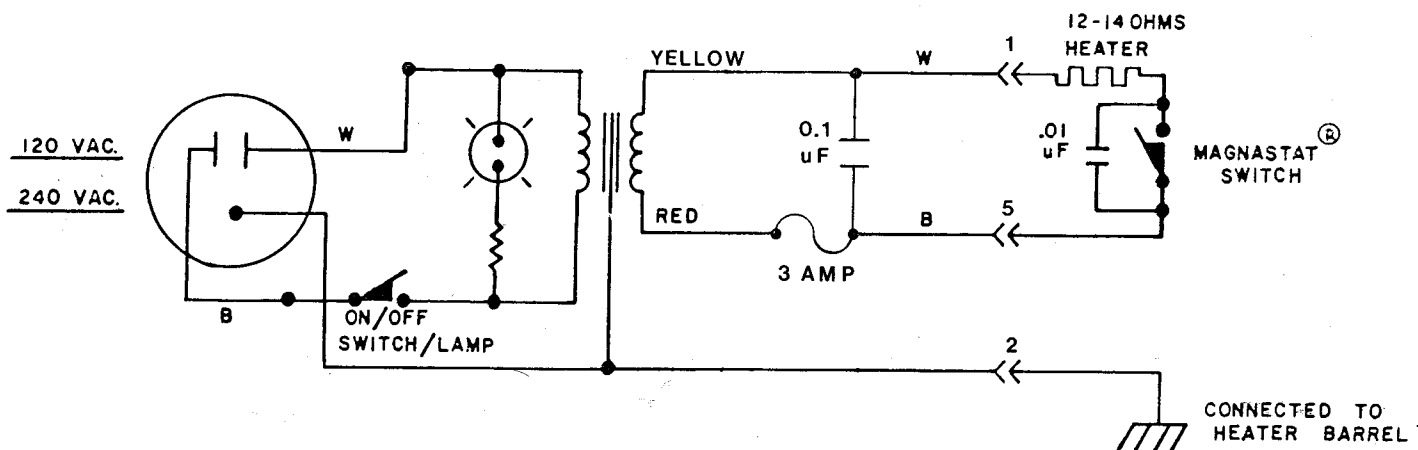
II. TC201P hand tool overheats or temperature is higher than marked on tip, temperature control is erratic.

- A. Replace tip with Weller tip.
- B. Check magnastat switch & heating element. For correct type & operation refer to steps I. B. 2. & 3.

III. High voltage on tip or indication of damage to circuit components.

- A. Check tip ground for maximum 1 ohm resistance from heater barrel to line cord round pin.
- B. Check heater barrel to Pin 2 of tool receptacle for 1 ohm maximum. If this shows good, go to step 3. C. Remove heating element as in step I. B. 2. and check ground pin on heating element. Check from ground pin receptacle in heat insulator to tool receptacle pin. Replace line cord.
- C. Remove case bottom and check green wire from line cord to tool receptacle. Replace power unit line cord.

*For use with plug-in heating element tools only.



CUSTOMER SERVICE

Should your WTCPS/WTCPSD require repair or adjustment it may be sent to the following address:

COOPER GROUP-WELLER PLANT

State Road

Cheraw, SC 29520

Attn: Repair Dept.

