

**“250” SERIES, DOUBLE LOCK CONNECTOR**

**1. PRODUCT FEATURES**

The 250 Series Double Lock Connector product is an improved version over the conventionally used 250 Series Faston\* Interlock Connector Product by incorporating a double lock plate.

- (1) Detects insufficient contact locking.
- (2) The 250 Series Double Lock Product is mountable to conventionally used 250 tab and receptacle contacts.
- (3) The 250 Series Double Lock Product is interchangeable with the 250 Series Faston\* Interlock product
- (4) The outer dimensions and configuration of the 250 Series Double Lock Product is common with the 250 Series Faston\* Interlock Product.

This instruction sheet (411-5560-1) describes mainly the mounting and replacing methods of the double lock plate.

The handling and assembly operation other than those relevant to the double lock plate is described in the customer manual 412-5111 (formerly CM-111J), “250 Series Housing Lance Connector”, and 412-5146 (formerly CM-146J), “250 Series, Faston\* Interlock Connector”. Refer to these customer manuals while using this instruction sheet.

Cross-Reference Listing of Interchangeable Product Part Numbers

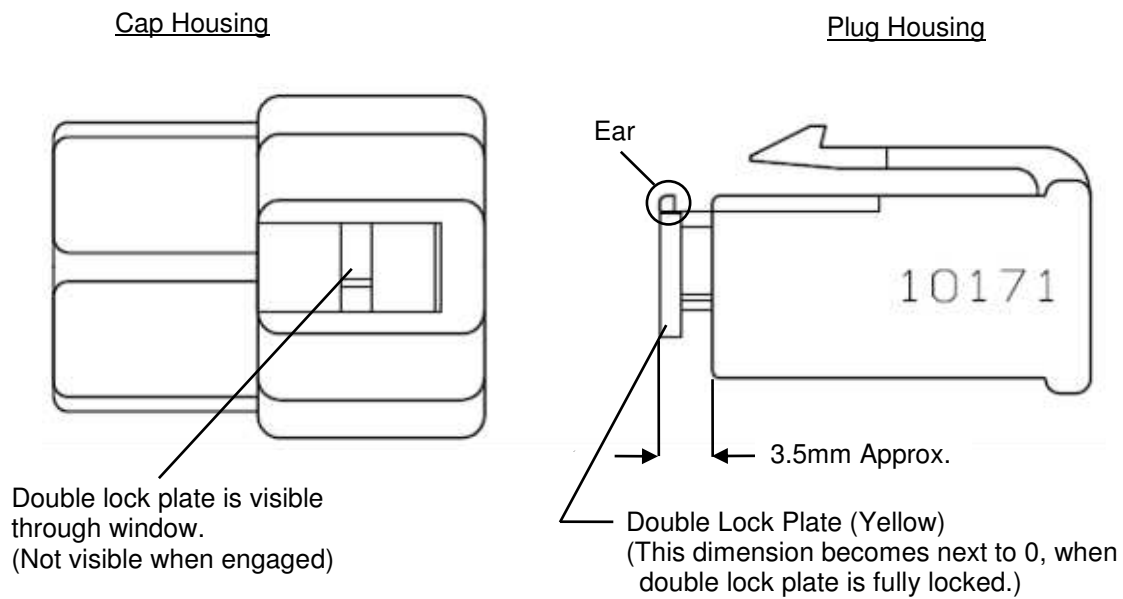
Product Description	Conventional Type Tyco PN	Double-Lock Type Tyco PN
4Pos. Cap	172133	178007
4Pos. Plug	172134	178004
6Pos. Cap	171897	178025
6Pos. Plug	171898	178022
1Pos. Plug	172128	176986
1Pos. Plug (Interlock Type)	172216	176989
3Pos. Cap (Interlock Type)	172219	176998
3Pos. Plug (Interlock Type)	172220	176995
4Pos. Cap (Interlock Type)	172221	178013
4Pos. Plug (Interlock Type)	172222	178010
5Pos. Cap (Interlock Type)	172223	178019
5Pos. Plug (Interlock Type)	172224	178016
7Pos. Plug (Interlock Type)	172226	178028
9Pos. Cap (Interlock Type)	172227	178034
9Pos. Plug (Interlock Type)	172228	178031
3Pos. Cap (Particular Type)	172384	178001
2Pos. Cap (Particular Type)	172383	176992
1Pos. Plug (Horn Type)	173271	178471

## 2. CONTACT LOADING IN HOUSING

When loading the contact into the connector housing, special care must be taken, because the primary locking device is initially set when the connector housing is first delivered.

