

NOTE


All numerical values are in metric units [with U.S. customary units in brackets]. Dimensions are in millimeters [and inches]. Unless otherwise specified, dimensions have a tolerance of ± 0.13 [$\pm .005$] and angles have a tolerance of $\pm 2^\circ$. Figures and illustrations are for identification only and are not drawn to scale.

1. INTRODUCTION

This specification covers the requirements for application of Tyco Electronics Heavy Duty Burner Connectors. These connectors are designed to be mounted to the chassis of a household appliance. The connectors will satisfy the requirements of appliance ranges with either interchangeable cooking modules or standard burner configurations.

These connectors feature a black phenolic or natural ceramic housing, a snap-in receptacle contact (two per assembly), and a clip. This system is easily assembled by snapping the connector housing into the clip and the receptacle contacts into the housing. The contact design permits a manufacturer to use "high-speed" application tooling to terminate leads. The metal connector clips are available in different configurations to satisfy various appliance range and burner designs.

There are two types of contacts: A Front Entry type for use with Standard Burner housings (Tyco Electronics supplied); and a Side Entry type for use with Interchangeable Cooking Module housings (customer supplied). The contacts feature a wire barrel and an insulation support barrel for crimping to a wire and a lead-in ramp to facilitate mating with the burner. The contact is designed to accept 18-14 AWG stranded or solid copper wire.

Figure 1 shows the product components and terms of their features. These terms will be used throughout this specification. Use these terms when corresponding with Tyco Electronics Representatives to facilitate assistance.

