

**3M**

**Scotch-Weld™ Hot Melt Applicator EC**

**Aplicador EC por Fusión en Caliente**

**Scotch-Weld™**

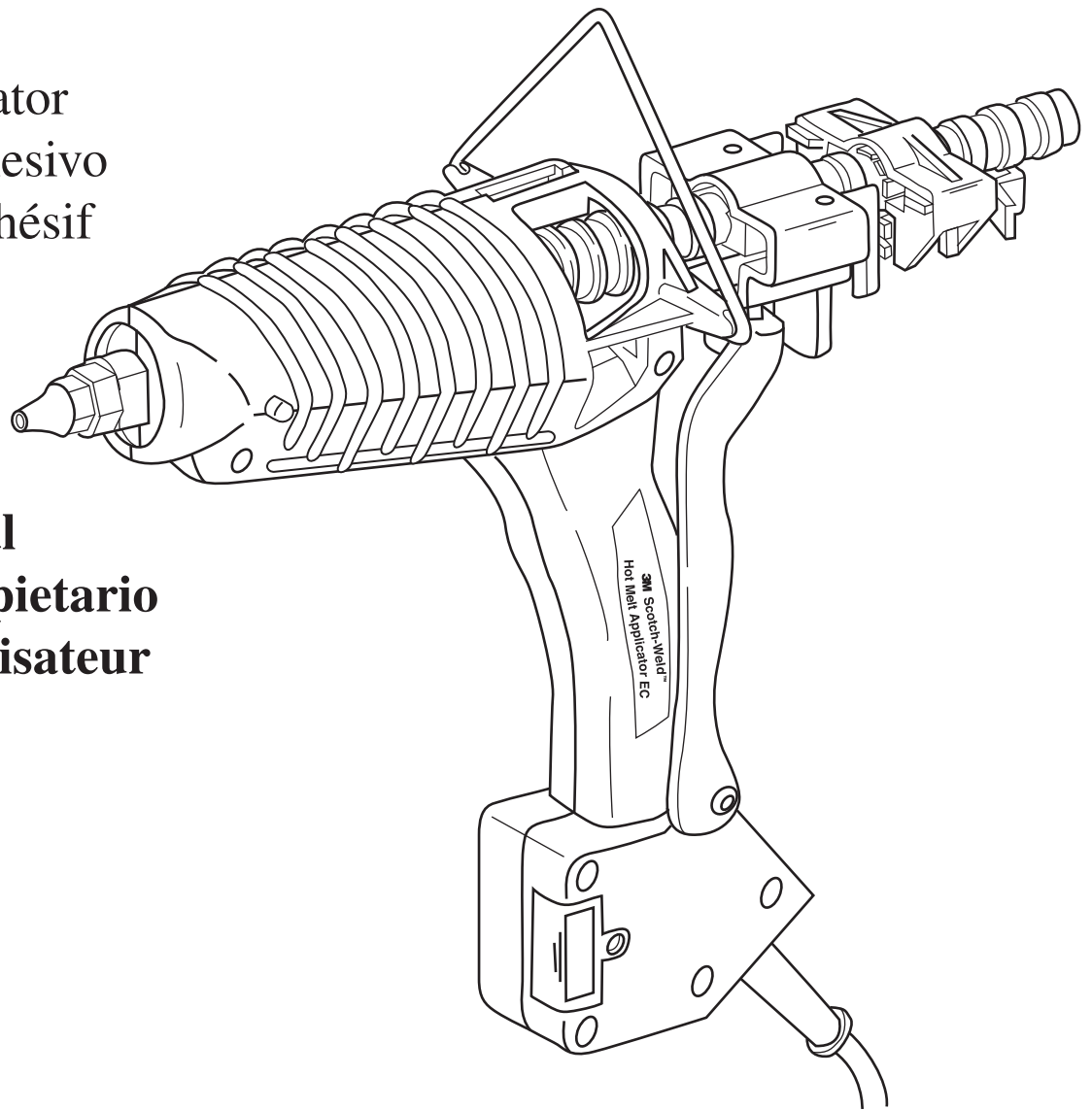
**Applicateur d'adhésif thermo-fusible EC**

**de Scotch-Weld™**

Adhesive Applicator

Aplicador de adhesivo

Applicateur d'adhésif



**Owner's Manual**

**Manual del propietario**

**Manuel de l'utilisateur**

Utilice el aplicador con los Adhesivos por Fusión en Caliente Scotch-Weld™ de 3M™ en cartuchos Quadrack™.

Use with 3M™ Scotch-Weld™ Hot Melt Adhesives in Quadrack™ cartridge form.

Utilisez avec l'adhésif thermo-fusible 3M™ Scotch-Weld™ sous forme de cartouche Quadrack™.

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# Important Safety Instructions

- Save these instructions
- Read all instructions before using this product

## 3M™ Scotch-Weld™ Hot Melt Applicator EC Operation and Servicing

### ⚠ WARNING

To reduce the risk of **electrical shock or injury** while operating or servicing the 3M Scotch-Weld Hot Melt Applicator EC, observe the following safety rules:

1. Operate and service the applicator only as described in this manual.
2. Connect the applicator only to a properly grounded outlet.
3. Do not unplug the applicator by pulling on the cord. Grasp the plug, not the cord, to unplug.
4. Do not handle the plug or applicator with wet hands.
5. Do not use the applicator outdoors or on wet surfaces.
6. Do not use the applicator if the cord or plug is damaged.
7. Do not use the applicator if it is not working properly or has been damaged, submerged in water or left outdoors.

### ⚠ WARNING

Use only 3-prong grounded plug and properly grounded outlet. Failure to use properly grounded plug and outlet **may cause electrical shock**. If you are not sure of proper connections, get help from a qualified electrician or service person.

### ⚠ WARNING

Disconnect electrical power and make sure applicator has cooled to room temperature before servicing. Failure to disconnect electrical power or failure to allow applicator to cool before servicing **may cause electrical shock or burns**. Read owner's manual before servicing.

### ⚠ WARNING

Do not use an unapproved extension cord with the applicator. Use of an unapproved extension cord **may cause electrical shock**. Use an extension cord which complies with NEC requirements and state and local codes and other requirements.

### ⚠ WARNING

Use only 3M-specified replacement parts. Use of other replacement parts **may cause hazardous conditions or damage the applicator**.

### ⚠ Caution

Allow applicator to cool to room temperature before servicing. Failure to do so **may cause burns**.

### ⚠ Caution

Avoid contact with hot adhesive and applicator tip. **May cause burns**. Wear safety glasses when using.

### ⚠ Caution

Use only the proper temperature module for the 3M™ Quadrack™ adhesive used. Failure to do so **may cause burns or damage applicator**. Refer to Table 1 for proper module selections for 3M Quadrack adhesives.

### ⚠ Caution

Do not pull adhesive stick from the rear of the applicator while in operation. Removing the adhesive from the rear may cause molten adhesive to flow out the rear of the applicator which **may cause burns and damage the applicator**.

## 3M™ Scotch-Weld™ Hot Melt Adhesive

**Note:** For health and safety information, see product label and Material Safety Data Sheet for 3M Scotch-Weld Hot Melt Adhesive before using.

### ⚠ WARNING

Use only with 3M™ Scotch-Weld™ Hot Melt Quadrack™ adhesive sticks. Use with any other materials **may cause hazardous conditions**.

### ⚠ WARNING

Do not clean or remove the 3M Scotch-Weld Hot Melt Adhesive with solvent. **May cause fire**. For additional health and safety information, see the product label and Material Safety Data Sheet for the 3M Scotch-Weld Hot Melt Adhesive used.

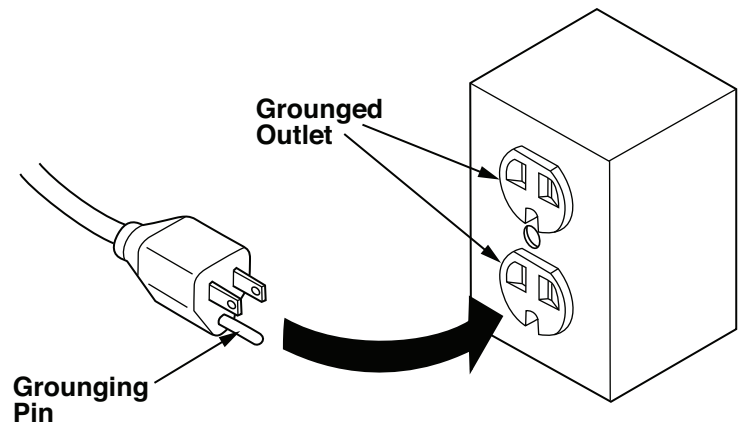
# Grounding Instructions

## **⚠ WARNING**

Do not modify the plug provided with the applicator or use with an adaptor or ungrounded outlet. Improper grounding connection of the applicator **may cause electric shock**. If the plug will not fit the outlet, have a qualified electrician or service person install the proper outlet.

The 3M™ Scotch-Weld™ Hot Melt Applicator EC must be grounded. If the applicator malfunctions, grounding provides a path of least resistance for electric current to help reduce the risk of electrical shock.

This applicator is equipped with a cord having an equipment-grounding conductor and grounding plug. The plug must be used with an appropriate outlet that is properly installed and grounded in accordance with all state and local codes and requirements.