REPLACEMENT PARTS FOR WTCPS/WTCPSD

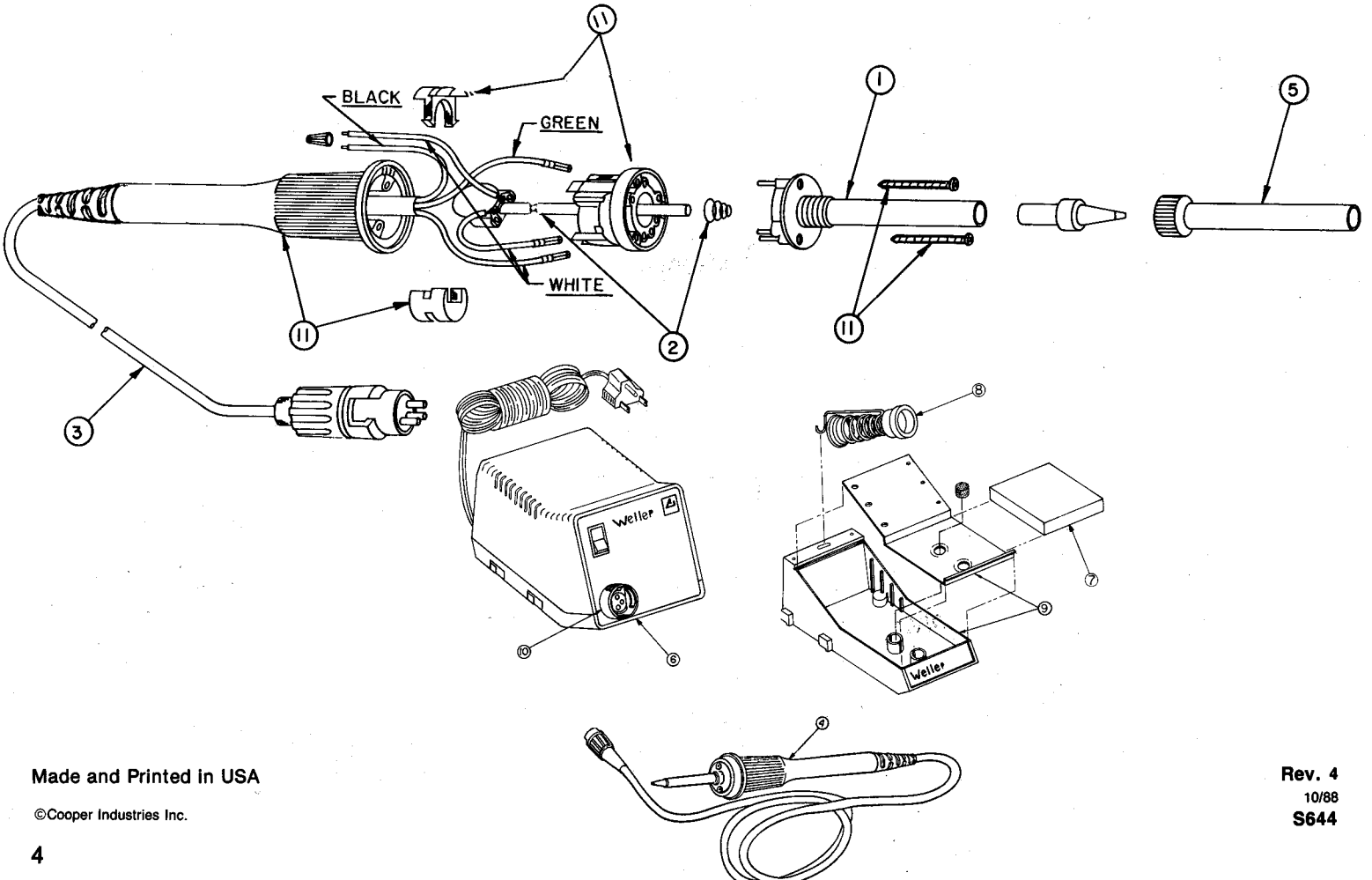
(Please state product model number when ordering)

KEY NO.	PART NO.	DESCRIPTION
1	EC234	Heater (plug-in type)
2	SW60	Switch Assembly w/Spring
3	TC212	Cordset w/Plug
4	TC201P	Soldering Pencil w/Tip
5	BA60	Barrel Nut Assembly
6	PU120	Power Unit Only WTCPS
6a	PU240	Power Unit Only WTCPSD
7	TC205	Sponge
8	TC204	Iron Holder w/Funnel
9	PH1201	Iron Stand
10	PL120	Plug/Receptacle Kit
11	EC232	Handle Assembly
Not Shown	SW120	Switch/light Power Unit WTCPS
Not Shown	SW240	Switch/light Power Unit WTCPSD
Not Shown	TR215	Power Transformer, 120V.
Not Shown	SHA1	Cushion Grip Sleeve For Iron Handle
Not Shown	TR216	Power Transformer, 240V
Not Shown	DS608	Replacement fuse

OPTIONAL PART

Not Shown	WPB1	Polishing Bar For Tips
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REPLACEMENT PART ILLUSTRATIONS