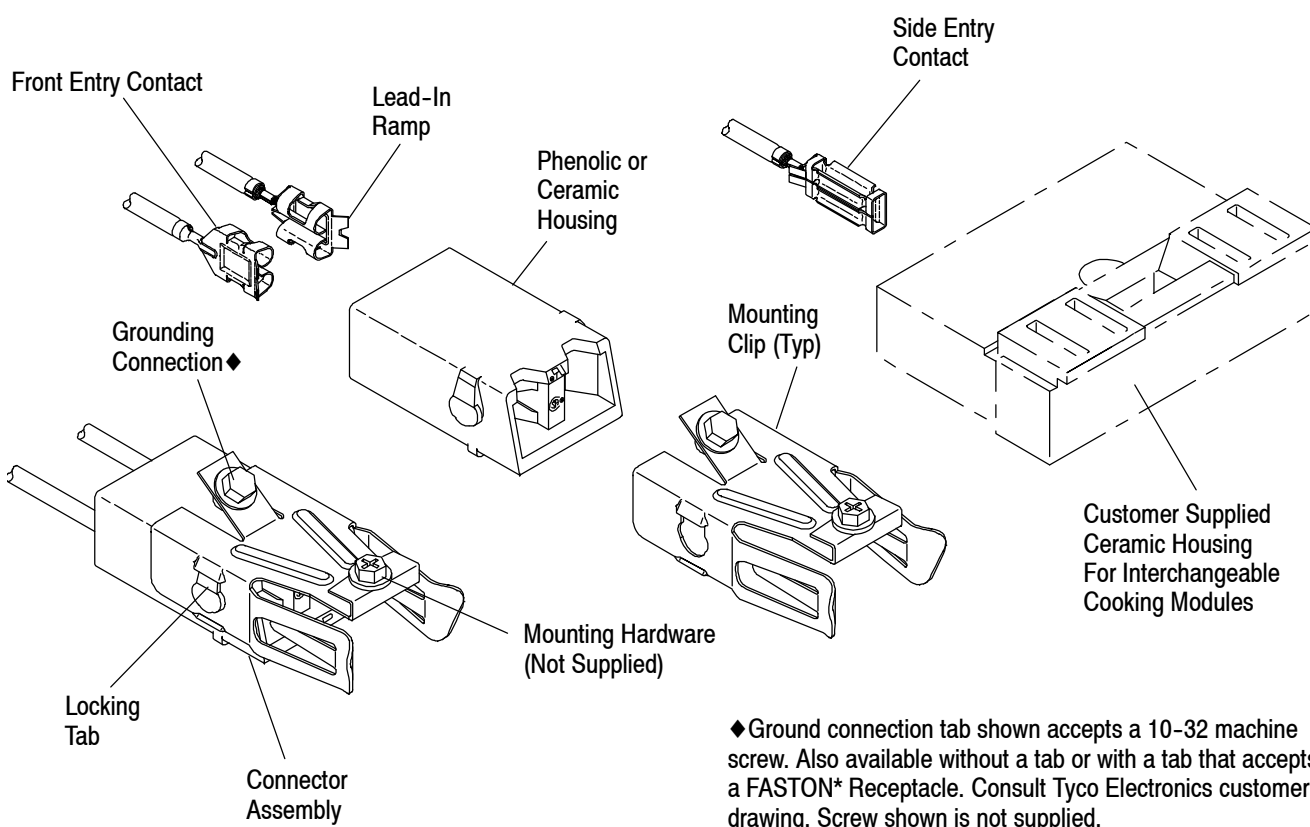


Figure 1

2. REFERENCE MATERIAL

2.1. Revision Summary

- Updated document to corporate requirements
- Changed text in Section 1, INTRODUCTION; Paragraph 3.2, and callouts in Figures 1 and 3
- Added notes to Figures 1 and 3
- Deleted obsolete tooling and related documentation in Paragraph 2.5 and Figure 6
- Added new Paragraph 2.1 and renumbered

2.2. Customer Assistance

Product Part Number 770524 and Product Code 1353 are representative of Heavy Duty Burner Connectors. Use of these numbers will identify the product line and expedite your inquiries through a service network established to help you obtain product and tooling information. Such information can be obtained through a local Tyco Electronics Representative or, after purchase, by calling the Product Information Center or the Tooling Assistance Center number at the bottom of Page 1.

2.3. Customer Drawings

Customer Drawings for specified products are available from the service network. The information contained in the Customer Drawings takes priority if there is a conflict with this specification or with any other technical documentation supplied by Tyco Electronics.

2.4. Specifications

Product Specification 108-1056 provides product performance requirements and test information.

2.5. Instructional Material

The following is a list of instruction sheets (408-Series), and Customer Manuals (409-Series) that provide detailed tooling, application, and repair information.

408-8040	Heavy Duty Miniature Quick Change Applicators (Side-Feed, Mechanical-Feed)
409-5128	AMP-O-ELECTRIC* Model "K" Terminating Machine
409-5806	AMPOMATOR* CLS III Lead-Making Machine

3. REQUIREMENTS

3.1. Safety Limitations/Precautions



Disconnect equipment from all power sources before performing maintenance or repairs.

When selecting a location for the connector, the wire bend radius specified by the wire manufacturer must be considered. Also, to permit attachment of the wire, there should be sufficient slack between the wire end and any strain relief. Reasonable care should be used when handling the connectors.

3.2. Special Characteristics

The black phenolic housing material will withstand temperatures up to 200°C [392°F]. The ceramic housing material is made for temperature ranges over 200°C [392°F].

3.3. Storage

The connectors should remain in the shipping containers until ready for use to prevent deformation to the contact or damage to the housings. The connectors should be used on a first-in/first-out basis to avoid shelf life degradation.

3.4. Wire Preparation (Figure 2)

The wire crimping barrel is designed to accept 18-14 AWG solid or stranded copper wire.

CAUTION

DO NOT nick, scrape, or cut the wire while stripping it.

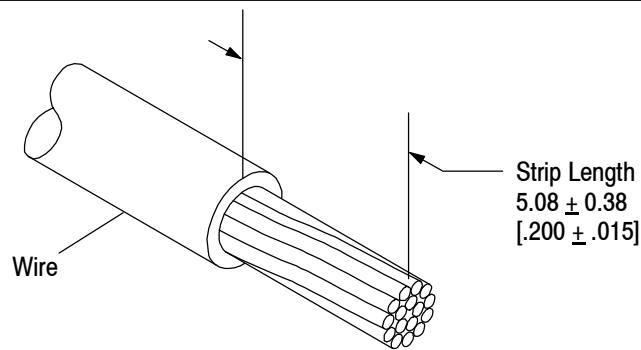


Figure 2

3.5. Attaching Hardware (See Figure 3)

Any commercially available hardware, such as sheet-metal screws or other hardware that is compatible with the mounting clip, may be used to secure the connector housing and clip to the appliance.

