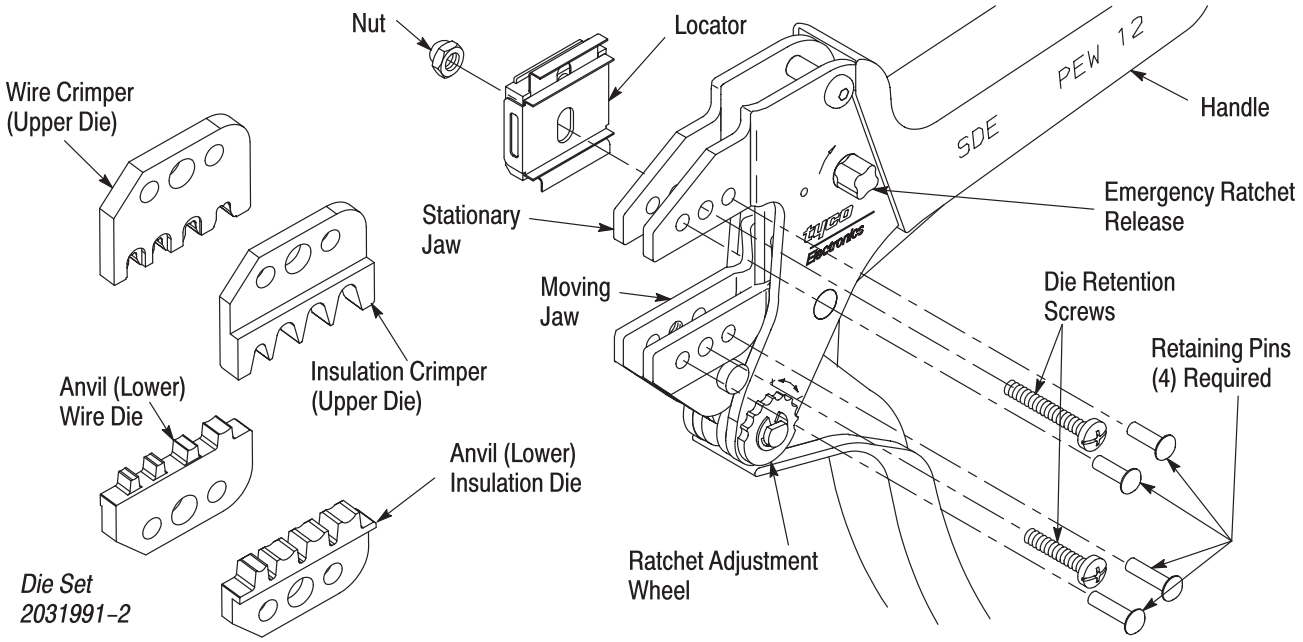
PROPER USE GUIDELINES

Cumulative Trauma Disorders can result from the prolonged use of manually powered hand tools. Hand tools are intended for occasional use and low volume applications. A wide selection of powered application equipment for extended–use, production operations is available.



DIE ASSEMBLY	CONTACTS		WIRE SIZE (mm^2)			INSULATION	
	LOOSE PIECE	STRIP	1.5–2.5	0.5–1.0	0.2–0.5	SIZE (mm^2)	STRIP LENGTH
2031991–2	929929–[ ] 929938–[ ]	927766–[ ] 963979–[ ] 929937–[ ]	✓	---	---	2.2–3.0	5.2
	929930–[ ] 929940–[ ]	927770–[ ] 963978–[ ] 929939–[ ]	---	✓	---	1.4–2.1	4.7
	929931–[ ] 929942–[ ]	927772–[ ] 963977–[ ] 929941–[ ]	---	---	✓	1.2–1.6	4.2
	927776–[ ]	927774–[ ] 963972–[ ]	---	---	✓	1.0–1.6	3.5

Figure 1

1. INTRODUCTION

NOTE

All dimensions on this document are in metric units. Figures and illustrations are for identification only and are not drawn to scale.

SDE Commercial Hand Tool Assembly 2031991–1 consists of SDE PEW–12 Frame Assembly 9–1478240–0 (Instruction Sheet 408–8851) and die set assembly 2031991–2. See Figure 1. The tool is used to crimp contacts shown in the table in Figure 1.

