

**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  $\pm 0.13$  mm [ $\pm .005$  in.] 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 FASTON Straight Receptacles with the “F”-Crimp wire barrel feature. Receptacles are available in a variety of mating configurations, and in five series sizes: .312, .250, .205, .187, and .110. The series designates the width of the mating tab. Also, depending on series and mating end, receptacles are offered in many standard tab thicknesses.

When corresponding with TE Connectivity Personnel, use the terminology provided in this specification to facilitate your inquiries for information. Basic terms and features of this product are provided in Figure 1.

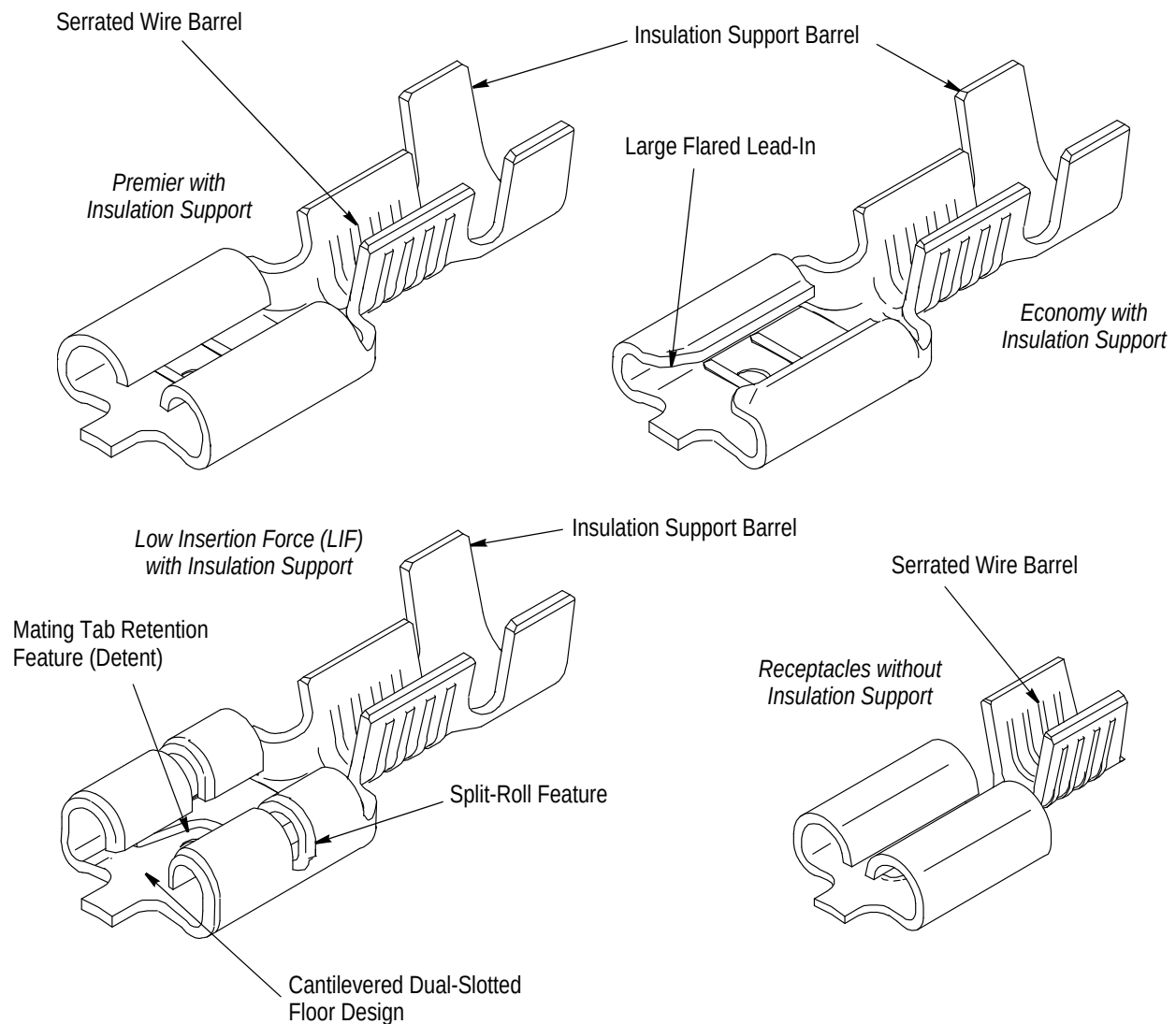


Figure 1

## 2. REFERENCE MATERIAL

### 2.1. Revision Summary

- Updated document to corporate requirements
- Added new NOTE to Section 5, TOOLING

### 2.2. Customer Assistance

Reference Product Base Part Number 41202 and Product Code 1110 are representative of FASTON Straight Receptacles with "F-" Crimp Feature. Use of these numbers will identify the product line and help you to obtain product and tooling information. Such information can be obtained through a local TE Representative, by visiting our website at [www.te.com](http://www.te.com), or by calling PRODUCT INFORMATION or the TOOLING ASSISTANCE CENTER at the numbers at the bottom of page 1.

### 2.3. Drawings

Customer drawings for each product part number are available from a service network. The information contained in customer drawings takes priority if there is a conflict with this specification or with any technical documentation supplied by TE.

