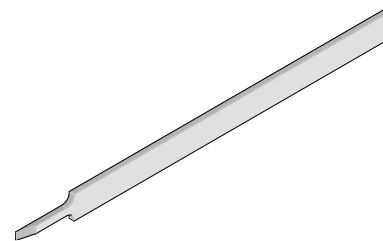


# Extractor Tool

# molex

## Application Tooling Specification Sheet


**Order No. 63813-2700**

### FEATURES

- This Extractor Tool is for the removal of Wire-to-Wire and Wire-to-Board terminal series in both plug and receptacles.

### SCOPE

Products: See Chart below.

Terminal Series No.	Description	Housing Series	Terminal Order No.		
35053	2.50mm (.098") Pitch Wire-to-Wire Male Terminals	35184	35053-9002		
35465	Earth Terminal for PT Bulb Socket AVSS 0.50~0.85mm <sup>2</sup>	35842 and 35843	35465-8000		
35477	Wedge Terminal 14.50mm (0.57") Pitch	68147	35477-9002		
35725	6.35mm (.250") Tab Slip-On Wire-to-Wire Terminal, Female, 12-18 AWG	35546 and 35547	35725-5110	35725-5210	
35745	VersaBlade™.070 Terminal(A-Type) Male, 16-26 AWG	35150and 35151	35745-0110	35745-0210	35745-0310
		35180 and 35965	35745-0410		
35746	VersaBlade™.070 Terminal (A-Type) Female, 16-26 AWG	35150and 35151	35746-0110	35746-0210	35746-0310
		35180 and 35965	35746-0410		
35747	VersaBlade™.070 Terminal(B-Type) Male, 16-26 AWG	35150 and 35180	35747-0110	35747-0210	35747-0310
		35182 and 35524	35747-0410		
35748	VersaBlade™.070 Terminal (B-Type) Female, 16-26 AWG	35150 and 35180	35748-0110	35748-0210	35748-0310
		35182 and 35524	35748-0410		
35768	2.3mm (.090") Slip-On Receptacle Terminal	35549	35768-0110	35768-0120	
41422	Flat Blade Crimp Terminal, Female, 10-18 AWG	41644, 41645	040-02-1601	040-02-1602	41422-5001
43374	3.18mm (.125") Sabre™ Terminal Receptacle Flat Blade System	42865, 44167 and 44421	43374-0001		
43375		44441	43375-0001	43375-1001	43375-2001
47634	1.00mm (.039") Pitch Crimp Housing for Slimline Serial ATA Power Cable	47634	47634-1000	47634-1001	47634-1002
			47634-0009		
48105	2.00mm (.079") Pitch, Wire-to-Board Crimp Terminal	48106	48105-0001		
5194	SPOX™ Crimp Terminal	5195	00870-1030	00870-1031	03900-0021
			03900-0022		
5225	SPOX™ Crimp Terminal	5195, 5196, 5197, 5198 and 5199	00870-1028	00870-1029	
50098	4.0mm (.157") Pitch Board-In Crimp Terminal	51036	50098-8000	50098-8100	
50147	2.50mm (.098") Pitch Splash Proof Crimp Terminal 20-22 AWG	52266	50147-8000	50147-8100	
50148		52213	50148-8000	50148-8100	
50217	2.54mm (.100") Pitch J-SL™ Crimp Terminal	51067	50217-8000	50217-8100	502179001
			50217-9101		
50351	2.50mm (.098") Pitch Mini-Lock™ Wire-to-Board and Wire-to-Wire Crimp Terminal	51102, 51163, and 51103	50351-8000	50351-5100	

Terminal Series No.	Description	Housing Series	Terminal Order No.		
50397	2.50mm (.098") Pitch Crimp Terminal	51111	50397-8000	50397-8100	
50539	3.96mm (.156") Pitch Wire-to-Board Crimp Terminal	51144	50539-8000	50539-8100	50539-9001
50597	3.96mm W/W and W/B, Crimp Terminal	51138, 51142	50597-8000	50597-8100	
50598	3.96mm W/W and W/B Crimp Terminal	51138, 51142	50598-8000	50598-8100	
56086	2.00mm (.079") Pitch Crimp Terminal	51227	56086-8000	56086-8100	
56134	2.00mm (.079") Pitch Crimp Terminal	51242, 51353, and 51382	56134-8000	56134-8100	56134-9000
56187	3.30mm (.130") Pitch Crimp Terminal	51284 and 51347	56187-8000	56187-8100	
57920	2.29mm (.090") Diameter Pin Cluster Block Terminal	35573, 68422	57920-6002		
57964	1.52mm (.060") OBD-II Male Terminal for AVS (CAVS) 0.3-0.5	68503-1602	57964-9702		
59370	2.00mm (.079") Pitch Crimp Terminal	51216	59370-8000	59370-8100	
501648	2.00mm Pitch iGrid™ Wire-to-Board, 26-28 AWG	501646	501648-1000	501648-1100	
501930	1.25mm (.049") Wire-to-Board Dual Plug Terminals	503110	501930-0100	501930-0200	501930-1100
502057	1.75mm (.069") Pitch Wire-to-Board Crimp Terminal	502056	502057-1000	502057-1100	
502381	1.25mm (.049") Pitch CLIK-Mate™ Wire-to-Board	502380	502381-0000	502381-0010	
502438	2.00mm (.079") Pitch CLIK-Mate™ Wire-to-Board	502439	502438-0000	502438-0100	
503657	2.00mm (.079") Pitch Wire-to-Board Receptacle Crimp Terminal, 22-26 AWG	503658	503657-1000	503657-1100	
504052	1.50mm Pitch Pico-Lock™ Crimp Terminal	504051	504052-0098	504052-0298	
67581	1.27mm (.050") Pitch Serial ATA Crimp Terminal for Power Cable	67582	67581-0000	67581-0001	67581-0002
			67581-0009	67581-0010	67581-0011
			67581-0012	67581-0019	
78172	1.20mm (.047") Wire-to-Board Crimp Terminals	78172	78172-0410	78172-0411	
87421	1.50mm (.059") Pico-SPOX™ Crimp Terminal Female, 24-30 AWG	87439	87421-0000	87421-0001	
94518	High Normal Force (HNF) Female Terminals, For 6.3x0.8mm (.248"x.031") Tabs, 18-20 AWG	90522, 90553, 94213 and 94535	94518-0100	94518-0101	94518-0120
			94518-0121	94518-0200	94518-0201
			94518-0220	94518-0221	94518-0300
			94518-0301	94518-0400	94518-0401
94529	Fork Type for PCB Edge Mating, Vertical Crimp Terminal 20-22 AWG	94529	94529-1103	94529-1201	94529-1203
171825	Super-Sabre™ Female Crimp Terminals	44441	171825-0100	171825-8100	