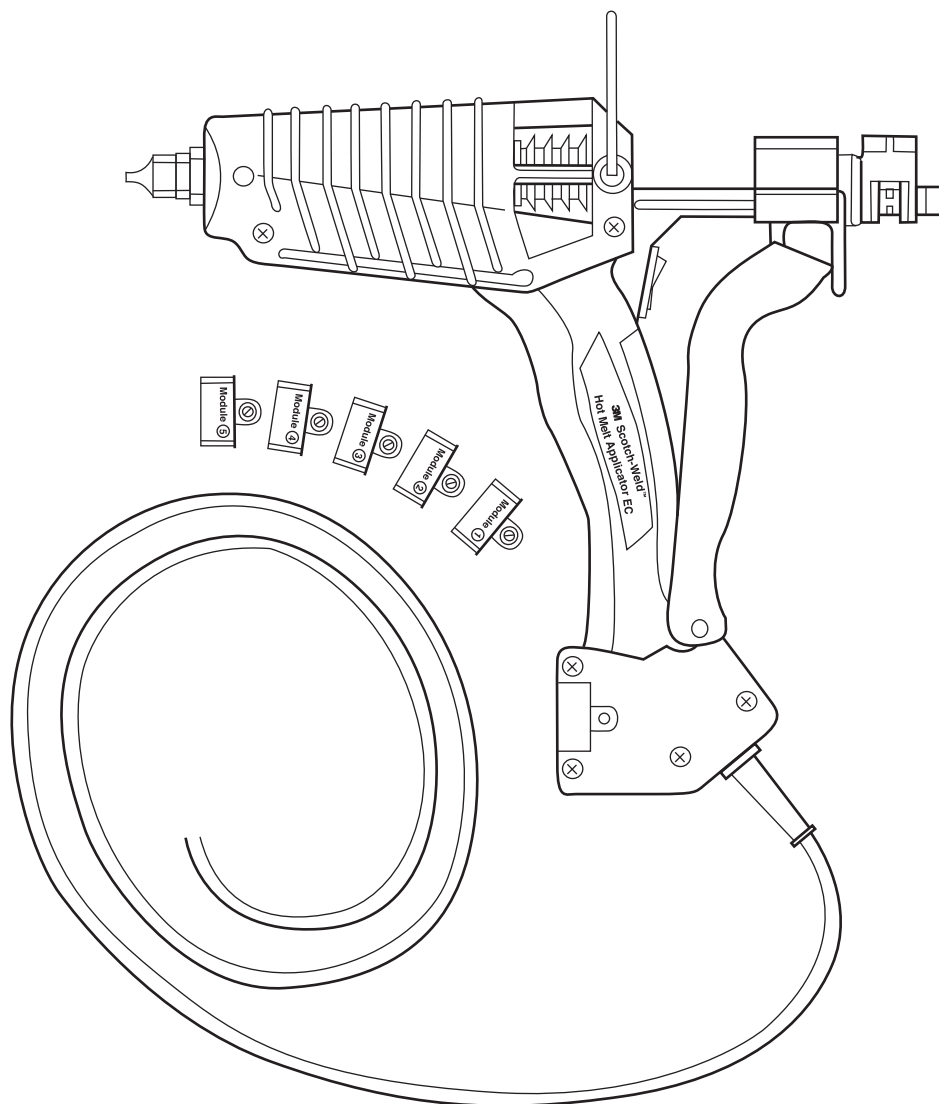


The 3M Scotch-Weld Hot Melt Applicator EC is intended for use on a nominal 120-volt circuit with a grounding plug as shown in the figure above. Make sure the applicator is connected to an outlet with the same configuration as the plug. **Do not use an adaptor.**

# UNPACKING

Remove the applicator and temperature modules (attached to the applicator) from their shipping container and inspect for obvious damage. If damaged, do not use and immediately contact your 3M sales representative or your authorized 3M distributor.

# FEATURES



- Industrial-grade, all-electric applicator, 120 VAC 40/60 Hz, 350 watts.
- Designed for 3M™ Scotch-Weld™ Hot Melt Quadrack™ Adhesive Sticks.
- Delivers up to 5.5 pounds of 3M adhesive per hour on demand.
- Innovative transport mechanism minimizes dripping.
- Applicator is supplied with five removable temperature modules. **Refer to Table 1 in the Temperature Module Installation section for proper module selection for 3M Quadrack adhesive used.**
- Palm trigger helps improve operator comfort in high demand applications.
- Stroke adjuster enables precise deposit of adhesive.



RoHS compliant means that the product or part does not contain any of the substances in excess of the maximum concentration values in EU Directive 2002/95/EC, as amended by Commission Decision 2005/618/EC, unless the substance is in an application that is exempt under RoHS. Unless otherwise stated by 3M in writing, this information represents 3M's knowledge and belief based on information provided by third party suppliers to 3M.

# Temperature Module Installation

## ⚠ Caution

Use only the proper temperature module for the 3M™ Quadrack™ adhesive used. Failure to do so **may cause burns or damage applicator**. Refer to Table 1 for proper module selection for 3M Quadrack adhesive used.

## Important:

The 3M™ Scotch-Weld™ Hot Melt Applicator EC is designed to operate with the proper combination of 3M™ Scotch-Weld™ Hot Melt Adhesives and temperature modules.

1. Refer to Table 1 on this page or the chart on pages 29-30 (Temperature Module Selections section) for selection of the proper temperature module to be used with your 3M Quadrack adhesive.
2. Install the proper temperature module by inserting it into the lower portion of the handle and tighten the fastener until snug (see Figure A).

## Temperature Module Selections for 3M™ Scotch-Weld™ Hot Melt Quadrack™ Adhesives

| Module ① | Module ②* | Module ③ | Module ④   | Module ⑤ |
|----------|-----------|----------|------------|----------|
| 3762 LMQ | 3762 LMQ  | 3762 Q   | 3738 Q     | 3731 Q   |
| 3776 LMQ | 3776 LMQ  |          | 3747 Q     | 3779 Q   |
| 3792 LMQ | 3792 LMQ  |          | 3748 Q     | 3789 Q   |
|          |           |          | 3748 V-O Q |          |
|          |           |          | 3764 Q     |          |
|          |           |          | 3792 Q     |          |

\* Tests indicate that use of LM Quadrack adhesives with Module ② improves the flow rates without damaging most heat sensitive substrates. For additional information about these 3M adhesives, see pp. 29-30 of this manual.

Table 1

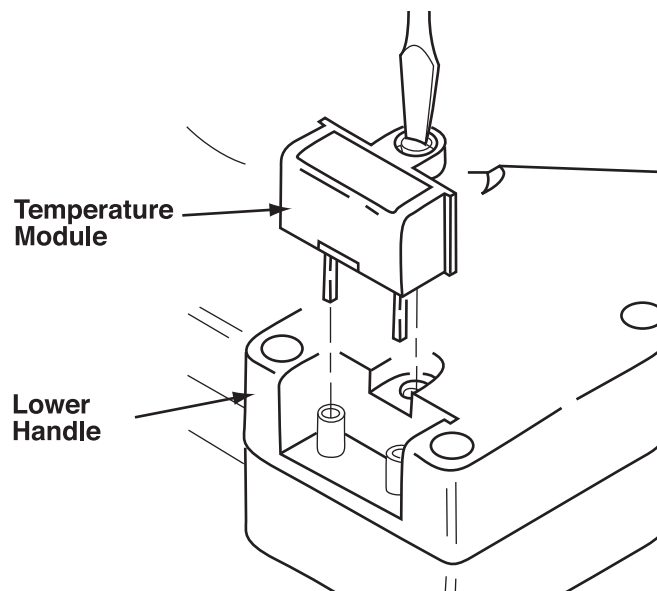


Figure A

# Applicator Startup

## **⚠ Caution**

Use only the proper temperature module for the 3M™ Quadrack™ adhesive used. Failure to do so **may cause burns or damage applicator**. Refer to Table 1 in the Temperature Module Installation section for proper module selection for 3M Quadrack adhesive used.

## **⚠ Caution**

Avoid contact with hot adhesive and the applicator tip. **May cause burns**. Wear safety glasses when using.

## **Important:**

Before proceeding, make sure the proper temperature module has been installed. See previous section on Temperature Module Installation.

1. Plug the applicator into a grounded 120 VAC receptacle.
2. Push the on/off switch to the “on” position, indicated by the visible red portion of the switch (see Figure B).

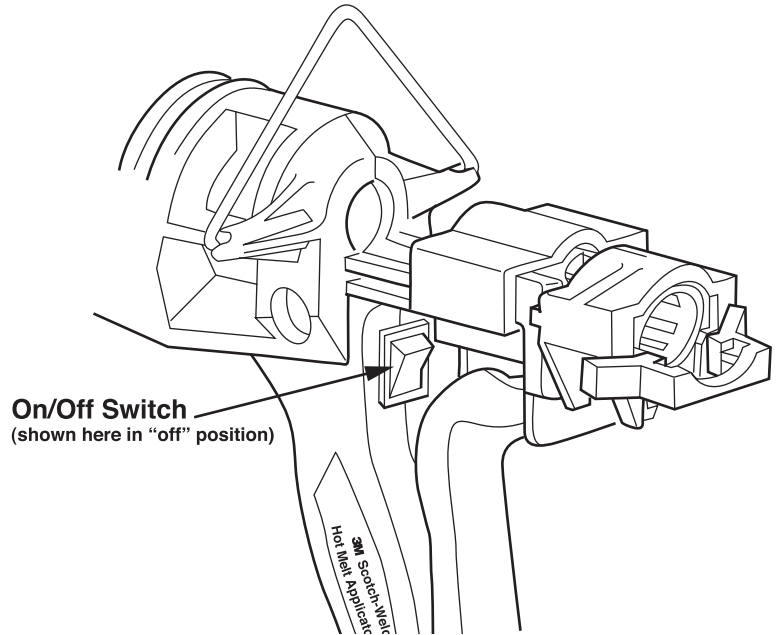


Figure B

3. Wait 5 to 10 minutes for heat-up.

**Note:** Allow at least 15 minutes for heat-up at its next use if the applicator did not have adhesive extruded at shut-down. Refer to shut-down procedure on page 12.

