

Figure 1

## 1. INTRODUCTION

Crimping Tool 2217400-1 is designed to crimp TE Connectivity CLOUDSPLITTER Plug Connectors 2178148-1 and 2178148-2. This tool is used in conjunction with TE Connectivity Crimping Tool 2217299-1. This crimping tool is used to crimp the power contacts in these terminations before they are loaded into the plug connectors.

## 2. DESCRIPTION

Crimping Tool 2217400-1 consists of a hand tool frame, a moving die, a stationary die, moving ferrule crimper, stationary ferrule crimper, and ferrule crimper mounting screws. The hand tool frame contains a

moving handle, a stationary handle, and a ratchet adjustment wheel. The moving die contains two connector alignment plates to align the connector in the die. The moving and stationary ferrule crimpers are rotatable using the ferrule crimper mounting screws to accommodate the two different connectors. See Figure 1.

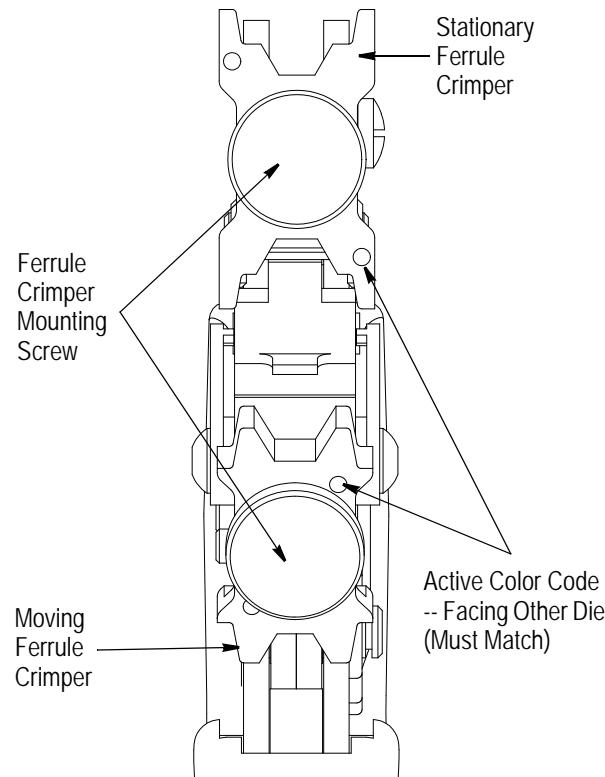


**NOTE**

*The tool frame is modified for this particular application and will not accept interchangeable dies.*

## 3. PREPARING THE TOOL

The ferrule crimpers must be oriented properly before attempting to crimp the connector. If the ferrule crimpers are not in their correct orientations, the tool will fail to make a good crimp on the connector. The ferrule crimpers are color-coded to determine their orientation. See Figure 2.



CONNECTOR PART NUMBER	ACTIVE COLOR CODE
2178148-1	Red (small)
2178148-2	White (large)

Figure 2

To change the orientation of a ferrule crimper

1. Loosen the ferrule crimper mounting screw.



**NOTE**

*The ferrule crimper mounting screws do **not** need to be removed to change the orientation of the ferrule crimper. Loosen the screws only enough to provide clearance for the ferrule crimpers to rotate.*

2. Pull the ferrule crimper away from the die.
3. Rotate the ferrule crimper until the correct color is facing the other die.
4. Push the ferrule crimper toward the die.
5. Tighten the ferrule crimper mounting screw.



**CAUTION**

*Damage to the screws, crimpers, or connectors can occur if the screws are not fully tightened. Check before each use to ensure the ferrule crimper mounting screws are fully tightened.*

#### 4. CRIMPING PROCEDURE

Before proceeding, refer to the application specification for the connectors, 114-32099, and ensure the following:

- The connector and cable are compatible.
- The cable polarity is properly maintained.

- The power contacts are crimped properly and are correctly inserted into the connector.
- The connector is properly assembled.