2. DESCRIPTION

The tool frame features two jaws, a handle, ratchet adjustment wheel, and an emergency ratchet release. The die set consists of an indenter (upper die) and an anvil (lower die). The tool frame holds a die assembly with two crimping chambers. See Figure 1. Die retaining screws are used to secure the dies in the tool frame.

The tool features a ratchet and an adjustment wheel with a range of settings. The ratchet ensures that the tool has completed the cycle and will not release until

the handles have been FULLY closed, unless the emergency ratchet release is rotated to manually release the ratchet. The adjustment wheel controls the amount of handle pressure exerted on the dies during the crimping procedure.

CAUTION

The dies bottom before the ratchet releases. This feature ensures maximum tensile performance of the crimp. DO NOT re-adjust the ratchet.

3. INSTALLATION AND REMOVAL OF DIE SET AND LOCATOR ASSEMBLY (Figure 1)

1. Open the tool handles and remove the two die retaining screws from the tool jaws.

2. Place the wire anvil so that the chamfered side and the marked surfaces face outward, when mounted in the moving jaw of the tool frame.

3. Insert the short die retaining screw through the jaw and through the anvil die, and tighten the screw just enough to hold the die in place. Do *not* tighten the screw completely at this time.

4. Place the wire crimper so that the chamfered side and the marked surface face outward, when mounted in the stationary jaw of the tool frame.

5. Insert the long die retaining screw through the jaw and through the crimper die, and tighten the screw just enough to hold the die in place. Do *not* tighten the screw completely at this time.

6. Carefully close the tool handles, making sure that the anvil and crimper align properly. Continue closing the tool handles until the ratchet in the tool frame has engaged sufficiently to hold the anvil and crimper in place, then tighten both die retaining screws.

7. Place the locator assembly over the end of the long screw, and position the locator assembly in place, while still allowing the locator to slide up and down.

8. Place the nut onto the end of the long screw and tighten the nut enough to hold the locator assembly in place, while still allowing the locator to slide up and down.

9. To disassemble, close the tool handles until the ratchet releases, remove the nut, the locator assembly, the two die retaining screws, and slide the anvil and crimper out of the tool jaws.

NOTE

The ratchet has detents with audible "clicks" as the handles are closed. The ratchet releases on the sixth "click".

4. CONTACT SUPPORT ADJUSTMENT (Figure 2)

NOTE

The contact support is preset prior to shipment, but minor adjustment may be necessary.

1. Make a sample crimp and determine if the contact is straight, bending upward, or bending downward.

2. If adjustment is required, loosen the screw that holds the contact support onto the locator assembly.

NOTE

The ratchet has detents that create audible clicks as the tool handles are closed.