## **Important:**

Thermal expansion can cause a small amount of adhesive to drip from the tip during heat-up. With the proper temperature module selection, the applicator should not drip after heat-up.

4. Inspect the nozzle tip. Use a Scotch-Brite® pad or equivalent to remove accumulated adhesive or foreign matter from the tip.

# Applicator Startup (continued)

## **⚠ WARNING**

Use only with 3M™ Scotch-Weld™ Hot Melt Quadrack™ Adhesive Cartridges. Use with any other materials **may cause hazardous conditions.**

5. Insert 3M Scotch-Weld Hot Melt Quadrack adhesive stick through the stroke adjuster and transport mechanism (see Figure C).

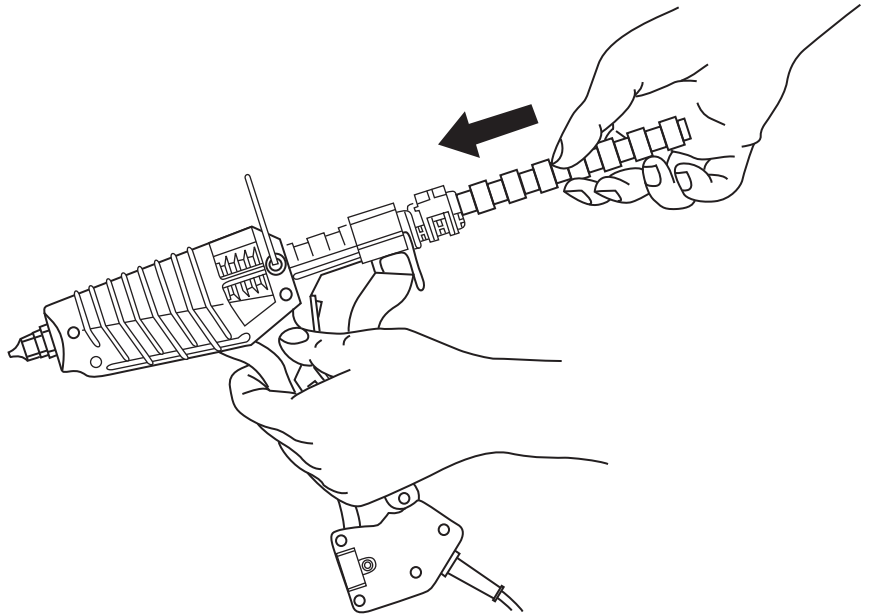


Figure C

## **⚠ Caution**

Do not pull adhesive sticks from the rear of the applicator while in operation. Removing adhesive from the rear may cause molten adhesive flow out the rear of the applicator which **may cause burns and damage the applicator.**

6. Align flat surfaces of stick as show in Figure D.

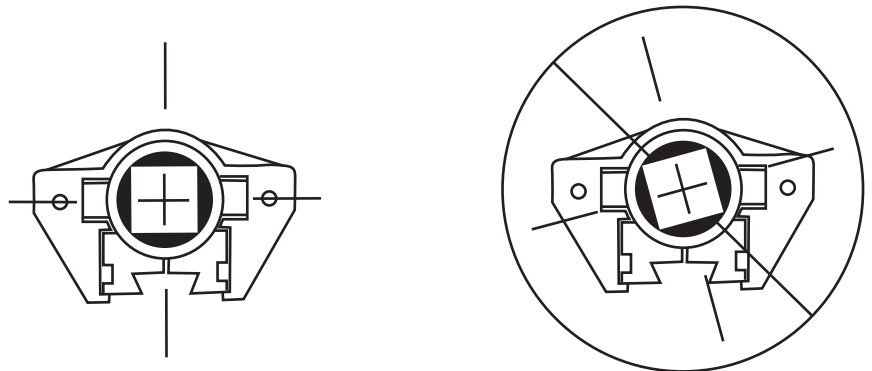


Figure D



# Applicator Startup (continued)

7. Extrude adhesive from the 3M™ Scotch-Weld™ Hot Melt Applicator EC by applying firm, even pressure to the trigger (see Figure E).

## **Important:**

Do not use excessive force while extruding adhesive through the applicator. Slow, continuous trigger actuation is required. Excessive force can damage the applicator.

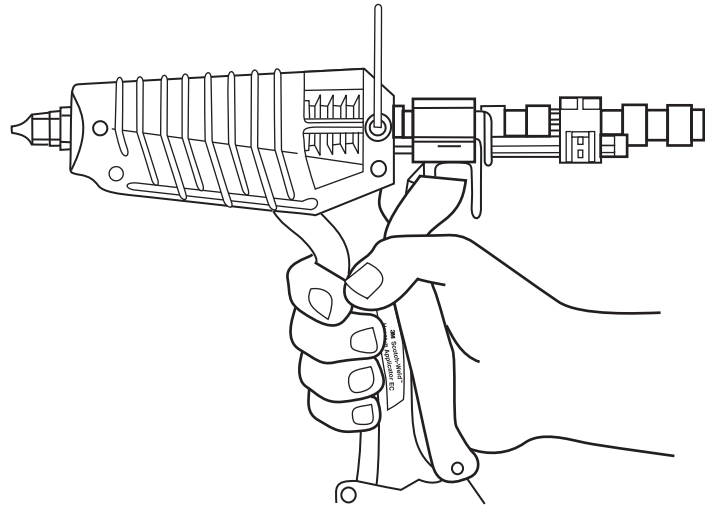


Figure E

# Adjusting Trigger Stroke and Shot Size

## **⚠ Caution**

Avoid contact with hot adhesive and the applicator tip. **May cause burns.** Wear safety glasses when using.

## **⚠ Caution**

Do not pull adhesive stick from the rear of the applicator while in operations. Removing adhesive from the rear may cause molten adhesive to flow out the rear of the applicator which **may cause burns and damage the applicator.**

1. Extrude the remaining adhesive from the entry track.
2. Using the trigger, push the transport mechanism full forward (see Figure F).

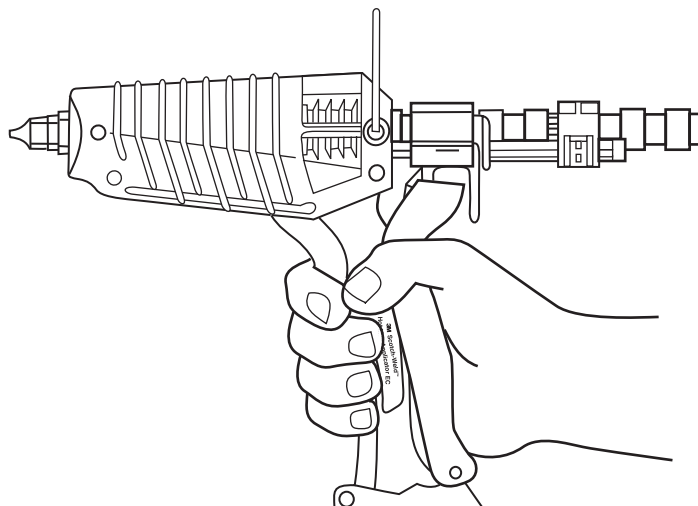


Figure F

3. Carefully twist the stroke adjuster off the entry track (see Figure G).

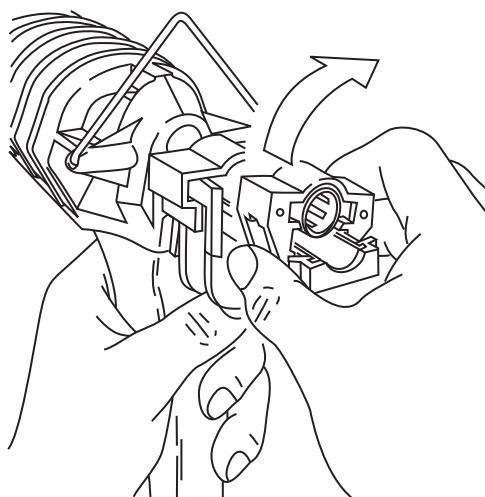


Figure G

# Adjusting Trigger Stroke and Shot Size (continued)

## **⚠ Caution**

Avoid contact with hot adhesive and the applicator tip. **May cause burns.** Wear safety glasses when using.

4. Snap the stroke adjuster into a new position on the entry track (see Figure H).



Figure H

- For a shorter stroke or smaller shot size, move the stroke adjuster forward (see Figure I).

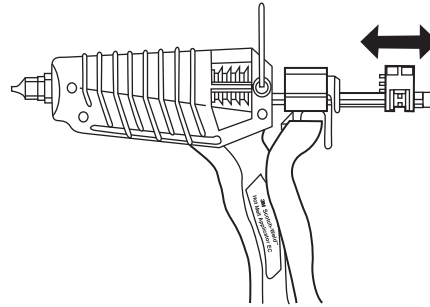


Figure I

- For a longer stroke or larger shot size, move the stroke adjuster toward the rear.
5. When the trigger stroke and shot size are established, ensure that the stroke adjuster is correctly seated on the entry track (see Figure J).
  6. Ensure that the white ring on the inside of the stroke adjuster moves freely. If not, remove and reinstall the stroke adjuster (see Figure J).

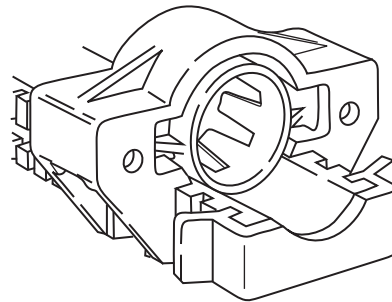


Figure J

# Changing To Another 3M™ Adhesive Requiring A Different Temperature Module

## ⚠ Caution

Use only the proper temperature module for the 3M Quadrack adhesive used. Failure to do so **may cause burns or damage applicator**. Refer to Table 1 in the Temperature Module Installation section for proper module selection for 3M Quadrack adhesive used.