### 2.4. Specifications

The following Application Specifications provide information for the application of related products.

| <u>Document Number</u> | <u>Document Title</u>                           |
|------------------------|-------------------------------------------------|
| 114-2028               | FASTON 110 Series Flag Receptacles              |
| 114-2032               | FASTON Reversible Flag Receptacles              |
| 114-2070               | FASTON AMPLIVAR* Contact Tab                    |
| 114-2078               | FASTON Flag Receptacles with Tab Lok Feature    |
| 114-2079               | FASTON Flag Receptacles with "F-" Crimp Feature |
| 114-2082               | FASTON Piggyback Receptacles                    |
| 114-2126               | FASTON "F-" Crimp Center-Strip Flag Receptacles |

### 2.5. Instructional Material

The following list includes available instruction sheets (408-series) that provide assembly procedures for operation, maintenance and repair of tooling; and customer manuals (409-series) that provide setup, operation, and maintenance of machines. A variety of Instruction Sheets for FASTON products are available from TE. Contact the Product Information Center number at the bottom of page 1.

| <u>Document Number</u> | <u>Document Title</u>                                          |
|------------------------|----------------------------------------------------------------|
| 408-3295               | Preparing Reel of Contacts for Applicator Tooling              |
| 408-7424               | Checking Contact Crimp Height                                  |
| 408-7432               | Force Gage 92-100505                                           |
| 408-8039               | Heavy Duty Miniature Quick-Change Applicators (End-Feed Type)  |
| 408-8040               | Heavy Duty Miniature Quick-Change Applicators (Side-Feed Type) |
| 408-8053               | Miniature (Mini) and Quick-Change Applicators                  |
| 408-8059               | General Preventative Maintenance for Applicators               |
| 408-9816               | Handling of Reeled Products                                    |
| 409-5842               | AMP-O-ELECTRIC* Model "G" Terminating Machine 354500-[ ]       |
| 409-5852               | AMPOMATOR* CLS III-G Lead-Making Machine 122500-[ ]            |
| 409-5878               | AMPOMATOR CLS IV+ Lead-Making Machine 356500-[ ]               |
| 409-10027              | Stripping Modules 1490500 and 1490502                          |
| 409-10029              | Stripping Modules 1490501 and 1490503                          |
| 409-10047              | AMP 3K* Terminating Machines 1725950-3, -4                     |

## 3. REQUIREMENTS

### 3.1. Storage

#### A. Ultraviolet Light

Prolonged exposure to ultraviolet light may deteriorate the chemical composition used in the contact materials.

## B. Reeled Contacts

When using reeled contacts, store coil wound reels horizontally and traverse wound reels vertically.

## C. Shelf Life

The contacts should remain in the shipping containers until ready for use to prevent deformation to the contacts. The contacts should be used on a first in, first out basis to avoid storage contamination that could adversely affect signal transmissions.

## D. Chemical Exposure

Do not store contacts near any chemicals listed below, as they may cause stress corrosion cracking in the contacts.

|          |            |          |            |          |                  |
|----------|------------|----------|------------|----------|------------------|
| Alkalies | Ammonia    | Citrates | Phosphates | Citrates | Sulfur Compounds |
| Amines   | Carbonates | Nitrites | Sulfur     | Nitrites | Tartrates        |

### NOTE



Where the above environmental conditions exist, phosphor-bronze contacts are recommended instead of brass if available.

## 3.2. Product Selection

The FASTON Straight Receptacles with “F”-Crimp feature are available in a variety of series sizes, types of mating ends, and thicknesses of tabs accepted See Figure 2.

| RECEPTACLE TYPE                    | SERIES SIZE AND MATING TAB THICKNESS | RECEPTACLE TYPE                                   | SERIES SIZE AND MATING TAB THICKNESS |
|------------------------------------|--------------------------------------|---------------------------------------------------|--------------------------------------|
| Premier with Insulation Support    | 7.92x0.81 [.312x.032]                | Budget with Insulation Support                    | 6.35x0.81 [.250x.032]                |
|                                    | 6.35x0.81 [.250x.032]                |                                                   | 4.75x0.51 [.187x.020]                |
|                                    | 5.21x0.51 [.205x.020]                |                                                   | 4.75x0.81 [.187x.032]                |
|                                    | 5.21x0.81 [.205x.032]                | Economy with Insulation Support                   | 6.35x0.81 [.250x.032]                |
|                                    | 4.75x0.38 [.187x.015]                |                                                   | 5.21x0.51 [.205x.020]                |
|                                    | 4.75x0.43 [.187x.017]                |                                                   | 5.21x0.81 [.205x.032]                |
|                                    | 4.75x0.51 [.187x.020]                |                                                   | 4.75x0.51 [.187x.020]                |
|                                    | 4.75x0.81 [.187x.032]                |                                                   | 4.75x0.81 [.187x.032]                |
|                                    | 2.79x0.30 [.110x.012]                | Economy without Insulation Support                | 6.35x0.81 [.250x.032]                |
|                                    | 2.79x0.41 [.110x.016]                |                                                   | 5.21x0.51 [.205x.020]                |
|                                    | 2.79x0.51 [.110x.020]                |                                                   | 4.75x0.81 [.187x.032]                |
|                                    | 2.79x0.64 [.110x.025]                |                                                   | 4.75x0.51 [.187x.020]                |
|                                    | 2.79x0.81 [.110x.032]                | Moldable with Insulation Support                  | 6.35x0.81 [.250x.032]                |
|                                    | 6.35x0.81 [.250x.032]                |                                                   | 4.75x0.51 [.187x.020]                |
| Premier without Insulation Support | 5.21x0.51 [.205x.020]                | Moldable without Insulation Support               | 6.35x0.81 [.250x.032]                |
|                                    | 5.21x0.81 [.205x.032]                |                                                   | 4.75x0.81 [.187x.032]                |
|                                    | 4.75x0.38 [.187x.015]                | Hermetic with Insulation Support                  | 6.35x0.81 [.250x.032]                |
|                                    | 4.75x0.51 [.187x.020]                | Commercial with Insulation Support                | 4.75x0.51 [.187x.020]                |
|                                    | 2.79x0.41 [.110x.016]                | Low Insertion Force (LIF) with Insulation Support | 7.92x0.81 [.312x.032]                |
|                                    | 2.79x0.51 [.110x.020]                |                                                   | 6.35x0.81 [.250x.032]                |
|                                    | 2.79x0.64 [.110x.025]                |                                                   | 4.75x0.51 [.187x.020]                |
|                                    | 2.79x0.81 [.110x.032]                |                                                   | 4.75x0.81 [.187x.032]                |

Figure 2

## Descriptions

### A. Premier

Resilient rolls and a double slotted floor allow maximum compliance toward mating tabs. Each receptacle is thermally stress-relieved to help resist the effects of overstressing, often induced during the manufacturing process. Premier receptacles also are typically constructed from 0.46 mm [.018 in.] thick material. All .110 Series receptacles are Premier, but are not stress-relieved and have no floor slots.