## OPERATION:

**CAUTION:** This extractor tool should be used to extract the terminal only. Using it for unintended purposes may cause injury or damage to parts. Be careful not to deform the end of the terminal. Avoid lifting the housing lock too high.

**For 35053, 48105, 504052, 78172, 87421, 94529, and 502057 Terminal Series:**

1. Push the terminal forward into the housing before using the Extractor Tool.
2. Insert the Extractor Tool into the slot on the bottom of the connector housing as shown in Figure 1. Make sure the straight edge of the extractor tool is up against the housing lock.

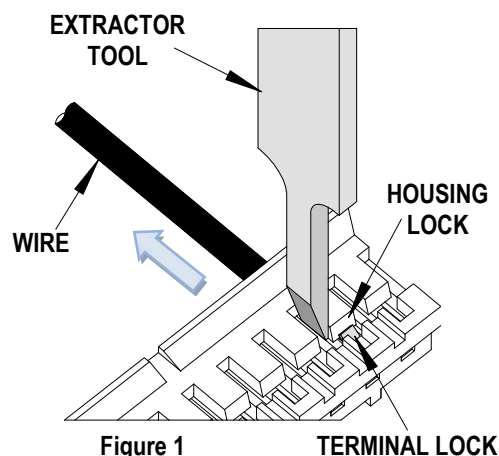


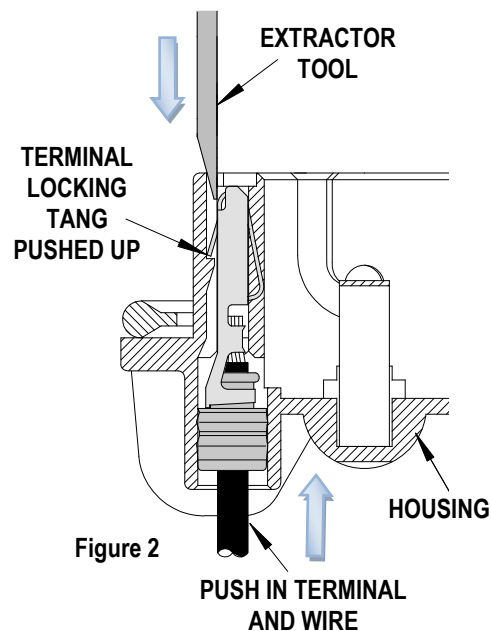
Figure 1

3. Gently lift up on the housing tab and push the terminal back through the connector slot and pull the terminated wire out in the arrow direction. See Figure 1.

**CAUTION:** Use a magnifying glass to locate the desired terminal. Do not reuse the 504052 housings series once the terminals are extracted.

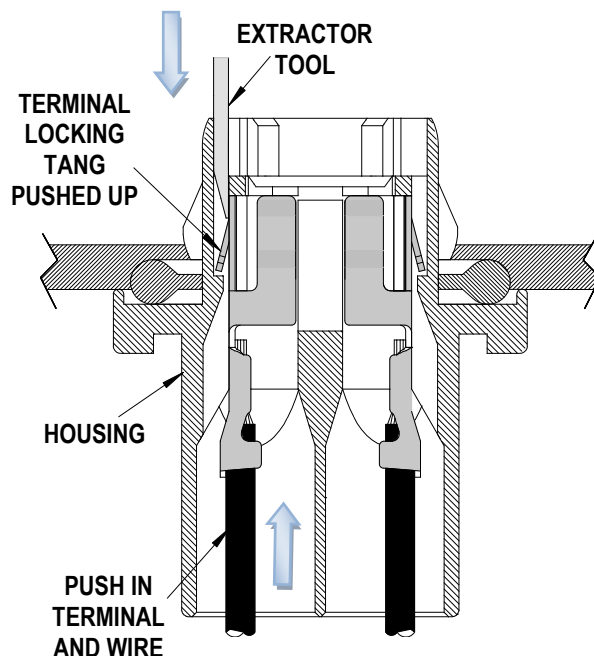
#### For 35465 Terminal Series

1. Push the terminal and the wire forward in the arrow direction before using this Tool.
2. Insert the Tool into the slot above the locking tang of the terminal.
3. Push the tool down until the locking tang is even with the rest of the terminal. This will free the terminal from the housing.
4. Pull the crimp wire back through the connector slot in the arrow direction as shown in Figure 2.



