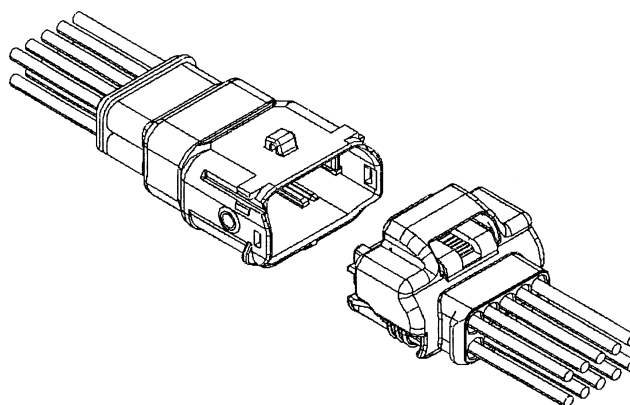




# APPLICATION SPECIFICATION

## 8 & 10 WAYS 1.5 mm SEALED CONNECTORS



Revision	MODIFICATION	SHEET	Date
A	First edition	All	2014/02/05
B	Seal plug reworking tool change : 63813-5700 was 98420-1037	16	2014/07/07
B1	Typing error for revision number on frame.	All	2014/09/04
C	Adding storage duration	19	2015/07/30

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DOCUMENT NUMBER: <b>AS-98788-003</b>	CREATED / REVISED BY: <b>A.HERBELIN</b>	CHECKED BY: <b>P. GOURBIN</b>	APPROVED BY: <b>C.BOUCHAN</b>



# APPLICATION SPECIFICATION

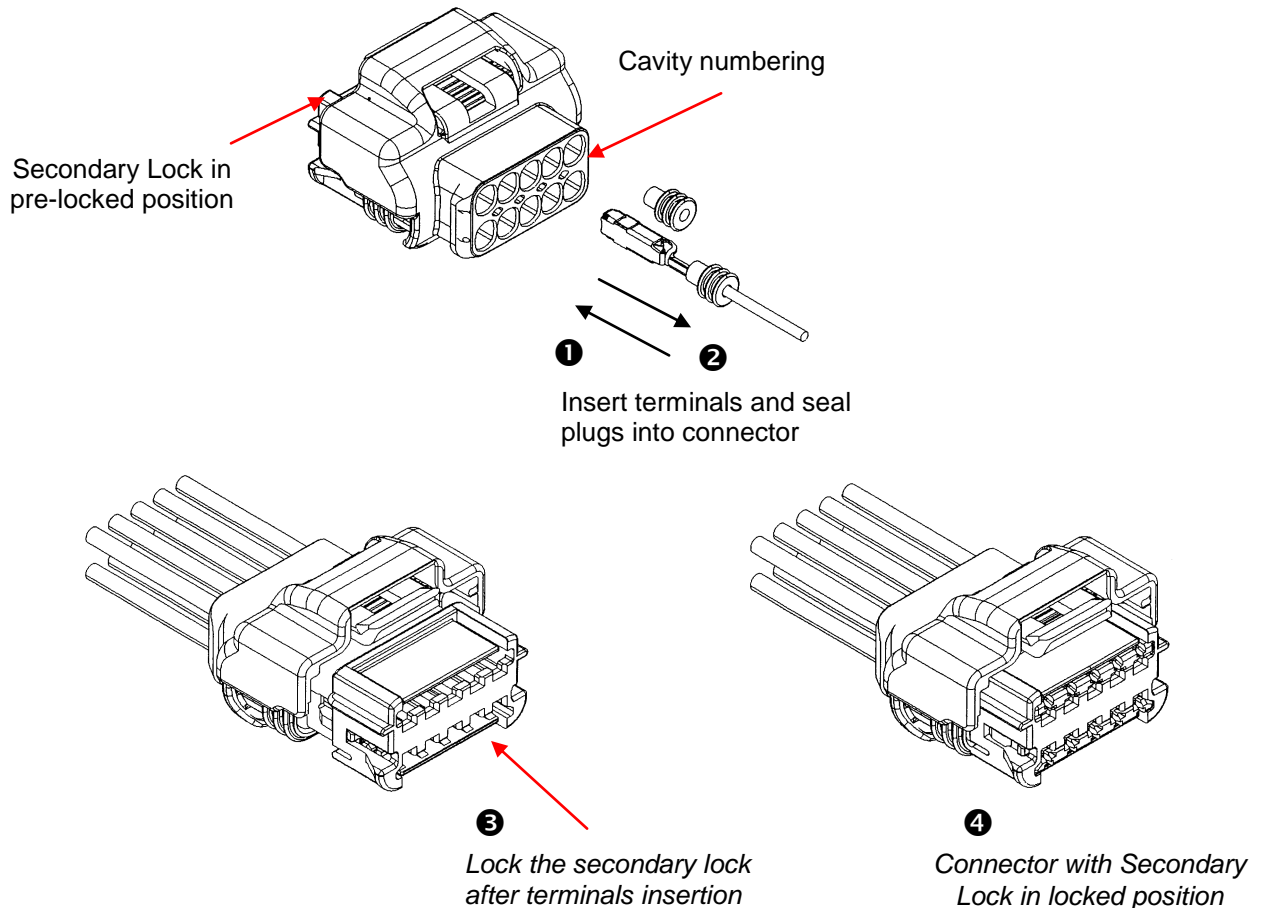
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## 1. HARNESS ASSEMBLY