### B. Budget

Construction and characteristics are much the same as the Premier, but the Budget receptacles have only one floor slot, and do not receive the special stress-relieving. Also, the .250 Series Budget receptacles are constructed of a 0.41 mm [.016 in.] thick material.

### C. Economy

Distinguishable by a large, flared lead-in and relatively low profile of the mating end rolls.

### D. Moldable

Available primarily as Economy or Premier type, but with no floor slots or openings, allowing over-mold processing.

### E. Hermetic

Designed specifically to mate with posted header tabs in hermetic motor applications. Provides all the features and benefits of the Premier line.

### F. Commercial

The abbreviated roll construction conserves stock material. These receptacles have generally higher insertion forces and a somewhat lower tolerance for abuse, allowing use in applications where it is common for connections to remain undisturbed for long periods of time.

### G. LIF

A cantilevered, dual-slotted floor design, a generous lead-in, and a two-stage roll (split-roll) feature provide greatly reduced insertion forces for this line of receptacles. Minimum withdrawal forces are maintained by the design.

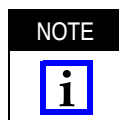
## 3.3. Wire Selection and Preparation

### A. Selection

This product line will accept wire sizes 26-8 AWG with an insulation outside diameter range of 0.76-7.11 mm [.030-.280 in.]. See Figure 3.

### B. Preparation

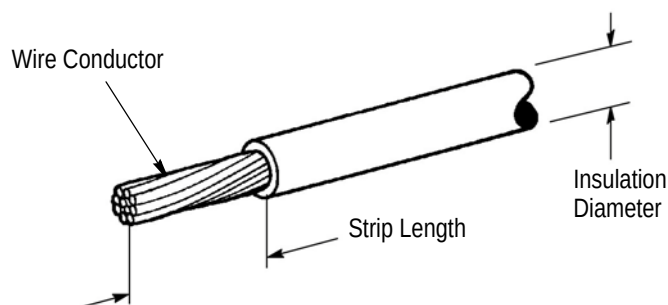
Strip the wire insulation according to the following table. See Figure 3.



*The applied crimp dimension (within the functional range of the product) is dependent on the termination tooling being used. Refer to the documentation (applicator logs and instruction sheets) supplied with the termination tooling for the applied crimp height. See Section 5, TOOLING.*



*Do NOT nick, scrape, or cut the wire conductor during the stripping operation.*



| WIRE SIZE RANGE, AWG | STRIP LENGTH ±0.38 [.015]      |                                   | WIRE SIZE RANGE, AWG | STRIP LENGTH ±0.38 [.015]      |                                   |
|----------------------|--------------------------------|-----------------------------------|----------------------|--------------------------------|-----------------------------------|
|                      | WITH INSULATION SUPPORT BARREL | WITHOUT INSULATION SUPPORT BARREL |                      | WITH INSULATION SUPPORT BARREL | WITHOUT INSULATION SUPPORT BARREL |
| .312 SERIES          |                                |                                   |                      |                                |                                   |
| 18-14                | 5.59 [.220]                    | N/A                               | 16-12                | 6.40 [.252]                    | N/A                               |
| .250 SERIES          |                                |                                   |                      |                                |                                   |
| 26-11                | 5.59 [.220]                    | N/A                               | 18-14•               | 5.59 [.220]                    | 6.40 [.252]                       |
| 24-20                | 5.59 [.220]                    | N/A                               | 16-12                | 6.40 [.252]                    | N/A                               |
| 22-18                | 5.59 [.220]                    | N/A                               | 14-10                | 6.40 [.252]                    | N/A                               |
| 18-14•               | 6.40 [.252]                    | 6.40 [.252]                       | ---                  |                                |                                   |
| .205 SERIES          |                                |                                   |                      |                                |                                   |
| 26-22                | 4.78 [.188]                    | N/A                               | 18-14                | 4.78 [.188]                    | 5.59 [.220]                       |
| 22-18                | 4.78 [.188]                    | 5.59 [.220]                       | ---                  |                                |                                   |
| .187 SERIES          |                                |                                   |                      |                                |                                   |
| 24-20                | 4.78 [.188]                    | N/A                               | 20-16•               | 4.78 [.188]                    | 3.96 [.156]                       |
| 22-18                | 4.78 [.188]                    | N/A                               | 18-14                | 5.59 [.220]                    | N/A                               |
| 20-16•               | 4.78 [.188]                    | 4.78 [.188]                       | ---                  |                                |                                   |
| .110 SERIES          |                                |                                   |                      |                                |                                   |
| 26-22                | N/A                            | 3.96 [.156]                       | 22-18•               | N/A                            | 4.78 [.188]                       |
| 24-22                | 4.78 [.188]                    | N/A                               |                      | N/A                            | 3.96 [.156]                       |
| 22-18•               | 5.59 [.220]                    | N/A                               | 20-16                | 4.78 [.188]                    | 5.59 [.220]                       |
|                      | 4.78 [.188]                    | N/A                               | 18-14                | N/A                            | 3.96 [.156]                       |

\*A second set of strip lengths is given for these sizes to cover receptacles with shorter or longer wire barrel areas. To calculate strip length for any given receptacle, add together the wire barrel length, one-half the transition length, plus 0.38 mm [.015 in.] wire brush length.

Figure 3

### 3.4. Crimped Receptacle Requirements

Locate the receptacle to be crimped in the appropriate tooling according to the instructions packaged with that tooling. Perform the crimping operation. Figure 4 shows a typical receptacle as it should appear after crimping.



Wire insulation shall NOT be cut or broken during the crimping operation. Exercise of reasonable care by tooling operators should be sufficient to provide undamaged terminations.