Proceed per the following instructions :

- (1) Look into the window of the housing to confirm that the double lock plate (yellow) is in the primary set condition. Insert the contact straight into the connector cavity in the same a manner as you do for the conventional type connector.

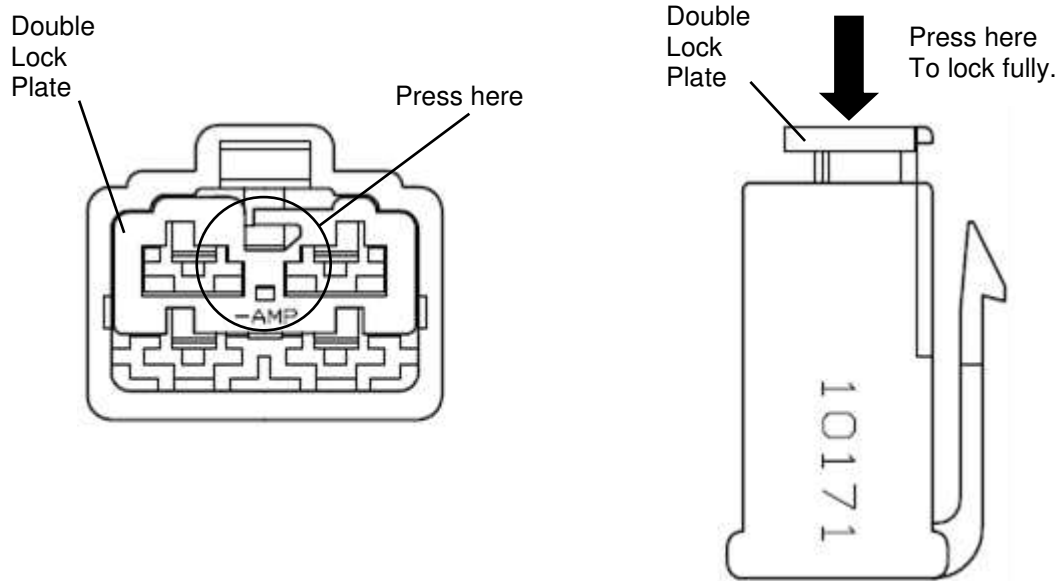


- (2) Note that the contact cannot be inserted into the housing cavity when the double lock plate is fully engaged. AVOID forcing the contact into the cavity, because it could deform the contact and/or damage the connector housing.
- (3) If the double lock plate is fully engaged and disengagement is required, Please review section 4 "Unlocking Double Lock Plate".
- (4) When the inserted contact is seated properly into the housing cavity, a clicking sound is heard which is made by the action of the lance. This clicking sound indicates proper seating of the double lock plate.

### 3. HOW TO SET FULL ENGAGEMENT OF DOUBLE LOCK PLATE

After all the contacts are correctly inserted into the connector cavities, the double lock plate is ready to be engaged per the following procedure :

- (1) Cap Housing : When the cap housing is ready for the double lock plate to be engaged, insert the mating plug housing into the cap housing in order to engage the cap housing's double lock plate.
- (2) Plug Housing : When the plug housing is ready for engagement of the double lock plate, place your fingers on the surface indicated and with a even and uniform manner fully depress the double lock plate.



- (3) When the double lock plate is fully locked, a small clicking sound is heard which indicates engagement is correct and completed.
- (4) If proper engagement of the double lock plate can not be made, the double lock plate may be unlatched to inspect that the contact is not seated properly into the connector cavity and then re-engage the double lock plate, per section 3 "How to Set Full Engagement of Double Lock Plate".
- (5) Normally, incorrect contact position within the connector cavity is a result of the contact being damaged during contact insertion or deform before insertion. Care must be taken with the contact before and during contact insertion into the connector cavity.