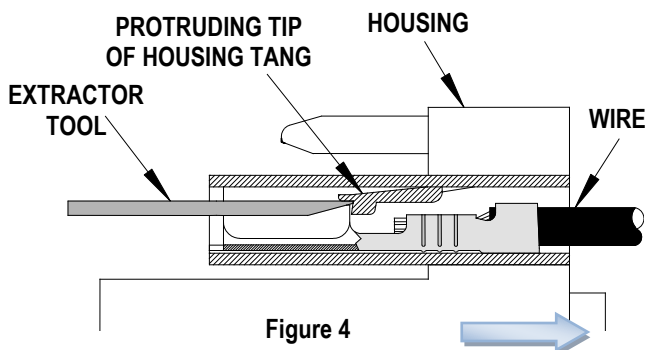
#### For 35477 Terminal Series:

1. Push the terminal and the wire forward in the arrow direction before using this Tool.
2. Insert the Tool into the slot above the locking tang of the terminal.
3. Push the tool down until the locking tang is even with the rest of the terminal. This will free the terminal from the housing.
4. Pull the crimp wire back through the connector slot in the arrow direction as shown in Figure 3.



#### For 35725 Terminal Series:

1. Push the terminal and the wire forward into the housing before using this Tool.
2. Insert the Tool into the area above the terminal contact and below the protruding tip of the terminal locking tang in the housing.



3. Lift the locking tab upward until it is above the contact of the terminal. This will free the terminal from the housing.
4. Pull the crimped wire and terminal back through the connector slot in the arrow direction as shown in Figure 4.

**For 35768 Terminal Series:**

1. Push the wire and the terminal forward in the arrow direction before using the Extractor Tool.
2. Insert the Extractor Tool into the slot on the side of the connector housing.
3. While depressing the housing lock, push the terminal back through the connector slot and pull the terminated wire out in the arrow direction.

See Figure 5.

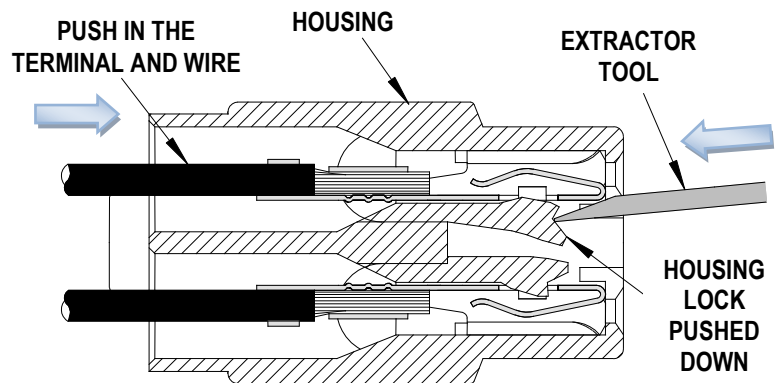


Figure 5

**For 41422 Terminal Series:**

1. Push the terminal forward in the arrow direction before using the Extractor Tool as shown in Figure 6. Insert the Extractor Tool into the slot on the side of the connector housing.
2. Depress the terminal locking tang and push the terminal back through the connector slot.
3. Pull the terminated wire out.

See Figure 6.