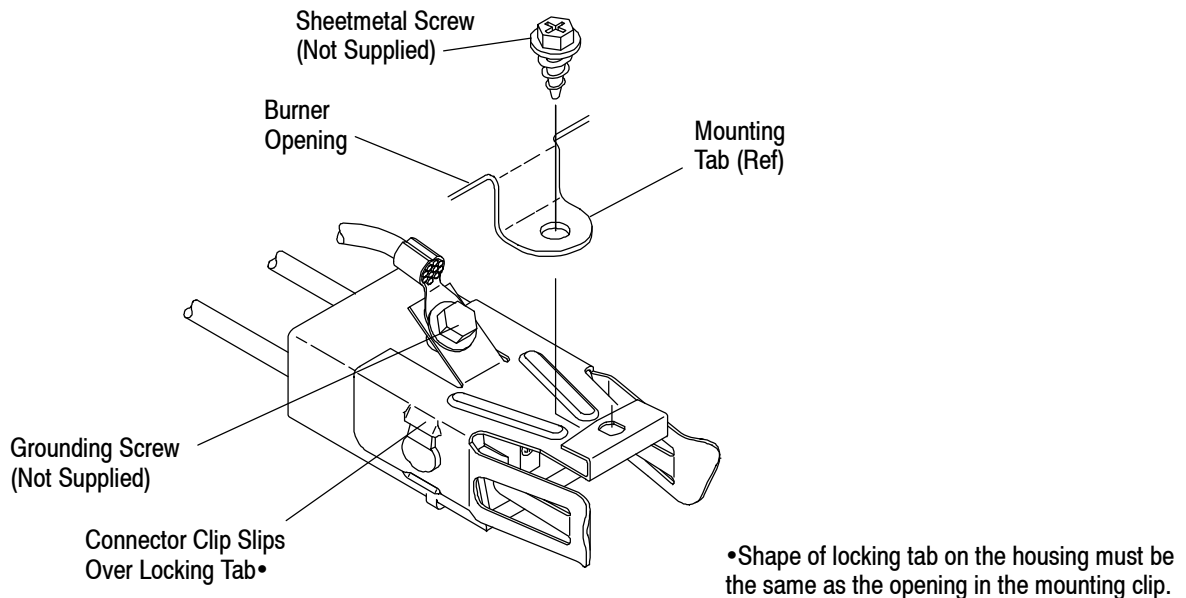


Figure 3

3.6. Crimp Requirements (See Figure 4)

- A. The contacts are terminated to the cable wires by crimping, then inserted into the housing cavities where they are held in place by a contact design spring retention feature.
- B. The crimp height and insulation diameter information is found in the table in Figure 4.
- C. The carrier cutoff tab and burr should not exceed 0.51 mm [.020 in.] or 0.13 mm [.005 in.] respectively.
- D. The wire barrel flash shall not exceed 0.13 mm [.005 in.].
- E. The wire barrel seam shall be completely closed and there shall be no evidence of loose wire strands or wire strands visible in the seam.

F. The rear bellmouth length shall be 0.25–0.51 mm [.010–.020 in.] and the front bellmouth shall not exceed 0.25 mm [.010 in.].

G. The end of the conductor shall be flush with the front end of the wire barrel or protrude 1.09 mm [.043 in.] maximum after crimping.

WIRE SIZE (AWG)	WIRE BARREL CRIMP (D)				INSULATION BARREL CRIMP WIDTH (H)		WIRE INSULATION DIAMETER (MAX)	
	HEIGHT		WIDTH					
	mm ±0.05	[in.] ±0.002	mm +0.17 -0	[in.] +0.007 -0.000	mm ±0.05	[in.] ±0.002	mm	[in.]
18	1.47	.058	2.79	.110	3.56	.140	3.96	.156
16	1.65	.065						
14	1.88	.074						

