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## 22 POS. GENERATION Y CONNECTOR

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**1 GENERAL**

**1.1 PURPOSE**

**THIS SPECIFICATION DESCRIBES HOW TO HANDLE THE 22 POS. CONNECTOR COMPONENTS.**

**1.2 CUSTOMER DRAWINGS**

**THIS APPLICATION SPECIFICATION IS BASED ON THE LATEST VALID CUSTOMER DRAWING.**

C\_2208021 **ASSY FEMALE 22 POS. CONNECTOR**

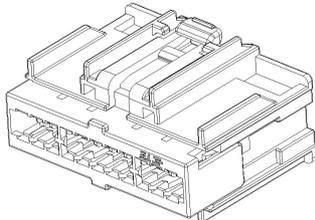
C\_2208018 **ASSY MALE 22 POS. CONNECTOR**

**INTERFACE SPECIFICATION :**

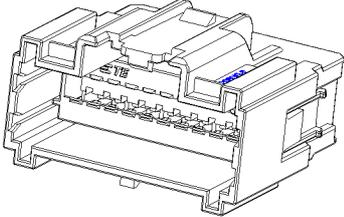
114-94181 **22 POS. CONNECTOR**

**1.3 DELIVERY CONDITION**

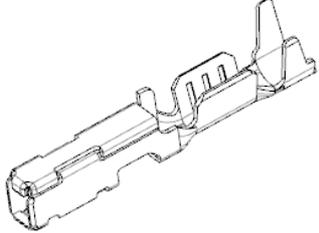
**1.3.1 22 POS. FEMALE CONNECTOR AND SPACER**

<p>ASSY 22 POS. FEMALE CONNECTOR</p>	<p>X-2208021-1 – KEYING A COLOUR: BLACK</p> <p>X-2208021-2 – KEYING B COLOUR: NATURAL</p> <p>X-2208021-3 – KEYING C COLOUR: GREY</p> <p>X-2208021-4 – KEYING D COLOUR: GREEN</p>	
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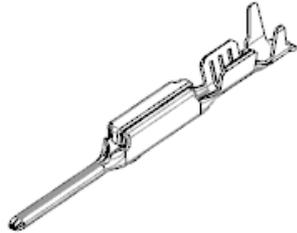
**1.3.2 22 POS. MALE CONNECTOR AND SPACER**

<p>ASSY 22 POS. MALE CONNECTOR</p>	<p>X-2208018-1 – KEYING A COLOUR: BLACK</p> <p>X-2208018-2 – KEYING B COLOUR: NATURAL</p> <p>X-2208018-3 – KEYING C COLOUR: GREY</p> <p>X-2208018-4 – KEYING D COLOUR: GREEN</p>	
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**1.3.3 TERMINALS FOR 22 POS. FEMALE CONNECTOR**

<p>GENERATION Y 0.64mm TERMINAL</p>	<p>TE-PN: 0-1456841-5 0-1456841-1 0-1456841-2</p>	
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**1.3.4 TERMINALS FOR 22 POS. MALE CONNECTOR**

<p>GENERATION Y 0.64mm TERMINAL</p>	<p>TE-PN: 0-1924275-5 0-1924275-1 0-1924275-2</p>	
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**1.4 REQUIREMENTS**

**1.4.1 Safety**

Do not stack product shipping containers so high that the containers buckle or deform.

**1.4.2 Storage**

**A. Ultraviolet Light**

Prolonged exposure to ultraviolet light may deteriorate the chemical composition used in the connector material.

**B. Shelf Life**

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

**1.5 Materials**

The connector housing is made from Nylon (Glass Fiber 35%), the connector TPA is made from PBT (Glass Fiber 30%). The contact is made from copper alloy .  
Materials are also shown on latest customer drawing.