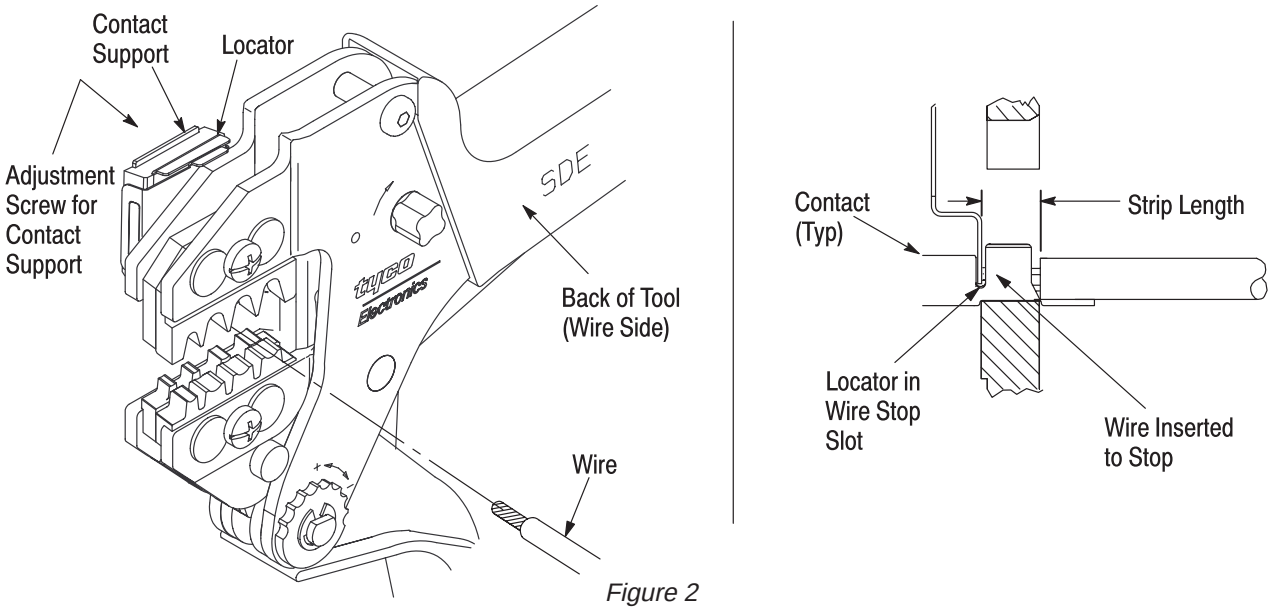


Figure 2

3. Place a contact with wire into the proper nest and close the tool handles until the ratchet reaches the sixth click, or until the contact support touches the contact.

4. Slightly loosen the nut that holds the locator assembly onto the tool frame.

5. Move the contact support as required to eliminate the bending of the contact.

6. Tighten the nut and close the handles until the ratchet releases

7. Remove and inspect the contact.

8. Make another sample crimp. If the contact is straight, tighten the contact support screw. If the contact is still being bent during crimping, repeat the adjustment procedure.

5. CRIMPING PROCEDURE

NOTE

This tool is provided with a crimp adjustment feature. Initially, the crimp height should be verified as specified in Figure 3. Refer to Section 6, CRIMP HEIGHT INSPECTION, and Section 7, CRIMP HEIGHT ADJUSTMENT, to verify crimp height before using the tool to crimp desired contacts and wire sizes.

Refer to the table in Figure 1 and select wire of the specified size and insulation diameter. Strip the wire to the length indicated in Figure 1, taking care not to nick or cut wire strands. Select an applicable contact and identify the appropriate crimp section according to the wire size markings on the tool. Refer to Figure 2 and proceed as follows:

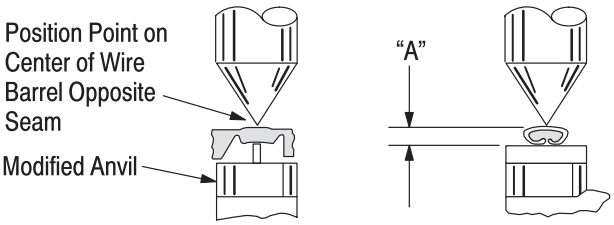
1. Hold the tool so that the back (wire side) is facing you. Squeeze tool handles together and allow them to open fully.

2. Holding the contact by the mating end, insert the contact through the front of the tool and into the appropriate crimp section.

3. Position the contact so that the mating end of the contact is on the locator side of the tool, and so that the open “U” of the wire barrel faces the top of the tool. Place the contact up into the nest so that the movable locator drops into the slot in the contact. Refer to Figure 2. Butt the front end of the wire barrel against the movable locator.

CAUTION

Make sure that both sides of the wire barrel are started evenly into the crimping section. Do NOT attempt to crimp an improperly positioned contact.



WIRE SIZE (MAX) mm²	CRIMP SECTION (WIRE SIZE MARKINGS)	CRIMP HEIGHT DIMENSION “A” (±0.05)
0.5	0.20–0.50	1.03
0.5	0.20–0.50	1.03
1.0	0.50–1.00	1.23
2.5	1.50–2.50	1.56

Figure 3

6. CRIMP HEIGHT INSPECTION

This inspection requires the use of a micrometer with a modified anvil. Tyco Electronics recommends the modified micrometer (Crimp Height Comparator RS–1019–5LP) which may be purchased from:

Shearer Industrial Supply Co.
717–767–7575

or

VALCO
610–691–3205

Proceed as follows:

1. Refer to Figure 1 and select a wire (maximum size) for each crimp section listed.

2. Refer to Section 5, CRIMPING PROCEDURE, and crimp the contact(s) accordingly.

3. Using a crimp height comparator, measure the wire barrel crimp height listed in Figure 3. If the crimp height conforms to that shown in the table, the tool is considered dimensionally correct. If not, the tool must be adjusted. Refer to Section 7, CRIMP HEIGHT ADJUSTMENT.