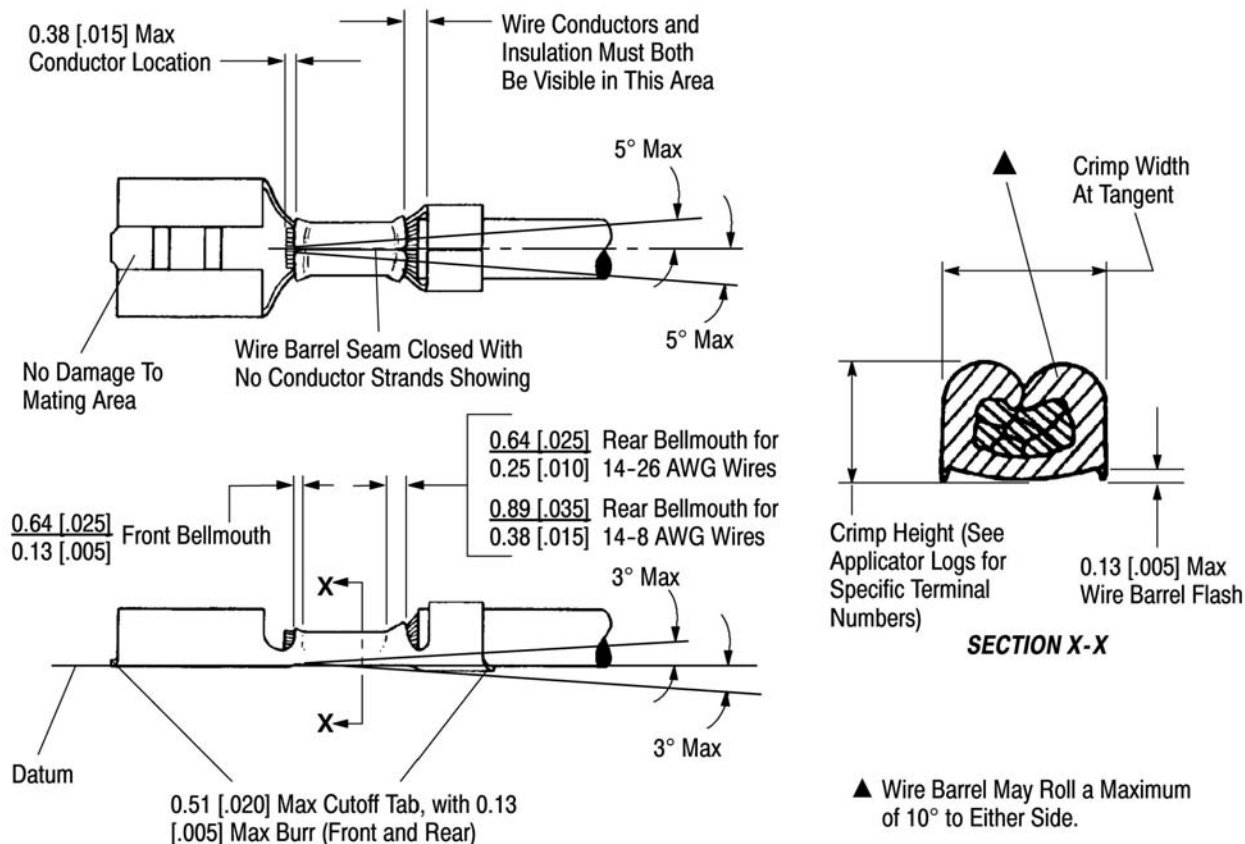
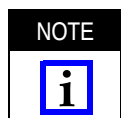


Figure 4

### 3.5. Crimp Pull-Out Test

Crimped receptacles shall not be separated from their associated wires when subjected to forces as specified in Figure 5.



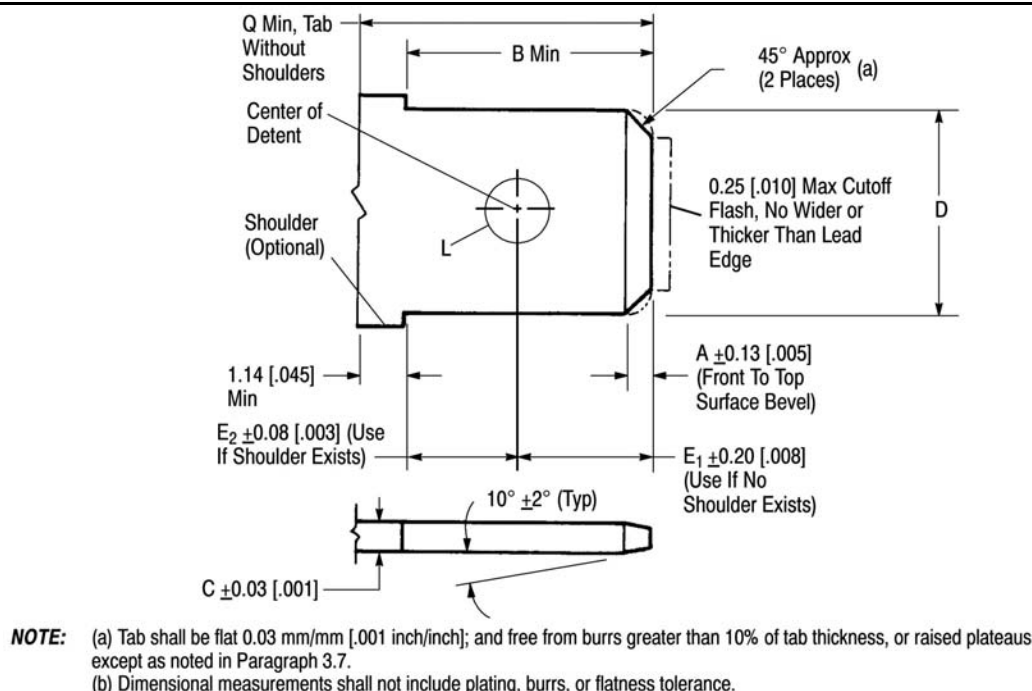
Adjust tensile testing machine for head travel of 25.4 mm [1 inch] per minute. Directly and gradually apply force for 1 minute.

| WIRE SIZE |                 | MINIMUM FORCE |         | WIRE SIZE |                 | MINIMUM FORCE |         |
|-----------|-----------------|---------------|---------|-----------|-----------------|---------------|---------|
| AWG       | mm <sup>2</sup> | POUNDS        | NEWTONS | AWG       | mm <sup>2</sup> | POUNDS        | NEWTONS |
| 22        | 0.32            | 8             | 35.58   | 14        | 2.10            | 50            | 222.40  |
| 20        | 0.52            | 13            | 57.82   | 12        | 3.30            | 70            | 311.36  |
| 18        | 0.82            | 20            | 88.96   | 10        | 5.30            | 80            | 355.84  |
| 16        | 1.30            | 30            | 133.44  | ---       |                 |               |         |

Figure 5

### 3.6. Mating Tab Dimensions

Figure 6 shows features and dimensional requirements for tab terminals intended for mating with FASTON Receptacles.