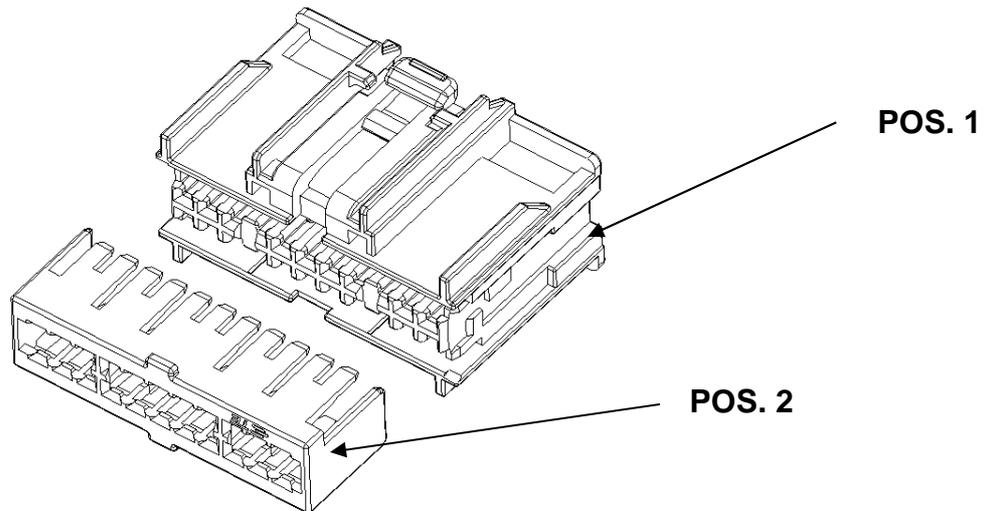
## 2 CONNECTOR OVERVIEW

### 2.1 OVERVIEW

#### ASSY FEMALE 22 POS. CONNECTOR

POS 1: FEMALE HOUSING

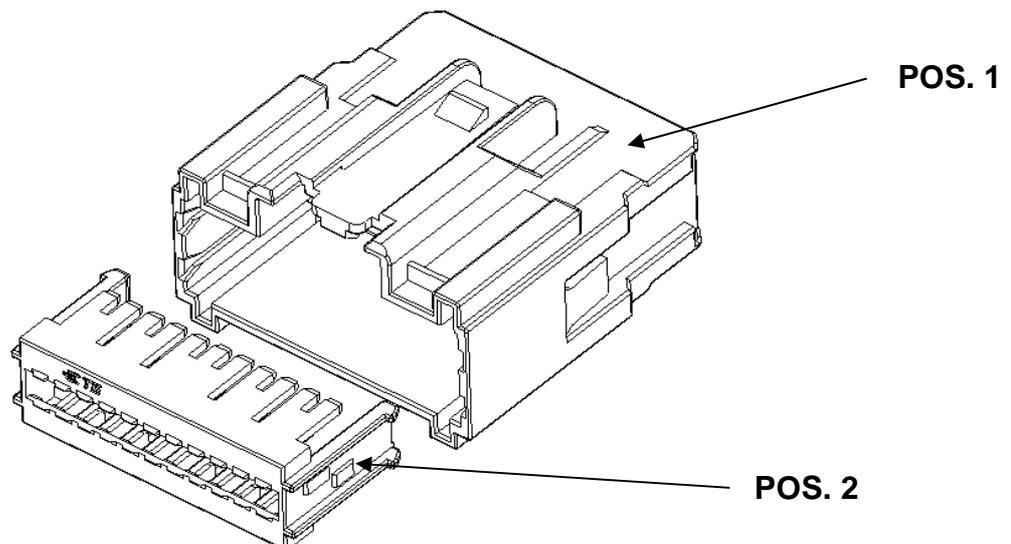
POS 2: FEMALE SPACER



#### ASSY MALE 22 POS. CONNECTOR

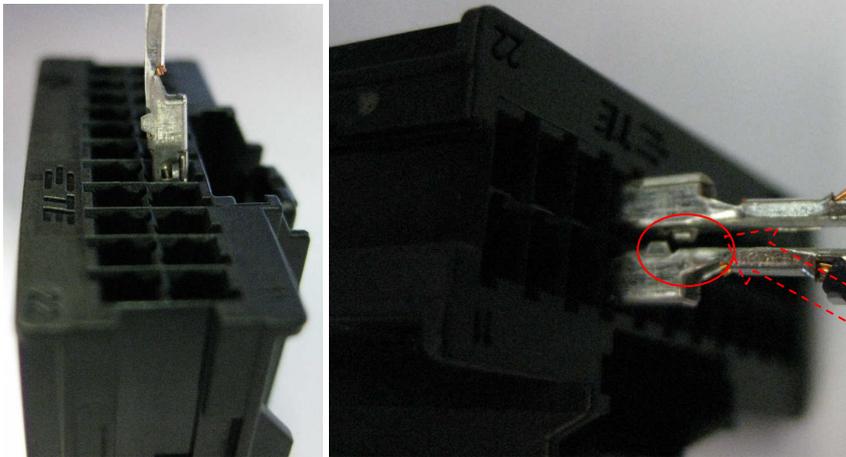
POS 1: MALE HOUSING

POS 2: MALE SPACER



## 2.2 TERMINAL INSERTION / REMOVAL INSTRUCTIONS

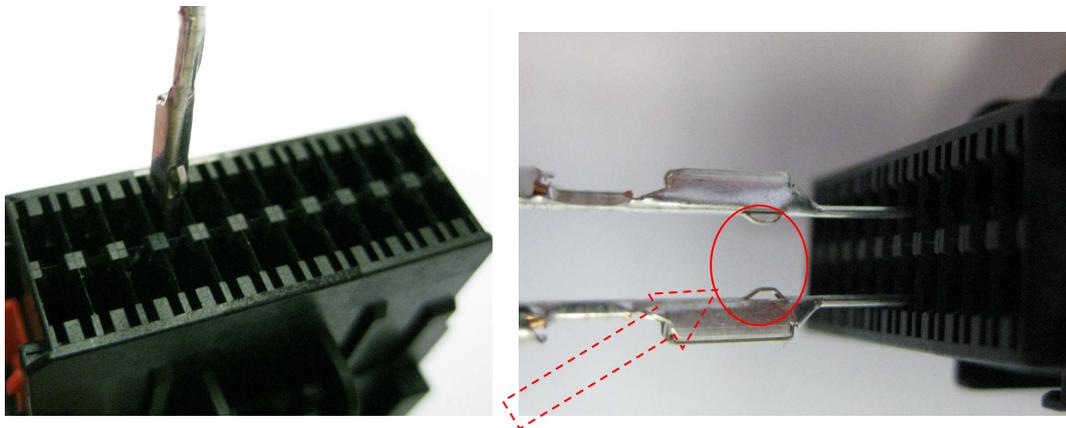
### 2.2.1 INSERTION OF FEMALE TERMINAL



ORIENT THE CONTACTS ALWAYS AS SHOWN ON THE PHOTO.