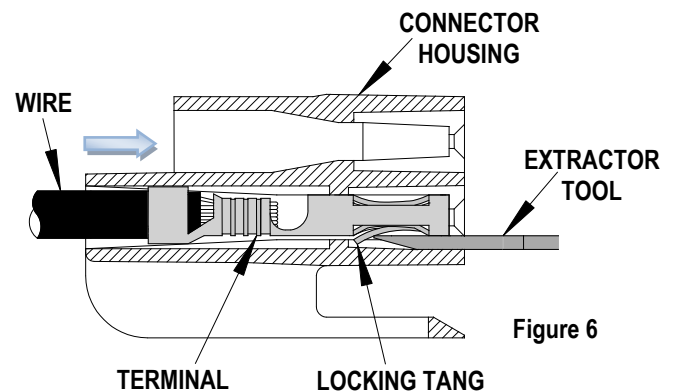


Figure 6

**For 43374, 43375, and 171825 Terminal Series:**

**Terminal TPA Activation (43375 and 171825 Series)**

1. On the mating end of the connector, place the tip of the tool so it rests on the TPA tab as shown:

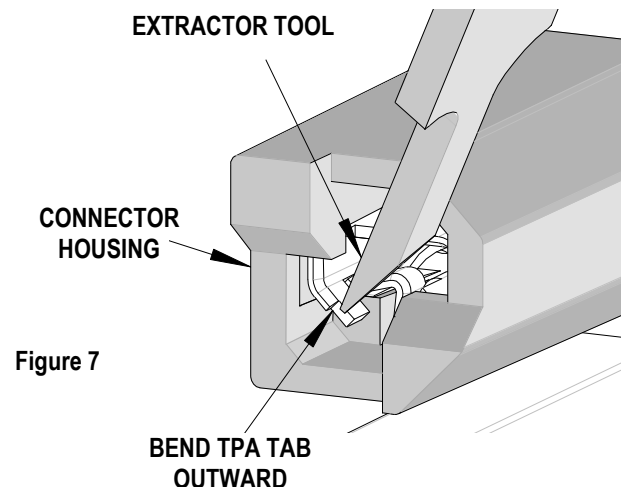
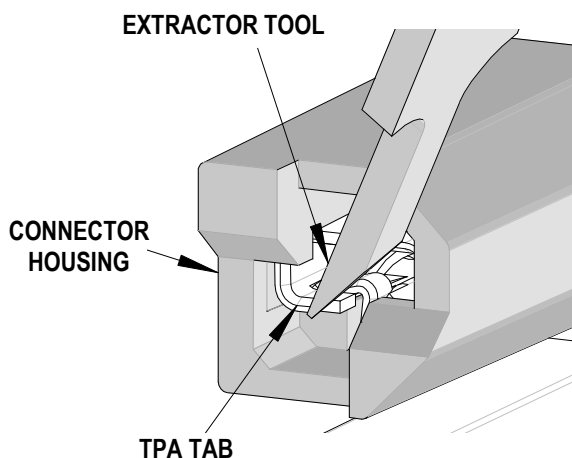


Figure 7

2. Push on the tool to bend the TPA tab outward. See Figure 7.
3. Repeat steps 1 and 2 for the other TPA tab.
4. To be effective, the TPA tabs should be bent at least 45° as shown.
5. Magnification and/or task lighting can help in this process.

**NOTE:** To avoid contact damage, make sure the extraction tool does not enter the mating area of the contact when activating the TPA.

### **Terminal TPA Deactivation (43375 and 171825 Series)**

1. On the mating end of the connector, place the tip of the tool behind the bent TPA tab as shown:

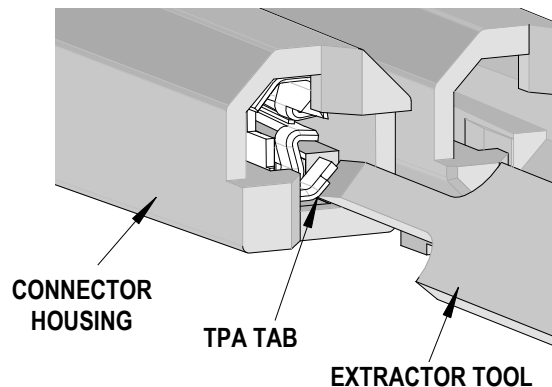
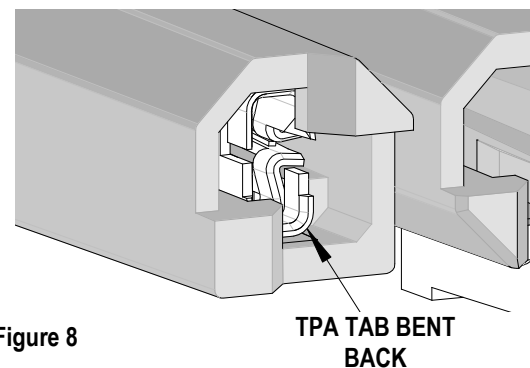


Figure 8



2. Twist the tool to bend the TPA tab inward.
3. Repeat steps 1 and 2 for the other TPA tab.

**NOTE:** After deactivating the TPA, the terminal should be extracted and replaced. Do not re-use the terminal.

### **Terminal Extraction (43374, 43375, and 171825 Series)**

1. Before extracting the terminal, make sure the TPA is deactivated (if applicable, see above).
2. Push the terminal forward in the arrow direction before using the Extractor Tool as shown in Figure 9. Insert the Extractor Tool into the slot on the side of the connector housing.
3. Depress the terminal locking tang beams and push the terminal back through the connector slot.
4. Pull the terminated wire out in the arrow direction. See Figure 10.