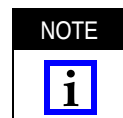


| TAB SIZE (NOMINAL)                        | DIMENSIONS  |             |             |             |                |                |             |             |
|-------------------------------------------|-------------|-------------|-------------|-------------|----------------|----------------|-------------|-------------|
|                                           | A           | B           | C           | D           | E <sub>1</sub> | E <sub>2</sub> | L           | Q           |
| 6.35x0.81 [.250x.032] with Dimple         | 0.89 [.035] | 7.80 [.307] | 0.81 [.032] | 6.35 [.250] | 3.86 [.152]    | 4.06 [.160]    | 1.83 [.072] | 8.89 [.350] |
| 6.35x0.81 [.250x.032] with Hole           | 0.89 [.035] | 7.80 [.307] | 0.81 [.032] | 6.35 [.250] | 4.52 [.178]    | 3.40 [.134]    | 1.83 [.072] | 8.89 [.350] |
| 5.21x0.81 [.205x.032] with Dimple         | 0.89 [.035] | 6.20 [.244] | 0.81 [.032] | 5.21 [.205] | 2.54 [.100]    | 3.81 [.150]    | 1.75 [.069] | 7.29 [.287] |
| 5.21x0.81 [.205x.032] with Hole           | 0.89 [.035] | 6.20 [.244] | 0.81 [.032] | 5.21 [.205] | 3.18 [.125]    | 3.18 [.125]    | 1.75 [.069] | 7.29 [.287] |
| 5.21x0.51 [.205x.020] with Hole           | 0.89 [.035] | 6.20 [.244] | 0.51 [.020] | 5.21 [.205] | 3.18 [.125]    | 3.18 [.125]    | 1.75 [.069] | 7.29 [.287] |
| 4.75x0.81 [.187x.032] with Dimple         | 0.89 [.035] | 6.20 [.244] | 0.81 [.032] | 4.75 [.187] | 2.54 [.100]    | 3.81 [.150]    | 1.40 [.055] | 7.29 [.287] |
| 4.75x0.81 [.187x.032] with Hole           | 0.89 [.035] | 6.20 [.244] | 0.81 [.032] | 4.75 [.187] | 3.18 [.125]    | 3.18 [.125]    | 1.40 [.055] | 7.29 [.287] |
| 4.75x0.51 [.187x.020] with Dimple         | 0.76 [.030] | 6.20 [.244] | 0.51 [.020] | 4.75 [.187] | 2.54 [.100]    | 3.81 [.150]    | 1.40 [.055] | 7.29 [.287] |
| 4.75x0.51 [.187x.020] with Hole           | 0.76 [.030] | 6.20 [.244] | 0.51 [.020] | 4.75 [.187] | 3.18 [.125]    | 3.18 [.125]    | 1.40 [.055] | 7.29 [.287] |
| 2.79x0.81 [.110x.032] with Dimple or Hole | 0.51 [.020] | 6.98 [.275] | 0.81 [.032] | 2.79 [.110] | 1.55 [.061]    | 5.54 [.218]    | 1.19 [.047] | 8.10 [.319] |
| 2.79x0.51 [.110x.020] with Dimple or Hole | 0.51 [.020] | 6.98 [.275] | 0.51 [.020] | 2.79 [.110] | 1.55 [.061]    | 5.54 [.218]    | 1.19 [.047] | 8.10 [.319] |

Figure 6

### 3.7. Mating Overcycle and Testing

The forces required to mate and unmate a test mating tab and receptacle shall be as specified in Figure 7. Measure the force using a testing device capable of holding the reading. It must also provide accurate alignment with slow and steady mating and unmating of the test tab and receptacle. Refer to Instruction Sheet 408-7432.



Testing may be done using a gage as described in *Electrical Quick Connect Terminals UL-310*. Test tabs shall be dimensioned as shown in Figure 6, except that the "C" dimension shall have a tolerance of +0.008 mm [+0.0003 in.] for brass tabs +0.013 mm [+0.0005 in.] for steel) and raised plateaus around detents shall be limited to a total of 0.025 mm [.001 in.] for both sides.

| TAB SIZE                           | NEWTON (N) [POUND-FORCE]                |                          |            |                          |            |
|------------------------------------|-----------------------------------------|--------------------------|------------|--------------------------|------------|
|                                    | FIRST MATING<br>(MAXIMUM)<br>INDIVIDUAL | FIRST UNMATING (MINIMUM) |            | SIXTH UNMATING (MINIMUM) |            |
|                                    |                                         | AVERAGE                  | INDIVIDUAL | AVERAGE                  | INDIVIDUAL |
| TEST TAB AND UNPLATED RECEPTACLE   |                                         |                          |            |                          |            |
| 6.35 [.250]                        | 80.06 [18]                              | 26.69 [6]                | 17.79 [4]  | 22.24 [5]                | 17.79 [4]  |
| 5.21 [.205]<br>4.75 [.187]         | 66.72 [15]                              | 22.24 [5]                | 13.34 [3]  | 13.34 [3]                | 8.90 [2]   |
| 2.79 [.110]                        | 53.38 [12]                              | 13.34 [3]                | 8.90 [2]   | 8.90 [2]                 | 4.45 [1]   |
| TEST TAB AND TIN-PLATED RECEPTACLE |                                         |                          |            |                          |            |
| 6.35 [.250]                        | 75.62 [17]                              | 22.24 [5]                | 13.34 [3]  | 17.79 [4]                | 13.34 [3]  |
| 5.21 [.205]<br>4.75 [.187]         | 66.72 [15]                              | 22.24 [5]                | 13.34 [3]  | 13.34 [3]                | 8.90 [2]   |
| 2.79 [.110]                        | 53.38 [12]                              | 13.34 [3]                | 8.90 [2]   | 8.90 [2]                 | 4.45 [1]   |

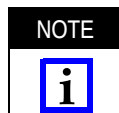
Figure 7

### 3.8. Repair/Replacement

Damaged contacts must be removed, discarded, and replaced.