THE ORIENTATION FEATURE (J-HOOK) SHOULD BE ORIENTED TOWARDS MIDDLE OF THE CONNECTOR.

### 2.2.2 INSERTION OF MALE TERMINAL



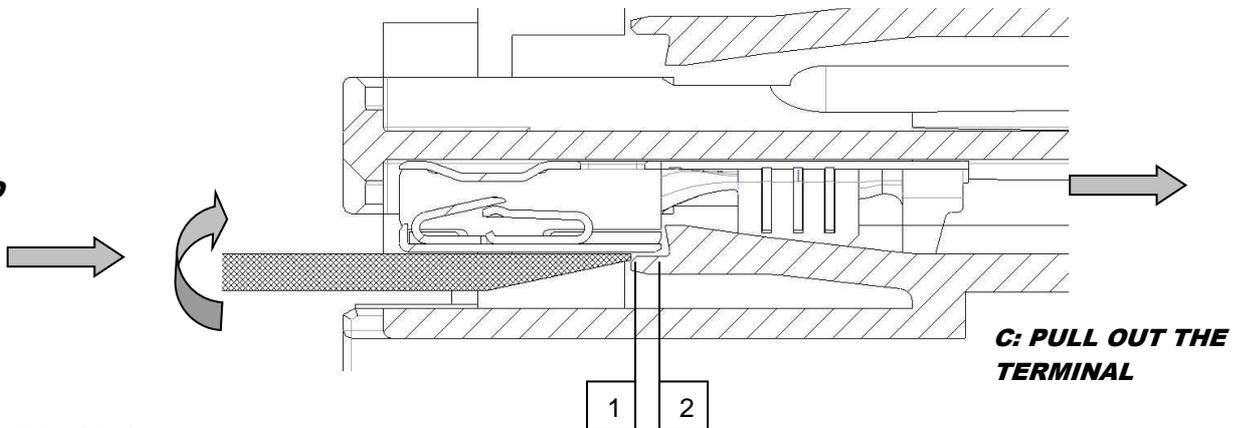
ORIENT THE CONTACTS ALWAYS AS SHOWN ON THE PHOTO.

THE ORIENTATION FEATURE SHOULD BE ORIENTED TOWARDS MIDDLE OF THE CONNECTOR.

**PUSH ALL TERMINALS INTO THE CONNECTOR UNTIL THE LOCKING IS FELT OR HEARD BY AN AUDIBLE CLICK**

**2.2.3 REMOVAL OF FEMALE TERMINAL  
TPA ( SPACER ) MUST BE REMOVED BEFORE CONTACT REMOVAL**

**A: INSERT THE  
EXTRACTION  
TOOL, MOVE  
FROM POS. 1 TO  
POS. 2**



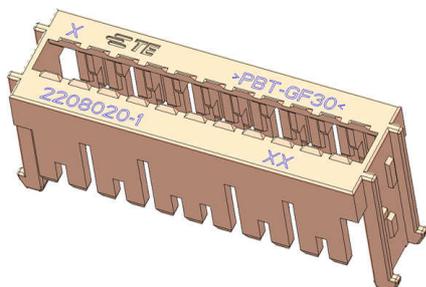
**B: MOVE THE EXTRACTION  
TOOL SIDEWARDS TO RELEASE  
THE LOCKING FINGER**

**EXTRACTION TOOLS FOR FEMALE TERMINALS:  
GENERATION Y 0.64 - TE-NO. 1452426-1**

**2.2.4 REMOVAL OF MALE TERMINAL**  
Servicing depends on spacer design

**TPA-EXISTING DESIGN**  
(X-2208018-X Versions)  
TPA must be in pre-set position

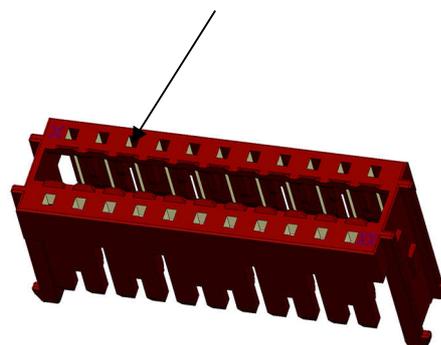
**OPEN SURFACE**  
PIN GUIDING ONLY ON ONE SURFACE  
**No front servicing!**



- FOR PARTS:**
- 0-2208018-1
  - 0-2208018-2
  - 0-2208018-3
  - 0-2208018-4

**TPA-NEW DESIGN (1-2208018-X)**  
(1-2208018-X Versions)  
TPA must be in pre-set position

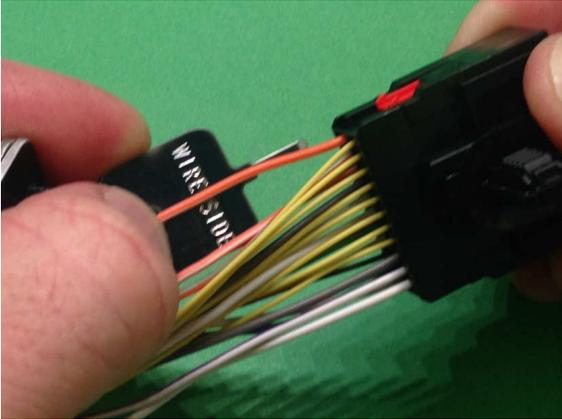
**Holes allow terminal  
front servicing.**



