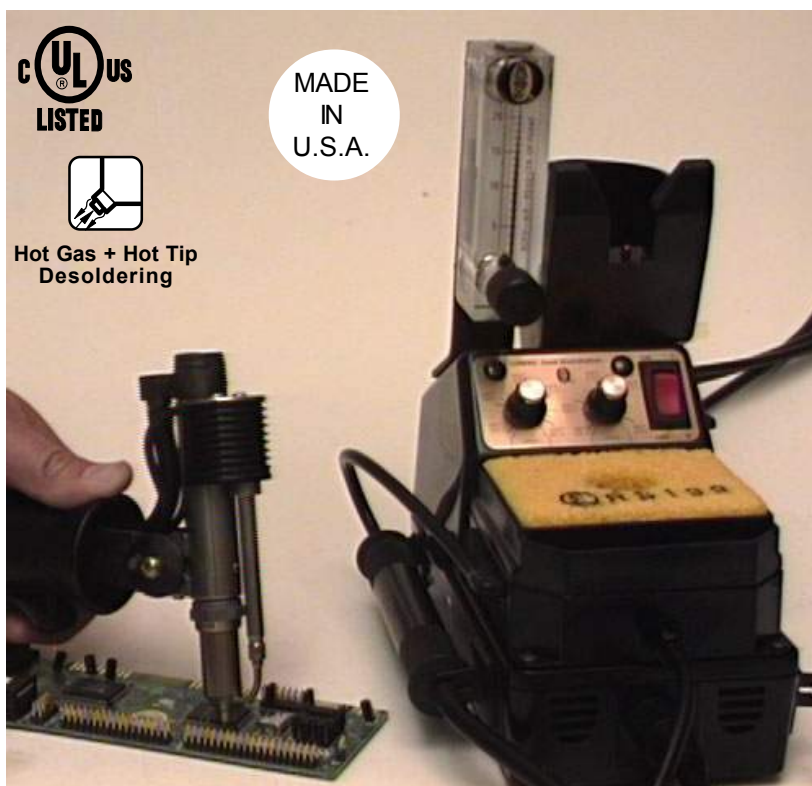


EDSYN^{INC}®

TSX70 *SOLDAVAC*® SMT Reflow Vacuum Workstation

IT COMPLIES WITH MIL-S-45743E, MIL-STD-2000, DOD-STD-2000-1B,
WS6536E AND ESD SPEC, DOD-STD-1686, DOD-HDBK-263



instruction manual

TSX70

SOLDAVAC®



Static Safe

Solder-Handling Station
(Hot Gas & Hot Tip Desoldering)

Table of Contents

- 3. Specifications
- 4. Features
- 5. Connection & Hook-up
- 6. Operation
- 7. Hand Tool Adjustments
- 7. Tip Replacement
- 8. Cleaning & Maintenance
- 9. Calibration
- 10. Spare Parts Hand Tool
- 12. Spare Parts Power Supply

EDSYN^{INC}®

TSX70

SOLDAVAC®

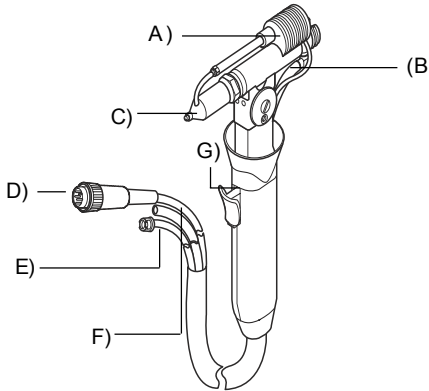
Solder-Handling Station
(Hot Gas & Hot Tip Desoldering)

SPECIFICATIONS

- 120V, 60 Hz, 39W - 330W
- Weight; **Power Supply:** 6.2 lbs. (2.8 kg)
Hand Tool: 13.5 ozs. (383 g)
- Temperature range of 400 °F to 800 °F (205 °C-425 °C).
- Flow is 22 SCFH (11 Li/min) @ 80 psi, 19 SCFH (9 Li/min) @ 65 psi.
- Voltage leakage from tip to ground, less than 2 MV.
- Tip to ground resistance, less than 2 ohms.
- COMPLIES WITH MIL-S-45743E, MIL-STD-2000, DOD-STD-2000-1B WS-6536E and ESD SPEC, DOD-STD-1686, DOD-HDBK-263.

Hand Tool FEATURES

- A) Gas Heater.
- B) Desoldering Head Housing.
- C) Desoldering Tip.
- D) 24V Power Input, turn clockwise to engage.
- E) Gas Connector, turn clockwise to engage.
- F) Vacuum Line, connect to AFX73.
- G) Trigger, activates vacuum.
- H) Cleaning Tool.