## 4. QUALIFICATIONS

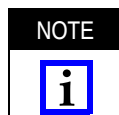
FASTON Straight Receptacles with "F-" Crimp Feature meet UL-310 specification for quick-connect terminals. They are Listed in Underwriters Laboratories (UL) Listing program Electrical File E-66717 and Certified to CSA International C22.2 No. 153 in Files LR-49710 and LR 36371.



*Underwriters Laboratories (UL) does not qualify this type of terminal for application to 24 AWG or smaller wire, or 8 AWG and larger.*

## 5. TOOLING

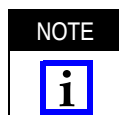
This section provides a selection of tools for various application requirements. Modified designs and additional tooling concepts may be available to meet other application requirements. A list of tooling recommendations and instructional material packaged with the tooling covering the full wire size range is provided in Figure 8.



*Tool Engineers have designed machines for a variety of application requirements. For assistance in setting up prototype and production line equipment, contact Tool Engineering through your local TE Representative or call the Tooling Assistance Center number at the bottom of page 1.*

### • Applicators

Applicators are designed for the full wire size range of strip-fed, precision formed contacts, and provide for high volume, heavy duty production requirements. The applicators can be used in bench or floor model power units.



*Each applicator is shipped with a metal identification tag attached. DO NOT remove this tag or disregard the information on it. Also, a packet of associated paperwork is included in each applicator shipment. This information should be read before using the applicator; then it should be stored in a clean, dry area near the applicator for future reference. Some changes may have to be made to the applicators to run in all related power units. Contact the Tooling Assistance Center number at the bottom of page 1 for specific changes.*



*Tool life may be significantly reduced when crimping comparable steel/nickel plated steel terminals.*

# • Power Units

A power unit is an automatic or semi-automatic device used to assist in the application of a product. Power unit includes the power source used to supply the force or power to an applicator. Power units used to terminate this product line include:

AMPOMATOR CLS III-G Lead Making Machine 122500-2, -3 (409-5852)

AMPOMATOR CLS IV+ 356500-1, -2 (409-5878)

AMP-O-LECTRIC Model "G" Terminating Machine 354500-1 (409-5842)

AMP 3K Terminating Machine 1725950-3, -4 (409-10047)