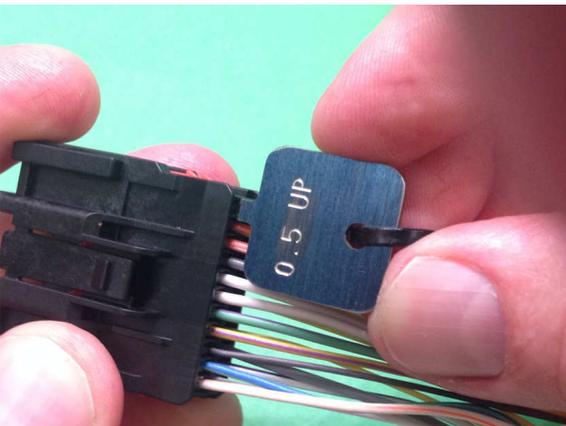
- FOR PARTS:**
- 1-2208018-1**
  - 1-2208018-2**
  - 1-2208018-3**
  - 1-2208018-4**

Select the wire/terminal to be removed.

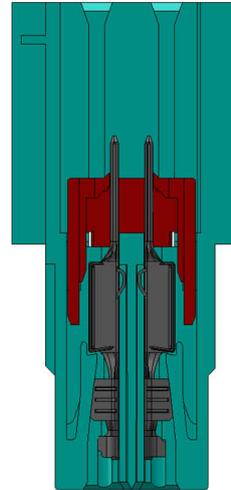
Place the tool with WIRE SIDE marking against the wire.



In orientation shown, insert the tool blade into the cavity until it stops.



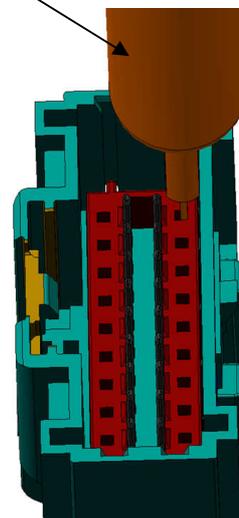
Connector section with TPA in pre-set position



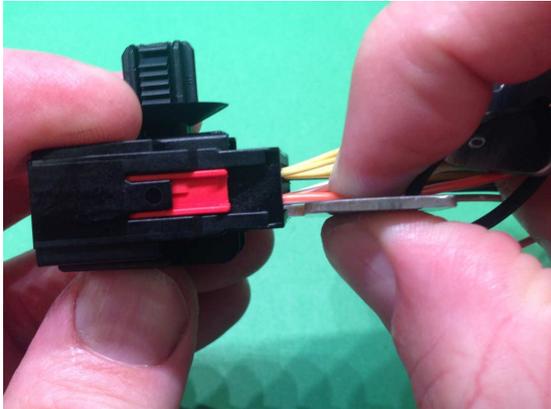
Connector with TPA in pre-set position



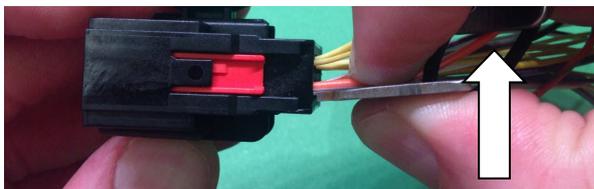
Insert tool to unlock contact



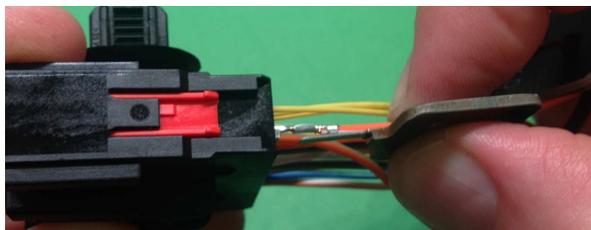
Once inserted, pinch the wire against the tool



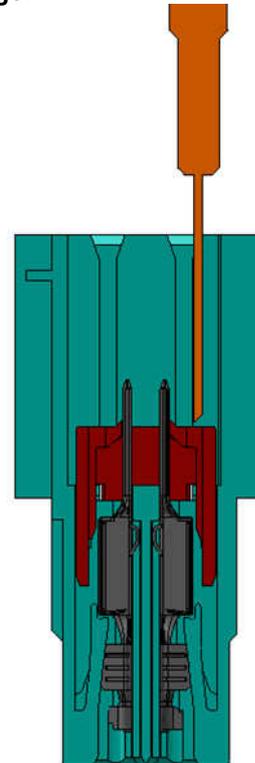
Tilt the tool toward the center of the connector to release the terminal locking finger.



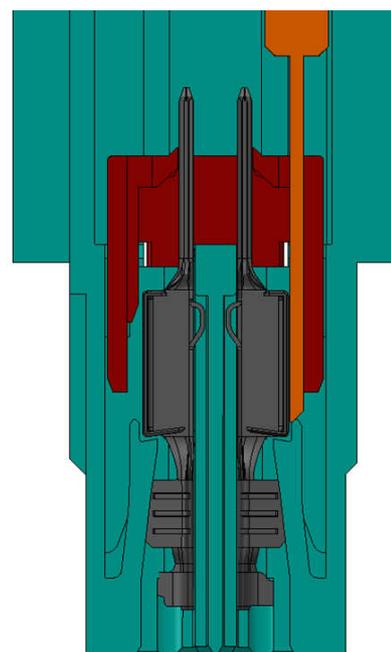
While tilted up, pull the tool and wire/Terminal out of the connector.