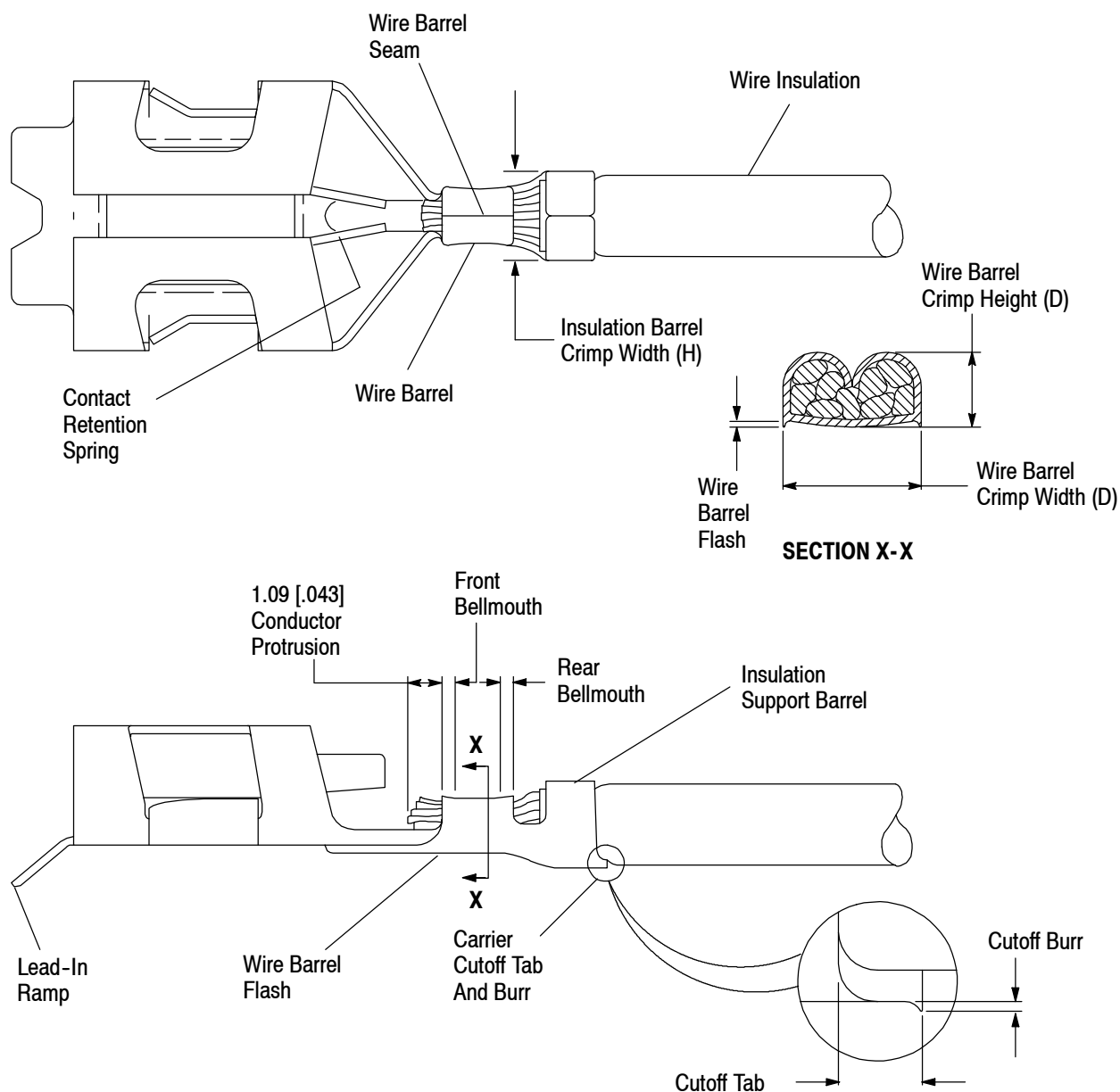


Figure 4

H. Both the insulation and conductor shall be visible between the insulation barrel and wire barrel. Care shall be taken not to allow insulation to be crimped in the wire barrel.

I. Reasonable care shall be taken not to cut or break the insulation during the crimping operation.

J. The lead-in ramp shall not be deformed.

K. The contact, including the cutoff tab and burr, shall not be bent above or below the datum line more than the amount shown in Figure 5. The side-to-side bending of the contact shall not exceed the limits specified. There shall be no twist or roll in the crimped portion that will impair usage of the contact.