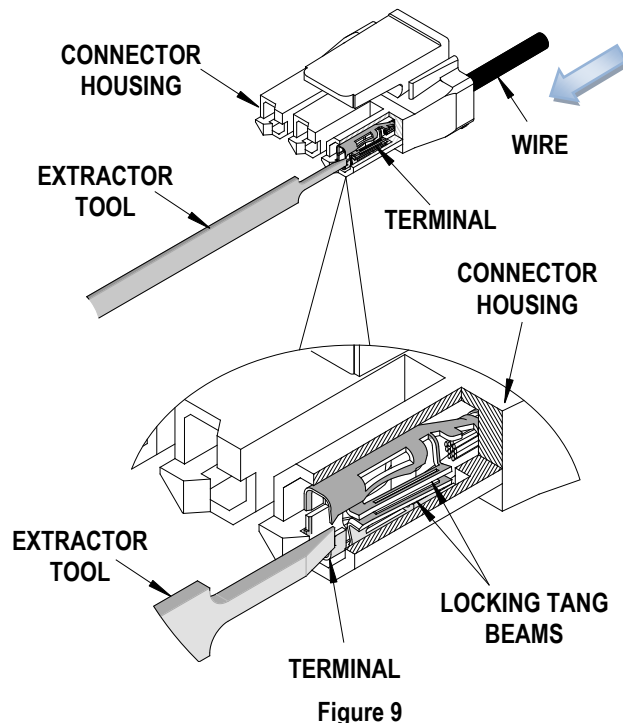


Figure 9

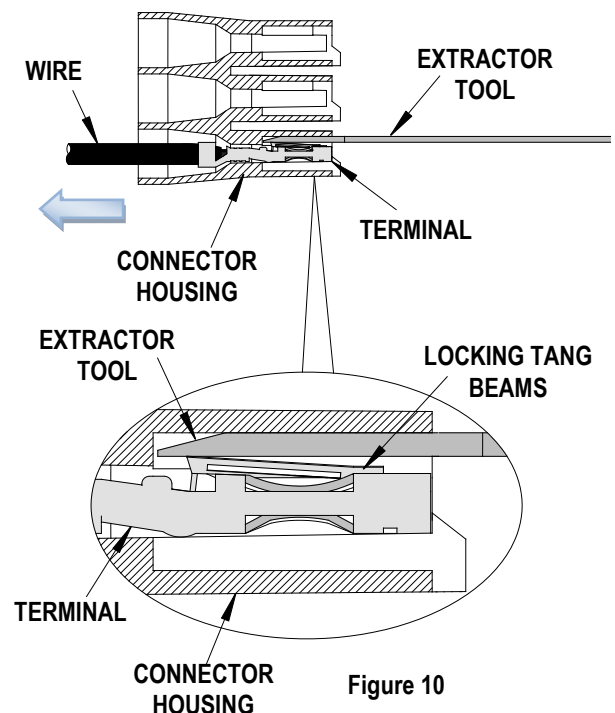
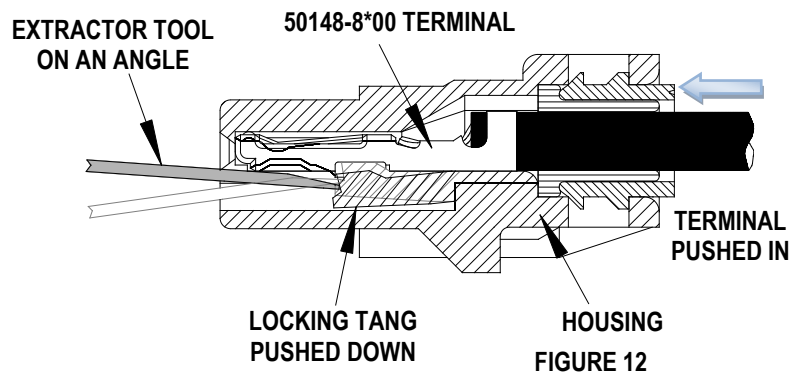
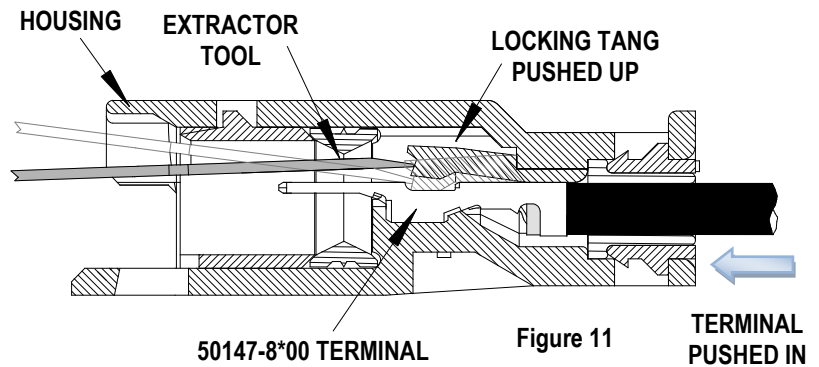


Figure 10

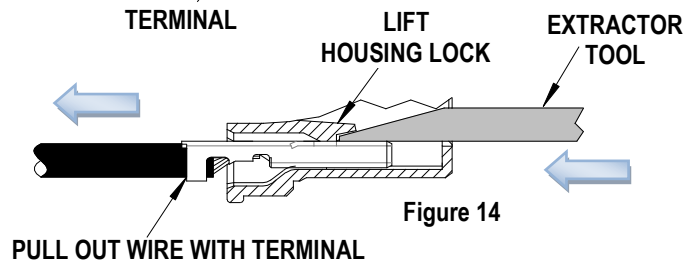
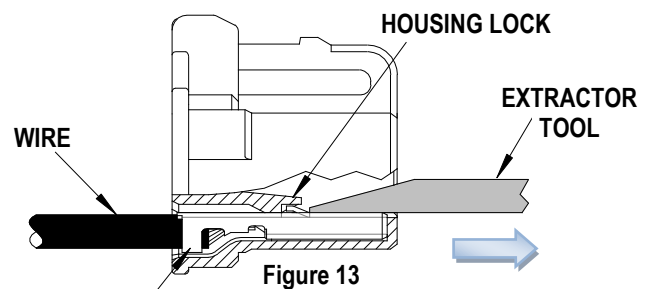
**For 35745, 35746, 35747, and 35748  
and for 50147 and 50148 Terminal Series:**

1. For terminal series 50147, push the terminal forward in the arrow direction before using the Extractor Tool.
2. Insert the tip of the Extractor Tool on an angle into the connector housing. See Figure 11.
3. While pushing the extraction tool against the terminal locking tang, bend the locking tang up and away from the terminal. At the same time a second person pulls on the crimped wire to release the terminal from the housing.
4. For terminal series 50148, push the terminal forward in the arrow direction before using the Extractor Tool.
5. Insert the tip of the Extractor Tool on an angle into the connector housing. See Figure 12.
6. While pushing the extraction tool against the terminal locking tang, bend the locking tang down and away from the terminal. At the same time a second person pulls on the crimped wire to release the terminal from the housing.