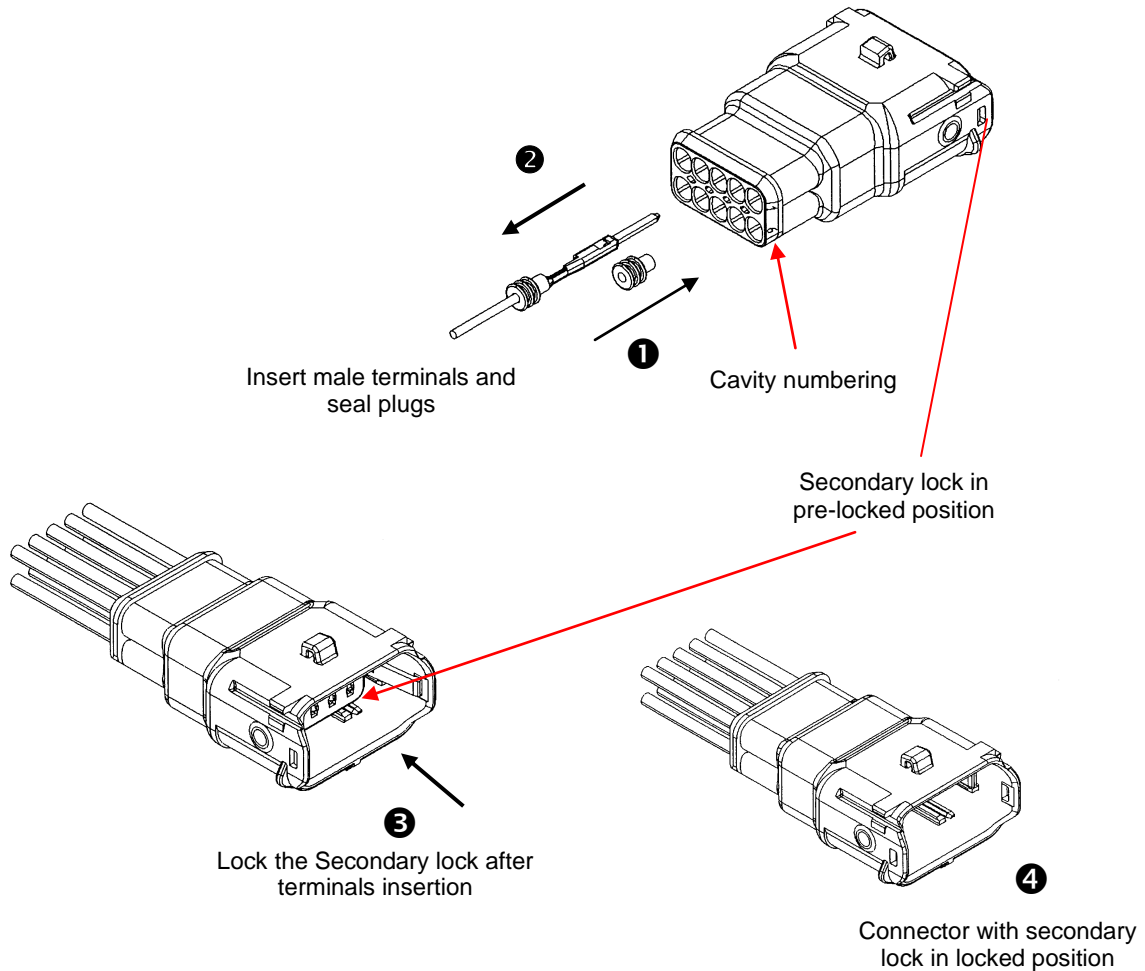
### 1.1. Receptacle connector assembly



- ❶ The terminal insertion is made by the connector back side. The cavity numbers allow respecting the harness configuration.
- ❷ Push and pull to check the good locking of contacts.
- ❸ The Secondary Lock can be locked manually or automatically using a mobile element of harness counterpart. For automatic operation, refer to locking force specified in section 1.3.  
In case of manual locking of the Secondary Lock, push evenly and in the harness axis on the front face of the Secondary Lock (see section 1.3). The movement is executed without difficulty.  
In the event of resistance, do not press; check the good insertion of the terminals.

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## 1.2. Male connector assembly

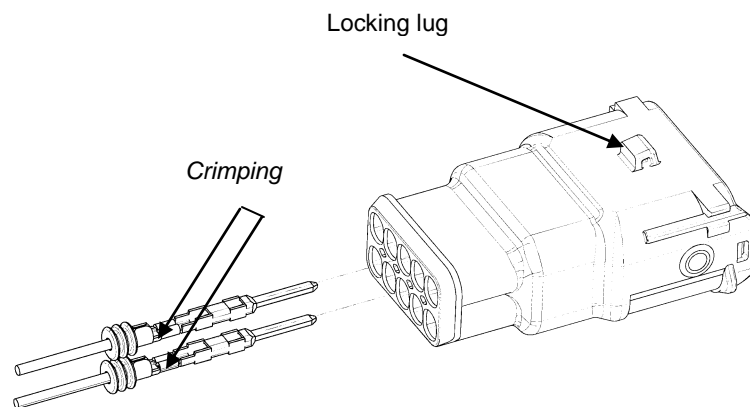


- ❶ The terminal insertion is made by the connector back side. The cavity numbers allow respecting the harness configuration.
- ❷ Push and pull to check the good locking of contacts.
- ❸ The Secondary Lock can be locked manually or automatically using a mobile element of harness counterpart. For automatic operation, refer to locking force specified in section 1.3.

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In case of manual locking of the Secondary Lock, a specific tool (not supplied) is required. It must be provided to avoid damaging male terminals during secondary lock closure. The closure force must be applied evenly and in the harness axis on the front face of the Secondary Lock (push area shown in section 1.3). The movement is executed without difficulty. In the event of resistance, do not press; check the good insertion of the terminals.

Note: Although male terminals are reversible, Molex suggests inserting terminals with crimping in the same side as pin connector locking lug for both terminals rows (as shown in below picture) in order to favor the receptacle / pin connectors mating.

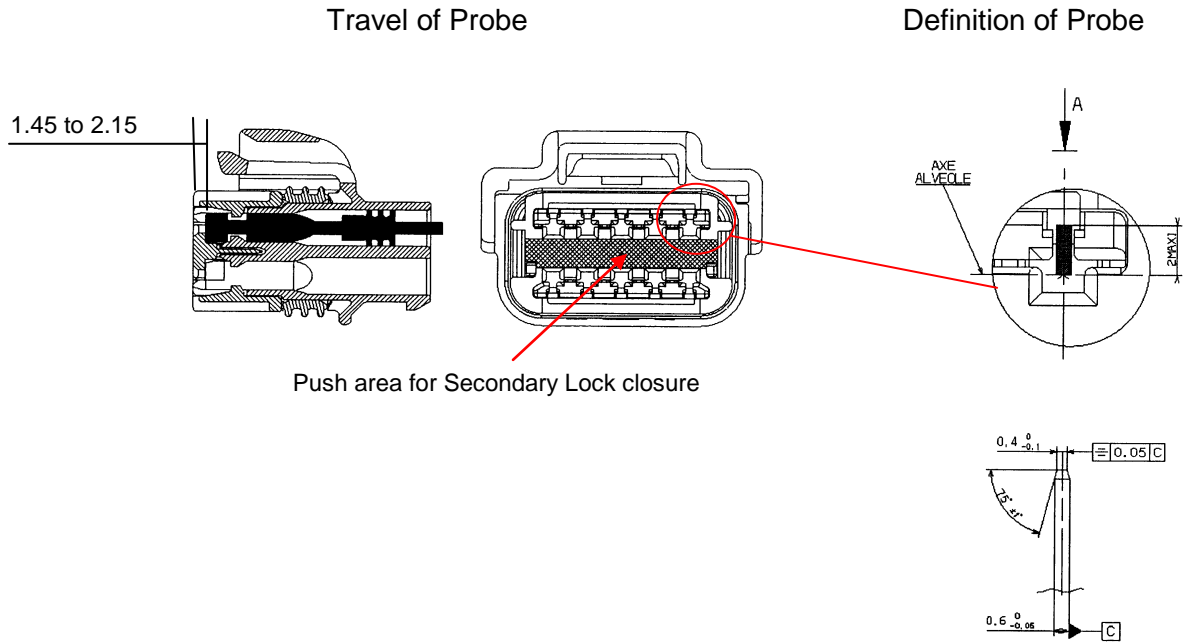


### 1.3. Interface and harness' electrical test

- ❖ Interface definition: refer to RSD-98788-002 MOLEX drawing.
- ❖ Interfaces must:
  - Assure the secondary lock in pre-locked position during contact insertion,
  - Allow the required clearance to lock the secondary lock,
  - Respect the recommended hold areas (see interface drawing),
  - Allow the electrical continuity checking using probes as described in below pictures,
  - Detect the Secondary Lock closure,
  - Prevent the seal and connector's aspect degradation.