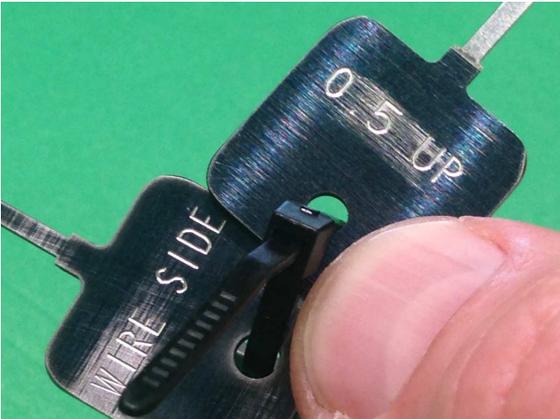


Straight insertion of the tool leads already to a deflection of the locking finger



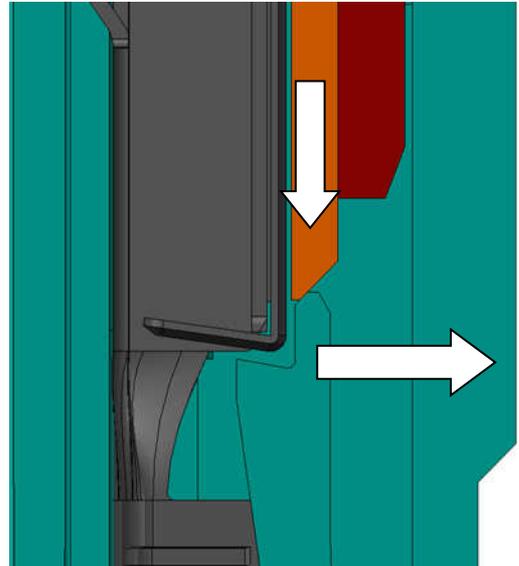
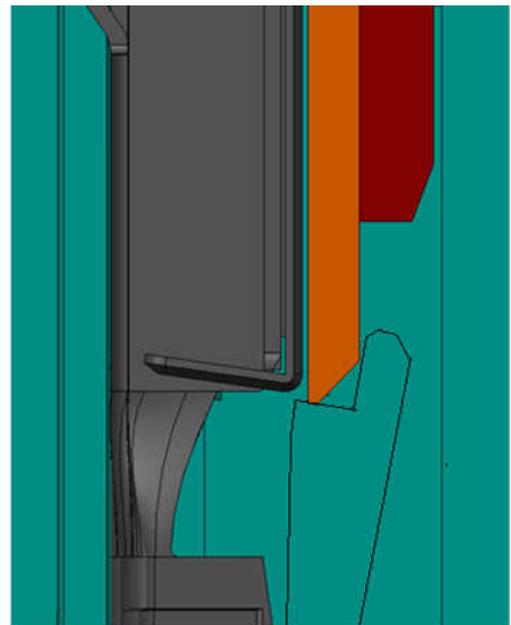
Insert tool to unlock contact



**Terminal removal tools:**

3 sizes of the tool are needed:  
0.5mm blade thickness (0.75mm<sup>2</sup>)  
0.7mm blade thickness (0.5mm<sup>2</sup>)  
0.9mm blade thickness (0.35mm<sup>2</sup>).

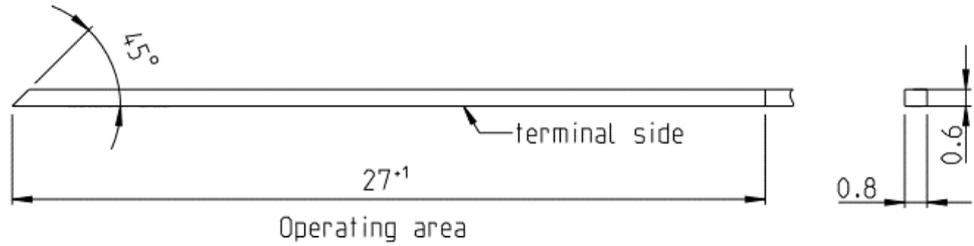
Each is marked on top and bottom of tool:  
**WIRE SIDE** – is to be held against wire.  
**0.5 UP** – this is the 0.5 blade, and would be always toward the outside of the connector.

**Push the tool in final position to unlock contact****Final position of the tool and locking finger deflected.****Remove contact after deflecting locking finger.**