CAUTION

Damaged product should not be used. If a damaged contact is evident, it should be replaced. Contacts must not be re–terminated.

7. CRIMP HEIGHT ADJUSTMENT

Although the ratchet is preset prior to shipment, it is important to verify the crimp height using a micrometer or caliper. General use and subsequent wear may cause the tool to go out of adjustment. It is recommended that crimp height be inspected, and the ratchet be adjusted, if necessary, on a regular basis. Refer to Figure 4, and proceed as follows:

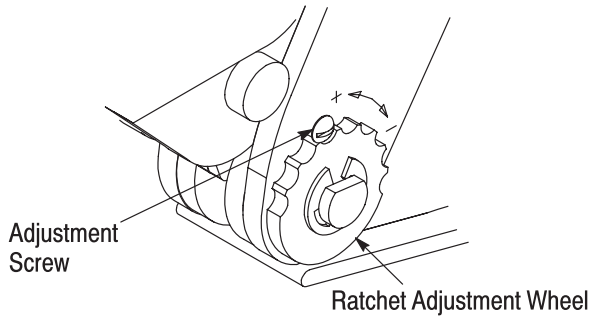


Figure 4

1. If the crimp height is larger than recommended, remove the ratchet wheel adjustment screw and rotate the adjustment wheel counterclockwise (+) to a higher setting. Reinstall the screw. Repeat as required.

2. If the crimp height is smaller than recommended, remove the ratchet wheel adjustment screw and rotate the adjustment wheel clockwise (–) to a lower setting. Reinstall the screw. Repeat as required.

3. If the crimp cannot be made to conform to the recommended crimp height, the tool or die set must be replaced. See Section 9, REPLACEMENT.

8. MAINTENANCE AND INSPECTION

8.1. Daily Maintenance

1. Remove dust, moisture, and other contaminants with a clean, soft brush, or a clean, soft, lint–free cloth. DO NOT use any objects that could damage the dies or tool.

2. Make sure that the proper die retaining screws are properly secured.

3. When the tool is not in use, keep the handles closed to prevent objects from becoming lodged in the dies. Store the tool in a clean, dry area.

4. Remove all lubrication and accumulated film from the dies by immersing the dies in a suitable commercial degreaser.

8.2. Inspection

Close the tool handles until the ratchet releases, and then allow them to quickly open freely. If they do not open quickly and fully, the spring is defective. See Section 9, REPLACEMENT.

9. REPLACEMENT

Order replacements through your representative, or call 1–800–526–5142, or send a facsimile of your purchase order to 717–986–7605, or write to:

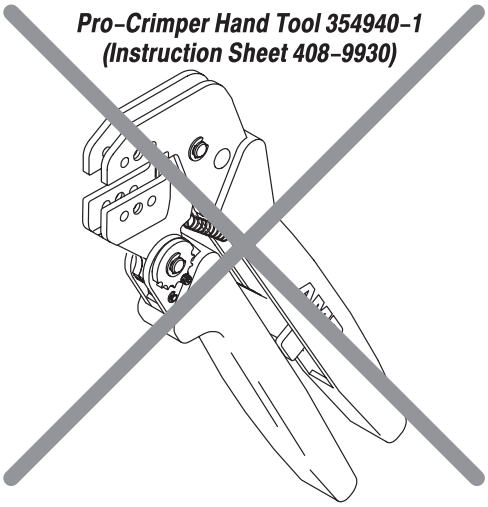
CUSTOMER SERVICE (038–035)
TYCO ELECTRONICS CORPORATION
P.O. BOX 3608
HARRISBURG, PA 17105–3608