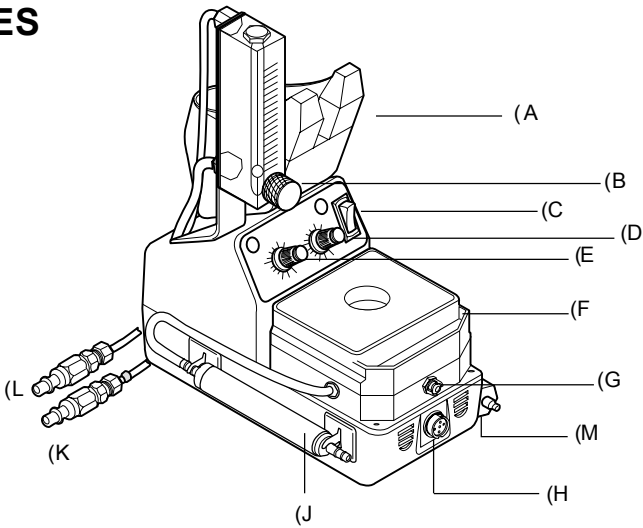


**DAMAGED CORD SHOULD
ONLY BE REPLACE BY AN
EDSYN-CERTIFIEDTECHNICIAN**

*ï Tool should be place in
Holder when not in use.*

*ï Hot Gas flow will stop if Tool
is placed in the Holder.*

Power Supply FEATURES



- A) Tool Pod, equipped with micro-switch to activate gas & vacuum.
- B) Gas Flow Control in standard cubic feet per hour delivered to Desoldering Tip.
- C) Power Switch, to activate WorkStation.
- D) Temp. Control Knob, Heater for Desoldering.
- E) Temp. Control Knob, Heater for Gas.
- F) **SH232** Sponge Holder, with cleaning sponge.
- G) Gas Output, controlled flow.
- H) Power output, 24V, controlled
- I) **WT623** Tip Wrench
- J) **AFX73** Filter, NOTE VACUUM FLOW DIRECTION.
- K) Gas Input, color coded sleeve.
- L) Shop air input.
- M) **CSX70** Cleaning Tool

CONNECTION & HOOK-UP

Hand Tool Connectors must be turned clockwise to engage.

Ideal air pressure input:

60 to 90 psi

413.7 - 620.5 KPA

4.1 - 6.2 bar

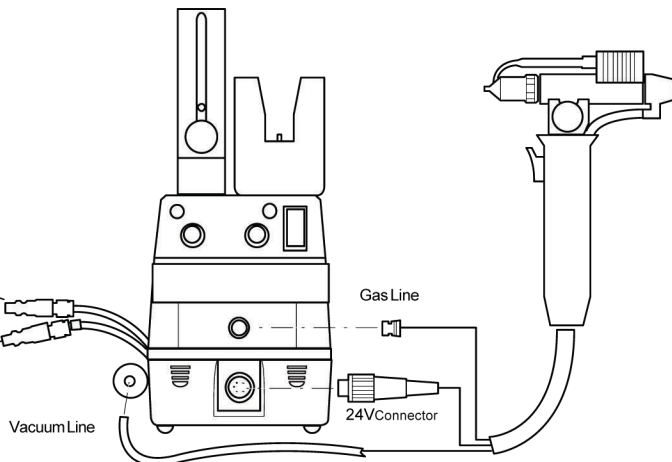
Inert Gas Input

(color-coded sleeve): **13**

psi max.

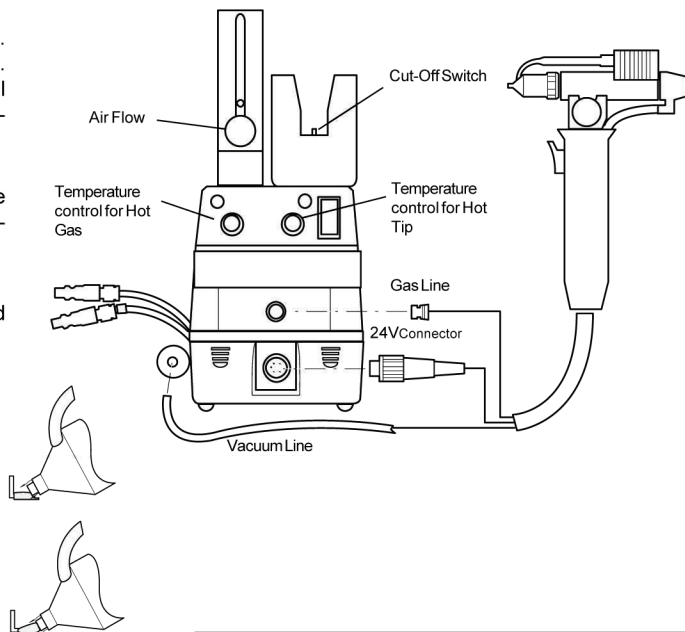
5 SCFH

2.4 Li/min.



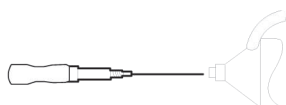
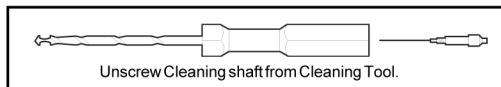
OPERATION

1. Turn on Power Switch. Heater indicator lights up. Hot Gas & Vacuum will activate if Tool is removed from the Holder.
2. Set both temperature controls to desired temperature. i.e. 600°F (315°C).
3. Adjust air flow to desired setting (3 to 5 SCFH).
4. Place Tip close to working area.
5. When solder reflows, press Trigger to desolder.