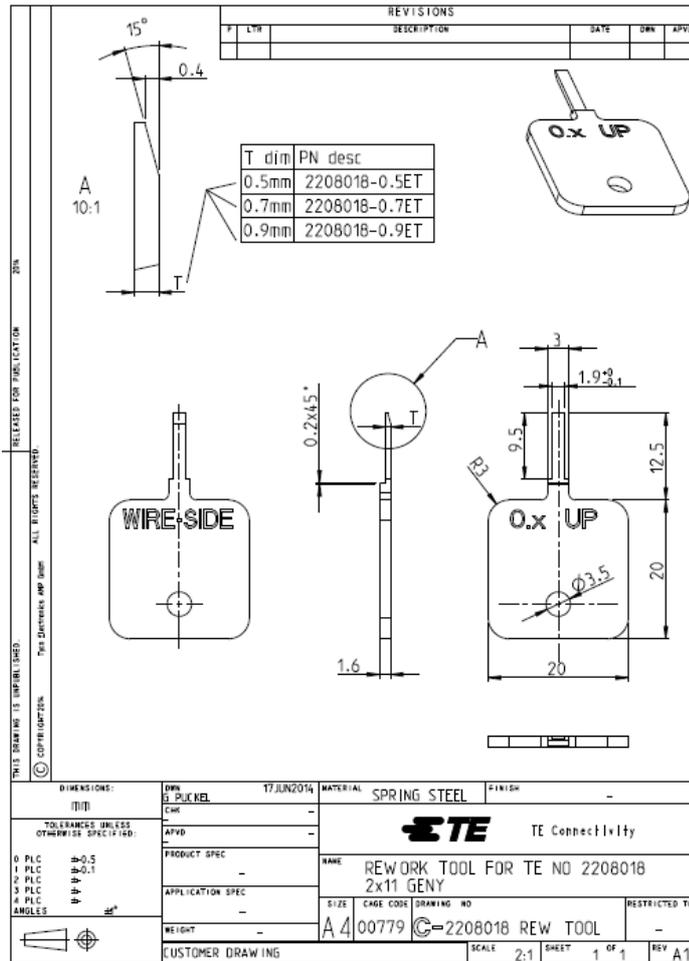
**Extraction tool for connectors with new TPA design (front servicing):**

This tool can only be used for the below mentioned connectors.

- 1-2208018-1
- 1-2208018-2
- 1-2208018-3
- 1-2208018-4



**Extraction tool for ALL versions:**



T dim	PN desc
0.5mm	2208018-0.5ET
0.7mm	2208018-0.7ET
0.9mm	2208018-0.9ET

DIMENSIONS:		MATERIAL		FINISH	
UNIT	mm	17 JUN 2014	SPRING STEEL		
TOLERANCES UNLESS OTHERWISE SPECIFIED:		TE Connectivity			
0 PLC	±0.5	NAME: REWORK TOOL FOR TE NO 2208018			
1 PLC	±0.5	2x11 GENY			
2 PLC	±0.1	SIZE: A4			
3 PLC	±0.1	CAGE CODE: 00779			
4 PLC	±0.1	DRAWING NO: C-2208018			
ANGLES	°	RESTRICTED TO: -			
WEIGHT: -		SCALE: 2:1		SHEET: 1 OF 1	
CUSTOMER DRAWING				REV: A1	

**2.3 APPLICABLE WIRES**

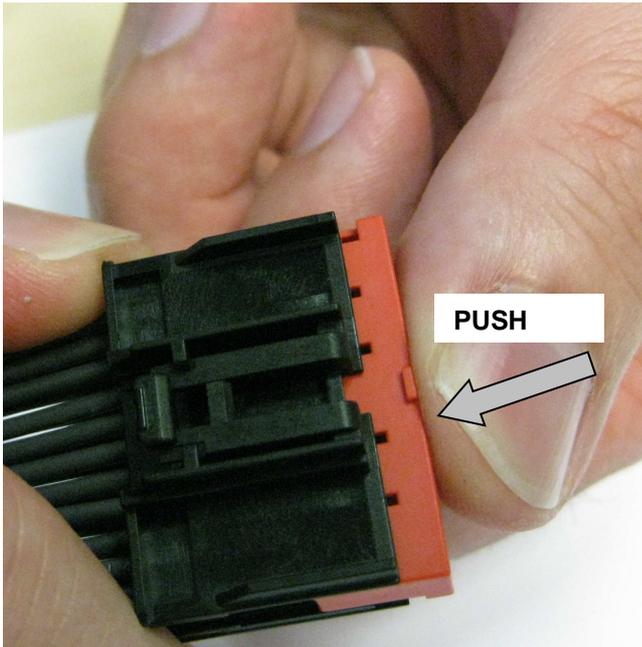
PLEASE REFER TO LATEST CONTACT CUSTOMER DRAWING

## 2.4 TPA - (SPACER) INSERTION / REMOVAL INSTRUCTION

### FEMALE HOUSING

DELIVERY CONDITION OF THE FEMALE CONNECTOR WITH THE FRONT LOADED TPA ( SPACER ) IN PRESET POSITION. THE FRONT LOADED TPA (SPACER) IS ELEVATED.

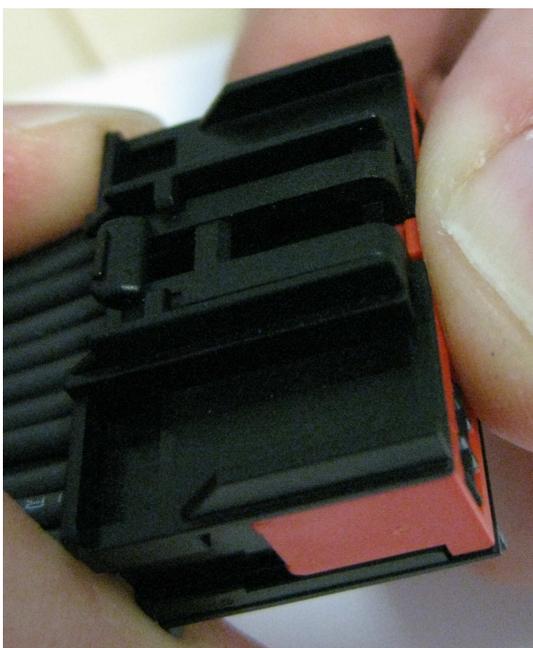
1.