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## 1.3.1. Receptacle connector



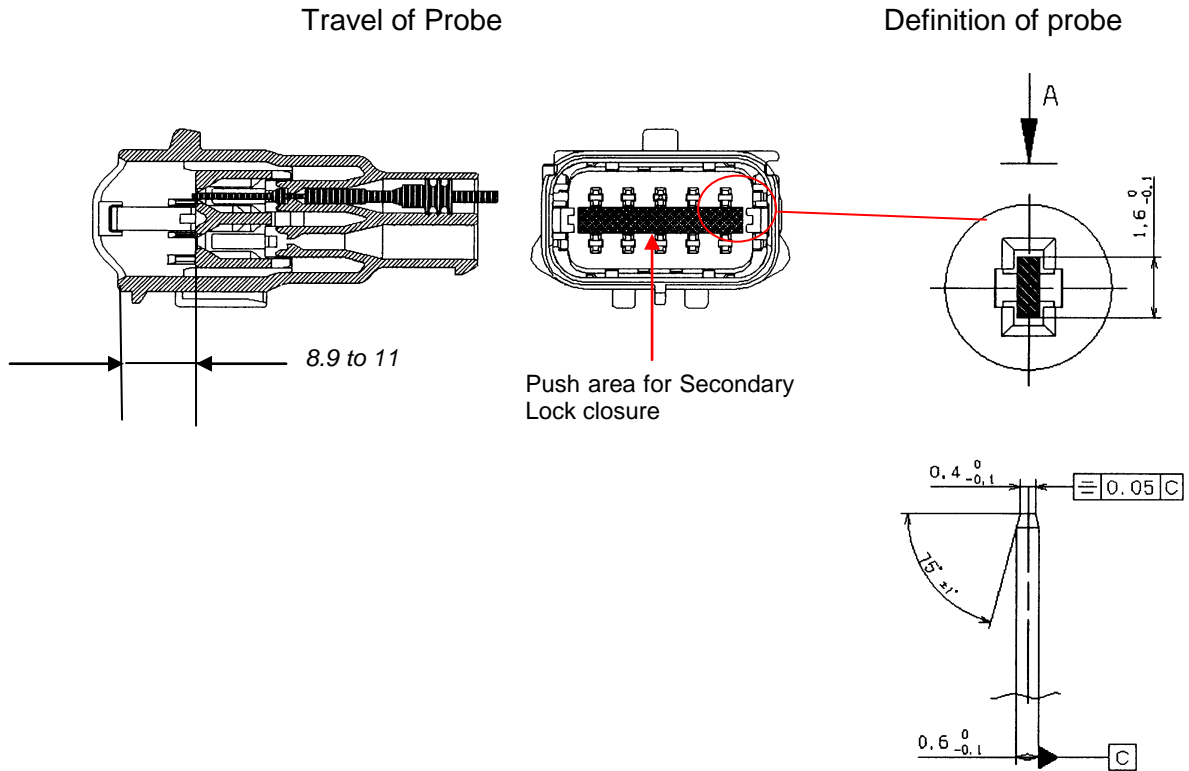
- Recommended automatic locking force of secondary lock:  $40N < F < 50N$ .
- Compression force on the female terminal: 20N max.
- Check of the presence of the cavity seals: 0.3bar max of internal overpressure in the housing, or mechanically.



The test probe must not enter into the terminal!

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## 1.3.2. Pin connector

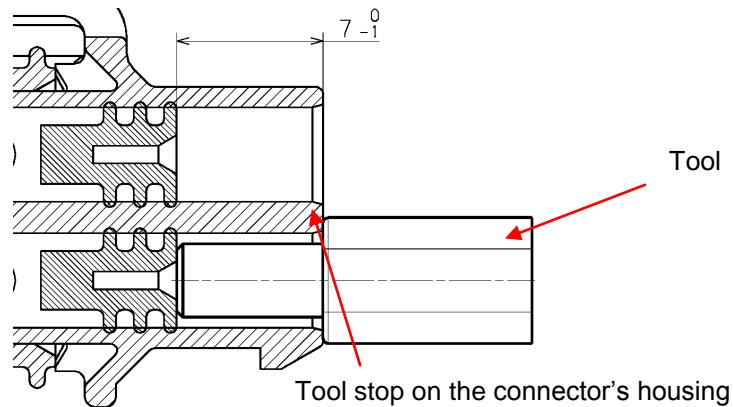


- Recommended automatic locking force of secondary lock:  $15\text{N} < F < 25\text{N}$ .
- Compression force on the male terminal: 10N max
- Check of the presence of the cavity seals: 0.3bar max of internal overpressure in the housing, or mechanically.

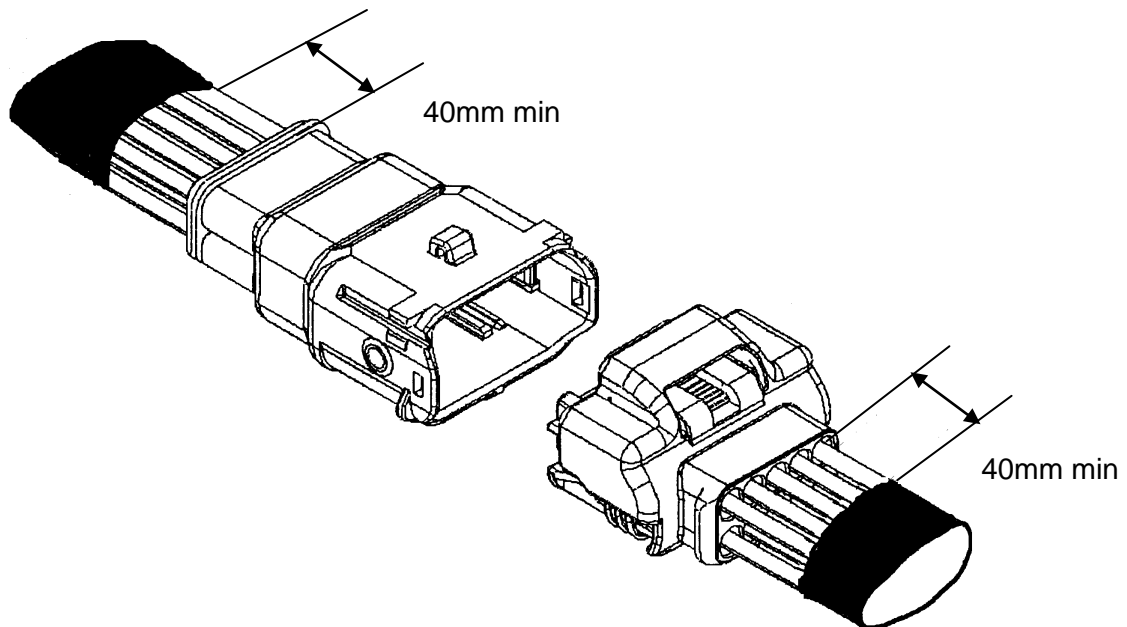
REVISION: <b>C</b>	ECR/ECN INFORMATION: EC No: <b>G2016-0014</b> DATE: <b>2015 / 07 / 30</b>	TITLE: <b>USE GUIDE FOR 8 &amp; 10W 1.5 SEALED CONNECTORS</b>	SHEET No. <b>7 of 19</b>
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## 1.4. Seal plug assembly

- ❖ Seal plug insertion is made by the connector back side.
- ❖ The seal plug position and the positioning tools are identical for the male and female connectors.
- ❖ Cavity numbers allow respecting the harness configuration.
- ❖ The seal plug has a specific assembly direction (central hole visible). Push it into the cavity with the positioning tool (see below picture for tool definition) which guarantees the sealing by a right positioning of seal plug.
- ❖ MOLEX seal plug tool reference: 63812-1200.