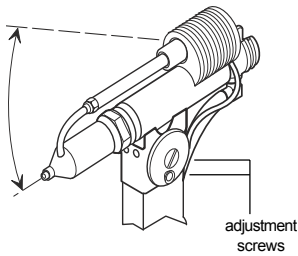
POINTERS:

- 1. USE CLEANING SHAFT TO REMOVE ANY OBSTRUCTION IN THE TIP.
- 2. ACTIVATE VACUUM IN PULSES RATHER THAN CONTINUOUS SUCTION.

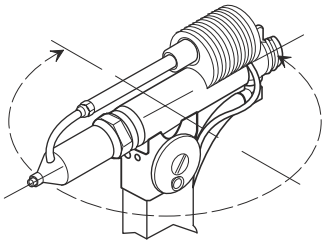


ADJUSTMENT

Should be done while the tool is cool.



To tilt the Head Assembly, loosen (2) Adjustment Screws. Tilt the Head Assembly to desired position and retighten screws.



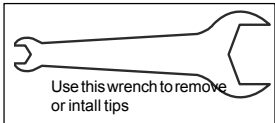
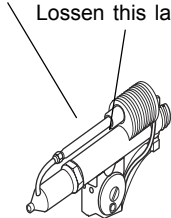
Twist until it locks into 1 of it's 4 positions. Twisting counter-clockwise will permit a 180° turn. Twisting clockwise will permit a 90° turn.

Note: Head Assembly does not make a full 360° turn

CHANGING TIP

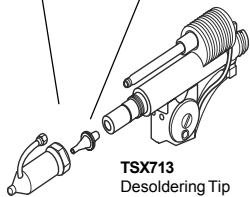
REMOVING:

Loosen this first
Loosen this last



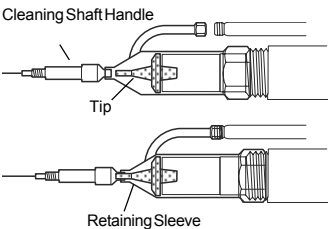
INSTALLING:

Tighten this last
Tighten this first



Before tightening the Retaining Sleeve

Check tip alignment by inserting the end of the Cleaning Shaft handle inside the tip, then tighten Retaining Sleeve

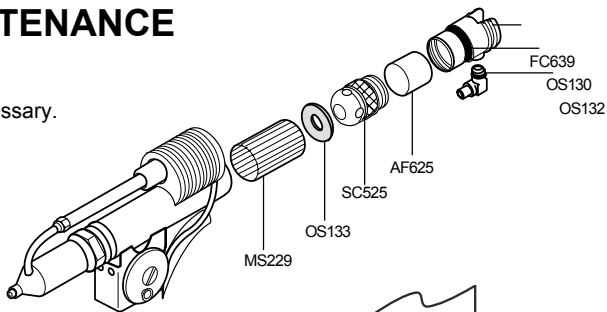


IT IS RECOMMENDED FOR THE OPERATOR TO REMOVE AND INSPECT THE TIP DAILY. REPLACE TIP THERE IS ANY SIGN OF CORROSION. DOING THIS WILL ALSO PREVENT THE TIP FROM SEIZING ON TO THE HEATER.

CLEANING & MAINTENANCE

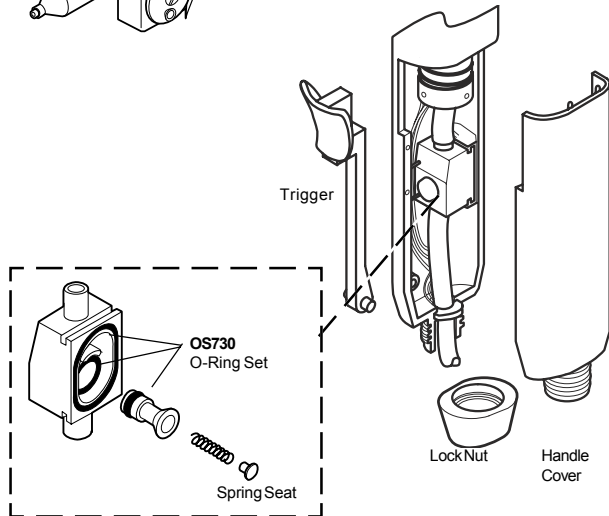
1. Replace AF625 Filter.
2. Clean SC525.
3. Clean or replace OS133 if necessary.
4. Replace MS229.
5. Replace worn-out Tip.

INSPECT OVER-ALL TIP
CONDITION REGULARLY.



O-Rings Replacement inside Valve Assembly

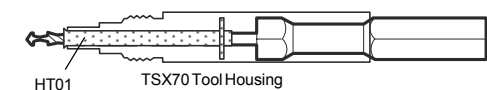
- a) Unscrew Lock Nut at the end of the Tool Handle.
- b) Remove Handle Cover.
- c) Slide out Valve Assembly while placing your finger over the Spring Seat. **BE CAREFUL NOT TO LET THE SPRING AND THE SPRING SEAT SHOOT OUT FROM THE HOUSING**
- d) Clean all parts with **alcohol only**.
- e) Replace **OS730** O-Ring Set (set of 3).
- f) Lube new O-Rings with **OL111** O-Ring Lube.