10. REVISION SUMMARY

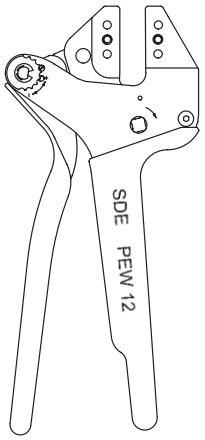
- Initial release of document

2031991–2 Die Set can be Used in Tools Show Below

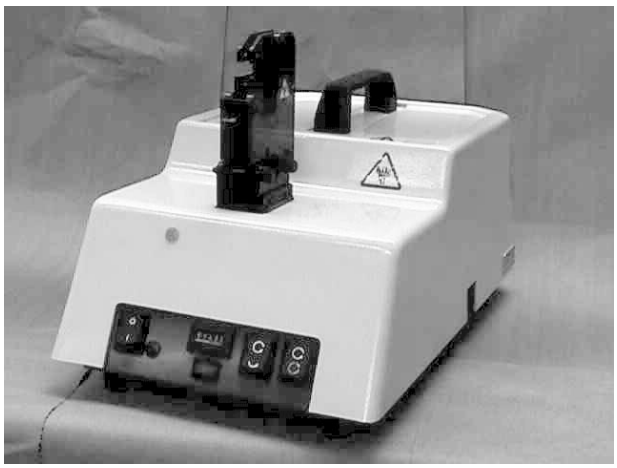
Pro–Crimper Hand Tool 354940–1
(Instruction Sheet 408–9930)



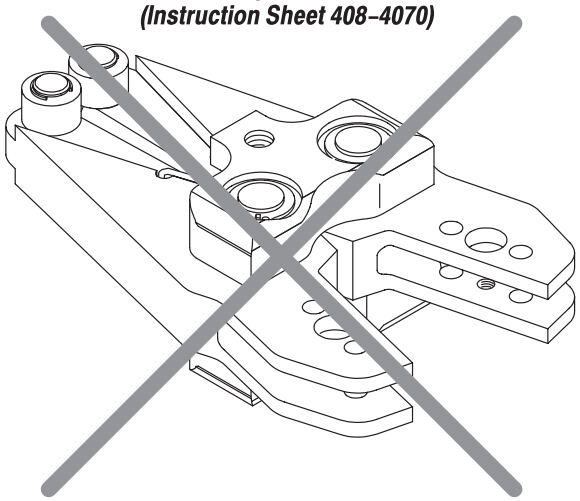
SDE PEW–12 Hand Tool 9–1478240–0
(Instruction Sheet 408–8851)



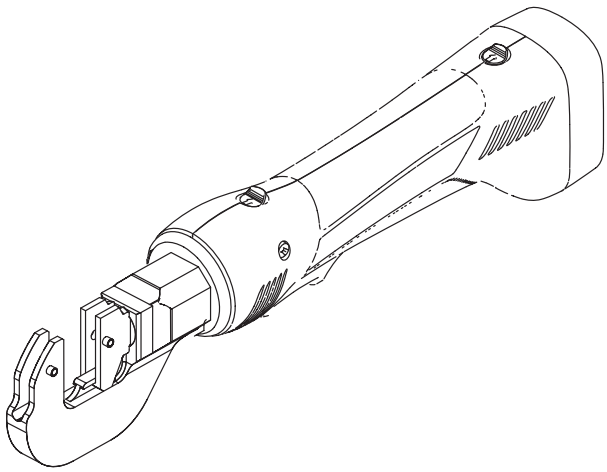
SDE Bench Terminator 1490076–2
(Customer Manual 409–10052)



626 Adapter 679304–1
(Instruction Sheet 408–4070)



Battery Tool (Shouldered Die) 1725837–1, –2
(Customer Manual 409–10053)



Battery Tool (Pin Die) 1213890–1, –2
(Customer Manual 409–10065)

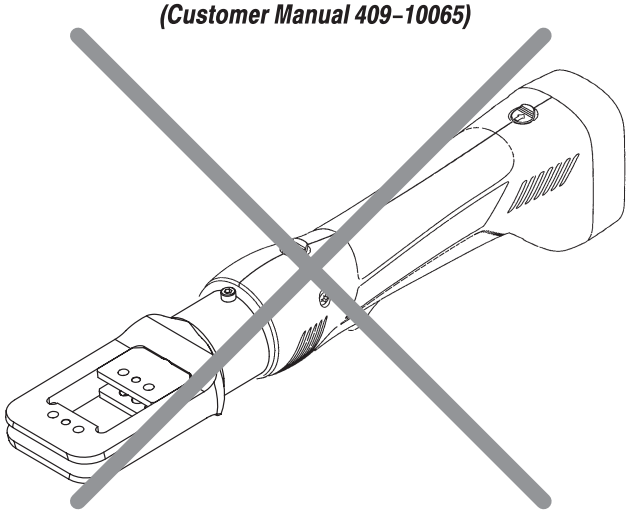


Figure 5

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

TE Connectivity:
2031991-2