## ⚠ Caution

Allow applicator to cool to room temperature before servicing. Failure to do so **may cause burns**.

Make sure the proper temperature module is in the applicator for the adhesive then in the entry track. Refer to Table 1 on page 4 or the chart on pages 29-30 (Temperature Module Selections section) for selection of the proper temperature module to be used with your 3M™ Quadrack™ adhesive.

1. Extrude the remaining adhesive from the entry track.
2. Turn the applicator off by pressing the rocker switch at the rear of the handle (see Figure K). The red visor on the rocker switch disappears, indicating the applicator is off.
3. Unplug the applicator and allow it to cool to room temperature.
4. Remove the temperature module by simultaneously unscrewing the fastener and lifting the module out (see Figure L). Save the module for possible reuse.

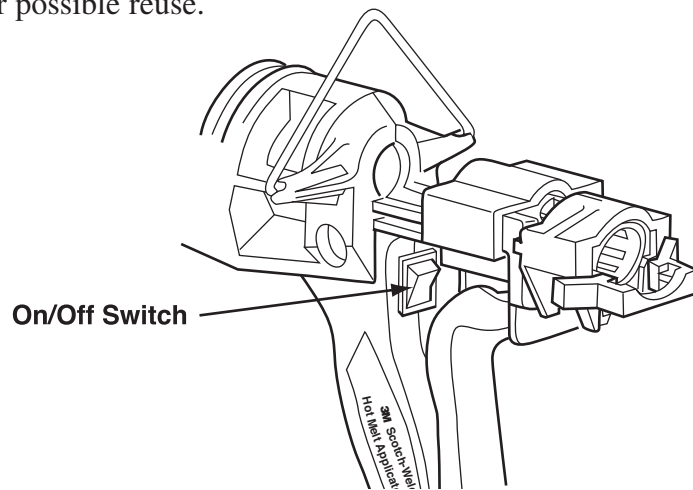


Figure K

**Note:** Do not unscrew the fastener more than 8 turns before lifting the module out.

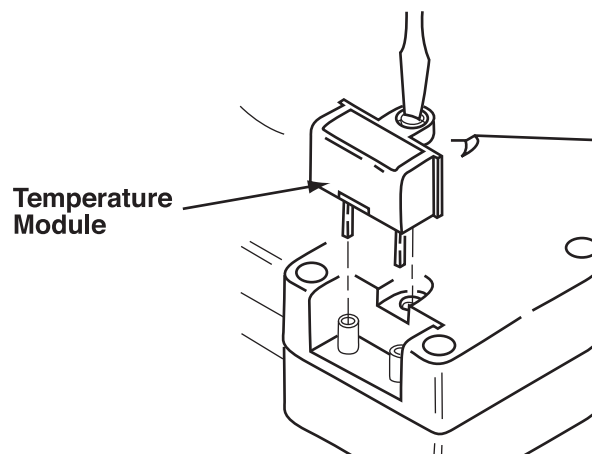


Figure L

# Changing To Another 3M™ Adhesive Requiring A Different Temperature Module (continued)

## Caution

Use only the proper temperature module for the 3M Quadrack adhesive used. Failure to do so **may cause burns or damage applicator**. Refer to Table 1 in the Temperature Module Installation section for proper module selection for 3M Quadrack adhesive used.

## WARNING

Use only with 3M™ Scotch-Weld™ Hot Melt Quadrack™ Adhesive Sticks. Use with any other materials **may cause hazardous conditions**.

## Caution

Avoid contact with hot adhesive and the applicator tip. **May cause burns**. Wear safety glasses when using.

Install the proper temperature module for the adhesive that has been selected by inserting and tightening the fastener until snug (see Figure L). Refer to Table 1 on page 4 or the chart on pages 29-30 (Temperature Module Selections section) for selection of the proper temperature module to be used with your 3M™ Quadrack™ adhesive.

5. Reconnect the power cord to the 120 VAC grounded receptacle. Push the on/off switch to the “on” position, indicated by the visible red visor of the switch (see Figure K).
6. Allow the applicator to heat up for 5 to 10 minutes with the new temperature module. Extrude all old adhesive left in the applicator by inserting the new adhesive and advancing through the applicator until it is ready to be reloaded with another stick.

## **Important:**

Do not use excessive force while extruding adhesive after changing the temperature modules. Slow, continuous trigger actuation is required. Excessive force can damage the applicator and cause molten adhesive flow out the rear.

7. The applicator is now ready to be used with the new adhesive.

# Shutdown

1. Turn the applicator off by pressing the rocker switch at the rear of the handle. The red visor on the rocker switch disappears, indicating the applicator is off (see Figure M).

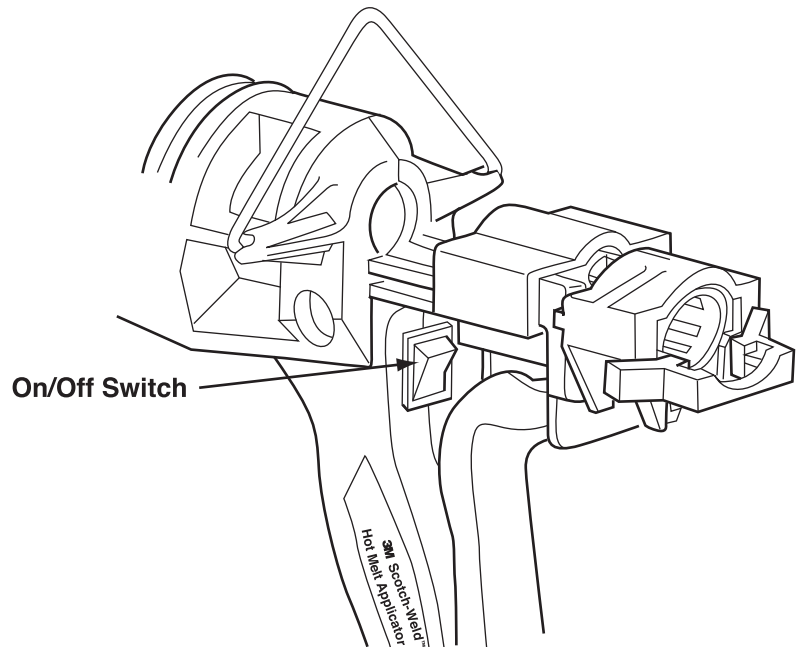


Figure M

2. **Immediately**, extrude approximately half of a Quadrack adhesive stick through the applicator.

## Important:

For long-term shutdown, disconnect the power cord from the power source.

### **⚠ WARNING**

Use only with 3M™ Scotch-Weld™ Hot Melt Quadrack™ Adhesive Sticks. Use with any other materials **may cause hazardous conditions.**

### **⚠ Caution**

Avoid contact with hot adhesive and the applicator tip. **May cause burns.** Wear safety glasses when using.

### **⚠ Caution**

Do not pull adhesive stick from the rear of the applicator while in operation. Removing adhesive from the rear may cause molten adhesive to flow out the rear of the applicator which **may cause burns or damage the applicator.**

# Preventive Maintenance

## **WARNING**

Do not clean or remove the 3M™ Scotch-Weld™ Hot Melt Adhesive with solvent. **May cause fire.** For additional health and safety information see the product label and Material Safety Data Sheet for Scotch-Weld Hot Melt Adhesive used.

## **Caution**

Avoid contact with hot adhesive and the applicator tip. **May cause burns.** Wear safety glasses when using.

## **Caution**

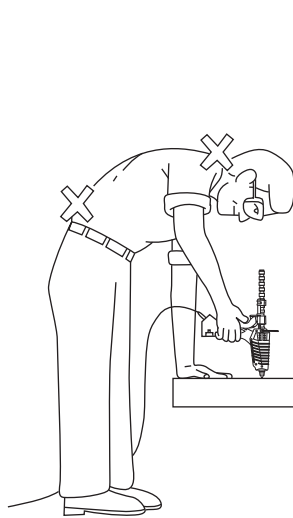
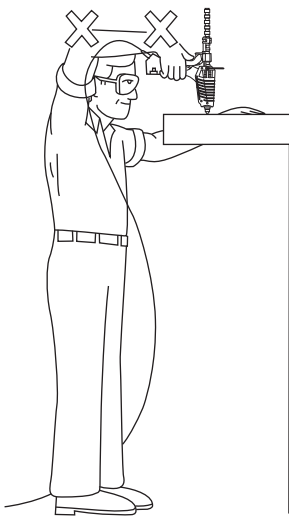
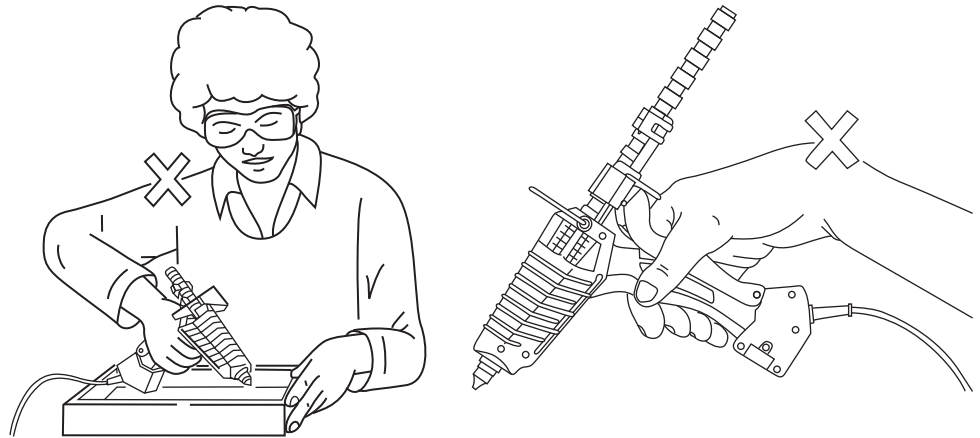
Do not pull adhesive stick from the rear of the applicator while in operation. Removing adhesive from the rear may cause molten adhesive to flow out the rear of the applicator which **may cause burns or damage the applicator.**

1. Inspect the nozzle tip every day before startup. Use a Scotch-Brite® pad or equivalent to remove accumulated adhesive or foreign matter from the tip
2. Inspect the adhesive entry track and transport mechanism daily to ensure it is clear of foreign matter and slides freely.
3. Inspect the applicator once a week. Refer to the Troubleshooting and Repair Procedures of this manual if necessary.