## 1.5. Taping



- ❖ The min distance recommended between connector output and taping beginning: 40 mm.

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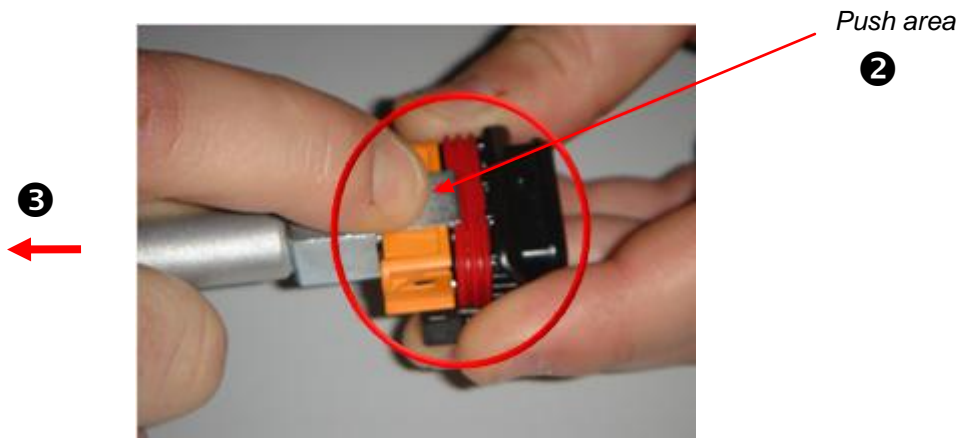
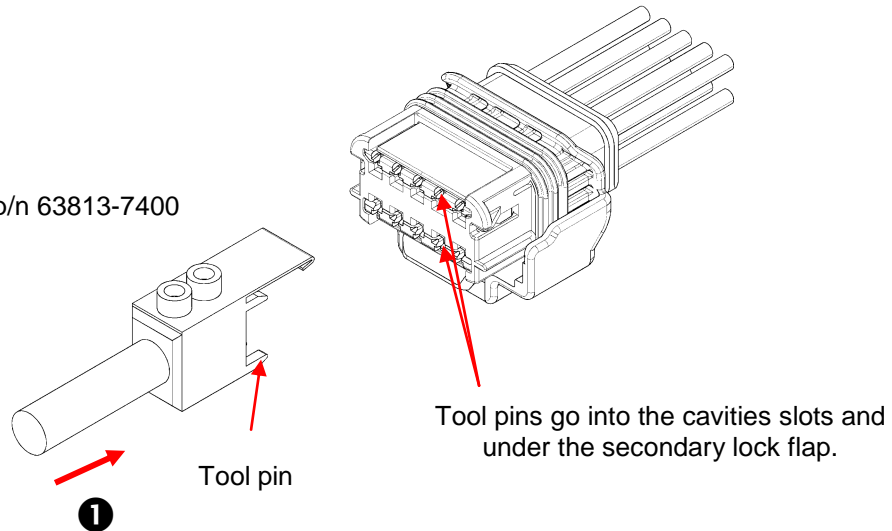


## 2. REPAIR OPERATION

### 2.1. Female terminals reworking

#### 2.1.1. Secondary lock removal

MOLEX tool p/n 63813-7400



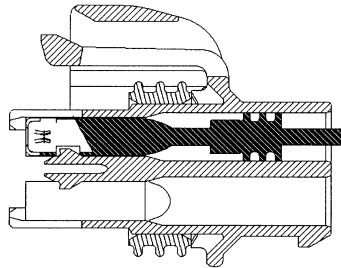
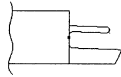
- 1 Place the tool in the middle of secondary lock and push it until stop
- 2 Apply a pressure on tool with a finger as described in above picture
- 3 Pull (from one side to the other one on the tool) to extract the secondary lock.

Note: each damaged connector must be replaced.

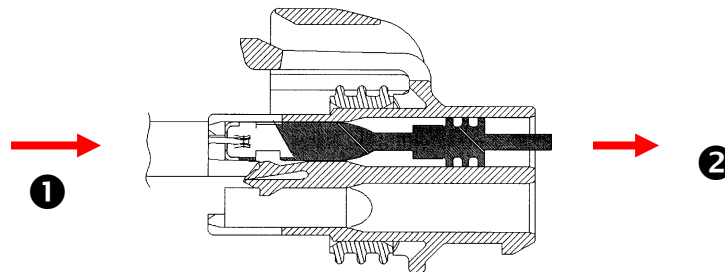
REVISION: <b>C</b>	ECR/ECN INFORMATION: EC No: <b>G2016-0014</b> DATE: <b>2015 / 07 / 30</b>	TITLE: <b>USE GUIDE FOR 8 &amp; 10W 1.5 SEALED CONNECTORS</b>	SHEET No. <b>9 of 19</b>
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## 2.1.2. Female terminals extraction