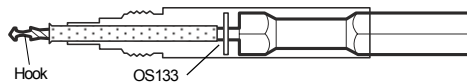
Make sure wires and hoses are not pinched or kinked.

HT01 & OS133 Replacement

Cleaning the Desoldering Head Housing



To clean wall of Housing, Remove Mica Sheet.
Rotate Cleaner while pushing in.



Push Cleaner all the way to remove HT01 Tube.



Remove O-Ring by using the Hook.



Place Cleaning Shaft & Tip/O-Ring Guide in HT01 Tube.



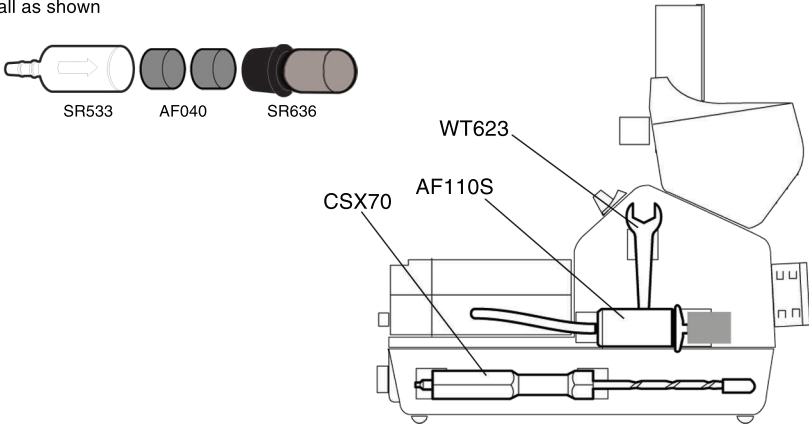
Place inside Housing & push O-Ring over HT01.
REMOVE GUIDE AFTER USING.

Safety Cover
Cleaning Shaft Holder

CLEANING & MAINTENANCE

AF110S Silencer

Install as shown

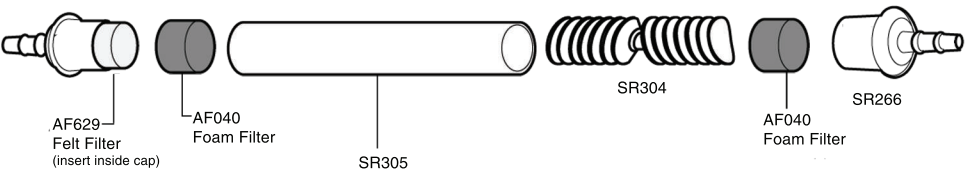


AFX73 Maintenance

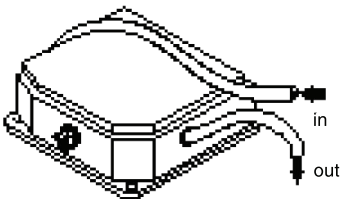
Replace dirty Filter Element.
Clean SR304 and SR305 with alcohol.



Tip Wrench can be used to remove SR266 filter cap.

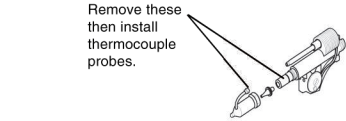


If flux gets in the venturi, disconnect the AFX73 and AF110S. Flush the venturi with alcohol. You may need to pump the alcohol through the venturi.



CALIBRATION

NOTE: The TI680 has only one input jack. Calibrate each heater separately.



For heater A:

- Using option 1, turn on power and set **left** Temperature Control Knob to 400°F (205°C). Allow heater **A** to warm up.
- Adjust **LO**-Temp. Calibration Pot on the left side of the station so the TI680 Meter will read 500°F (260°C).
If you are using option 2, adjust pot so meter will read 640°F (338°C)
- Set Temperature Control Knob to 800°F (427°C).
- Adjust **HI**-Temp. Calibration Pot so the Meter will read 900°F (482°C).
If you are using option 2, adjust pot so meter will read 1120°F (604°C)



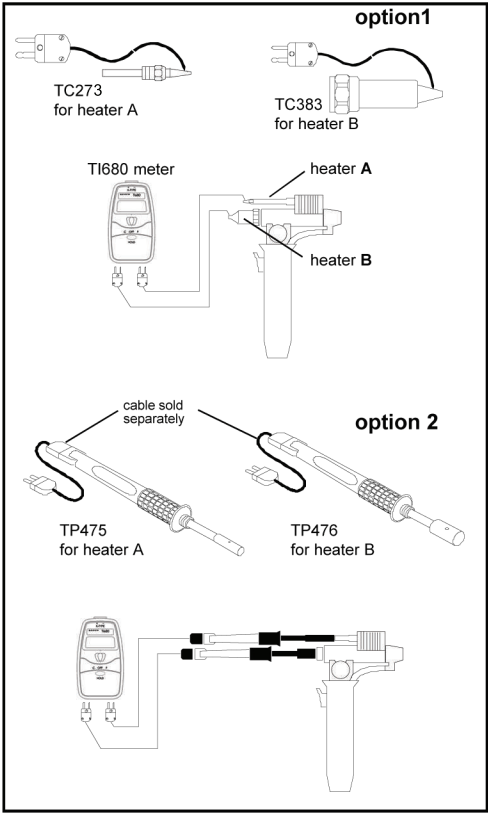
For heater B:

- Using option 1, set **right** Temperature Control Knob to 400°F (205°C). Allow heater **B** to warm up.
- Adjust **LO**-Temp. Calibration Pot on the right side of the station so the TI680 Meter will read 500°F (260°C).
If you are using option 2, adjust pot so meter will read 490°F (254°C)
- Set Temperature Control Knob to 800°F (427°C).
- Adjust **HI**-Temp. Calibration Pot so the Meter will read 900°F (482°C).
If you are using option 2, adjust pot so meter will read 980°F (527°C)



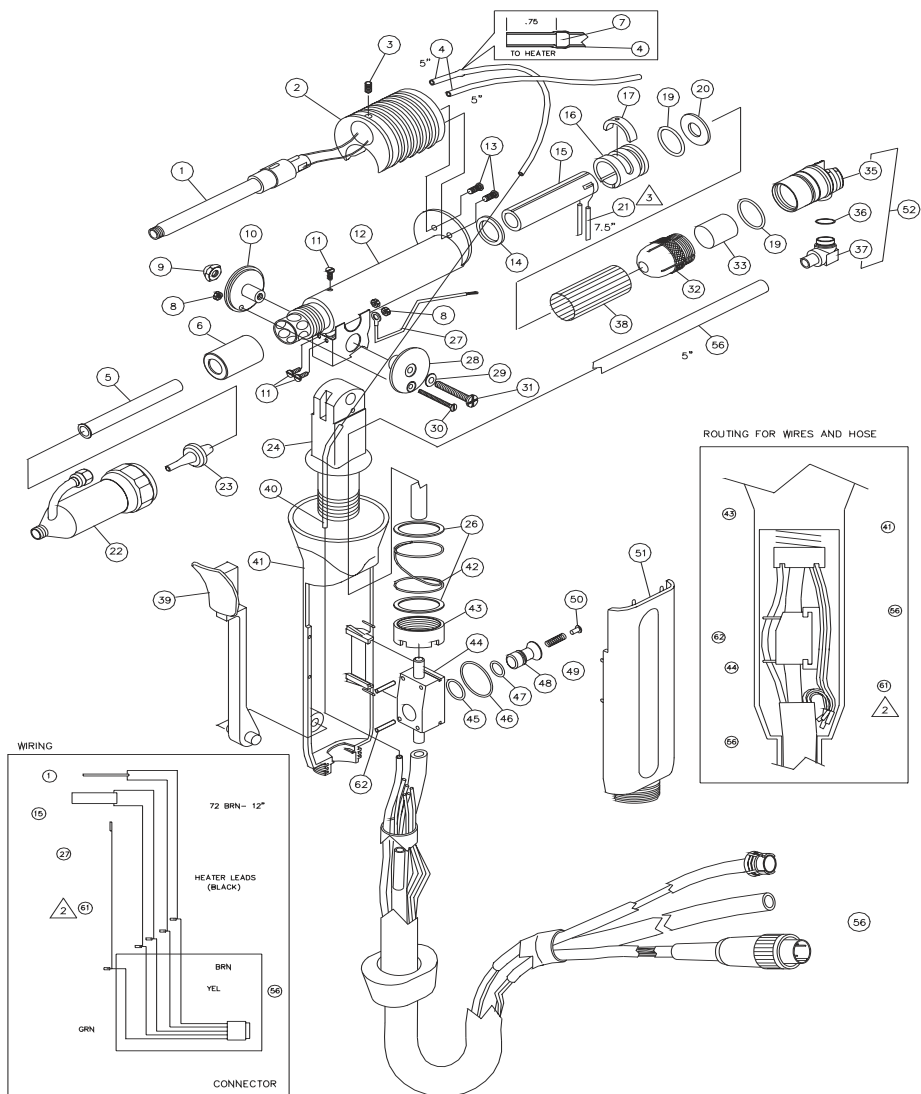
IMPORTANT:
User must understand the principle of wire probe (option 2). See Form.800. Procedure may yield different temperatures than noted above.