SW60 SWITCH REPLACEMENT

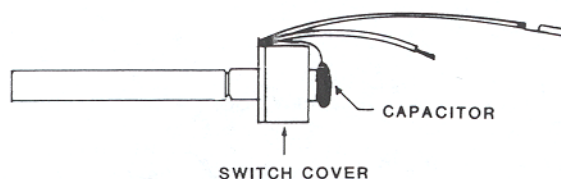
Kit Includes:

- 1 - SW60 Switch W/Capacitor
- 1 - Long Conical Spring

- 2 - Long Screws #2 x 1"
- 1 - Wire Connector

THE FOLLOWING PROCEDURE SHOULD BE FOLLOWED FOR SWITCH REPLACEMENT.

1. Remove two Phillips head screws (#1) from flange.
2. Grasp heating element (#2) in one hand while holding black insulator (#3) and handle (#4) in other hand and pull heating element out.
3. Locate flat on strain relief (#5) where cord enters handle. This flat is aligned with the Weller logo. Press downward and forward with a flat screw driver until cord moves forward into handle. DO NOT PRY ON HANDLE.
4. Pull insulator (#3), switch (#6) and cord (#8) out of handle.
5. Remove white switch lead (#7) from the black insulator (#3) by pulling connector pin out with the needle nose pliers or remove terminal using special pin removal tool.*
6. Remove wire connector (#9) from other switch lead and wires attached to it.
7. Grasp switch insulator and force switch rearward approximately $\frac{3}{4}$ " until spring (#10) is disengaged from groove in switch barrel.
8. Slide spring forward over end of switch barrel and remove spring.
9. On new switch, gently bend the capacitor down and over boss on switch cover. See below



10. Insert new switch through insulator (#3) and insert white lead (#7) with crimp terminal into insulator until it snaps and cannot be pulled back.
(Note: The crimp pin anti-rotation tabs must be turned toward the center of the tool, against the protruding insulator extension. The terminal will not insert otherwise.)
11. Slide the long conical spring (#10) over the switch barrel (large opening end of spring toward insulator) and slide it rearward until it snaps into groove in the switch barrel.
12. With wire connector (#9), reconnect the other switch lead and wires that were connected to it from Step 6.
13. Assuming the strain relief did not come off the cord, pull the cord through the handle so that the insulator with switch can be worked into place. Align the switch and insulator as shown in Figure 2 so that capacitor leads are facing towards you. Rotate the handle so that the Weller logo is also toward you in the same plane. Guide the switch and insulator into the handle, wiggling slightly to properly seat insulator. The switch terminals should straddle the screw boss in the handle if positioning is correct.
14. With the handle in one hand and the cord in the other, rotate the cord until the flat on the strain relief aligns with the handle stop bar under the Weller logo. Pull firmly until the strain relief snaps into place. (If this cannot be done, check for strain relief alignment or insulator alignment.) Replace heating element and flange screws. Check switch for free movement with tip. There should be approximately $\frac{1}{16}$ " movement of the tip from spring action.

*Note: If crimped wire receptacles are removed by force they will be rendered non-reusable. When replacing defective parts this is not detrimental because line cords and magnastat switches are supplied with new receptacles crimped in place. For removing receptacles without damage, a special tool is required. This tool may be easily made from a common lady's "bobby pin" which has .020" x .050" spring wire material. The open end of the pin is inserted into the grooves in the insulator around the receptacle hole. The receptacle may then be removed without damage by pulling from the wire side.

