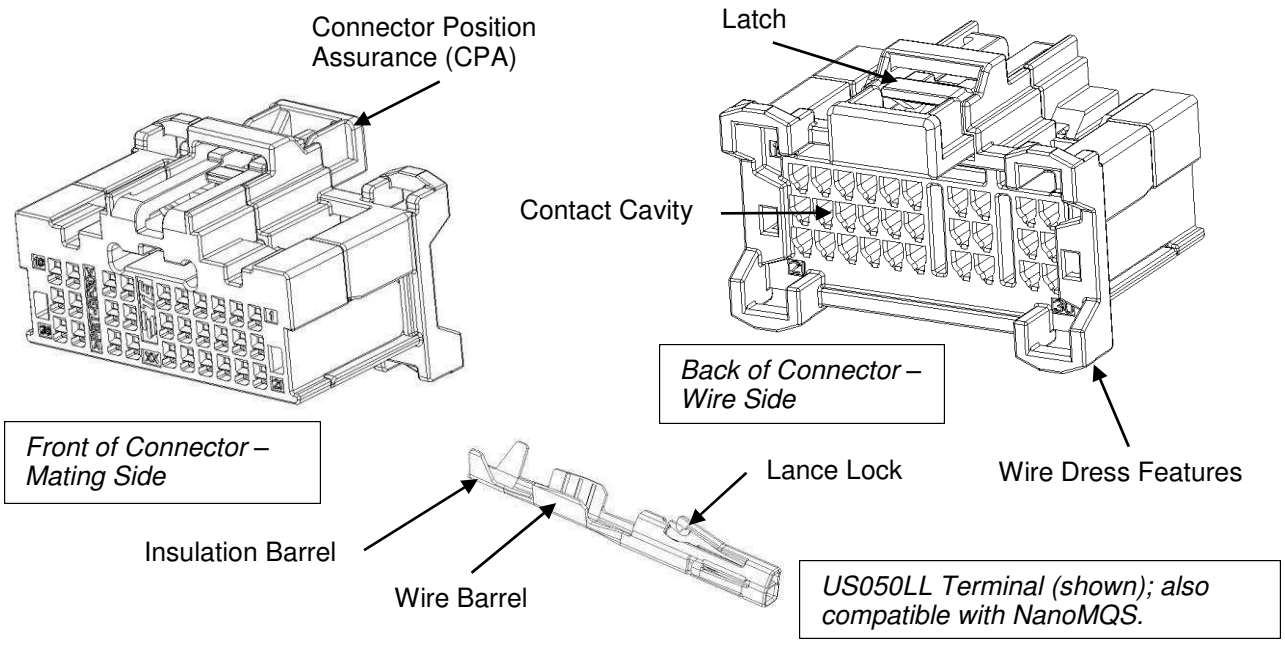


Figure 1

1. INTRODUCTION

This instruction sheet provides information on the assembly procedures for the NanoMQS/US050LL Unsealed Female Connector. Representative connector housing is shown in Figure 1. While this instruction sheet depicts only the 30P, it is applicable to other connector sizes within this family. Part numbers for this connector are 2309644-[ ]. Applicable female contact part numbers are [ ]-1703930-[ ] and 2272196-[ ].

NOTE

All dimensions on this document are in metric units. Figures and illustrations are for reference only and are not drawn to scale

Read these instructions carefully before attempting any assembly procedures. Also refer to Application Specification 114-32153 for termination requirements.

2. DESCRIPTION

Figure 1 provides the components required to make the assembly in this instruction sheet. Contact material is made from a copper alloy, pre-plated with tin or bright tin. The connector housings are made from glass content plastic materials.

3. ASSEMBLY PROCEDURES

3.1. Tooling

Refer to Application Specification 114-32153 for specific manual and semi-automatic termination tooling for the 0.50mm receptacle and blade contacts.

Refer to Instruction Sheet 408-32201 for Extraction tool information on removing contacts

3.2. Contact Assembly

The following procedures provide the details of the contact installation into the connector housing.