DELPHI / FCI tool  
p/n 210 S 045



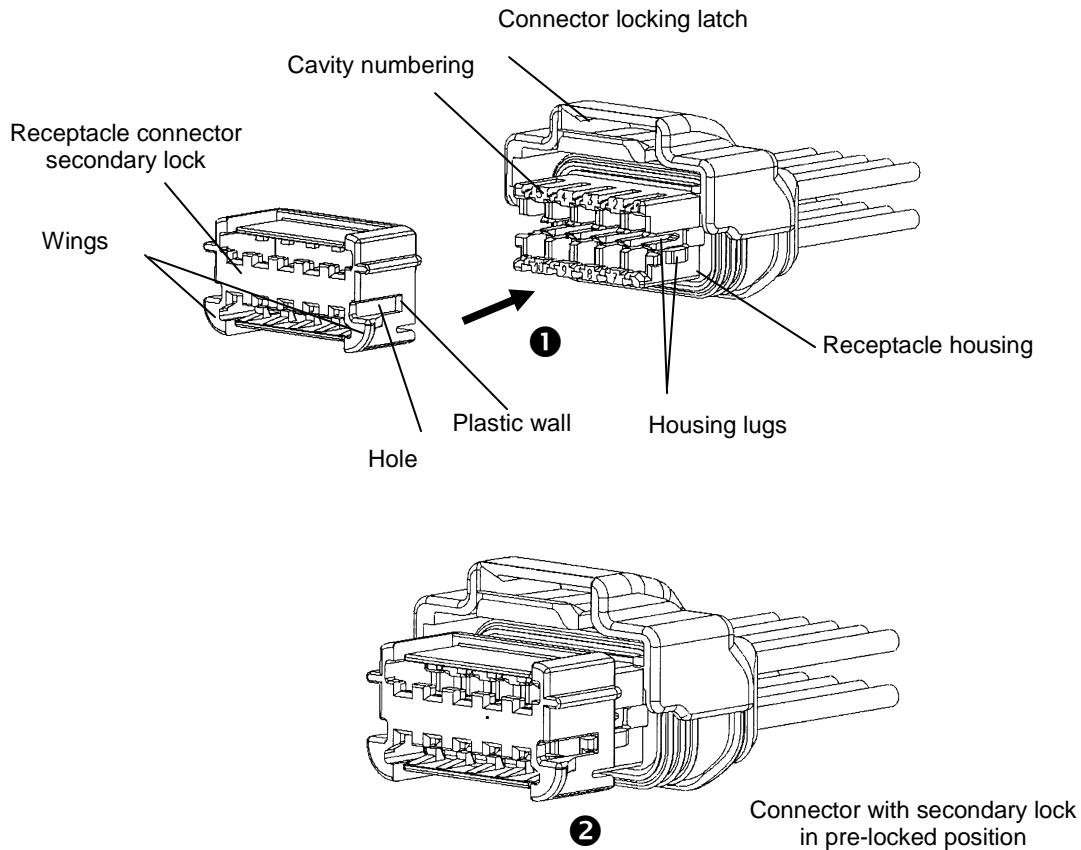
Connector without secondary lock



- ❶ Place the tool into the terminal then push lightly the tool toward in order to deactivate the terminal latch.
- ❷ Extract the terminal from the connector by pulling carefully the wire. Any abrupt extraction can damage the terminal latch.

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## 2.1.3. Secondary lock re-assembling on receptacle connector



- Place the secondary lock in the harness axis and with its two wings in the same side as cavities numbered from 6 to 10.
- Insert the secondary lock as far as its plastic wall is seated between both housing lugs.
- For the female terminals wiring, refer to section 1.1

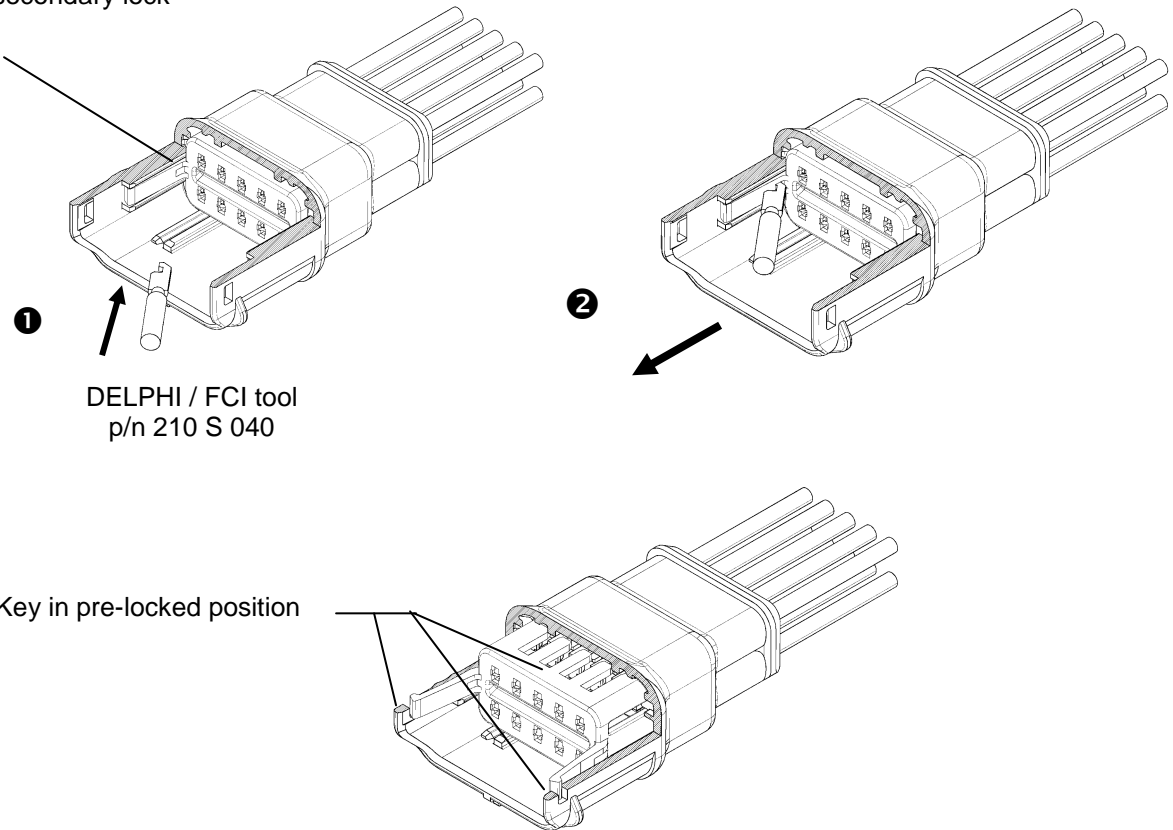
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## 2.2. Male terminals reworking

### 2.2.1. Secondary lock removal

From locked position to pre-locked position:

Slots in the secondary lock for removal

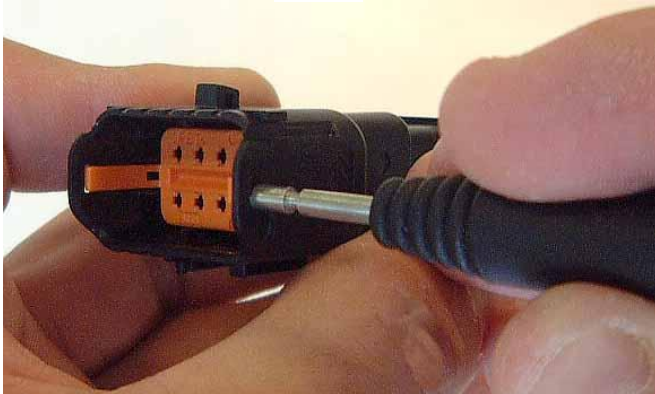


- ➊ Place the tool hook in the secondary lock slot.
- ➋ Hold the housing and pull carefully the tool in order to move the secondary lock from the locked to the pre-locked position.