1. Close the tool handles until the ratchet releases and then allow the handles to open fully.

2. Hold the tool so the back is facing the user. Insert the connector (including shield and cable) in the crimping chamber until it bottoms. Refer to Figure 3.



**NOTE**

*The ferrule lip must be in front of the ferrule crimper. If it is not, push the ferrule until it is.*

3. While holding the assembly, carefully close the tool handles until the ratchet releases. Then allow the handles to open fully.



**NOTE**

*This tool terminates the ferrule, the front shield tabs, and the rear shield tabs. For proper alignment, make sure to apply forward force on the cable while closing the tool handles.*

4. Remove the connector from the tool and make sure the crimp requirements are met according to the application specification, 114-32099.

5. If necessary, adjust the tool ratchet according to Section 5, CRIMP HEIGHT ADJUSTMENT (to obtain the proper crimp heights.)

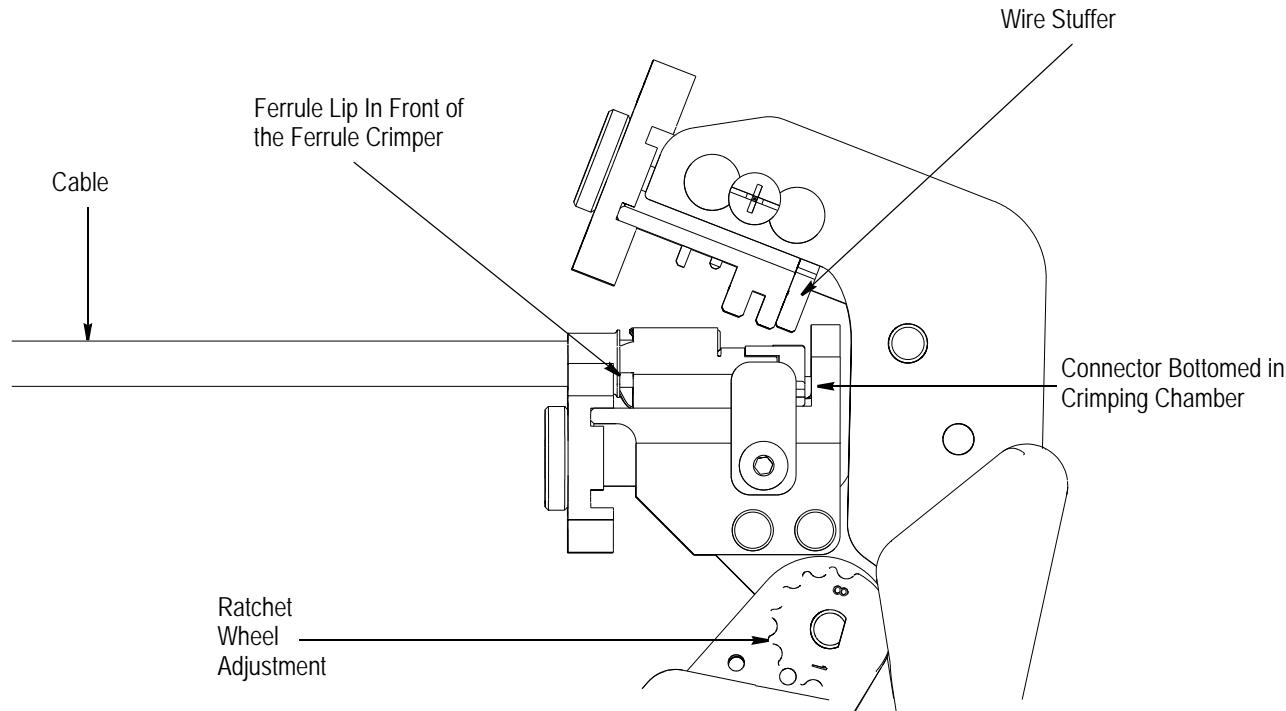


Figure 3

## 5. CRIMP HEIGHT (RATCHET) ADJUSTMENT

Refer to Figure 4.