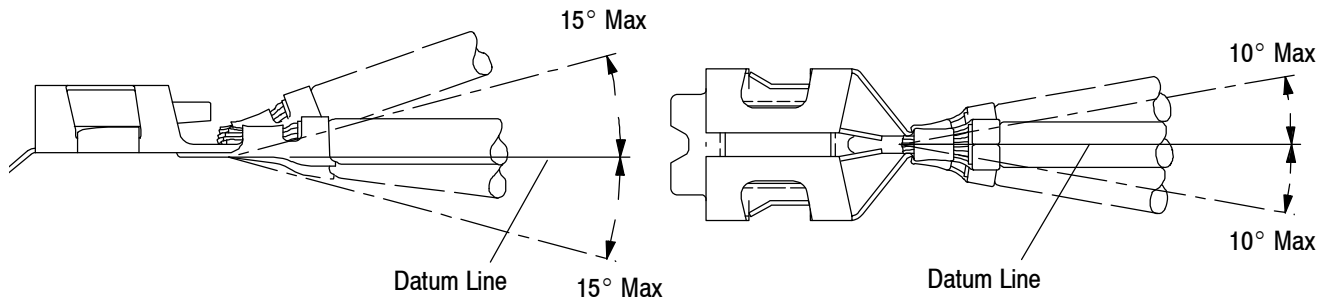


Figure 5

4. QUALIFICATION

Heavy Duty Burner Connectors are Recognized by Underwriters Laboratories Inc. (UL) in File E36851 and Certified by CSA International in File LR7189.

5. TOOLING

Figure 6 shows applicators, machines, Applicator Instructions (408-Series), and Customer Manuals (409-Series) related to the Heavy Duty Burner Connectors.

CONTACT TYPE	WIRE SIZE (AWG)	WIRE INSULATION DIAMETER (MAX) mm [in.]	STRIP FORM APPLICATOR (408-8040)	MACHINE USED (DOCUMENT)
Heavy Duty Burner Contacts	18-14	3.96 [.156]	466815-1 466815-3	854400-[] (409-5806)
			466815-2 567254-2	565435-5 (409-5128)

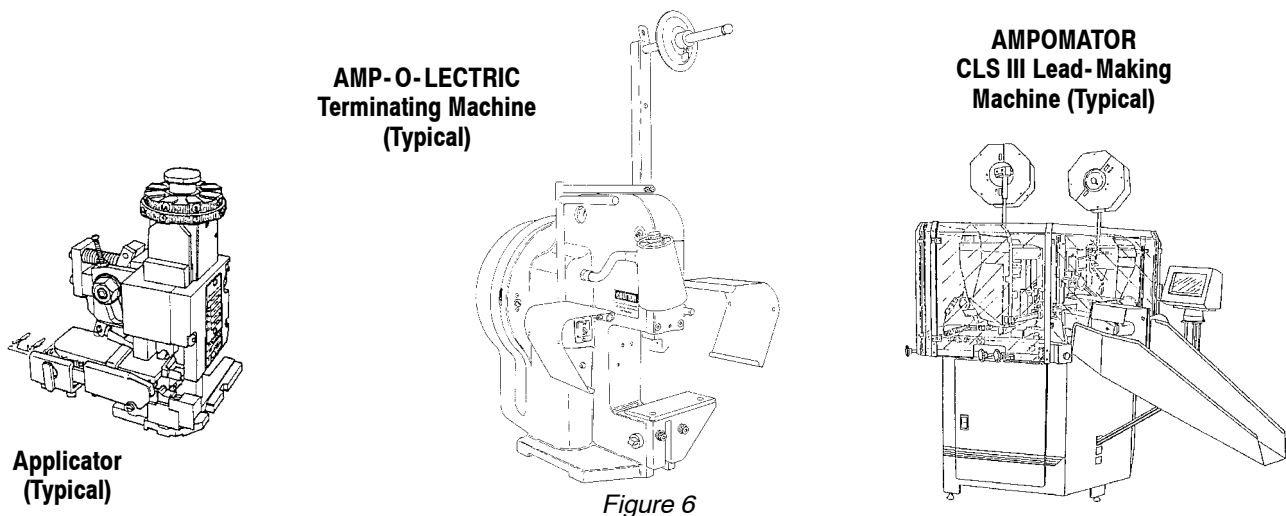


Figure 6

6. VISUAL AID

Figure 7 shows a typical application of a Heavy Duty Burner Connector. This illustration should be used by production personnel to ensure a correctly applied product. Applications which DO NOT appear correct should be inspected using the information in the preceding pages of this specification and in the instructional material shipped with the product or tooling.

