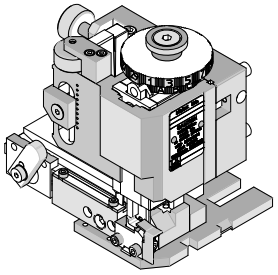
**Order Number**
**63904-3800**

molex®

# Application Tooling Specification



## FEATURES

- Directly adapts to most automatic wire processing machines
- Quick punch removal with the push of a button for fast and easy tooling change
- Applicator designed to industry-standard mounting and 135.80mm (5.346”) shut height
- Quick setup time; plus, the crimp height, track and feed adjustments can be set without removing the applicator from the press
- Fine adjustment allows users to achieve target with little effort by adjusting in increments of 0.015mm (.0006”) for conductor crimp height and 0.063mm (.0025”) for insulation height
- Independent adjustment rings allow users to quickly adjust the conductor or insulation crimp height without affecting each other

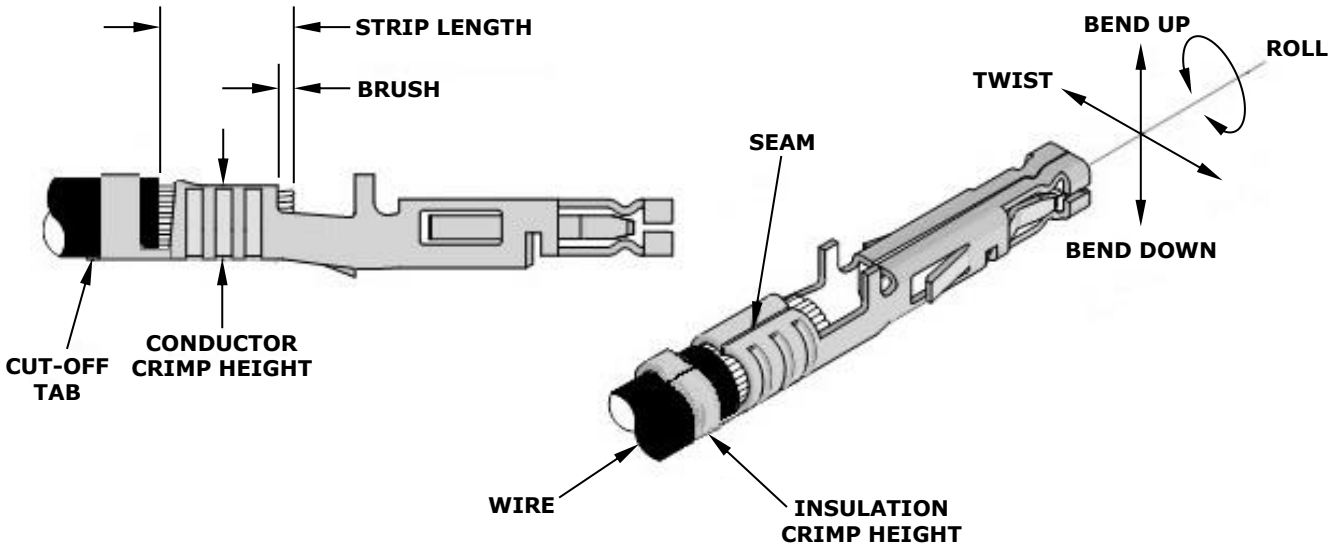
## SCOPE

**Products:** Mega-Fit Male and Female Terminals, 12 AWG UL1007 Wire.

| Terminal Series No. | Terminal Order No. | Wire Size | Insulation Diameter | | | | Strip Length | |
|---|---|---|---|---|---|---|---|---|
| | | | IPC/WHMA-A-620 (1) | | Terminal Maximum (2) | | | |
| | | AWG | mm | In. | mm | In. | mm | In. |
| 76823 | 76823-0343 | 12 | 3.12-3.35 | .123-.131 | 4.05 | .126 | 5.00-5.50 | .197-.216 |
| 105417 | 105417-0333 | 12 | 3.12-3.35 | .123-.131 | 4.05 | .126 | 5.00-5.50 | .197-.216 |
| 105418 | 105418-0313 | 12 | 3.12-3.35 | .123-.131 | 4.05 | .126 | 5.00-5.50 | .197-.216 |
| | 105418-1313 | | | | | | | |
| 172063 | 172063-0333 | 12 | 3.12-3.35 | .123-.131 | 4.05 | .126 | 5.00-5.50 | .197-.216 |
| | 172063-1333 | | | | | | | |