# Operator Productivity and Comfort

## AVOID:

- Raised elbow
- Bent Wrist
- Reaching
- Bending over



These positions can result in irritation of the nerves, muscles, tendons, and cartilage of the shoulder, elbow, wrist, hand and back.

## Adjust your workstation so you can:

- Stand or sit erect
- Keep your elbows close to your sides
- Hold the applicator with a straight wrist





# Troubleshooting

## **⚠ WARNING**

Use only 3M-specified replacement parts. Use of other replacements parts **may cause hazardous conditions or damage the applicator.**

This part of the owner's manual is divided into three sections to assist in evaluating possible operating difficulties with your 3M™ Scotch-Weld™ Hot Melt Applicator EC.

If the applicator will not heat, refer to:

## **Condition 1: Applicator will not heat**

Page 16

If the applicator is heating, refer to:

## **Condition 2: Dripping nozzle**

Page 22

## **Condition 3: No or low adhesive flow**

Page 24

An applicator diagram and replacement parts list can be found on pages 26-27. Should your applicator require repair, replacement parts can be ordered from your local authorized 3M Scotch-Weld Hot Melt Adhesive distributor. If, after following these procedures, a problem still exists, contact your local Sales Representative. For telephone numbers of the nearest 3M location refer to the back cover of this manual.

### **Important:**

Service on this applicator should only be performed by a qualified electrician or service person.

# Troubleshooting (continued)

## Condition 1: Applicator will not heat

### Important:

Troubleshooting steps should be conducted only by a qualified electrician or service person.

1. Turn the applicator on by pushing the on/off switch to the “on” position, indicated by the visible red visor of the switch (see Figure N). If no heat, proceed to the next step.

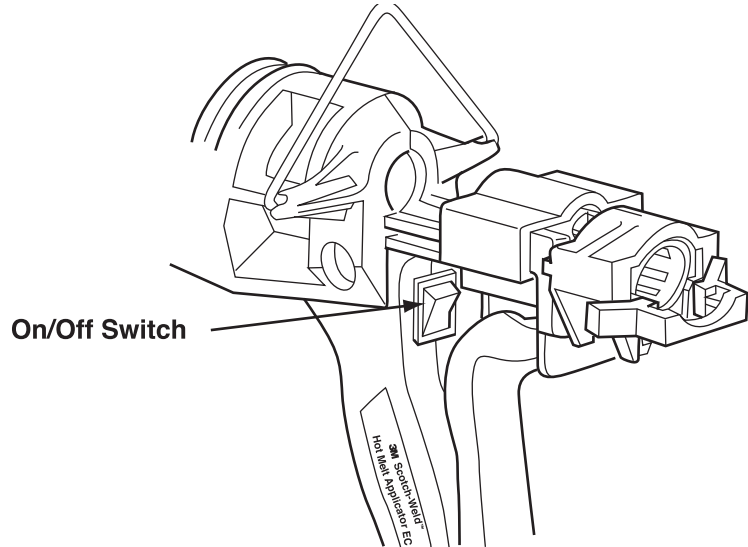


Figure N

### ⚠ Caution

Use only the proper temperature module for the 3M™ Quadrack™ adhesive used. Failure to do so **may cause burns or damage applicator**. Refer to Table 1 in the Temperature Module Installation section for proper module selection for 3M Quadrack adhesive used.

2. Check to make sure that the proper temperature module is fully engaged by inserting and tightening the fastener until snug (see Figure O). Refer to Table 1, page 4, for the proper module. If no heat, proceed to the next step.

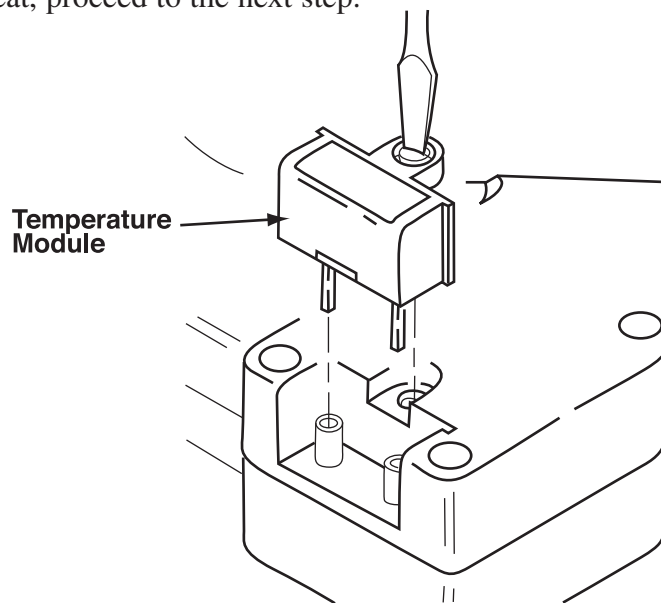


Figure O

# Troubleshooting (continued)

## Condition 1: Applicator will not heat

### Allowable Resistance

|          |              |
|----------|--------------|
| Module 1 | 21-26 K ohms |
| Module 2 | 12-16 K ohms |
| Module 3 | 3-5 K ohms   |
| Module 4 | 1-1.5 K ohms |
| Module 5 | 0-10 ohms    |

Table 2

### ⚠ WARNING

Disconnect the electrical power and make sure the applicator has cooled to room temperature before servicing. Failure to disconnect the electrical power or failure to allow applicator to cool before servicing **may cause electrical shock or burns.**

### ⚠ Caution

Do not pull adhesive stick from the rear of the applicator while in operation. Removing adhesive from the rear may cause molten adhesive to flow out the rear of the applicator which **may cause burns or damage the applicator.**

3. Check to make sure that power cord is plugged in and that the electrical outlet has power. If there is no power, contact an electrician. If outlet has correct power, proceed to the next step.
4. Disconnect the power cord from the electrical outlet, then remove the temperature module by unscrewing the fastener and lifting out (see Figure O). Inspect the module for damage to the pins.

If no damage is found, check the resistance between the pins using an ohmmeter. If the measured value does not agree with that listed in Table 2, then the temperature module is defective. Replace it by ordering the appropriate Temperature Module Kit. See Parts Kit list on page 27 on this manual.

If the measured value agrees with that listed in Table 2, place temperature module aside for re-use and proceed to next step.

### Important:

Remove the power cord from the electrical outlet before conducting any further evaluations or repairs.

## Handle Disassembly

5. Remove the remaining adhesive from the entry track by using a utility knife to cut off the adhesive stick just before it enters the white sleeve assembly, and gently remove it.

Refer to Figure P for steps 6 through 8.

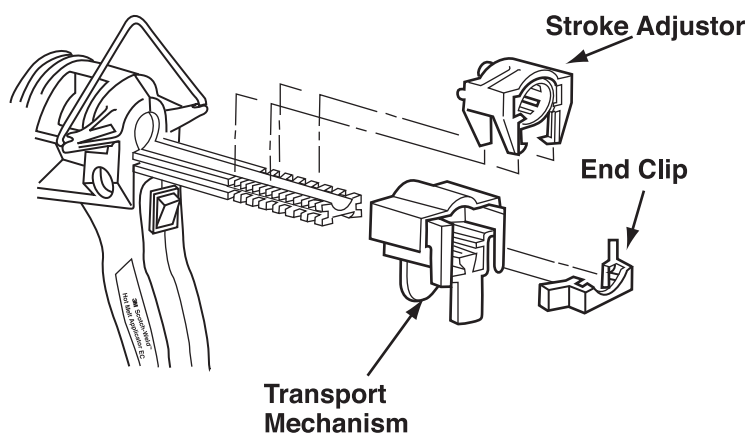


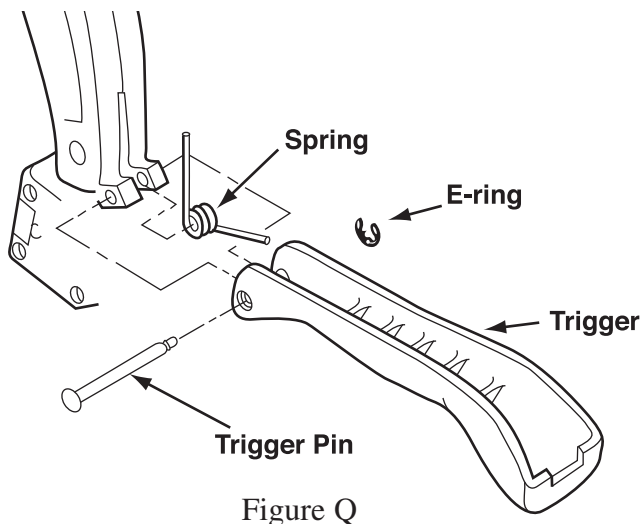
Figure P

6. Remove the stroke adjuster by firmly grasping and twisting upward.
7. Remove the end clip by gently prying off one end of the clip.
8. Slide the transport mechanism off the entry track.