**For 501930 and 502381 Terminal Series:**

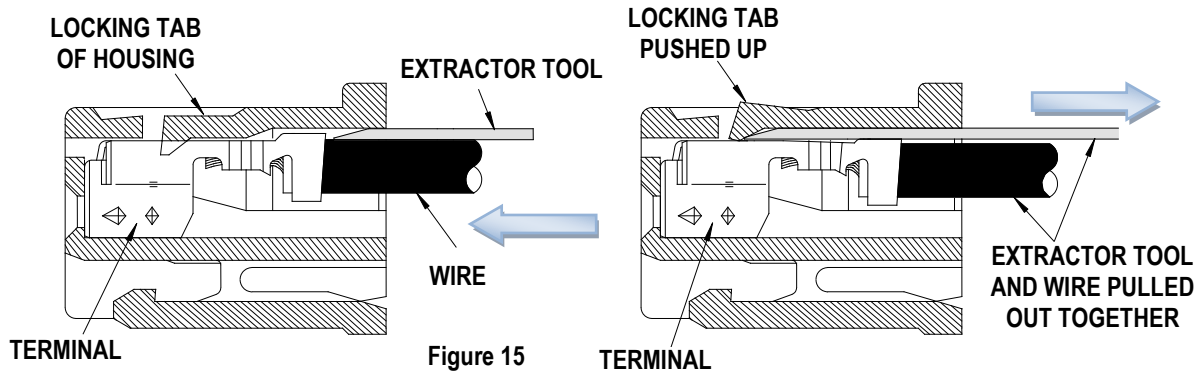
1. Line up the terminal to be removed in the connector assembly with the tip of the Extractor Tool. Insert and slide the Extractor Tool into the slot on the side of the connector housing as shown. Positioning it under the housing lock as shown in Figure 13.
2. Slide the Extractor Tool in the direction shown lifting up the housing lock. While lifting the housing lock, push the terminal back through the connector slot and pull the terminated wire out in the arrow direction. See Figure 14.



**For 50539 Terminal Series:**

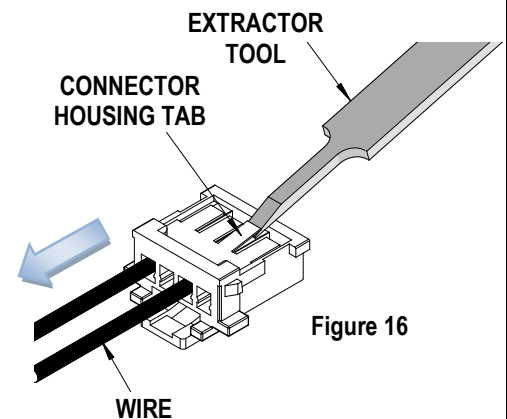
1. Push the terminal forward in the arrow direction before using the Extractor Tool.
2. Insert the Extractor Tool into the slot above the terminal in the connector housing as shown in Figure 15.
3. Gently push the extractor tool till it stops. The housing locking tab should be bent up.
4. Pull the terminal and the terminated wire back through the Connector slot along with the extractor tool in the arrow direction as shown.





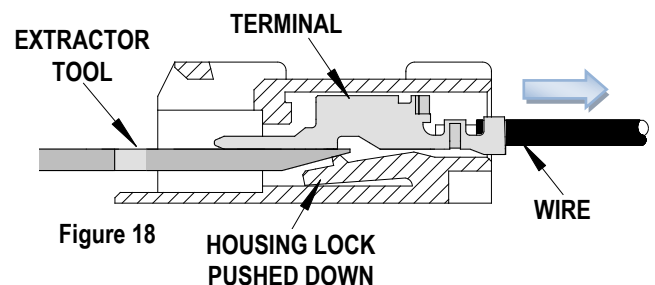
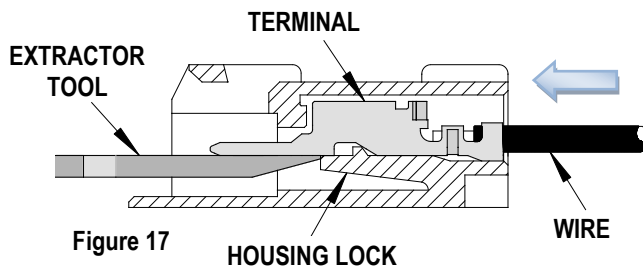
**For 5194, 5225, 47634, 50098, 501648, 50217, 50351, 50397, 503657, and 67581 Terminal Series:**

1. Insert the Extractor Tool into the slot on the bottom of the connector housing.
2. Gently lift up on the housing tab, and push the terminal back through the connector slot. While pulling the terminated wire out in the direction of the arrow. See Figure 16.