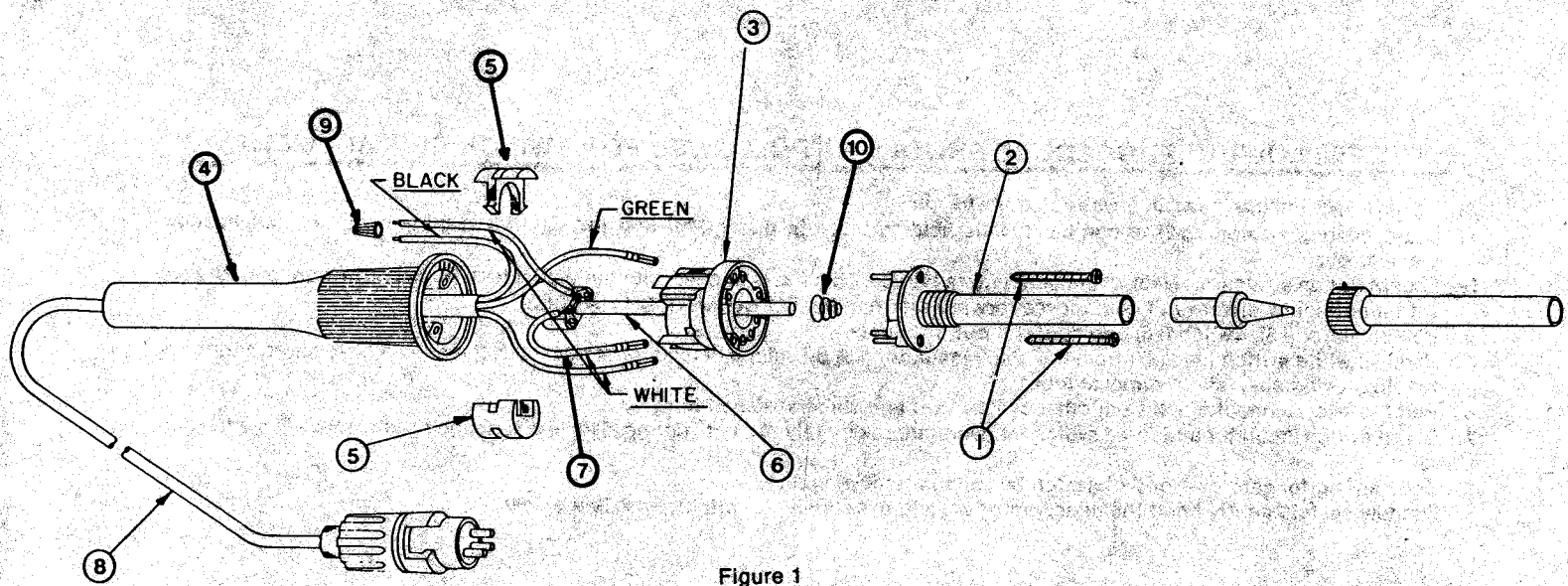
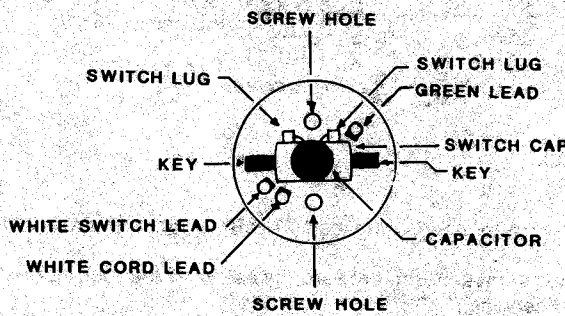


Figure 1



Switch alignment in insulator as viewed from handle side of insulator. (Lead wires not shown.)