**(1)** To achieve optimum IPC/WHMA-A-620 insulation crimps, use this OD range, or UL1007 wire type
**(2)** Overall insulation OD specification for terminal

## DEFINITION OF TERMS



## CRIMP SPECIFICATION

| Terminal Series No. | Bell Mouth | | Cut-Off Tab Maximum | | Conductor Brush | |
|---|---|---|---|---|---|---|
| | mm | In. | mm | In. | mm | In. |
| 76823 | 0.40-0.75 | .016-.029 | 0.60 | .024 | 0.10-1.15 | .004-.045 |
| 105417 | 0.40-0.75 | .016-.029 | 0.60 | .024 | 0.10-1.15 | .004-.045 |
| 105418 | 0.40-0.75 | .016-.029 | 0.60 | .024 | 0.10-1.15 | .004-.045 |
| 172063 | 0.40-0.75 | .016-.029 | 0.60 | .024 | 0.10-1.15 | .004-.045 |

| Terminal Series No. | Bend Up | Bend Down | Twist | Roll | Punch Width (Ref) Conductor | | Seam |
|---|---|---|---|---|---|---|---|
| | Degree (Max) | | Degree (Max) | | mm | In. | |
| 76823 | 3 | 3 | 4 | 8 | 3.20 | .126 | Seam shall not be open and no wire allowed out of the crimping area |
| 105417 | 3 | 3 | 4 | 8 | 3.20 | .126 | |
| 105418 | 3 | 3 | 4 | 8 | 3.20 | .126 | |
| 172063 | 3 | 3 | 4 | 8 | 3.20 | .126 | |

After crimping, the conductor profile should measure the following:

| Terminal Series No. | Wire Size | Conductor Crimp | | | | Pull Force Minimum | |
|---|---|---|---|---|---|---|---|
| | | Crimp Height | | Crimp Width (Ref.) | | | |
| | AWG | mm | In. | mm | In. | N | Lb. |
| 76823 | 12 | 1.90-2.00 | .075-.079 | 3.30 | .130 | 220.0 | 49.46 |
| 105417 | 12 | 1.90-2.00 | .075-.079 | 3.30 | .130 | 220.0 | 49.46 |
| 105418 | 12 | 1.90-2.00 | .075-.079 | 3.30 | .130 | 220.0 | 49.46 |
| 172063 | 12 | 1.90-2.00 | .075-.079 | 3.30 | .130 | 220.0 | 49.46 |

| Terminal Series No. | Wire Size | Insulation Crimp | | | |
|---|---|---|---|---|---|
| | | Crimp Height (Ref.) | | Crimp Width (Ref.) | |
| | AWG | mm | In. | mm | In. |
| 76823 | 12 | 3.75 | .147 | 4.0 | .157 |
| 105417 | 12 | 3.75 | .147 | 4.0 | .157 |
| 105418 | 12 | 3.75 | .147 | 4.0 | .157 |
| 172063 | 12 | 3.75 | .147 | 4.0 | .157 |

### Tool Qualification Notes

1. Pull force should be measured with no influence from the insulation crimp.
2. The above specifications are guidelines to an optimum crimp.
3. Oiler (63801-7240) required to crimp terminals to improve tooling life and also to minimize the crimp extrusions. See 63800-4900 FineAdjust manual.

## NOTES

1. Molex recommends that an extra perishable tooling kit be maintained at your facility.
2. Verify tooling alignment by hand cycling the press and applicator before crimping under power. Check that all screws are tight.
3. Slugs, terminals, dirt and oil should be kept clear of the work area.
4. Wear safety glasses at all times.
5. For recommended maintenance, refer to the FineAdjust manual.