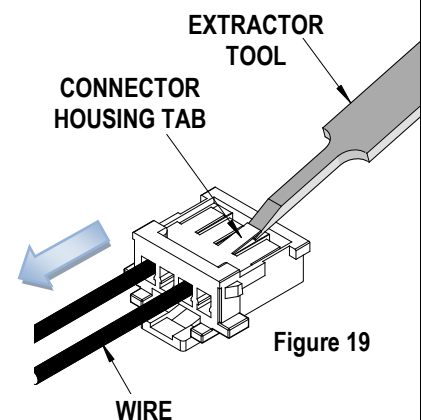


**For 56086, 56134, 56187, 57964, and 59370 Terminal Series:**

1. Push the terminal forward in the arrow direction before using the Extractor Tool. Insert the Extractor Tool into the slot on the side of the connector housing as shown in Figure 17.



2. While depressing the housing lock, push the terminal back through the connector slot and pull the terminated wire out in the arrow direction. See Figure 18.
3. When using certain housings it may be necessary to insert the Extractor Tool into the slot on the bottom of the connector housing.
4. Gently lift up on the housing tab, and push the terminal back through the connector slot. While pulling the terminated wire out in the direction of the arrow. See Figure 19.



**CAUTION:** Do not reuse the 51242, 51353, and 51382 housings series once the terminals are extracted.

**For 57920 Terminal Series:**

1. Push the wire of the crimped terminal to be removed forward into the connector housing before using the Extractor Tool.
2. Starting with one side, insert the Extractor Tool tip in between the terminal nose and the housing cavity wall until the blade comes to a stop.
3. Using a twisting action bend the upper "U" channel towards the middle of the terminal. See Figure 20.
4. Repeat steps 2 and 3 on the other side bending the terminal towards the middle. Make sure both sides of the terminal are bent in far enough to clear the housing stop.
5. Gently pull the wire and terminal back through the housing slot opposite the arrow direction as shown.

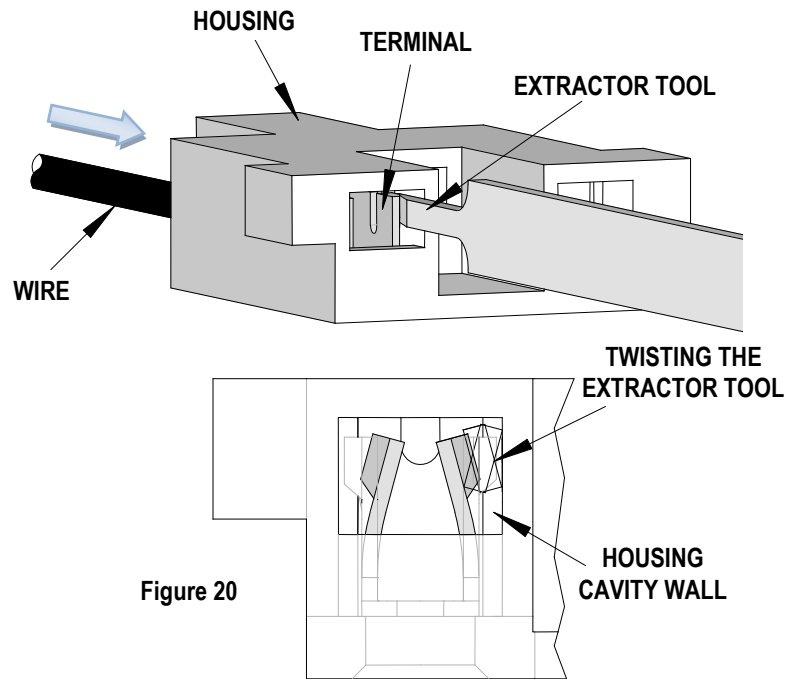


Figure 20

**For 94518 Terminal Series:**

1. Push the wire of the crimped terminal to be removed forward into the connector housing before using the Extractor Tool.
2. Insert the Extractor Tool into the slot below the terminal, seated in the connector housing and slide it forward until it stops. See Figure 21.
3. Pull the wire and terminal back through the Connector slot in the arrow direction as shown. See Figure 22.

