

Figure 1

1. INTRODUCTION (Figure 1)

Press Fit Insertion Tool 2161930-1 is used to press fit terminated DATA DART pin and socket contacts into pin and socket DATA DART housings in order to create a pin or socket DATA DART (assembly).

A pin or socket DATA DART consists of four terminated pin or socket contacts and one pin or socket housing.



NOTE
Dimensions in this instruction sheet are in millimeters with [inches in brackets]. Figures and illustrations are for reference only and are not drawn to scale.

NOTE: Always insert wires with the key oriented as shown. When placing the dart into the tool, the key must be in the right or left orientation, not top or bottom.

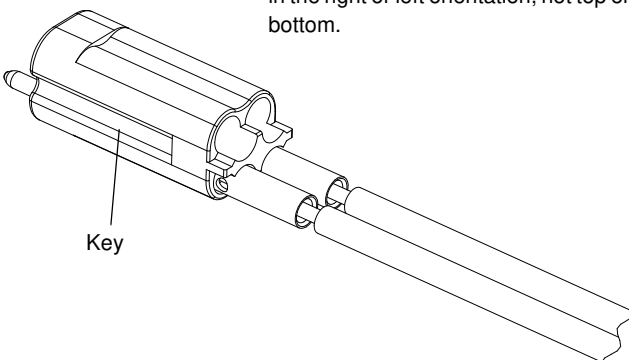


Figure 2

2. DESCRIPTION

The tool features a handle, a socket housing pocket, and a pin housing pocket which allows for a shorter stroke than what may be required for the socket housing. The tool is also equipped with an adjustment feature to increase or decrease the stroke of the tool to obtain proper insertion depth of the contacts. The tool is designed to insert two pin contacts, or two socket contacts at the same time.

3. USING THE TOOL



CAUTION

Wipe the tool and be sure that there is no dirt or foreign particles on the tool prior to use.

3.1. Pin DATA DART (Assembly)

1. Refer to Application Specification 114-32031 for proper set-up, handling, orientation, and requirements for proper installation of pin contacts into the pin DATA DART contact housings.

2. Pre-insert the first two terminated contacts, as shown in Figure 2.

NOTE: Be sure that the key is in the 3 or 9 o'clock position, not in the 12 or 6 o'clock position.

Key Shown
in 9 O'clock
Position

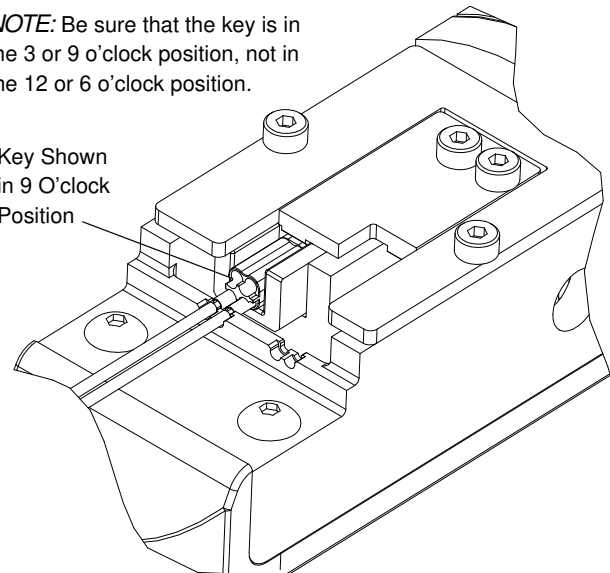


Figure 3

3. Take the pre-inserted assembly and carefully place it in the tool as shown in Figure 3. Slowly actuate the handle until the stroke is complete.