## WARNINGS

**CAUTION:** This applicator must be installed in a press with a standard shut height of 135.80mm (5.346”). Tooling damage could result at a lower setting.

**CAUTION:** To prevent injury, never operate this applicator without the guards supplied with the press or wire-processing machine in place. Reference the press or wire processing manufacturer’s instruction manual.

**CAUTION:** Molex tooling crimp specifications are valid only when used with Molex terminals and tooling manufactured by Molex and sold by Molex or authorized distributors (“Molex Tooling”). When using tooling other than Molex Tooling with Molex-specific connector systems listed in our ATS documents, the Molex Tooling qualification does not apply, and the responsibility for full qualification of the connector system is that of the customer. Molex accepts no liability for connector performance or tooling support where tooling other than Molex Tooling is used or where Molex Tooling is modified.

## PARTS LIST

| FineAdjust Applicator 63904-3800 | | | | |
|---|---|---|---|---|
| **Item** | **Order No.** | **Engineering No.** | **Description** | **Quantity** |
| **Perishable Tooling** | | | | |
| | 63904-3870 | 63904-3870 | Tool Kit (All "Y" Items) | REF |
| 1 | 63457-3201 | 63457-3201 | Conductor Punch | 1 Y |
| 2 | 63455-3231 | 63455-3231 | Conductor Anvil | 1 Y |
| 3 | 63446-3938 | 63446-3938 | Insulation Punch | 1 Y |
| 4 | 63445-3952 | 63445-3952 | Insulation Anvil | 1 Y |
| 5 | 63443-0002 | 63443-0002 | Cut-Off Plunger | 1 Y |
| 6 | 63443-0012 | 63443-0012 | Front Plunger Retainer | 1 Y |
| **Other Components** | | | | |
| 7 | 11-17-0022 | 1739-21 | Nose Hold Down Spring | 1 |
| 8 | 11-18-4083 | 60707-8 | Feed Guide | 1 |
| 9 | 11-24-1067 | 4996-4 | Cut-Off Plunger Spring | 1 |
| 10 | 63443-0009 | 63443-0009 | Scrap Chute | 1 |
| 11 | 63443-0024 | 63443-0024 | Key | 1 |
| 12 | 63443-0090 | 63443-0090 | Wire Stop | 1 |
| 13 | 63443-0093 | 63443-0093 | Shank | 1 |
| 14 | 63443-1714 | 63443-1714 | 18.40mm (Height Spacer) | 1 |
| 15 | 63443-2314 | 63443-2314 | 3.70mm (Fine Spacer) | 1 |
| 16 | 63443-2208 | 63443-2208 | 8.00mm (Coarse Spacer) | 1 |
| 17 | 63443-2205 | 63443-2205 | 5.00mm (Coarse Spacer) | 1 |
| 18 | 63443-3160 | 63443-3160 | Front Plunger Striker | 1 |
| 19 | 63443-6123 | 63443-6123 | Rear Cover | 1 |
| 20 | 63443-7136 | 63443-7136 | Terminal Hold Down | 1 |
| **Frame** | | | | |
| 21 | 63800-4901 | 63800-4901 | Top | 1 |
| 22 | 63801-3281 | 63801-3281 | Base | 1 |
| 23 | 63801-4650 | 63801-4650 | Track | 1 |
| **Hardware** | | | | |
| 24 | — | — | M3 by 6 Long SHCS | 2* |
| 25 | — | — | M3 by 6 Long FHCS | 1* |
| 26 | — | — | M3 by 8 Long SHCS | 1* |
| 27 | — | — | M4 by 6 Long SHCS | 2* |
| 28 | — | — | M4 by 12 Long BHCS | 2* |
| 29 | — | — | M4 by 45 Long SHCS | 2* |
| 30 | — | — | M5 by 12 Long SHCS | 1* |
| 31 | — | — | #10-32 by 3/8"Long Flat Point SSS | 1* |
| 32 | — | — | #10-32 Hex Jam Nut | 1* |
| * Available from an industrial supply company. | | | | |