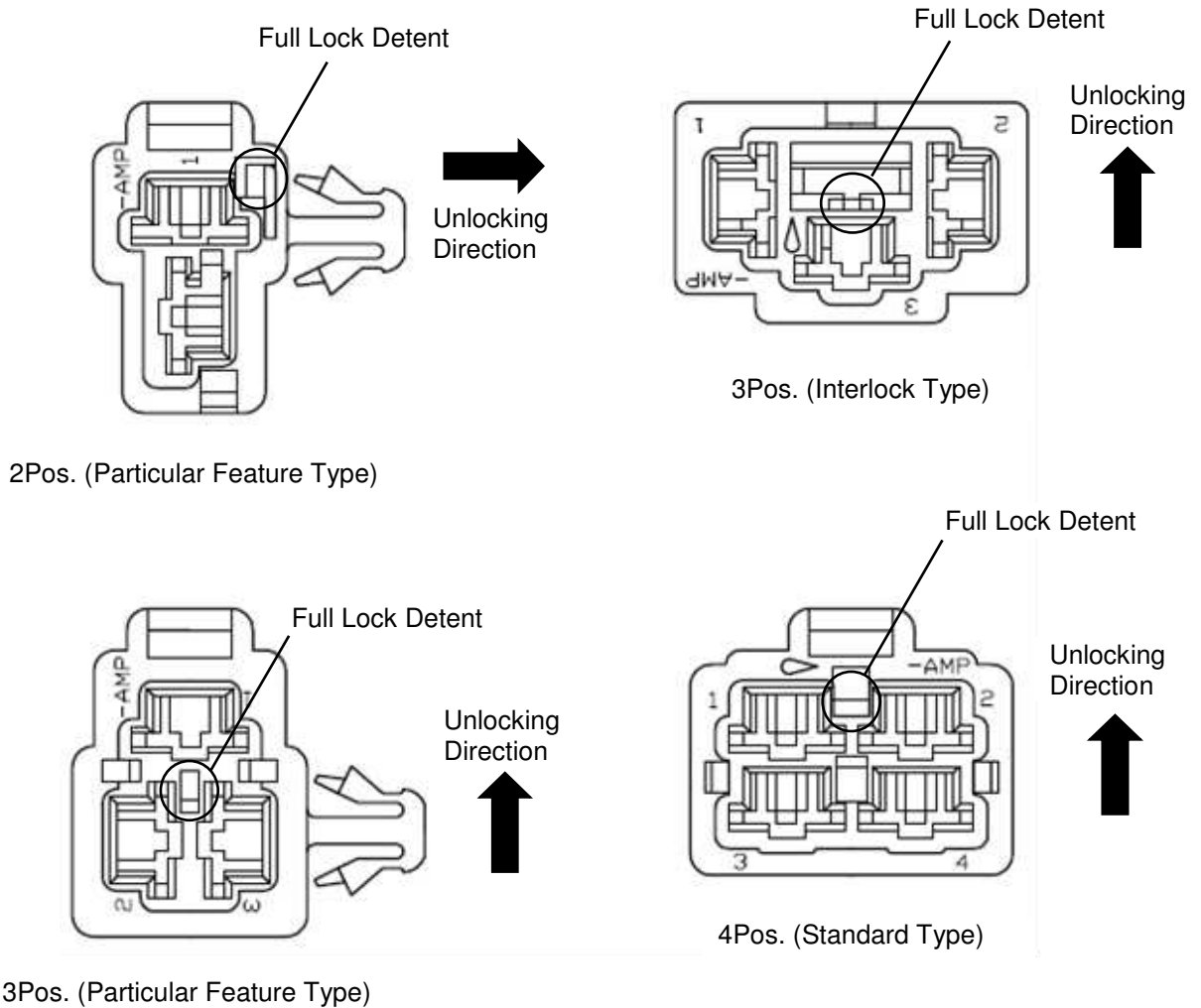
**4. UNLOCKING DOUBLE LOCK OLATE :**  
**(HOW TO RETURN DOUBLE LOCK PLATE TO PRIMARY SET POSITION)**

During the assembly operation, you may wish to remove the inserted contact after the double lock plate was fully engaged or the double lock plate was engaged before contacts were inserted. In such cases, you need to know how to return the double lock plate to its primary set condition.