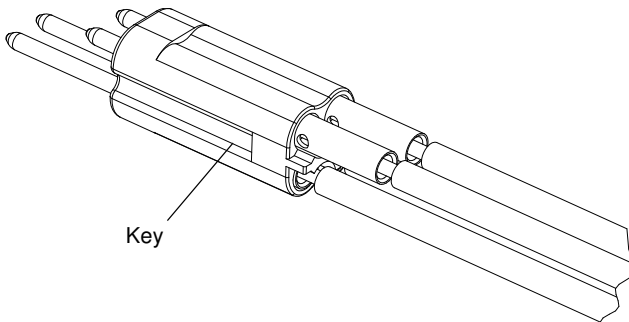


CAUTION

During a full cycle, the handle will complete a stroke and return to its initial position. If the tool jams, you can manually release the ratchet and return to the initial position without completing the full stroke and potentially damaging the tool or product.

4. Verify that the contacts were inserted to the proper depth 0.08 mm [.003 in.] max. (Refer to Section 4 for adjustment instructions, if needed.)
5. Pre-insert the next two terminated contacts as shown in Figure 4A.
6. Repeat steps 3 and 4 to install the two contacts to complete the pin DATA DART assembly. See Figure 4B.

4A



4B

NOTE: Be sure that the key is in the 3 or 9 o'clock position, not in the 12 or 6 o'clock position.

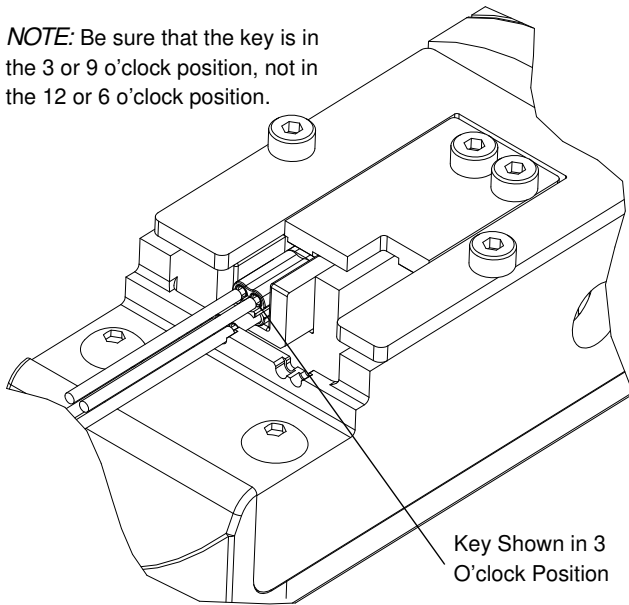


Figure 4

3.2. Socket DATA DART (Assembly)

1. Refer to Application Specification 114-32031 for proper set-up, handling, orientation, and requirements for proper installation of socket contacts into the socket DATA DART contact housings.
2. Pre-insert the first two terminated contacts, as shown in Figure 5.

NOTE: Always insert wires with the key oriented as shown when placing the dart into the tool. the key must be in the right or left orientation, not top or bottom.

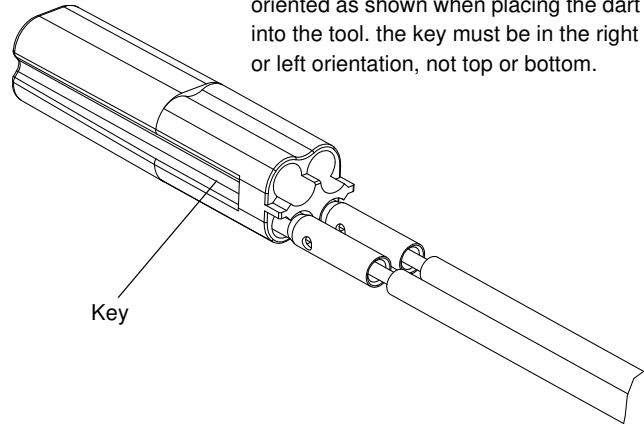


Figure 5

3. Take the pre-inserted assembly and carefully place it in the tool as shown in Figure 6. Slowly actuate the handle until the stroke is complete.