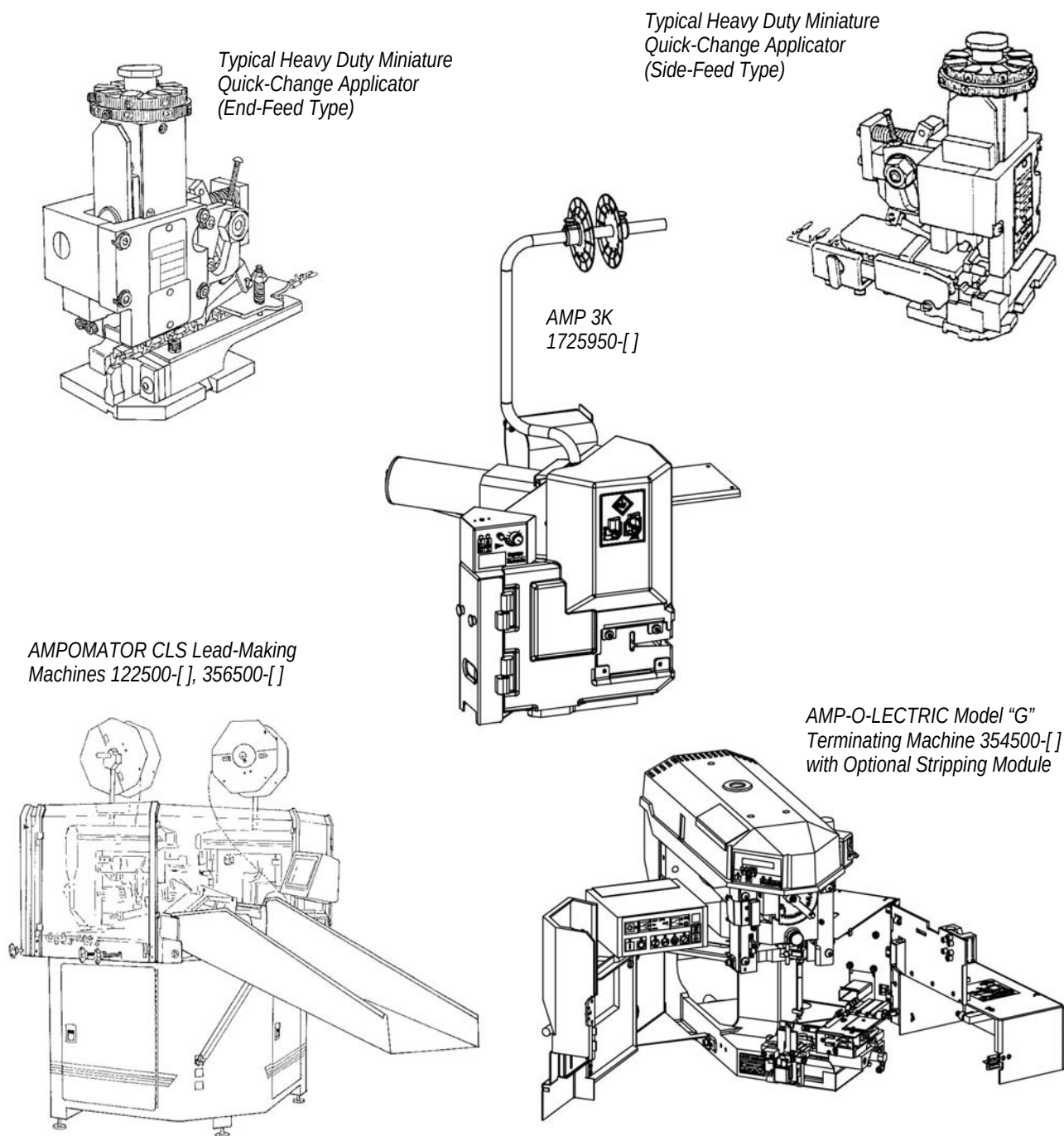


Figure 8 (Cont'd)

| RECEPTACLE SERIES AND TYPE                             | WIRE SIZE RANGE, AWG | INSULATION DIAMETER RANGE                    | APPLICATOR (408-8039) |                      |
|--------------------------------------------------------|----------------------|----------------------------------------------|-----------------------|----------------------|
|                                                        |                      |                                              | CLS Machines          | G or AMP 3K Machines |
| 7.92 [.312] Premier with Insulation Support Barrel     | 18-14                | 2.29-3.05 [.090-.120]                        | 466157-1              | ---                  |
|                                                        | 16-12                | 4.06 [.160] Max or Two 2.79 [.110] Max       | 687944-1              | 687944-2             |
| 6.35 [.250] Premier with Insulation Support Barrel     | 24-20                | 0.76-1.78 [.030-.070]                        | ---                   | 466145-2             |
|                                                        | 22-18                | 1.52-2.54 [.060-.100]                        | 687931-1              | 687931-2             |
|                                                        |                      | 2.29-3.30 [.090-.130]                        | 687875-1              | 687875-2             |
|                                                        | 18-14                | 1.52-2.79 [.060-.110]                        | 466133-1              | 466133-3             |
|                                                        |                      | 3.05-4.32 [.120-.170]                        | 687823-1†             | 687823-2†            |
|                                                        | 16-12 or Two 18      | 5.33-6.73 [.210-.265] or Two 3.05 [.120] Max | 466284-6              | 466284-7             |
|                                                        | 14-10                | 3.81-5.08 [.150-.200]                        | 687857-1              | 687857-3             |
| 6.35 [.250] Premier without Insulation Support Barrel  | 18-14                | N/A                                          | ---                   | 687844-2             |
|                                                        |                      |                                              |                       |                      |
| 6.35 [.250] Budget with Insulation Support Barrel      | 22-18                | 2.29-3.30 [.090-.130]                        | 687875-1              | 687875-2             |
|                                                        | 18-14                | 3.05-4.32 [.120-.170]                        | 466649-1              | 466649-2             |
| 6.35 [.250] Economy with Insulation Support Barrel     | 26-22                | 1.02-1.52 [.040-.060]                        | ---                   | 466106-2             |
|                                                        | 22-18                | 2.29-3.30 [.090-.130]                        | 466653-1              | 466653-2             |
|                                                        |                      | 3.05-4.32 [.120-.170]                        | 466649-1              | 466649-2             |
|                                                        | 18-14                | 3.81-5.54 [.150-.218]                        | 687941-1              | 687941-2             |
| 6.35 [.250] Economy without Insulation Support Barrel  | 18-14                | N/A                                          | 687942-1              | 687942-2             |
| 6.35 [.250] Moldable with Insulation Support Barrel    | 22-18                | 2.29-3.30 [.090-.130]                        | 687875-1              | 687875-2             |
|                                                        | 18-14                | 3.05-4.32 [.120-.170]                        | 466649-1              | 466649-2             |
| 6.35 [.250] Moldable without Insulation Support Barrel | 18-14                | N/A                                          | 687943-1              | 687943-2             |
| 6.35 [.250] Hermetic with Insulation Support Barrel    | 18-14                | 3.05-4.32 [.120-.170]                        | 687823-1†             | 687823-2†            |
|                                                        | 14-10                | 3.81-5.08 [.150-.200]                        | 687857-1              | 687857-3             |
| 6.35 [.250] LIF with Insulation Support Barrel         | 18-14                | 3.05-4.32 [.120-.170]                        | 466649-1              | 466649-2             |
|                                                        | 14-10                | 3.81-5.08 [.150-.200]                        | 687857-1              | 687857-3             |
| 5.21 [.205] Premier with Insulation Support Barrel     | 26-22                | 1.27-1.78 [.050-.070]                        | ---                   | 466091-3             |
|                                                        | 22-18                | 2.16-3.18 [.085-.125]                        | 687927-1              | 687927-3             |
|                                                        | 18-14                | 3.30-4.57 [.130-.180]                        | 687949-1              | 687949-2             |
| 5.21 [.205] Premier without Insulation Support Barrel  | 22-18                | N/A                                          | ---                   | 687935-2             |
|                                                        | 18-14                | N/A                                          | ---                   | 687865-2             |
| 5.21 [.205] Economy with Insulation Support Barrel     | 22-18                | 2.16-3.18 [.085-.125]                        | 687927-1              | 687927-3             |
|                                                        | 18-14                | 3.30-4.57 [.130-.180]                        | 687948-1              | 687948-3             |
| 5.21 [.205] Economy without Insulation Support Barrel  | 18-14                | N/A                                          | ---                   | 687947-3             |

†This applicator is used for receptacles with 0.46 mm [.018 in.] thick stock; use applicator 466766-2, -1 for receptacles with 0.41 mm [.016 in.] thick stock.