The tool ratchet mechanism features an adjustment wheel with numbered settings. The adjustment wheel controls the amount of handle pressure exerted on the jaws during crimping. If the crimp is not acceptable, adjust the ratchet as follows:

1. Remove the lockscrew from the ratchet adjustment wheel.
2. With a screwdriver, adjust the ratchet wheel from the front of the tool.
3. Observe the ratchet adjustment wheel. If a tighter crimp is required, rotate the adjustment wheel counterclockwise to a higher-numbered setting. If a looser crimp is required, rotate the adjustment wheel clockwise to a lower-numbered setting.
4. Re-assemble the lockscrew.
5. Make a sample crimp and inspect to the requirements in 114-32033. If the crimp is acceptable, the adjustment setting is correct. If the crimp is unacceptable, continue to adjust the ratchet wheel, and again measure a sample crimp. If a proper crimp cannot be obtained, the tool or die assembly must be replaced. Refer to Section 7.

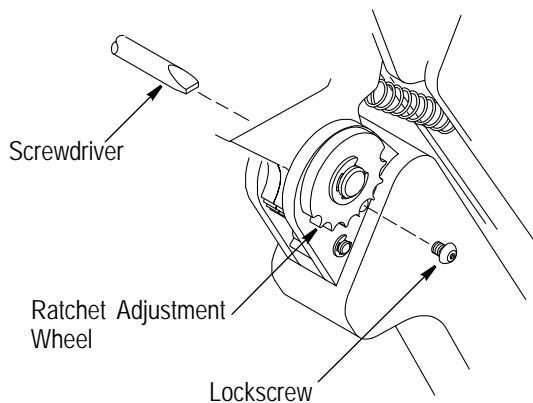


Figure 4



### NOTE

*This tool is set at the Number 6 ratchet setting at the factory. This setting assures the proper crimp height for solid wire and accounts for the maximum tolerance of the tooling. Users can readjust the tool to a lower setting (Number 4, minimum) as long as the tool produces proper insertion depth and ferrule crimp height. Refer to the application specification 114-32099.*

## 6. MAINTENANCE AND INSPECTION

### 6.1. Daily Maintenance

It is recommended that the tool operator be made aware of, and be responsible for, the following steps of daily maintenance.

1. Remove dust, moisture, and any other contaminants from the tool with a clean, soft brush, or a clean, soft, lint-free cloth.



#### CAUTION

*DO NOT use hard or abrasive objects that could damage the tool.*

2. Make certain that the retaining pins are in place and that they are secured with retaining rings.
3. All pins, pivot points, and bearing surfaces should be protected with a thin coat of any good grade SAE 20 motor oil. DO NOT oil excessively.
4. When the tool is not in use, keep the handles closed to prevent objects from becoming lodged in the jaws.
5. Store the tool in a clean, dry area.

### 6.2. Periodic Inspection

Regular inspection of the tool should be performed by quality control personnel. A record of the scheduled inspections should remain with the tool or be supplied to personnel responsible for the tool. Inspection frequency should be based on amount of use, working conditions, operator training and skill, and established company standards.

### 6.3. Visual Inspection

1. Remove all lubrication and accumulated film by immersing the tool (handles partially closed) in a suitable commercial degreaser that will *NOT* affect paint or plastic material.
2. Make certain that the retaining pins are in place and that they are secured with retaining rings.
3. Close the tool handles until the ratchet releases. Then allow the handles to open freely. If they do not open quickly and fully, the spring is defective and must be replaced.
4. Inspect the tool frame for wear or damage, paying particular attention to the tool jaws and the pivot points. If damage is evident, replace. If damage is not evident, lubricate the pivot point and return the tool to service.
5. Check the die assembly on a regular basis to ensure it has not become worn or damaged. Inspect the crimping sections for flattened, chipped, worn, or broken areas. If damage is evident, replace the die assembly.

## 7. REPLACEMENT

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

CUSTOMER SERVICE (038-035)  
TYCO ELECTRONICS CORPORATION  
PO BOX 3608  
HARRISBURG PA 17105-3608

## 8. REVISION SUMMARY

New release of 408-32098