NOTE: Be sure that the key is in the 3 or 9 o'clock position, not in the 12 or 6 o'clock position.

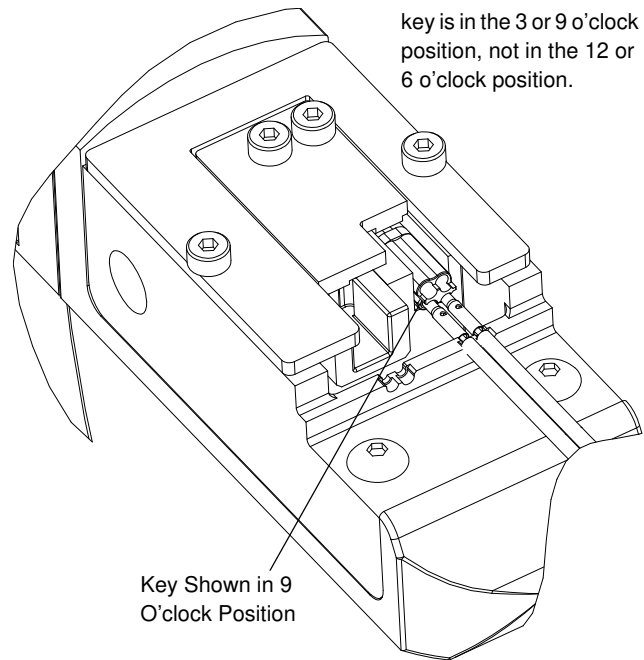
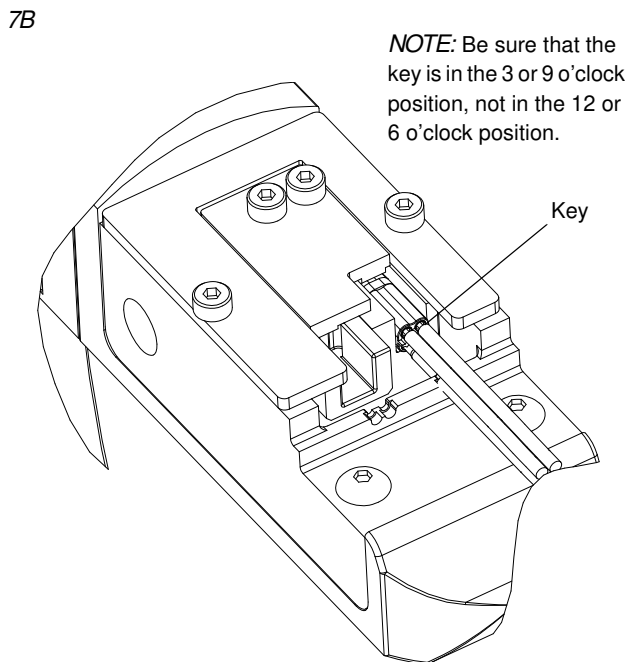
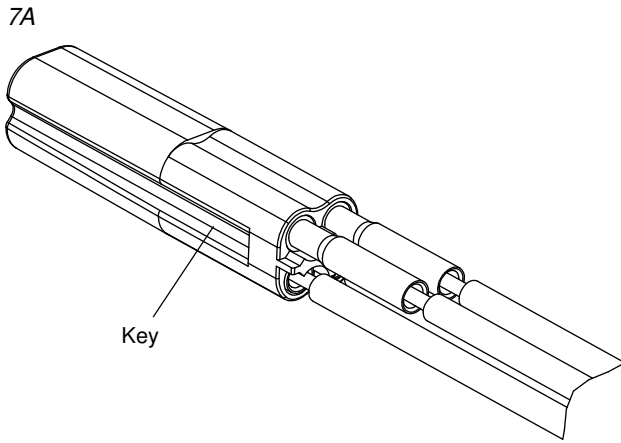


Figure 6

4. Verify that the contacts were inserted to the proper depth 0.08 mm [.003 in.] max. (Refer to Section 4 for adjustment instructions, if needed.)
5. Pre-insert the next two terminated contacts as shown in Figure 7A.
6. Repeat steps 3 and 4 to install the two contacts to complete the socket DATA DART assembly. See Figure 7B.