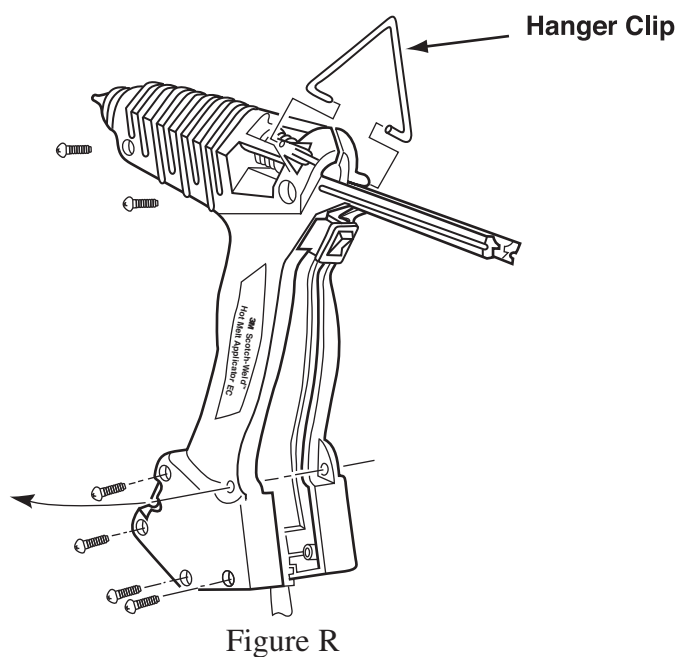
# Troubleshooting (continued)

## Condition 1: Applicator will not heat

9. To remove the trigger (see Figure Q):
  - a. Use a small screwdriver to remove the E-ring from the pin at the base of the trigger.
  - b. Remove the trigger pin.
  - c. Remove the trigger and spring.



10. If the temperature module is installed, remove it by unscrewing the fastener and lifting out (see Figure O). Set aside until reinstalled.
11. Remove the six screws and hanger clip from the applicator handles. Remove the left-handle (see Figure R).



# Troubleshooting (continued)

## Condition 1: Applicator will not heat

### ⚠ WARNING

Disconnect the electrical power and make sure the applicator has cooled to room temperature before servicing. Failure to disconnect electrical power or failure to allow the applicator to cool before servicing **may cause electrical shock or burns.**

12. Inspect all terminal block connections for loose or disconnected wires by making certain the screws in each terminal block are securing the wires. If any connections are loose or have pulled out of the terminal blocks, reconnect and retighten the connections (see Figures S and T). After reconnections have been made, reassemble the applicator making sure wiring is properly located and will not be pinched when handles are closed (see Figures P, Q and R). Reinstall the previously removed temperature module (see Figure O).

If all terminal block connections were initially found to be tight, proceed to the next step.

### Important:

Power switch **MUST** be in “on” position (red visor visible) for step 13.

13. Check electrical continuity of heater/TCO/switch assembly. Using an ohmmeter, measure across the terminals numbered 3 and 4 on the top terminal block labeled TB2. These are the terminal block positions for the black wire from the power switch and the white wire from the heater, respectively (see Figure S).

Value measured should be between 40-50 ohms. If measured value is not in this range, replace the heater/TCO/switch assembly by ordering 3M™ Heater Kit #62-9680-9731-1.

If measured value is within the specified range, proceed to the next step.

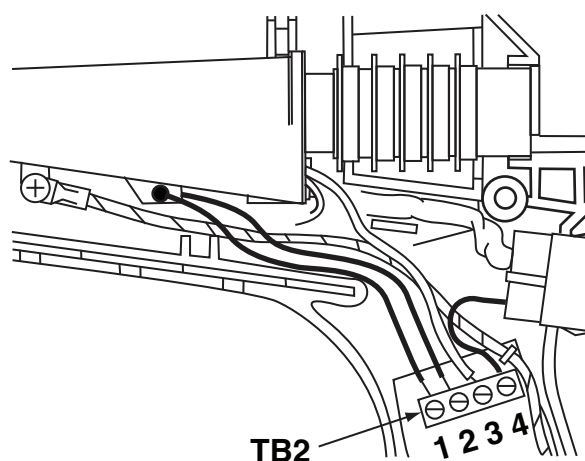


Figure S

# Troubleshooting (continued)

## Condition 1: Applicator will not heat

### Important:

Applicator **must** be cooled to **room temperature** for step 14.

14. Check continuity of the thermistor. First, disconnect the thermistor lead from terminal number 1 of the upper terminal block (TB2) (see Figure S). Using an ohmmeter, measure between the disconnected thermistor lead and terminal number 2 of terminal block TB2 (see Figure S).

### Important:

Thermistor lead **must** be disconnected for this test.

Measured value between the disconnected thermistor lead and terminal number 2 should be between .65 and 1.25 Mega-ohms.

If measured value is not within this range, replace the defective thermistor assembly by ordering 3M™ Thermistor Kit #62-9680-9733-7.

If measured value is within the acceptable range, reconnect the previously disconnected thermistor lead to terminal number 1 of terminal block TB2 (see Figure S) and proceed to the next step.

15. Check the power cord for obvious wire damage. If damage is observed, replace the power cord by ordering 3M™ Power Cord Kit #62-9680-9920-0.

If no damage is observed, check the electrical continuity of the power cord wires (steps 15A and 15b).

- a. Using an ohmmeter, check for continuity between terminal number 1 (black wire from cord) on the lower terminal block TB1 and the AC line terminal on the applicator plug (see Figures T and U).

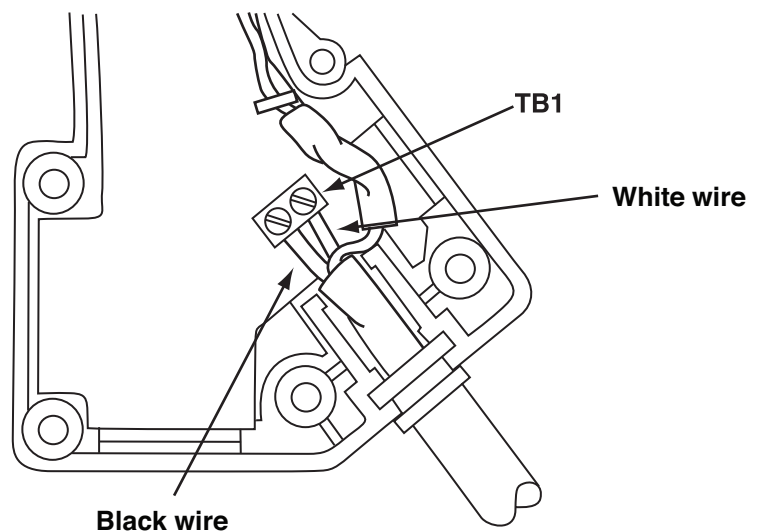


Figure T

# Troubleshooting (continued)

## Condition 1: Applicator will not heat

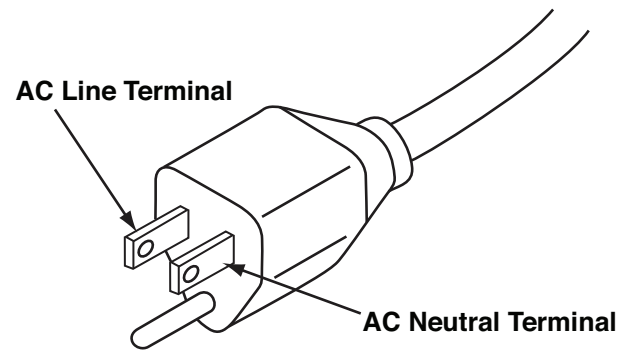


Figure U

- b. Using the ohmmeter, check for continuity between terminal number 2 (white wire from cord) on the lower terminal block TB1 and the AC neutral terminal on the applicator plug (see Figures T and U).

If the measurements in a) or b) above indicate electrical discontinuity in the cord, the cord is defective. Replace the power cord by ordering 3M™ Power Cord Kit #62-9680-9920-0.

If the measurements in a) and b) above verify electrical continuity, then the power cord is functioning properly.

16. The cause of the heating problem has now been isolated to be the temperature controlling circuit. Replace the temperature controlling circuit by ordering 3M™ Handle/Controller Kit #62-9680-9732-9.

# Troubleshooting (continued)

## Condition 2: Dripping nozzle

1. Plug in the power cord of the applicator and turn it on. Follow Applicator Startup Procedure on page 5 of Owner's Manual.

### Important:

Thermal expansion can cause a small amount of adhesive to drip from the tip during heat-up. This is normal. If the nozzle continues to drip after a warmup period of more than 10 minutes, then proceed to the next step.

2. Check to make sure that the proper temperature module is inserted into the applicator for your adhesive. Refer to Table 1 on page 4 or the chart on pages 29-30 (Temperature Module Selections section) for selection of the proper temperature module to be used with your 3M™ Quadrack™ adhesive. If the applicator continues to drip, proceed to the next step.
3. Make sure that the adhesive is clean and not contaminated, and proceed to the next step.

### ⚠ Caution

Avoid contact with hot adhesive and the applicator tip. **May cause burns.** Wear safety glasses when using.

### ⚠ WARNING

Do not pull adhesive stick from the rear of the applicator while in operation. Removing adhesive from the rear may cause molten adhesive to flow out of the rear of the applicator which **may cause burns or damage the applicator.**

### Backmelt Procedure:

4. If the adhesive stick is very difficult to extrude, check for backmelt:
  - a. Slowly push the adhesive stick into the applicator so stick is flush with the white sleeve.
  - b. Remove stroke adjuster by firmly grasping and twisting upward (see Figure P).
  - c. Remove the end clip by gently prying off one end of the clip (see Figure P).
  - d. Remove the transport mechanism by sliding it off the entry track (see Figure P).
  - e. Turn the applicator off by unplugging the power cord from the outlet and pressing the rocker switch off. The red visor on the rocker switch disappears, indicating the applicator is off (see Figure N).