THERMOCOUPLE PROBES



SOLDERING TIPS

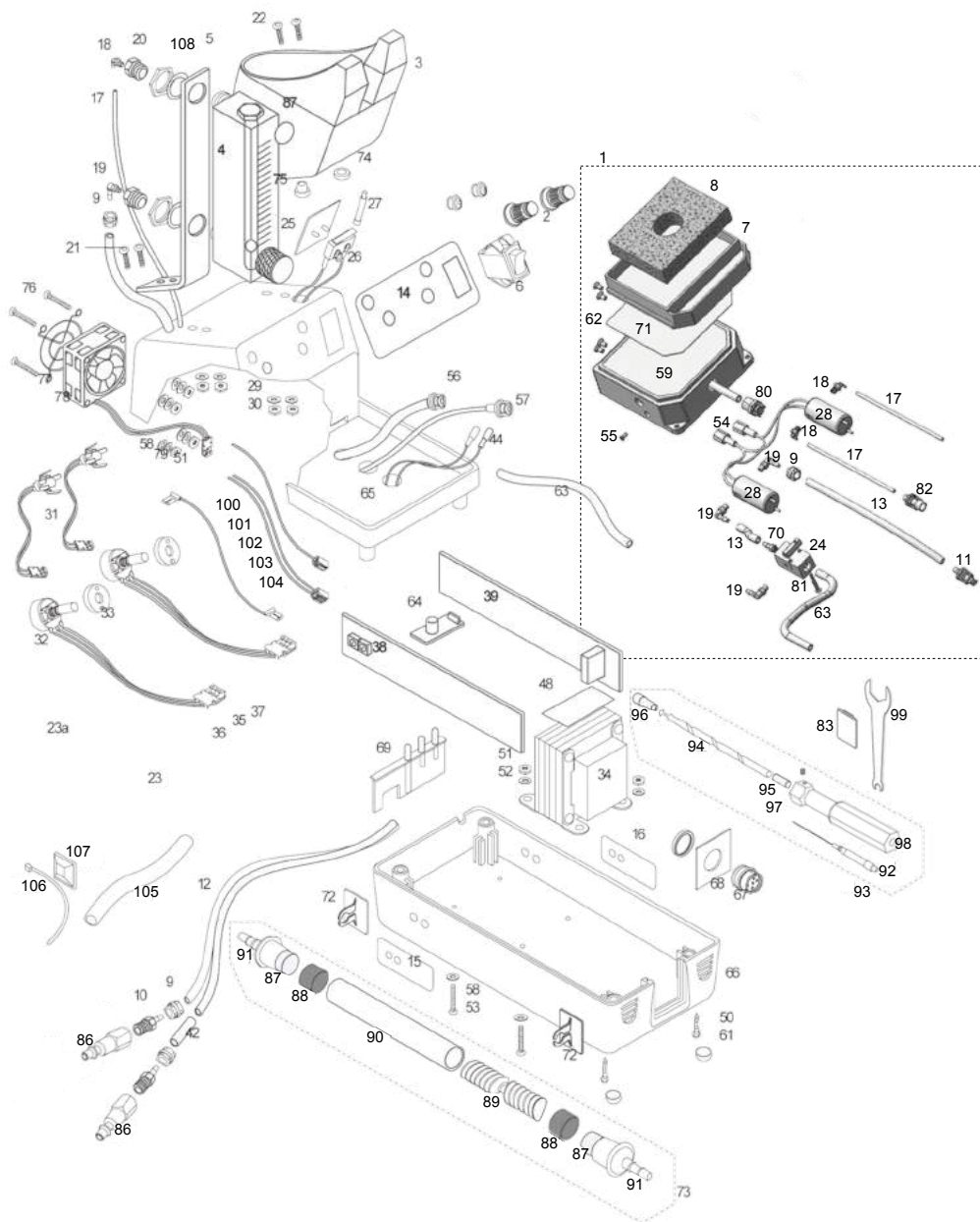
		Hole Dia.	Length
TSX715		.09	.55
Focus Nozzle		(2.3 mm)	(14.0 mm)
TSX713		.05	.43
Small		(1.3 mm)	(10.9 mm)
TSX716		.02	.80
Round Needle		(.5 mm)	(20.3 mm)
TSX717		.01	.63
Small Oval Needle		(.3 mm)	(16.0 mm)
TSX718		.02	.80
Medium Oval Needle		(.5 mm)	(20.3 mm)



TSX70-1 *SOLDAVAC*^{®/E} SOLDER HANDLING TOOL SPARE PARTS LIST

ITEM NO.	PART NO.	DESCRIPTION	QTY REQ'D
1	SR341	Heater Assy. 24V, Hollow Threaded	1
2	SR342	Housing, Hot Gas Heater	1
3	SR343	Set Screw	1
4	HS304	Low Static Silicone Hose, 3/32 i.d.	2
5	HT01	Hot Tube	1
6	AC737	Accumulator Bushing	1
8	SR007	Nut, Hex, 2-56	3
9	SR170	Nut, Hex, Cap, 8-32	1