DO NOT PUSH THE TPA (SPACER) FURTHER THAN THIS POSITION BEFORE CONTACT MOUNTING

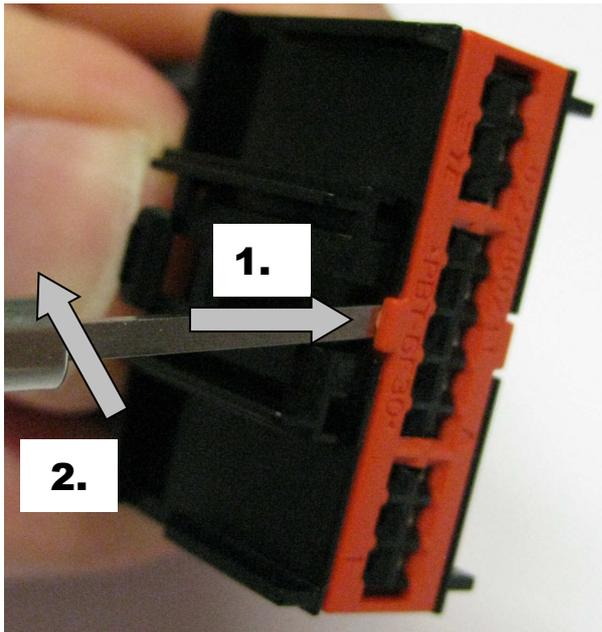
AFTER CONTACT MOUNTING, THE TPA (SPACER) SHOULD BE PUSHED IN END POSITION.

2.



THE FRONT LOADED TPA (SPACER) IS FULLY INSERTED.

## REMOVAL OF THE TPA (SPACER) FROM FEMALE HOUSING



INSERT THE SCREW DRIVER OR THE EXTRACTION TOOL 1452426-1 AS SHOWN  
TO UNLOCK / LIFT THE TPA (SPACER)

## MALE HOUSING

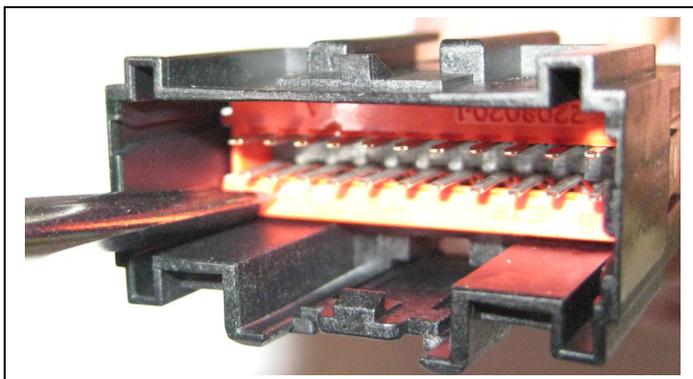
### TPA (SPACER) INSERTION



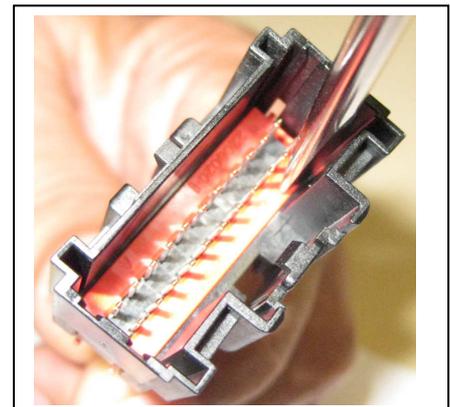
DELIVERY CONDITION OF THE MALE CONNECTOR WITH THE FRONT LOADED TPA (SPACER) IN PRESET POSITION. THE FRONT LOADED TPA (SPACER) IS ELEVATED.

DO NOT PUSH THE TPA (SPACER) FURTHER THAN THIS POSITION BEFORE CONTACT MOUNTING

1. AFTER CONTACT MOUNTING, THE TPA SHOULD BE PUSHED IN END POSITION. THE FRONT LOADED TPA ( SPACER ) IS FULLY INSERTED.

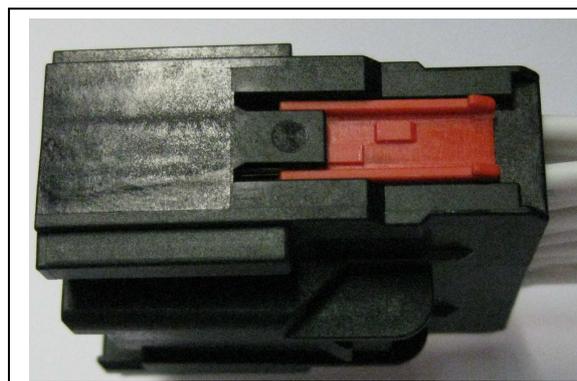


PUSH ON LEFT SIDE



PUSH ON OPPOSITE SIDE

PLEASE DO NOT DAMAGE THE TABS DURING TPA INSERTION TO END-LOCK POSITION. RECOMANDATION: TOOL WITH NO SHARP EDGES !