NOTE: Be sure that the key is in the 3 or 9 o'clock position, not in the 12 or 6 o'clock position.

Figure 7

4. ADJUSTMENT

1. Remove the head from the handle assembly by removing the locking key in the handle.
2. If the contact is more than 0.08 mm [.003 in.] above the housing, see Figure 8, increase the insertion depth by turning the adjuster counterclockwise, see Figure 9.
3. If the tool is compressing on the housing, decrease the insertion depth by turning the adjuster clockwise, see Figure 9. The contact may be below the housing. The housing should not be damaged, skiving is acceptable but the housing should not be crushed or deformed.



CAUTION
When turning the adjuster counterclockwise, make sure to check the depth after each adjustment. If the adjuster is set past the maximum setting, damage to the tool may occur.

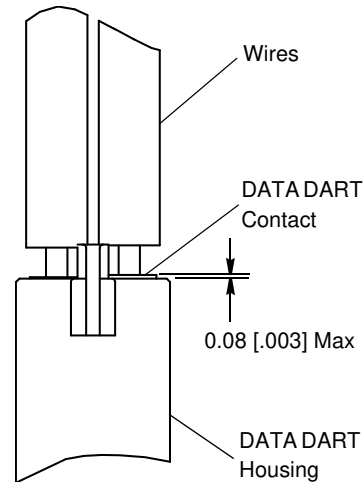
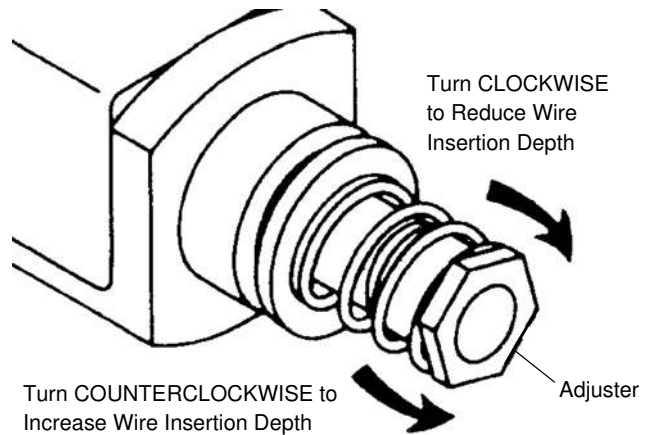


Figure 8

Wire Insertion Depth Adjustment



Turn COUNTERCLOCKWISE to Increase Wire Insertion Depth

Turn CLOCKWISE to Reduce Wire Insertion Depth

DO NOT Turn Past Maximum Setting
Refer to CAUTION

NOTE: $\frac{1}{6}$ Revolution Equals 0.20 mm [.008 in.] Adjustment

Figure 9

5. MAINTENANCE AND INSPECTION

1. Remove dust, moisture, and other contaminants with a clean, soft brush or lint-free cloth. DO NOT use objects that will damage the head.
2. Make sure that all components are in place and properly secured.
3. Actuate the tool to make sure that the mechanisms inside the head function smoothly.
4. Lightly oil the tool when not in use.
5. Regular inspections should be performed by quality control personnel with a record of quality control inspections remaining with the personnel responsible for the head. One inspection per month

is the recommended frequency; however, operator training and skill, amount of use, working conditions, and established company standards are all factors to be considered in establishing inspection frequency.

6. REPLACEMENT AND REPAIR

Order replacement parts through your local TE Representative, or call 1-800-526-5142, or send a facsimile of your purchase order to:

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

For customer repair service, call 1-800-526-5136.

7. REVISION SUMMARY

- Initial release of document