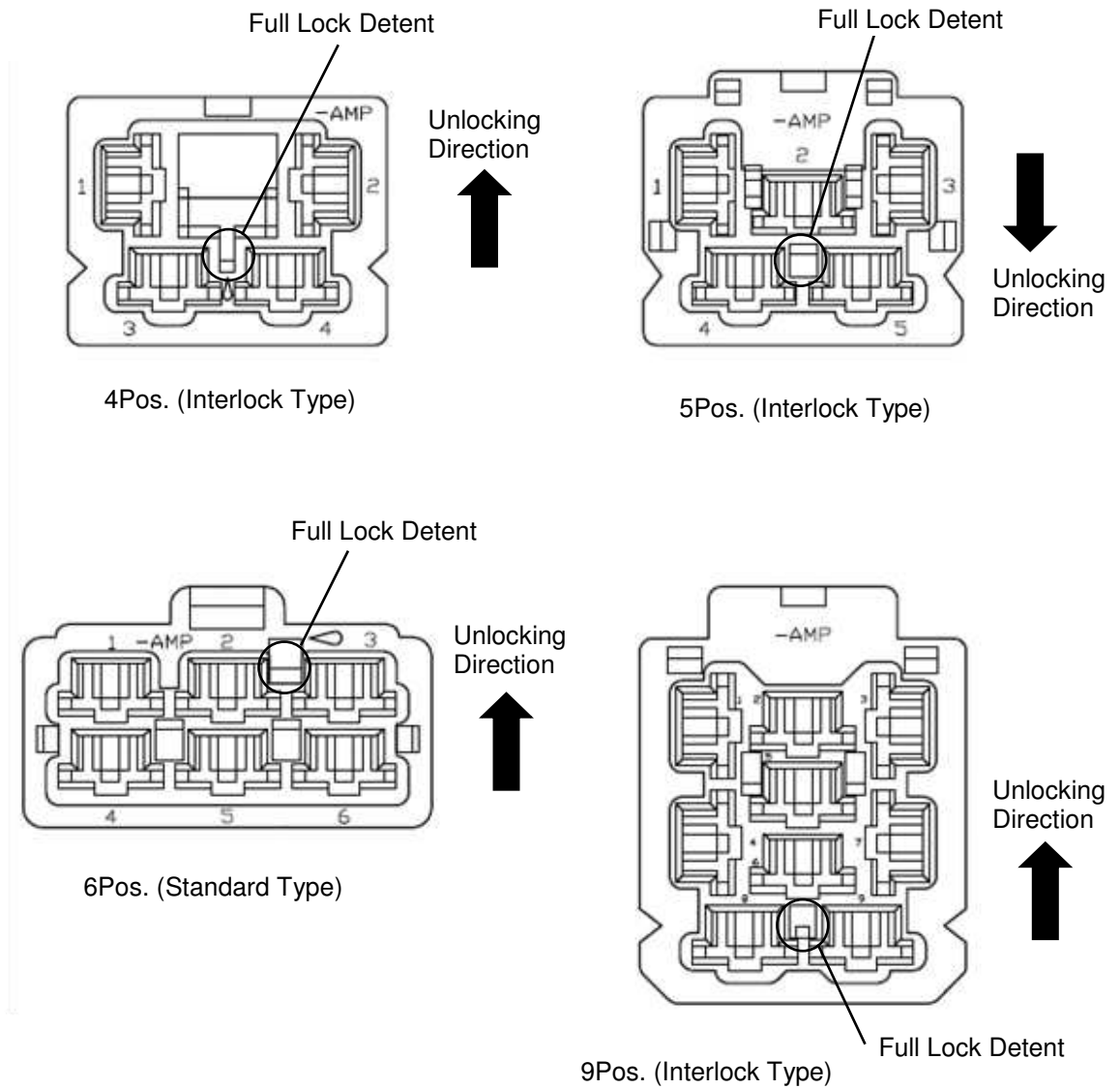
For contact removal, use Tyco Contact Extraction Tool, part number 724713-1 for tab and part number 724712-1 for receptacle contacts. However, you can use a watchmaker's screw driver of 1.0mm flat width if a Tyco Contact Extraction Tool is not available.