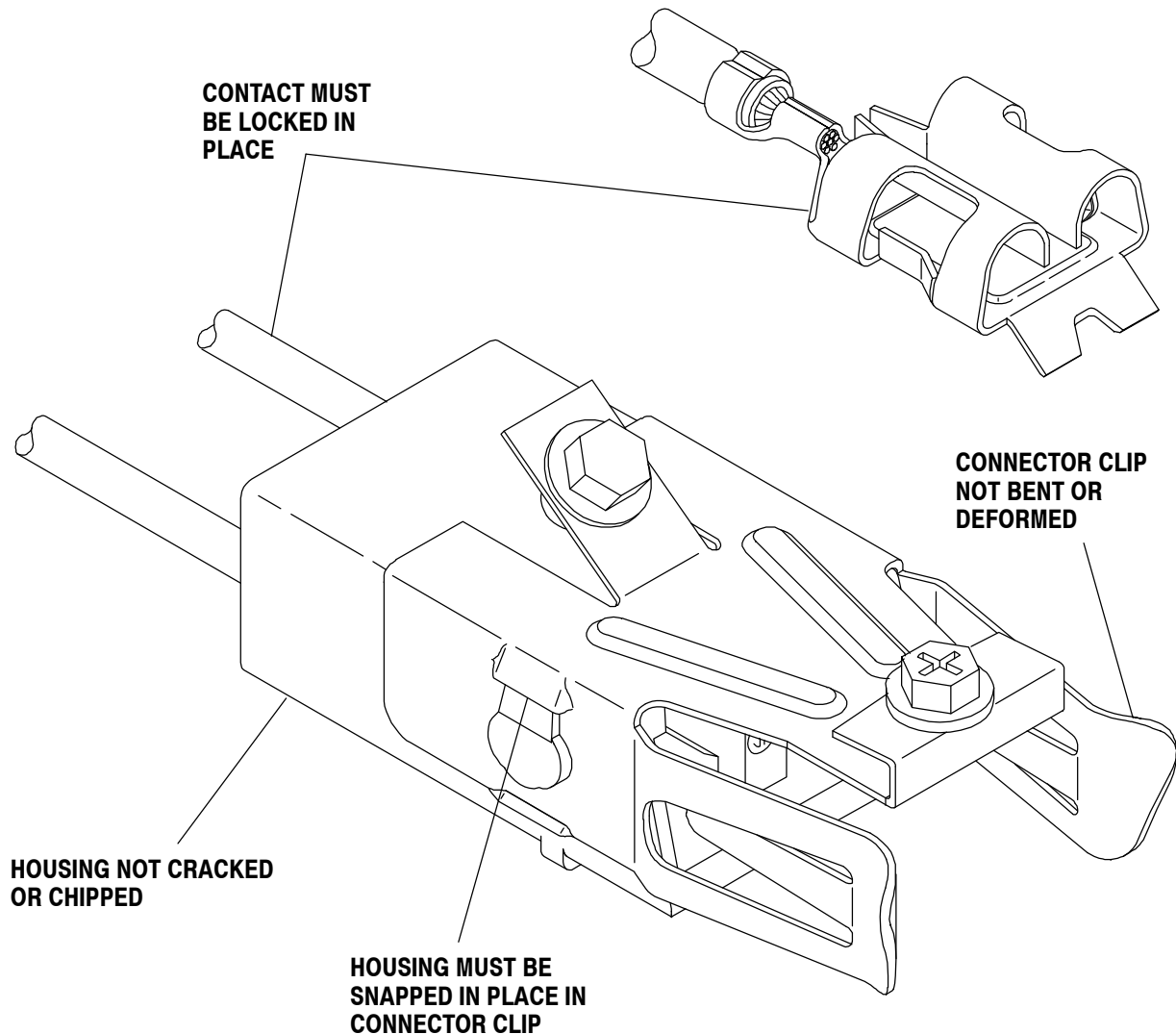


FIGURE 7. VISUAL AID