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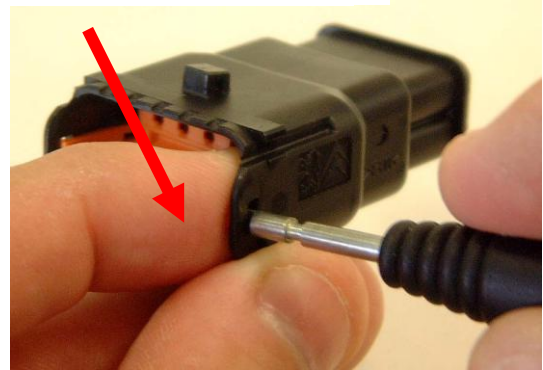
From pre-locked position to complete extraction:

3

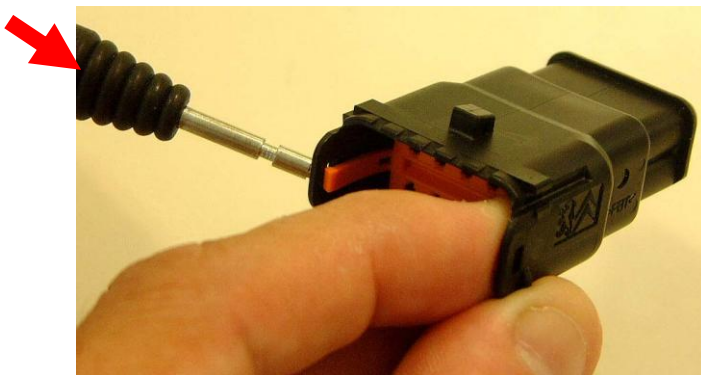


« A » finger

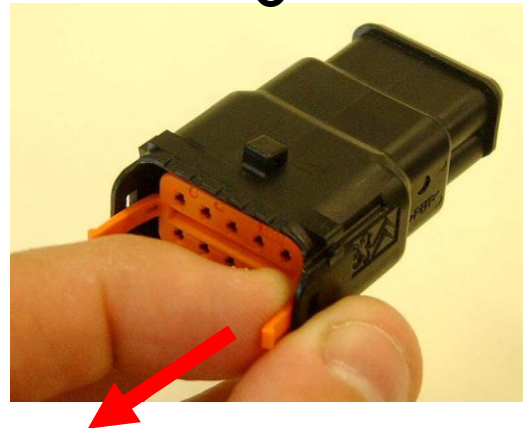
4



5

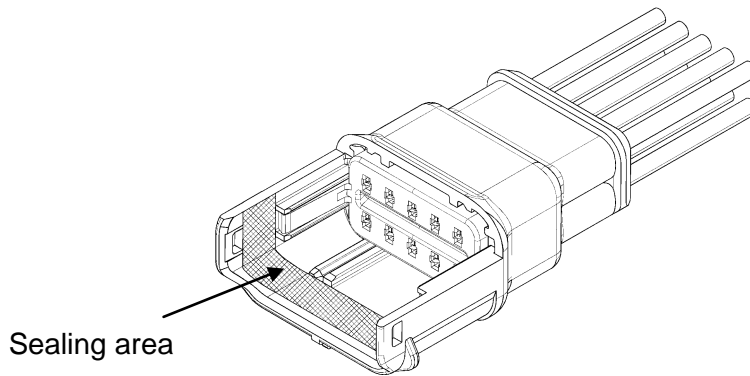


6



- 3 Insert the tool in the male connector hole to extract the first secondary lock latch.
- 4 Hold with the "A" finger, the unlocked side of the secondary lock.
- 5 Insert the tool in the other side of male connector to extract the second latch of secondary lock
- 6 Pull out secondary lock with the "A" finger.

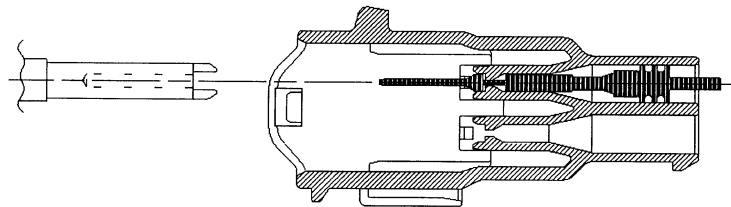
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DOCUMENT NUMBER: <b>AS-98788-003</b>	CREATED / REVISED BY: <b>A.HERBELIN</b>	CHECKED BY: <b>P. GOURBIN</b>	APPROVED BY: <b>C.BOUCHAN</b>



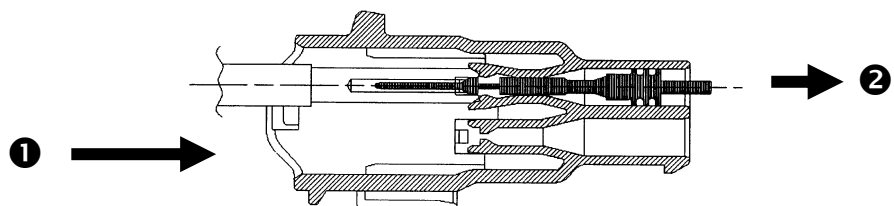
**WARNING:** no contact between the secondary lock removal tool and the male connector housing sealing area. All damaged housing must be replaced.

### 2.2.2. Male terminals removal

DELPHI / FCI tool  
p/n 210 S 049



Connector without secondary lock



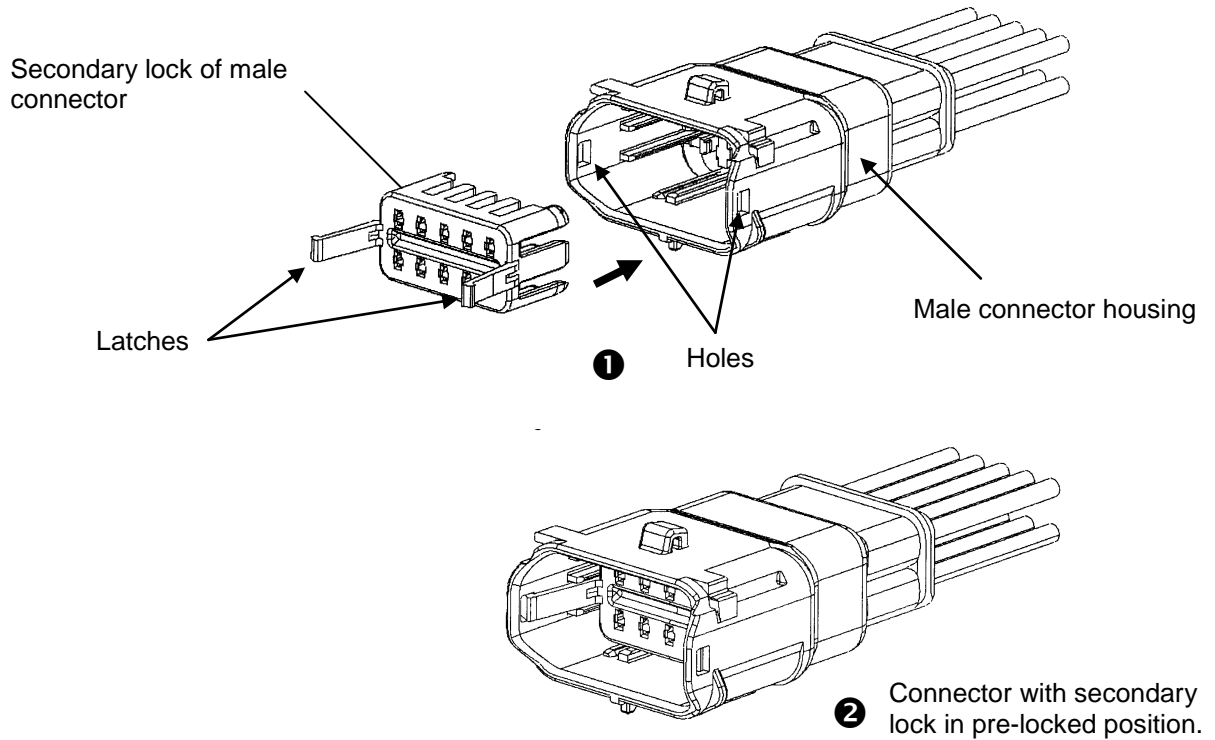
- 1** Place the tool over the male terminal to extract it. Push gently in order to deactivate the terminal latches.
- 2** Pull gently on the wire to extract the male terminal. Any abrupt extraction can damage the terminal latch.