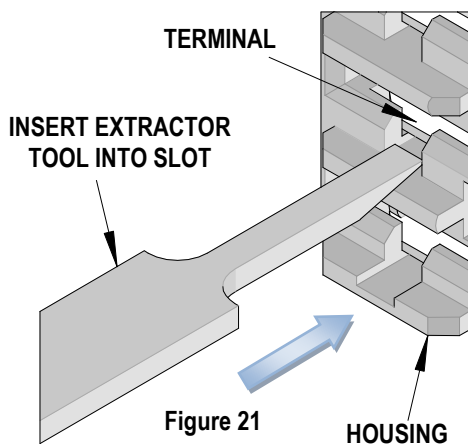


Figure 21

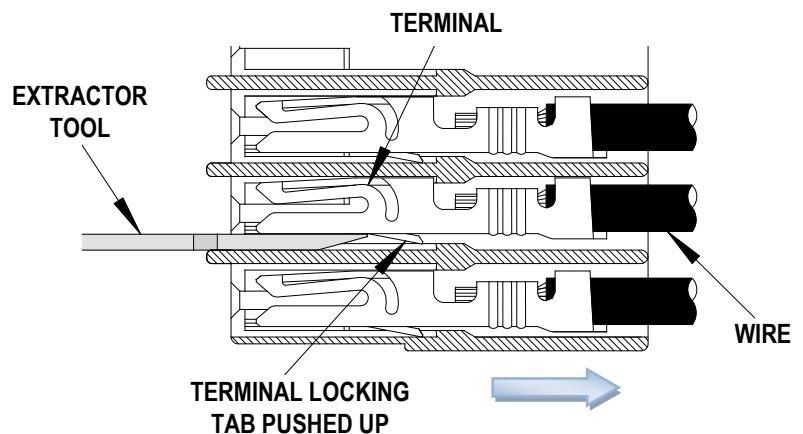
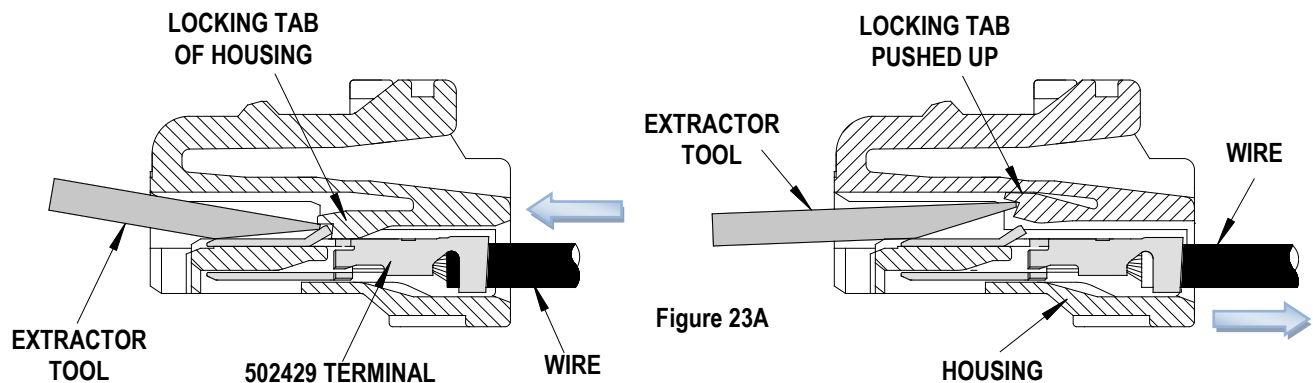


Figure 22



**For 502438, 50597, and 50598 Terminal Series:**

1. Push the terminal forward in the arrow direction before using the Extractor Tool.
2. Insert the Extractor Tool into the slot above the terminal in the connector housing as shown in Figure 23A and 23B.



3. Gently push the Extractor Tool on an angle above the terminal until it stops.
4. Rotate tool counterclockwise approximately 5°-10° to lift housing locking tab.
5. Pull the terminal and the terminated wire back through the Connector slot along with the extractor tool in the arrow direction as shown.

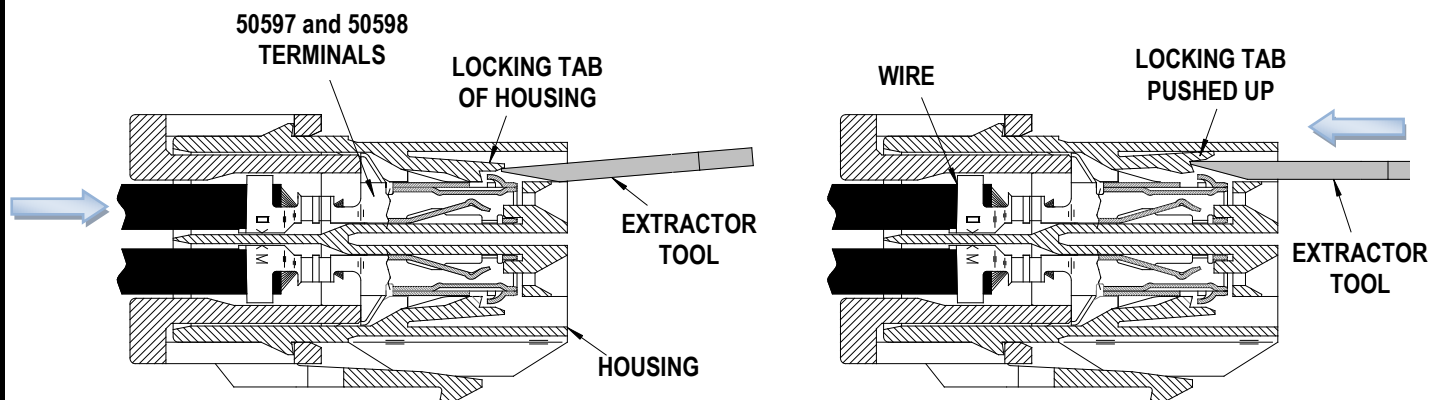


Figure 23B

**CAUTION:** This extractor tool should be used to extract the terminal only. Using it for unintended purposes may cause injury or damage to parts. Be careful not to deform the end of the terminal.

**CAUTION:** Molex specifications are valid only when used with Molex terminals, applicators and tooling.

Molex does not offer repair parts for Extractor Tools due to the inexpensive nature of these tools.

**Contact Information**

For more information on Molex application tooling please contact Molex at 1-800-786-6539.

Visit our Web site at <http://www.molex.com>