# Troubleshooting (continued)

## Condition 2: Dripping nozzle

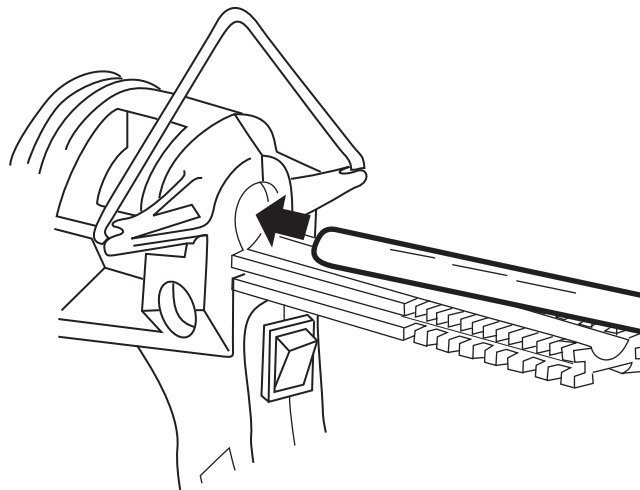


Figure V

### **⚠ Caution**

Allow applicator to cool to room temperature before servicing. Failure to do so **may cause burns.**

- f. Immediately (before the applicator cools), use a blunt object to gently push the adhesive stick approximately one inch into the applicator so the white sleeve is empty (see Figure V). Allow the applicator to cool to room temperature before proceeding to next step.
- g. With the tip pointed down and away from body, look inside the white sleeve.
- h. If there is a thin skin of adhesive on the inside of the white sleeve, the applicator is backmelted. With the applicator off and at room temperature, use a small knife or screwdriver to carefully loosen the edge of this skin. This creates a ridge for the next adhesive stick to catch.

### **Important:**

Be careful not to damage the white sleeve with knife or screwdriver.

- i. Replace the transport mechanism, stroke adjuster, and end clip (see Figure P). Reconnect the power cord to electrical outlet and turn on the applicator by pressing the rocker switch to the on position. Allow the applicator to heat up for ten minutes. Extrude an adhesive stick to clear the sleeve. Extrude a second stick to be sure the sleeve is clear. If dripping still continues, proceed to next step.

### **Important:**

To avoid backmelt problems, keep the tip clean, do not use excessive force to extrude the adhesive, and allow adequate heat-up time (especially when using extension tips or small orifice tips).

5. Valve assembly is defective. Replace by ordering 3M™ Valve Assembly Kit #62-9234-9930-5.

# Troubleshooting (continued)

## Condition 3: Low or no adhesive flow

### Caution

Use only the proper temperature module for the 3M™ Quadrack™ adhesive used. Failure to do so **may cause burns or damage applicator**. Refer to Table 1 in the Temperature Module Installation section for proper module selection for 3M Quadrack adhesive used.

### WARNING

Use only with 3M™ Scotch-Weld™ Hot Melt Quadrack™ Adhesive sticks. Use with any other materials **may cause hazardous conditions**.

### Caution

Avoid contact with hot adhesive and applicator tip. **May cause burns**. Wear safety glasses when using.

1. Check to make sure that the proper temperature module is inserted and fastened into the applicator for your adhesive. See the Temperature Module Installation procedure on page 4 of this manual for proper selection and installation of the temperature module. If the flow problem still exists with the proper temperature module installed, proceed to next step.
2. If adhesive is not properly extruded during shut-down (see shutdown procedure on page 12), the applicator requires 15 minutes of heat-up time before adhesive will flow properly. If the flow problem still exists after the 15 minute heat-up, proceed to the next step.
3. When using high viscosity 3M adhesive (3779, 3789, 3747 adhesive), use a .125" fluted tip (3M #62-9940-6920-1) or a high viscosity valve (3M #62-9729-9930-4). If a flow problem still exists with the proper valve and tip being used, proceed to the next step.
4. If the applicator is on for a long period of time without dispensing adhesive (for example 2-3 hours), charring may occur at the nozzle tip. Charring blocks adhesive flow and may cause adhesive backmelt. Remove charred adhesive by pushing a paper clip into the tip to clear the opening. If the flow problem still exists, proceed to the next step.

### Important

To avoid this problem, remember to follow the shutdown procedure on the page 12 and to extrude at least one adhesive stick every three hours while the applicator is on.

# Troubleshooting (continued)

## Condition 3: Low or no adhesive flow

### Caution

Allow applicator to cool to room temperature before servicing.  
**Failure to do so may cause burns.**

### WARNING

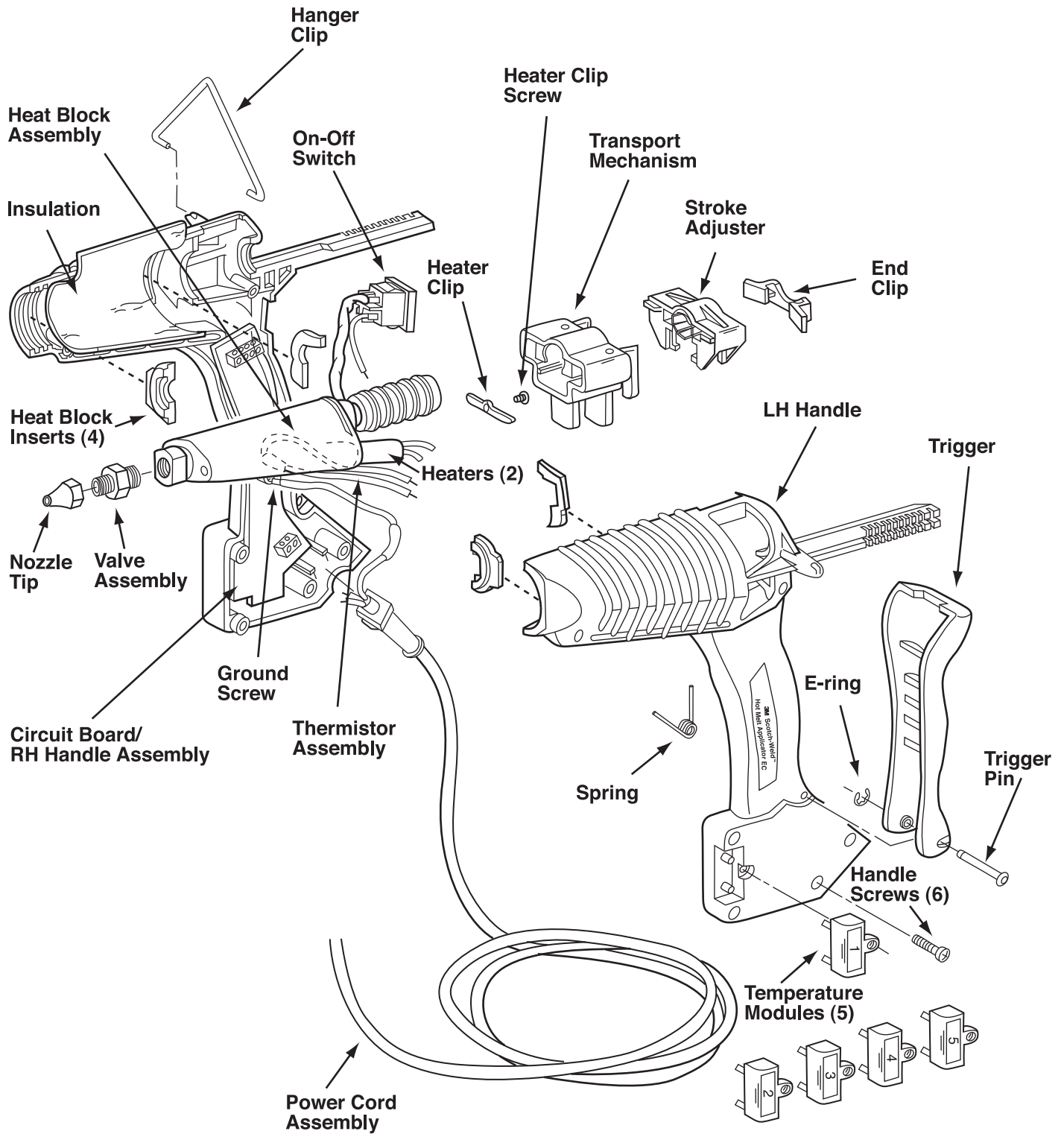
Do not clean or remove the 3M™ Scotch-Weld™ Hot Melt Adhesive with solvent. **May cause fire.** For additional health and safety information, see the product label and Material Safety Data Sheet for Scotch-Weld Hot Melt Adhesive used.

5. If the transport mechanism does not move freely on the track or if the arms of the mechanism do not open and close freely, clean the transport mechanism (steps 5a-5d).
  - a. Extrude the remaining adhesive from the entry track.
  - b. Disconnect the power cord from the outlet.
  - c. Allow the applicator to cool to room temperature.
  - d. Use 3M™ Citrus Base Cleaner or equivalent to remove any dirt that restricts free movement of the transport mechanism. See Figure P to remove or reinstall transport mechanism if necessary.

If the transport mechanism is damaged, replace it with 3M™ Transport Mechanism Kit #62-9787-9930-2. If the flow problem still exists, proceed to the next step.

6. The adhesive applicator may be backmelted. See Backmelt procedure on page 22 of this manual. If the flow problem still exists after cleaning the backmelt, proceed to the next step.
7. There may be gelled adhesive in the heat-block or valve. Replace the heat block, valve and nozzle with the 3M™ Heat Block Kit #62-9680-9730-3.