Figure 8 (Cont'd)

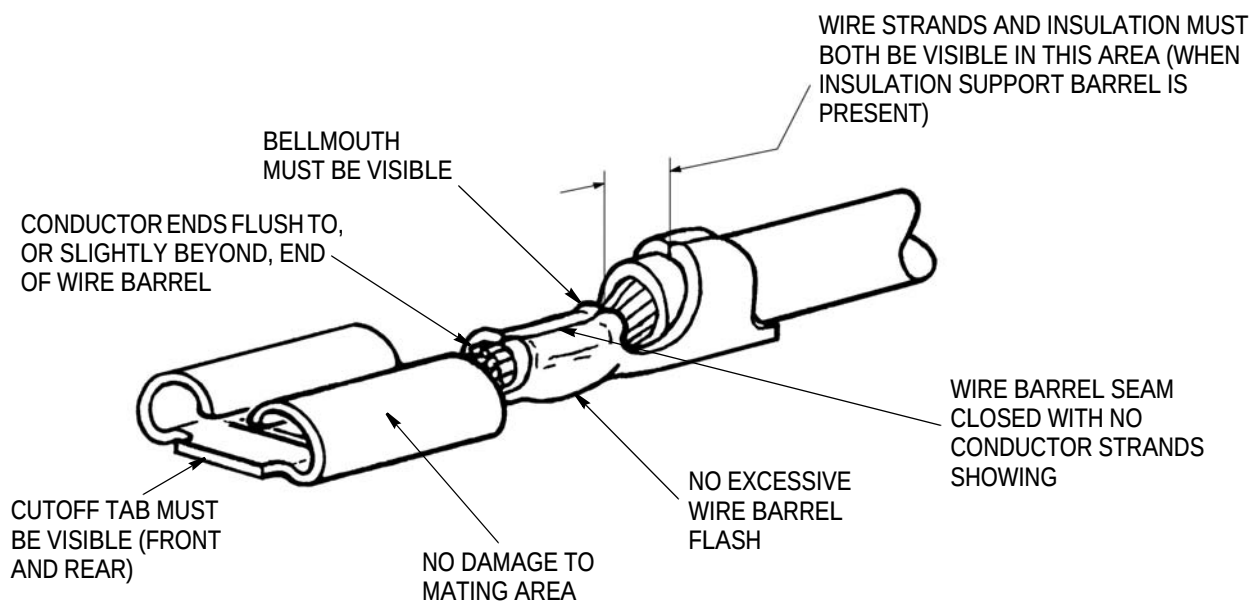
| RECEPTACLE SERIES AND TYPE                             | WIRE SIZE RANGE, AWG | INSULATION DIAMETER RANGE               | APPLICATOR (408-8039) |                      |
|--------------------------------------------------------|----------------------|-----------------------------------------|-----------------------|----------------------|
|                                                        |                      |                                         | CLS Machines          | G or AMP 3K Machines |
| 4.75 [.187] Premier with Insulation Support Barrel     | 24-20                | 1.02-1.78 [.040-.070]                   | 687852-1              | 687852-2             |
|                                                        |                      | 1.52-2.79 [.060-.110]                   | 687938-1              | 687938-2             |
|                                                        | 20-16                | 1.52-2.79 [.060-.110]                   | 687928-1              | 687928-2             |
|                                                        |                      | 2.29-3.30 [.090-.130]                   |                       |                      |
|                                                        | 18-16 or Two 18      | Two 2.67 [.105] Max                     | 687870-1              | 687870-2             |
| 4.75 [.187] Premier without Insulation Support Barrel  | 20-16                | N/A                                     | 687928-1              | 687928-2             |
| 4.75 [.187] Economy with Insulation Support Barrel     | 20-16                | 2.29-3.30 [.090-.130]                   | 687928-1              | 687928-2             |
| 4.75 [.187] Economy without Insulation Support Barrel  | 20-16                | N/A                                     | 687933-1              | 687933-2             |
| 4.75 [.187] Commercial with Insulation Support Barrel  | 18-14                | 3.81-4.83 [.150-.190]                   | 466300-1              | 466300-2             |
|                                                        | 18-14 or Two 16      | 4.57-5.84 [.180-.230] or Two [.110] Max | 466409-1              | 466409-2             |
| 4.75 [.187] Moldable with Insulation Support Barrel    | 20-16                | 2.29-3.30 [.090-.130]                   | 687928-1              | 687928-2             |
| 4.75 [.187] Moldable without Insulation Support Barrel | 20-16                | N/A                                     | 687928-1              | 687928-2             |
| 4.75 [.187] LIF with Insulation Support Barrel         | 20-16                | 2.29-3.30 [.090-.130]                   | 687928-1              | 687928-2             |
| 2.79 [.110] Premier with Insulation Support Barrel     | 26-22                | 1.02-1.52 [.040-.060]                   | 687896-1†             | 687896-2†            |
|                                                        | 22-20                | 1.52-2.54 [.060-.100]                   | 687892-1              | 687892-3             |
|                                                        | 22-18                |                                         |                       |                      |
|                                                        | 22-18                | 2.29-3.30 [.090-.130]                   | 466178-1              | 466178-2             |
|                                                        |                      | 3.05-3.56 [.120-.140]                   | 687967-1              | 687967-3             |
|                                                        | 20-16                | 1.52-2.54 [.060-.100]                   | 466141-1              | 466141-2             |
|                                                        |                      | 3.05-3.56 [.120-.140]                   | 466060-1              | 466060-3             |
|                                                        |                      | 3.81-4.32 [.150-.170]                   | ---                   | 466049-2             |
| 2.79 [.110] Premier without Insulation Support Barrel  | 24-22                | N/A                                     | 466090-1              | 466090-2             |
|                                                        | 20-18 or Two 20      | N/A                                     | 687954-1              | 687954-2             |
|                                                        | 2-16                 | N/A                                     | 687891-1              | 687891-2             |
|                                                        | 18-14                | N/A                                     | 466573-1‡             | 466573-2†            |

†This applicator is used for receptacles 16.13 mm [.635 in.] long; use applicator 466020-2, -1 for receptacles 12.95 mm [.510 in.] long. ‡Side-Feed Applicator (See Instruction Sheet 408-8040).

Figure 8 (End)

## 6. VISUAL AID

The illustration below shows a typical application of this product. 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 9. VISUAL AID**