Removal from Cap Housing

Insert the tip end of the extraction tool or watchmaker's screw driver into the full locking hole on the back of connector housing (Wire leading out side), and unlatch the locking detent of the double lock plate in the directions shown in the sketches below. Unlatch the detent and pull up until it becomes disengaged in the primary set position.

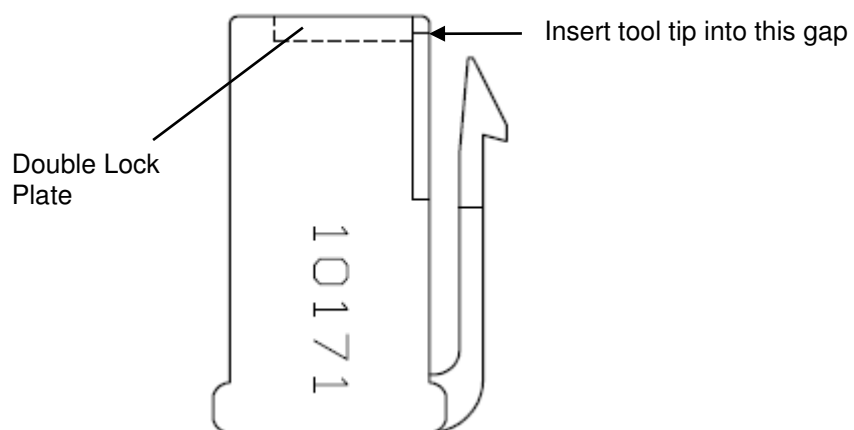


Cap Housing



Removal from Plug Housing

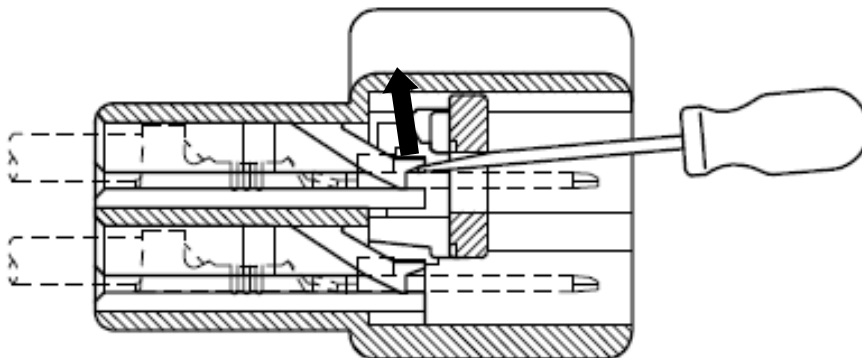
Insert the tip end of the extraction tool or watchmaker's screw driver into the gap between the ear of double lock plate and housing body and raise the double lock plate until reaches the primary set condition.



## 5. REMOVAL OF CONTACT FROM HOUSING

- (1) Set the double lock plate in the primary set condition, per the procedure described in section 4 "Unlocking Double Lock Plate".
- (2) Push back the wire lead of the contact you wish to remove from the housing to relax the engagement, and hold it in position.
- (3) Keeping the wire lead in the push-in position, insert the tip end of extraction tool or watchmaker's screw driver between the locking lance end and contact while raising the locking lance in the direction of the arrow as indicated below. AVOID levering up the lance on the contact. This will cause deformation or bending of the contact. Raise the tool gently, just enough to unlock the lance.
- (4) At this point, pull back the crimp wire lead and the contact can be removed.

Cap Housing :



Plug Housing :