**WARNING:** none contact allowed between the male terminal reworking tool and the male housing sealing area. A damaged housing must be replaced.

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## 2.2.3. Secondary lock re-assembling on male connector

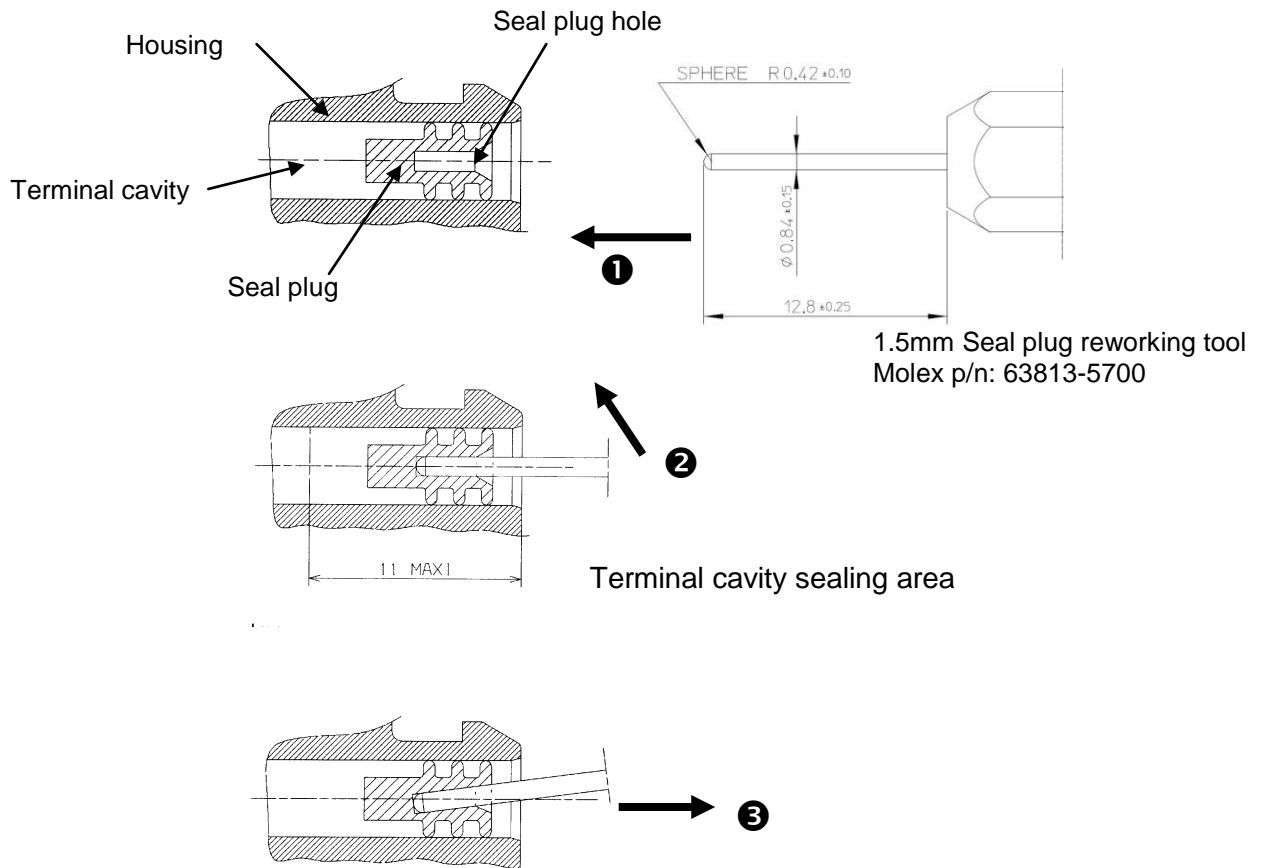


- ❶ *Place the secondary lock in the harness axis.*
- ❷ *Insert the secondary lock into the male connector housing as far as the 2 latches of the secondary lock are in the housing holes.*
- ❸ *For the male terminals wiring, see chapter 1.2*

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## 2.3. Seal plugs reworking



- ❶ Insert the rework tool into the seal plug hole
- ❷ Incline the tool.
- ❸ Pull gently the tool to extract the seal plug. For the seal plug installation into the housing, refer to section 1.4.



**WARNING:** no contact between the seal plug reworking tool and the terminal cavity sealing area.

All housings or seals damaged must be replaced.

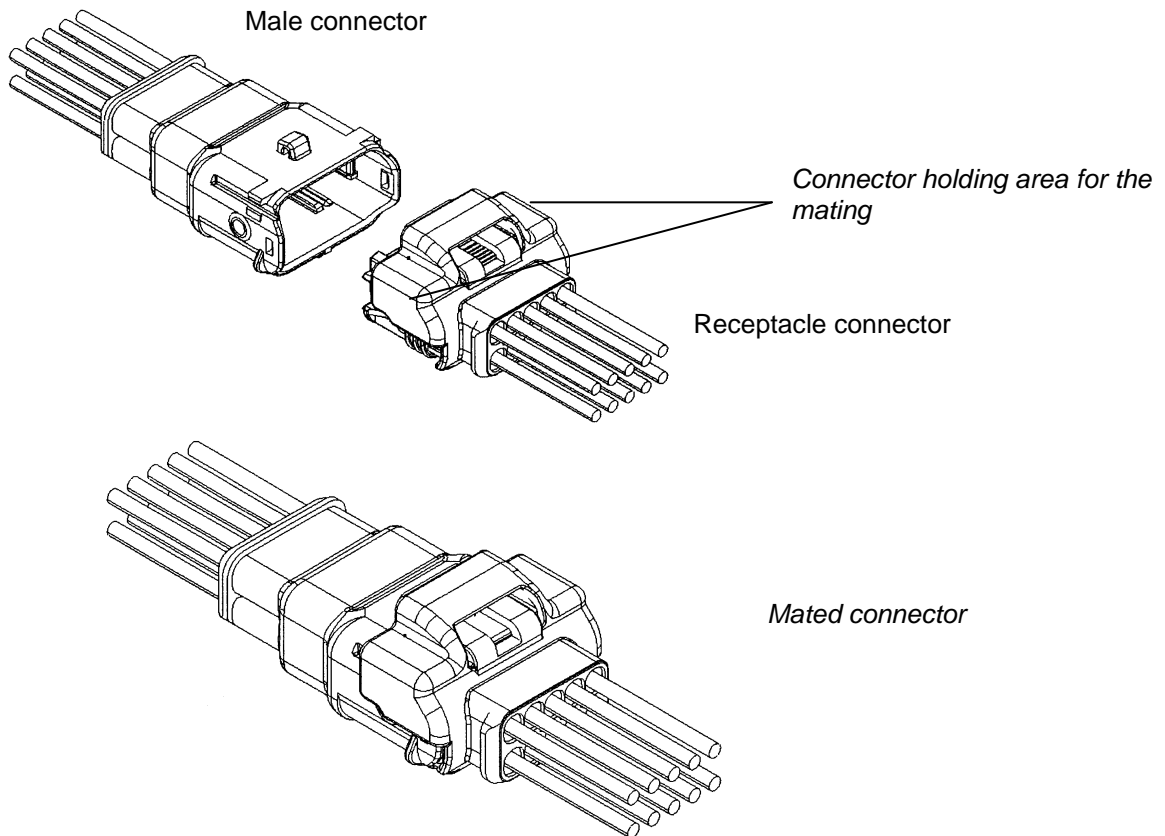
REVISION: <b>C</b>	ECR/ECN INFORMATION: EC No: <b>G2016-0014</b> DATE: <b>2015 / 07 / 30</b>	TITLE: <b>USE GUIDE FOR 8 &amp; 10W 1.5 SEALED CONNECTORS</b>	SHEET No. <b>16 of 19</b>
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## 3. CONNECTORS MATING