## ASSEMBLY DRAWING

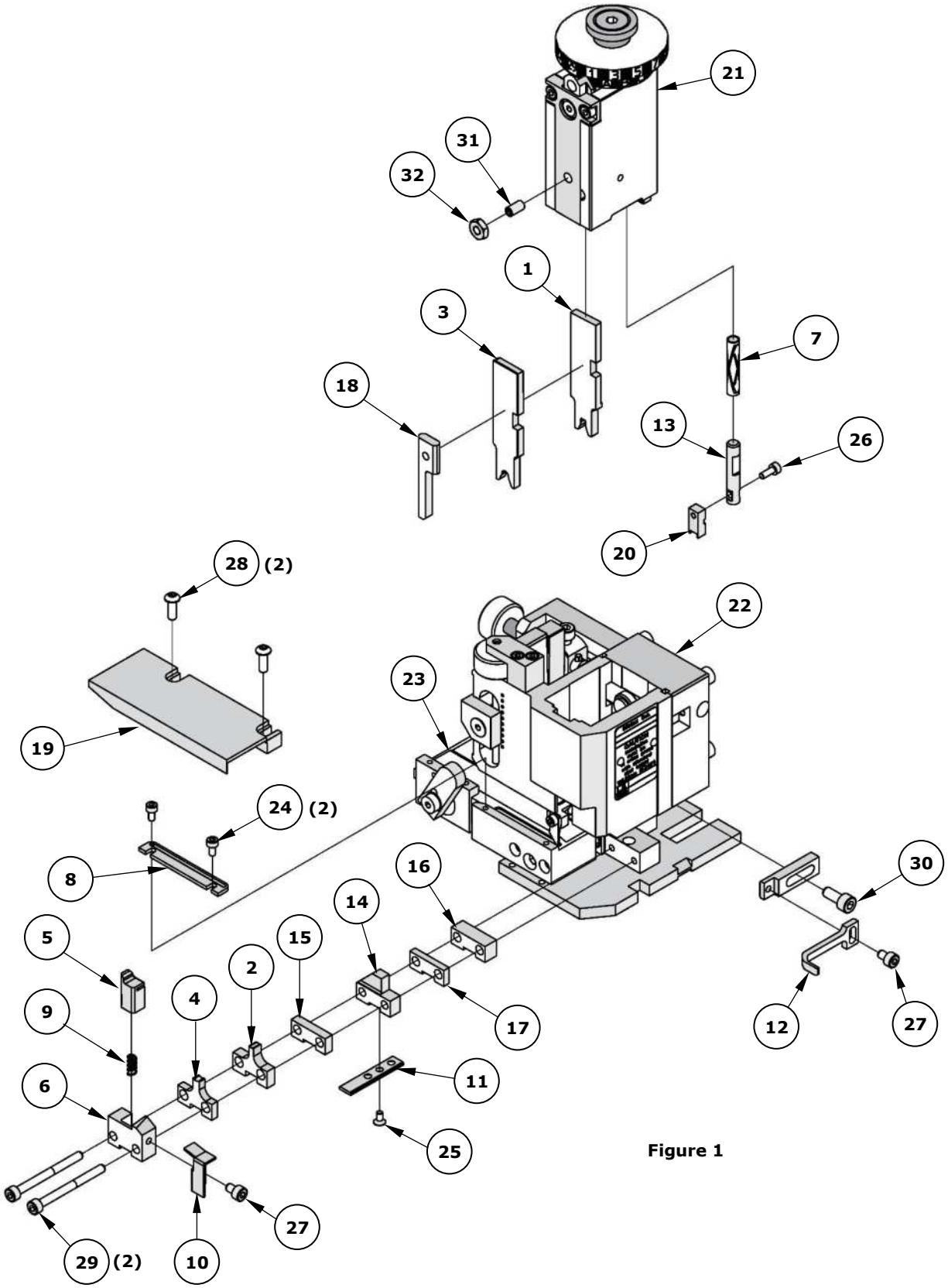



Figure 1

**Application Tooling Support**

**Phone:** (402) 458-TOOL (8665)
**E-Mail:** applicationtooling@molex.com
**Website:** www.molex.com/applicationtooling

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