# Illustrated Part Breakdown



# 3M™ Scotch-Weld™ Hot Melt Applicator

## EC Parts Kits

Each Parts Kit is shipped with illustrated instructions

| <b>3M Stock Number</b> | <b>Description</b>             | <b>Contents</b>   |  |
|------------------------|--------------------------------|---|--|
| 62-9680-9733-7         | Thermistor Kit                 | Trigger Pin<br>Thermistor Assy<br>Handle Screws (6)<br>End Clip                                       | E-Ring<br>Heat Block Inserts (1 set)<br>Spring   |
| 62-9680-9730-3         | Heat Block Kit                 | Heat Block Assy<br>Valve Assy<br>Trigger Pin<br>Nozzle<br>Insulation<br>Handle Screws (6)<br>End Clip | Thermistor Assy<br>Heater Clip<br>Ground Screw<br>E-Ring<br>Spring<br>Heat Block Inserts (1 set) |
| 62-9787-9930-2         | Transport Mechanism Kit        | Transport Mechanism   | End Clip   |
| 62-9786-9930-4         | Stroke Adjuster Kit            | Stroke Adjuster   | End Clip   |
| 62-9680-9732-9         | Handle/Controller Kit,<br>120V | Circuit Board/<br>RH Handle Assy<br>LH Handle<br>E-Ring<br>End Clip                                   | Handle Screws (6)<br>Spring<br>Trigger Pin<br>Heat Block Inserts (1 set)                         |
| 62-9680-9734-5         | Small Parts Kit                | Trigger<br>Spring (3)<br>E-Ring (3)<br>Trigger Pin (3)  | Handle Screws (6)<br>Hanger Clip (2)<br>Heat Block Inserts (3 sets)<br>End Clip (2)              |
| 62-9680-9920-0         | Power Cord Kit, 120V           | Power Cord Assy<br>Handle Screws (6)<br>Ground Screw<br>End Clip                                      | E-Ring<br>Spring<br>Trigger Pin  |
| 62-9680-9731-1         | Heater Kit, 120V               | Heater Clip<br>Handle Screws (6)<br>Spring<br>Heater (2)/<br>Thermal Cut-off/<br>On-Off Switch Assy   | Heater Clip Screw<br>E-Ring<br>Trigger Pin<br>End Clip   |
| 62-9234-9930-5         | Valve Assembly Kit             | Valve Assembly  | Nozzle Tip   |
| 62-9680-9851-7         | Temperature Module #1 Kit      | Temperature Module #1 (3 ea.)   |  |
| 62-9680-9852-5         | Temperature Module #2 Kit      | Temperature Module #2 (3 ea.)   |  |
| 62-9680-9853-3         | Temperature Module #3 Kit      | Temperature Module #3 (3 ea.)   |  |
| 62-9680-9854-1         | Temperature Module #4 Kit      | Temperature Module #4 (3 ea.)   |  |
| 62-9680-9855-8         | Temperature Module #5 Kit      | Temperature Module #5 (3 ea.)   |  |
| 62-9680-9856-6         | Temperature Module Set Kit     | Temperature Module #1, 2, 3, 4, 5 (1 of each)   |  |

# Accessories

| <b>3M Stock Number</b> | <b>Description</b>   |
|------------------------|--|
| 62-9921-0066-9         | .090 inch Fluted Tip   |
| 62-9922-0066-7         | .063-inch Fluted Tip   |
| 62-9940-6920-1         | .125-inch Fluted Tip   |
| 62-9946-6980-2         | .072-inch Brass Extension  |
| 62-9725-9930-2         | Mini-Extension Tip, .072-inch Opening                                      |
| 62-9726-9930-0         | “T” Tip w/Adapter  |
| 62-9727-9930-8         | “L” Tip w/Adapter  |
| 62-9729-9930-4         | High Viscosity Valve (recommended for use with adhesives 3779, 3789, 3747) |
| 62-9785-9930-6         | .070-inch Tapered Aluminum Extension                                       |
| 62-9945-9935-5         | Bench Stand  |

# Temperature Module Selections for 3M™ Scotch-Weld™ Hot Melt Quadrack™ Adhesives

| Scotch-Weld Adhesive | Description  | Color        | Resistance    | Temperature Module |
|----------------------|--|--------------|---------------|--------------------|
| 3731 Q               | A 100% solid, high heat resistant thermoplastic adhesive for bonding a variety of substrates including low surface energy plastics like polypropylene, polyethylene and many other plastics.                         | Off-White    | 265°F (129°C) | (5)                |
| 3738 Q               | High delivery rate, multi-purpose adhesive with long bonding range and good performance properties.  | Tan          | 130°F (55°C)  | (4)                |
| 3747 Q               | Good adhesion to a variety of plastic and wood with good heat resistance, long bonding range, and high delivery rate.  | Tan          | 145°F (63°C)  | (4)                |
| 3748 Q               | Outstanding adhesive for rigidizing and attaching components to printed circuit boards. Good adhesion to many plastics including polyolefins. Offers good shock and heat resistance.                                 | Off-White    | 175°F (80°C)  | (4)                |
| 3748 V-O Q           | Self-extinguishing version of 3748 adhesive which meets UL 94 and UL 1410 requirements. Can bond to FRP, epoxy board, polypropylene, polyethylene.   | Light Yellow | 175°F (79°C)  | (4)                |
| 3762 Q               | A rapid-setting, low viscosity adhesive that exhibits excellent “hot tack” properties. Can be used on most paper and paper products.   | Tan          | 130°F (55°C)  | (3)                |
| 3762LM Q             | Similar to 3762 Q adhesive except applied at a substantially lower temperature.  | Cream        | 130°F (55°C)  | (1)                |
| 3764 Q               | Clear, high performance adhesive for many types of plastics, glass and wood, such as acrylic, polyolefins, polystyrene, polyester, and polycarbonate. Exhibits outstanding resistance to shock at both 72°F and 0°F. | Clear        | 140°F (60°C)  | (4)                |
| 3776LM Q             | Medium performance, low temperature applied adhesive. Can bond many light weight materials to light gauge metals.  | Tan          | 140°F (60°C)  | (1)                |

# Temperature Module Selections for 3M™ Scotch-Weld™ Hot Melt Quadrack™ Adhesives

| Scotch-Weld Adhesive | Description  | Color        | Resistance    | Temperature Module |
|----------------------|--|--------------|---------------|--------------------|
| 3779 Q               | High performance adhesive for many electrical or electronic applications. Meets UL 94 V-O requirements.  | Amber        | 300°F (149°C) | (5)                |
| 3789 Q               | High performance, general purpose adhesive with good resistance to plasticizer migration. Bonds many plastics including supported and unsupported vinyls.  | Light Yellow | 220°F (105°C) | (5)                |
| 3792 Q               | Clear, general purpose adhesive has a long open time and good delivery rate. Excellent adhesion to many plastics, glass, and wood. Exhibits good resistance to shock at both 0°F and ambient temperatures. | Clear        | 140°F (60°C)  | (4)                |
| 3792LM Q             | Similar to 3792 Q adhesive except applied at substantially lower temperature.  | Clear        | 140°F (60°C)  | (1)                |

## Caution

Use only the proper temperature module for the 3M™ Quadrack™ adhesive used. Failure to do so **may cause burns or damage applicator**. Refer to Table 1 in the Temperature Module Installation section for proper module selection for 3M Quadrack adhesive used.

## Important Notice

User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of application.

Please remember that many factors can affect the use and performance of a 3M product in a particular application. The materials to be bonded with the product, the surface preparation of those materials, the product selected for use, the conditions in which the product is used, and the time and environmental condition in which the product is expected to perform are among the many factors that can affect the use and performance of a 3M product. Given the variety of factors that can affect the use and performance of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for the user's method of application.



# Warranty and Repair

## During Warranty Period

Contact your nearest 3M sales branch or authorized 3M™ Scotch-Weld™ Hot Melt Adhesive distributor.

## After Warranty Period

The 3M™ Scotch-Weld™ Hot Melt Applicator EC has been engineered to be durable and reliable. Recognizing that it will eventually need maintenance, we have made it easy to disassemble and repair.

Should your 3M Scotch-Weld Hot Melt Applicator EC require repair, you can order replacement part kits from your local authorized 3M Scotch-Weld Hot Melt distributor or from the nearest 3M sales branch listed on the back cover.

**Important Notice:** User is responsible for determining whether the 3M Scotch-Weld Hot Melt Applicator EC is fit for a particular purpose and suitable for user's method of application.

**Warranty:** 3M warrants for 12 months from the date of purchase or use, whichever occurs first, that the 3M Scotch-Weld Hot Melt Applicator EC will be free of defects in material and manufacture. 3M MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY ARISING OUT OF A COURSE OF DEALING, CUSTOM, OR USAGE OF TRADE; This warranty does not cover routine maintenance, normal wear and tear, or damage resulting from accident, misuse, alteration, corrosion, lack of reasonable care, service performed by an unauthorized repair service, use of unauthorized replacement parts or accessories, or installation, use, operation, or maintenance not in accordance with 3M recommended procedures, or use of adhesive sticks not manufactured by 3M or not subject to 3M quality standards.

**Limitation of Remedies:** If the 3M Scotch-Weld Hot Melt Applicator EC is proven to be defective within the warranty period stated above, THE EXCLUSIVE REMEDY, AT 3M'S OPTION, SHALL BE TO REFUND THE PURCHASE PRICE OF OR TO REPAIR OR REPLACE THE DEFECTIVE 3M APPLICATOR, provided that the defective applicator is, at 3M's choice, returned immediately to 3M, or an authorized service representative designated by 3M, or made available at user's premises in a location suitable for servicing.

**Limitation of Liability:** 3M shall not otherwise be liable for any losses or damages, whether direct, indirect, special, incidental, or consequential, regardless of the legal or equitable theory asserted, including contract, negligence, warrant, or strict liability.