### 3.1. Receptacle connector / Male connector mating

- ❖ Only one mating direction possible
- ❖ Mechanical and color coding will forbid a wrong mating configuration.



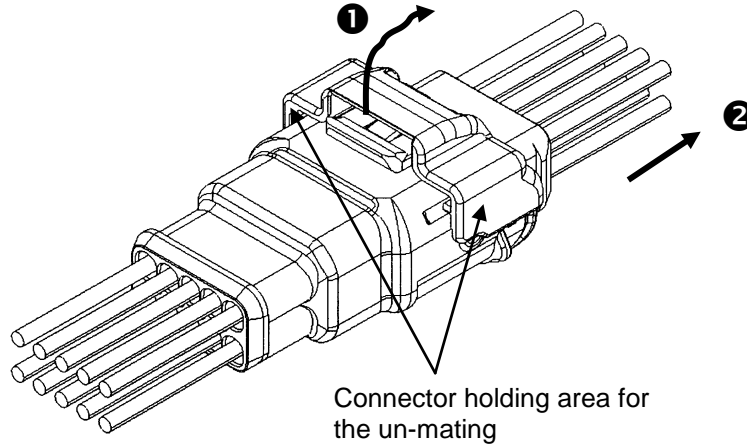
- ❖ The mating occurs only beyond a force of about 60N. It is the “go-no go” effect. It ends with an audible “click” which informs that the mating operation is over.

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## 3.2. Receptacle connector / Male connector un-mating



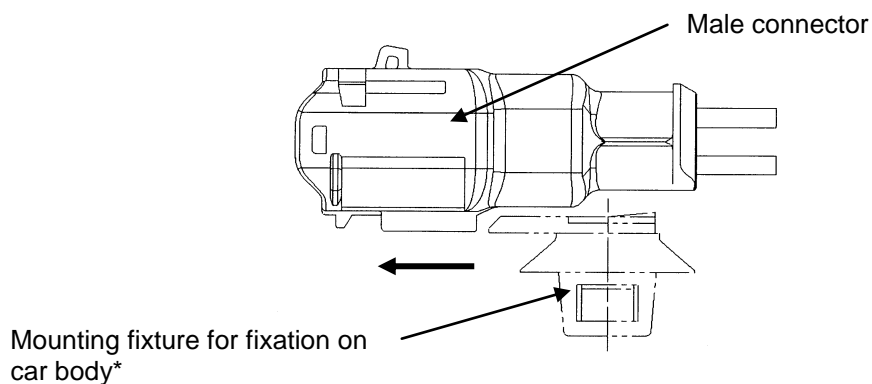
- ❶ Unlock the receptacle connector locking latch.
- ❷ Together, pull the receptacle connector holding it by lateral faces.  
Note: do not pull the wires.



*Same process for mating and un-mating a receptacle connector with a header.*

## 4. FIXATION ON CAR BODY

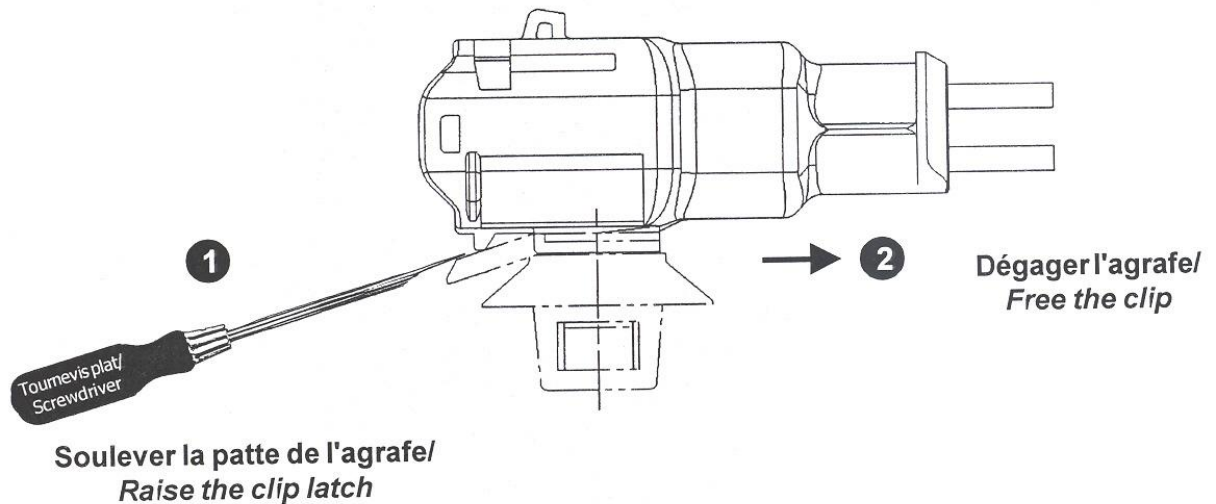
- ❖ The mounting fixture is attached on the male connector as specified in below picture. An audible “clik” informs that the operation is completed properly.



(\*): Refer to PSA STE "agrafe support composant faisceau" 96 153 261 99.

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- ❖ Mounting fixture insertion and extraction should be made in the housing axis, avoiding unneeded strain on the male connector guides. For instance, avoid fixing the male connector on a mounting fixture which is already attached on the vehicle. It could generate harness strain and make the operation difficult.
- ❖ If the mounting fixture extraction from connector is required:
  - ❶ Using a screwdriver, unlock slightly the locking latch of mounting fixture.
  - ❷ Free the mounting fixture.



Do not try to separate the two parts before unlocking the mounting fixture locking latch.

## 5. STORAGE CONDITIONS

To warrant an optimum use of our products, MOLEX recommends respecting the following instructions during the transformation process:

- ❖ The product must never be exposed to a greater temperature than the maximal temperature of product class temperature.
- ❖ Do not use cutting tool to open the package.
- ❖ After harness assembly, connectors do not need specific protection. However, the hardness maker must guarantee an appropriate protection regarding storage, transport and using conditions.
- ❖ Male and female connectors must be stored in their original packaging.
- ❖ During storage and handling, make sure to do not damage original packaging (falls, stacks of packages, pallets, excess humidity ...).
- ❖ Storage duration: EIGHTEEN MONTHS

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