PICTURE SHOWS THE TPA (SPACER) IN END-LOCK POSITION

## REMOVAL OF THE TPA (SPACER) FROM MALE HOUSING

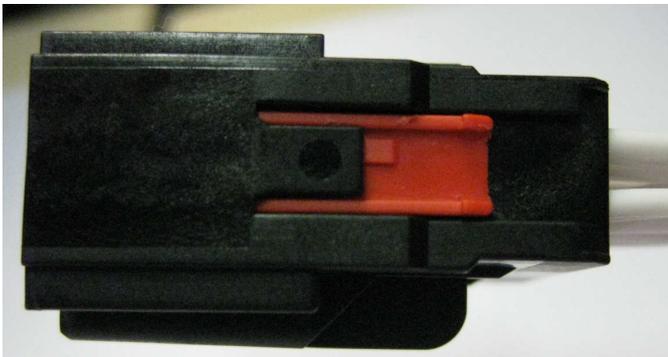
**1.**



**PUSH ON BOTH SIDES**

**INSERT THE SCREW DRIVER  
OR THE EXTRACTION TOOL AS  
SHOWN TO UNLOCK / LIFT THE  
TPA (SPACER)**

**2.**

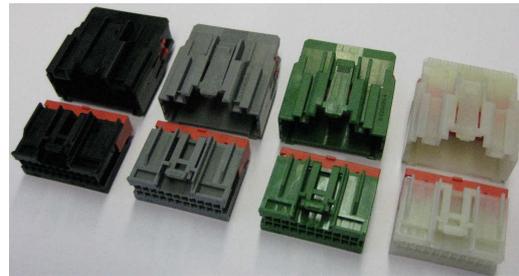
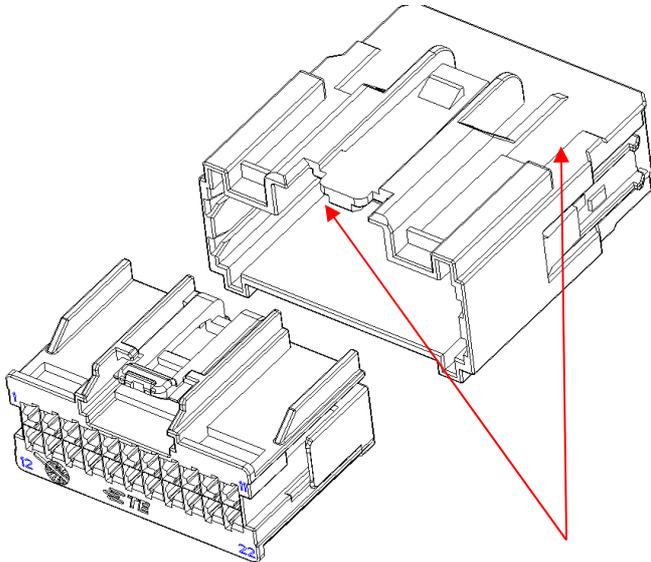


**PICTURE SHOWS THE  
TPA (SPACER)  
IN PRE-LOCK POSITION**

**REMOVE THE TPA (SPACER) BY USING THE EXTRACTION TOOL 1452426-1  
OR A SMALL SCREWDRIVER.**

**FOR REMOVING THE TERMINALS THE TPA (SPACER) HAVE TO BE  
REMOVED COMPLETELY.**

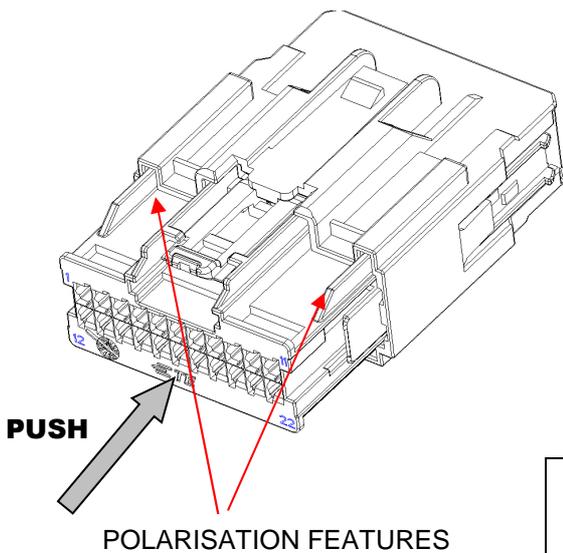
### 3. MATING AND UNMATING OF THE 22 POS. CONNECTORS



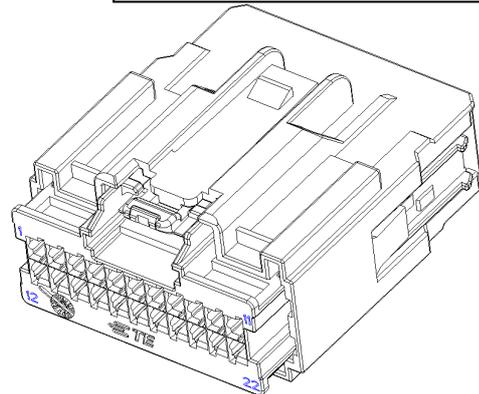
POLARISATION FEATURES  
( MECHANICAL AND COLOUR KEYING )

#### 3.1 MATING OF THE CONNECTORS

**1.**



**2.**



MATE THE CONNECTORS SUCH AS THE POLARISATION FEATURES FIT TOGETHER UNTIL IT STOPS AND A CLIC IS HEARD

**DO NOT BEND THE WIRES DURING ASSEMBLY! DO NOT MATE PARTS BY PUSHING ON WIRES! MATING FORCE SHOULD BE APPLIED ON HOUSINGS.**

3.2 UNMATING OF THE CONNECTOR WITH THE HEADER