ITEM NO.	PART NO.	DESCRIPTION	QTY REQ'D
10	SR006	Index Flange (nut side)	1
11	SR122	Screw, Pan Hd, Slotted, 2-56 x 1/8	3
12	SR440	Housing, Desold Head Assy.	1
13	SR345	Screw, Pan Hd, Phillips, 4-40 x 3/8	2
14	SR119	Teflon Spacer	1
15	SR120	Heater Element, 24V, 70W	1
16	SR117	Teflon Bushing	1
17	SR118	Heater Restrainer	1
19	OS731	O-Ring for Heater Bushing and End Cap	2
20	OS133	Silicone Washer	1
21	SR145	Teflon Braided Fiberglass	2
22	RSX72	Retaining Sleeve for Heater Assy.	1
23	TSX713	Desoldering Tip	1
24	SR629	Head Shaft	1
26	SR126	Washer, Nylon	2
27	SR121	Grounding Wire	1
28	SR005	Index Flange (screw side)	1
29	SR169	Washer, Flat, .32 O.D. x .17 I.D	1
30	SR008	Screw, Flat Head, Slotted, 2-56 x 1	2
31	SR168	Screw, Pan Head, Phillips, 8-32 x 1	1
32	SC525	Solder Cone	1
33	AF625	Felt Filter (set of 10)	1
35	SR148	Housing for End Cap	1
36	OS132	O-Ring for Elbow Connector of End Cap	1
37	SR147	Elbow Connector of End Cap	1
38	MS229	Mica Sheet	3
39	SR128	Trigger	1
40	SR348	Gas Tube	1
41	SR349	Handle Base	1
42	SR125	Spring for Head Shaft	1
43	SR127	Retaining Nut for Head Shaft	1
44	SR129	Valve Housing	1
46	OS730	O-Ring Set for Valve Assy. (3 O-Rings)	1 set
48	SR130	Poppet (O-Ring included)	1
49	SR131	Spring	1
50	SR132	Seat for Spring	1
51	SR350	Handle Cover	1
52	FC639	End Cap Assy.	1
55	SR352	Fitting, Quick Disconnect, Female	1
56	HL603	Hose, Low Static Silicone, 3/16 i.d.	5"
57	SR353	Plug, Male Cable Connector	1
60	SR393	Retaining Nut for Handle	1
62	SR143	Wire Guide, 3/8 Length, Nylon	2
68	SR335	Valve Assy.	1
69	SR356	Hose and Wiring Assy.	1

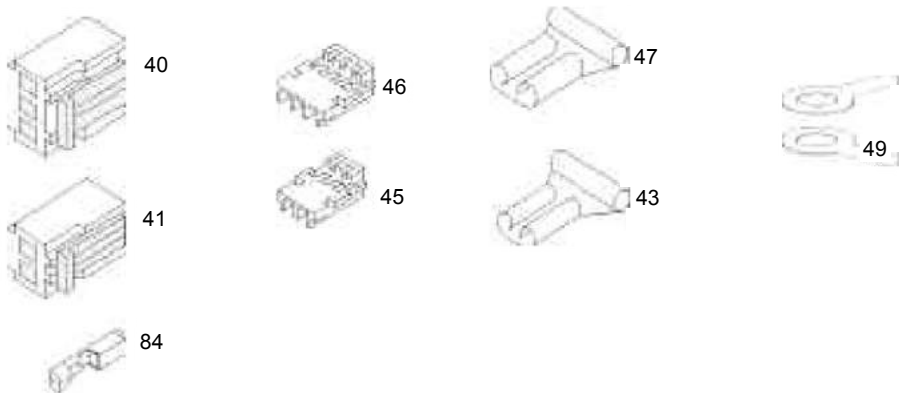
TSX70-2 SOLDAC[®] SOLDER HANDLING TOOL SPARE PARTS LIST

ITEM NO.	PART NO.	DESCRIPTION	QTY REQ'D
1	SR408	Solenoid and Vacuum Ejector Assembly	1
2	SR068	Temperature Control Knob for Dual Station	2
3	SR376	Tool Pod Holder for Hot Gas Tool	1
4	SR375	Flow Meter	1
5	SR443	Mounting Bracket for Flow Meter	1
6	SR065	Power Switch	1
7	SH232	Low Profile Sponge Holder Tray	1
8	RS199	Replacement Sponge	1
9	LC363	Locking Collar for 1/4 in. Hose (set of 5)	4
10	HB357	Threaded Hose Barb Fitting	2
11	SR428	Male Coupling Quick-Disconnect for 1/8 in. Hose	1
12	SR378	Black Twin Tubing Polyurethane Hose ID: 1/8in. (sold per foot)	72 in.
13	SR283	Black Polyurethane Hose ID: 1/8 in. (sold per foot)	6.96 in.
14	SR380	Front Control Panel Label	1
15	SR310	Temperature Calibration Label for Right Side	1
16	SR311	Temperature Calibration Label for Left Side	1
17	SR351	Black Polyurethane Hose ID: 1/16 in. (sold per foot)	22.92 in.
18	SR381	Elbow Connector ID: 1/16 in. (set of 3)	3
19	SR382	Elbow Connector ID: 1/8 in. (set of 3)	4
20	SR383	Fitting Reducer (set of 3)	2
21	SR384	Button Head Socket Screw	2
22	SR385	Button Head Socket Screw	2
23	SR386	Power Cord Assembly with Fuse and Connectors	1
23a	SR026	Power Cord Only	1
24	SR418	Micro-Ejector Vacuum Generator	1
25	SR115	Retaining Plate for Micro Switch	1
26	SR113	Pump Cut-Off for Micro Switch	1
27	SR114	Push Rod for Switch on Holder	1
28	SR419	4 Way Normally Close Solenoid Valve	2
29	SR431	Flat Washer	4
30	SR388	Hex Nut	4
31	SR246	LED Assembly Green Lens Included	2
32	SR243	Temperature Control Potentiometer Assembly 5K	2
33	SR255	Spacer for Potentiometer Pod Dia: 1 in.	2
34	SR387	Dual Primary Transformer	1
35	SR106	Fuse	1
36	SR370	Parallel Solderless Non-Insulated Connector	2
37	SR371	Clear Shrink Sleeve Dia: 1/4 in. (sold per foot)	1.92 in.
38	15242W45	Circuit Board Assembly for Left Hand Side	1
39	15242W70H10	Circuit Board Assembly for Right Hand Side	1
40	SR432	3 Circuit VH Housing Connector (set of 3)	2
41	SR389	2 Circuit VH Housing Connector (set of 3)	1
42	SR390	Blue Shrink Sleeve Dia: 3/64 in. (sold per foot)	.96 in.
43	SR433	Non-Insulated Flag Connector (set of 5)	7
44	SR437	Red Fully Insulated Female Connector (set of 5)	2
45	SR436	2 Circuit HR Receptacle Connector (set of 3)	1