Figure 2



AMP★ EXTRACTION TOOL
91136-1

REDUCED FOR PACKAGING

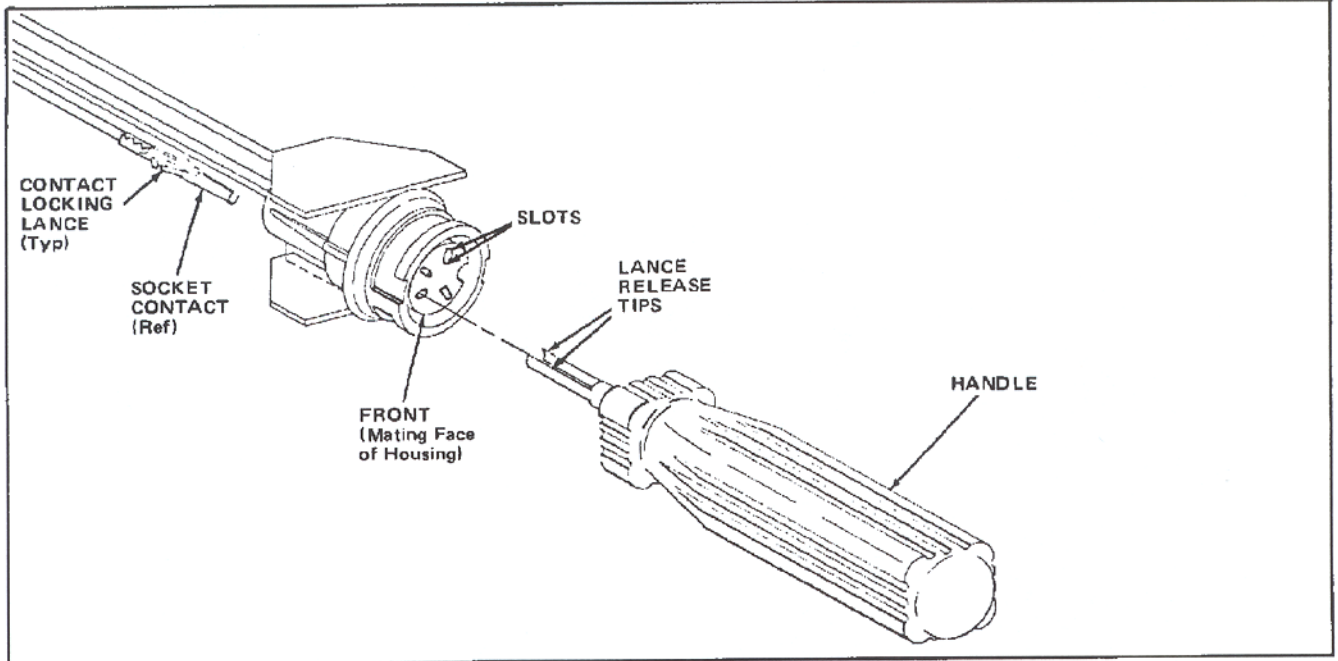
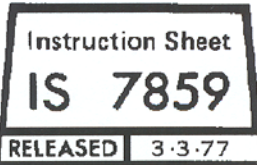


Fig. 1

1. INTRODUCTION

AMP Extraction Tool 91136-1 is designed for removing pin and/or socket contacts from AMP Audio Microphone Connectors. Read this material thoroughly before extracting any contacts.

NOTE All dimensions presented on this instruction sheet are in inches, unless otherwise stated.

2. DESCRIPTION

This tool consists of a plastic handle and two lance release tips for depressing the contact locking lances (see Figure 1).

3. CONTACT EXTRACTION

Refer to Figure 1 and proceed as follows:

1. Determine which contact is to be removed.
2. Look straight into FRONT (Mating Face) of housing. Notice location of slots in contact cavity for lance release tips.
3. Insert lance release tips straight into slots until tool bottoms on housing. The contact locking lances are now released.
4. Keeping tool bottomed on housing, grasp wire of contact to be removed and pull contact straight out BACK of housing.
5. Remove tool from contact cavity.

4. TOOL CERTIFICATION

AMP Extraction Tool 91136-1 should be certified with the information provided in Figure 2. Each tool should be inspected immediately upon arrival at your facility to be sure it has not been damaged in transit, and at regularly scheduled intervals to be sure it remains functional.

Additional tools can be purchased from:

AMP Incorporated
Eisenhower Boulevard
Harrisburg, Pennsylvania 17105

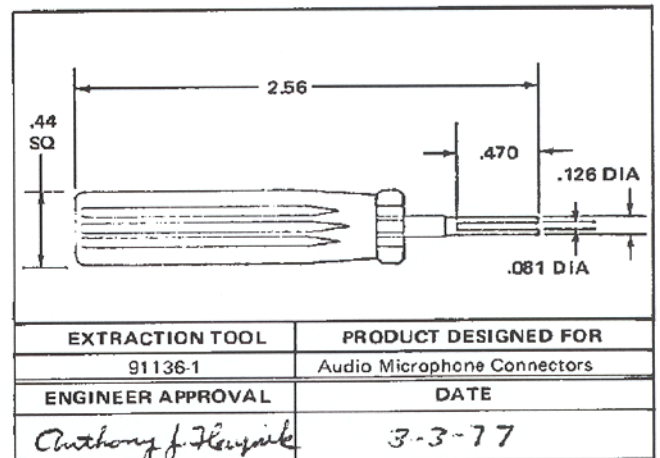


Fig. 2

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