ITEM NO.	PART NO.	DESCRIPTION	QTY REQ'D
46	SR438	3 Circuit HR Receptacle Connector (set of 5)	1
47	SR435	Non-Insulated Flag Connector	3
48	SR434	Armid Paper Insulator (sold per square foot)	1
49	SR400	Non-Insulated Ring Tongue Connector (set of 5)	2
50	SR011	Phillips Pan Head Self Tapping Screw	4
51	SR017	Hex Nut	8
52	SR139	Star Lock Washer	8
53	SR144	Phillips Round Head Screw	4
54	SR420	Red Male Connector (set of 5)	2
55	SR1301	Philips Flat Head Screw	1
56	SR402	Female Coupling Quick Disconnect Fitting for 1/8 in. Hose	1
57	SR352	Male Coupling Quick Disconnect Fitting for 1/16 in. Hose	1
58	SR016	Flat Washer	8
59	SR417	Cover for Solenoid and Vacuum Ejector Assembly	1
61	SR251	Rubber Feet (set of 4)	4
62	SR774	Phillips Flat Head Screw	4
63	HS307	Static-Safe Silicone Black Hose ID: 1/8in. (sold per foot)	17.04 in.
64	SR403	Cooling Fan Circuit Board Assembly	1
65	SR404	Top Cover	1
66	SR405	Bottom Case	1
67	SR406	Female 5-Pin Circular Socket Connector	1
68	SR430	Molded Frame Plate for Connector	1
69	SR241	Slide-On Strain Relief for Power Supply Cord	1
70	SR261	Male Mini Barbed Fitting for 1/8 in. Hose	1
71	SR409	Cleaning Instruction Label	1
72	SR439	Self-Adhesive Holder Clip for Tools and Accessories (set of 2)	4
73	AFX73	Condenser and Filter Assembly	1
74	SR410	Flat Spacer for Tool Pod	1
75	SR411	Flat Spacer with Stem for Tool Pod	1
76	SR412	Round Head Slotted Screw	4
77	SR413	Fan Guard Grill for Cooling Fan	1
78	SR414	Fan Assembly with Connector	1
79	SR016	Flat Washer	4
80	SR425	Female Coupling Quick Disconnect for 1/16 in. Hose	1
81	SR694	Phillips Pan Head Steel Screw for Air/Vacuum Pump Assembly	1
82	SR427	Female Coupling Quick Disconnect for 1/16 in. Hose	1
83	SR416	Self-Adhesive Wrench Hanger Holder	1
84	SR415	Terminal Crimp for VH Connector (10 per bag)	10
85	SR229	Edsyn Medallion Logo	1
86	HB359	Quick Disconnect Fitting	2
87	AF629	Felt Filter for AFX73 (set of 10)	2
88	AF040	Replacement Muffler Filter (set of 10)	2
89	SR304	Flux Condenser and Cooling Fin for AFX73	1
90	SR305	Aluminum Barrel for AFX73	1
91	SR266	End Cap for Muffler	2
92	CSX71	Tip Cleaning Shaft and O-Ring Guide for CSX70 Dia: .05 in.	1

ITEM NO.	PART NO.	DESCRIPTION	QTY REQ'D
93	CSX70	Maintenance Tool with CSX71 Tip Cleaning Shaft Dia: .22 in.	1
94	SR307	Drill Hook for CSX70 Cleaning Tool System	1
95	SR308	Set Screw for Socket on CSX70 Cleaning Tool System	1
96	SR309	Protective Cover for Hook of CSX70 Cleaning Tool System	1
97	SR444	Bushing for Stainless Steel Tubing OD: 1/4 in.	1
98	SR306	Hex Handle for CSX70 Cleaning Tool System (includes SR308)	1
99	WT623	Dual Open-End Tip Wrench	1
100	SR442	White Wire 24 AWG (sold per foot)	7.92 in.
101	SR445	Black Wire 22 AWG (sold per foot)	12 in. 3@
			10.44 in. 2@
			4.44 in. 2@
			1.92 in. 3@
102	SR446	White Wire 22 AWG (sold per foot)	12 in. 2@
			4.44 in. 2@
			11.4 in.
			15 in.
103	SR447	Red Wire 22 AWG (sold per foot)	12 in.
104	SR448	Green Wire 18 AWG (sold per foot)	5.04 in.
105	HS320	Black Static-Safe Silicone Hose ID: 1/4 in. (sold per foot)	3 in.
106	SR050	Cable Tie (set of 5)	7
107	SR051	Mount for Cable Tie (set of 2)	1
108	SR126	Nylon Washer	2

Connectors



TSX70 instruction manual



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