3.2.1. Terminate the contacts to the correct wire size according the information provided in the specific application specifications.

NOTE

The connector housings are shipped with the secondary locks in an open position, however, during shipping, the secondary locks may become closed. Make

sure the locks are in the OPEN position before any contacts can be inserted into those contact cavities. See Figure 2.

3.2.2. The terminated contact must be aligned with the contact cavity at the wire end of the connector and oriented as shown. The contact is oriented toward the secondary lock. See Figure 3. Terminals will only easily go into cavity in one orientation.

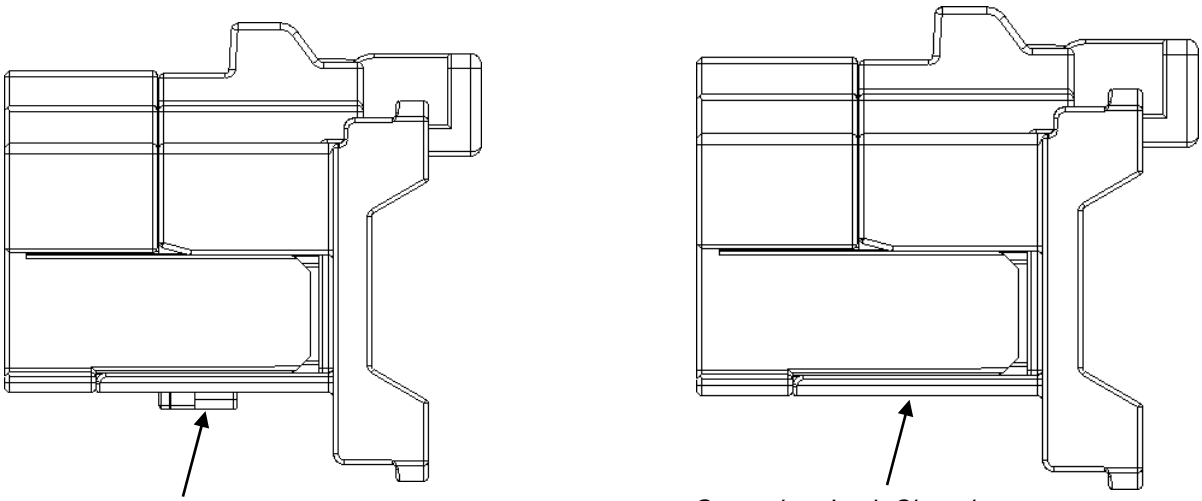


Figure 2

3.2.3. Each contact must be inserted into a contact cavity until the primary locking lance on the contact is fully seated. See Figure 4. (There should be an audible and tactile click which indicates that the contact has been fully inserted.) Pull back gently to ensure the contact has been locked in place.

3.2.4. The secondary lock must be pushed to the CLOSED position. The secondary lock is in the CLOSED position when it is flush with the bottom of connector housing. After all desired contact positions are loaded, if both sides of the secondary lock does not sit flush with the adjacent (bottom) surfaces of the connector body, it is likely that one or more contacts are not fully installed. The secondary lock is the detection for partially installed terminals. Re-open the secondary lock and gently push/pull on the wire of each contact to ensure they are fully inserted and the primary locking lance on each contact is fully seated in housing.

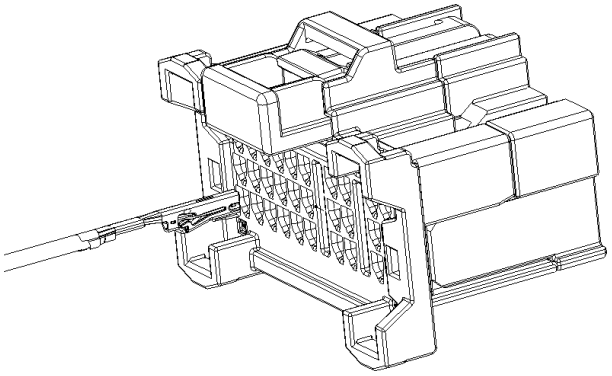


Figure 3

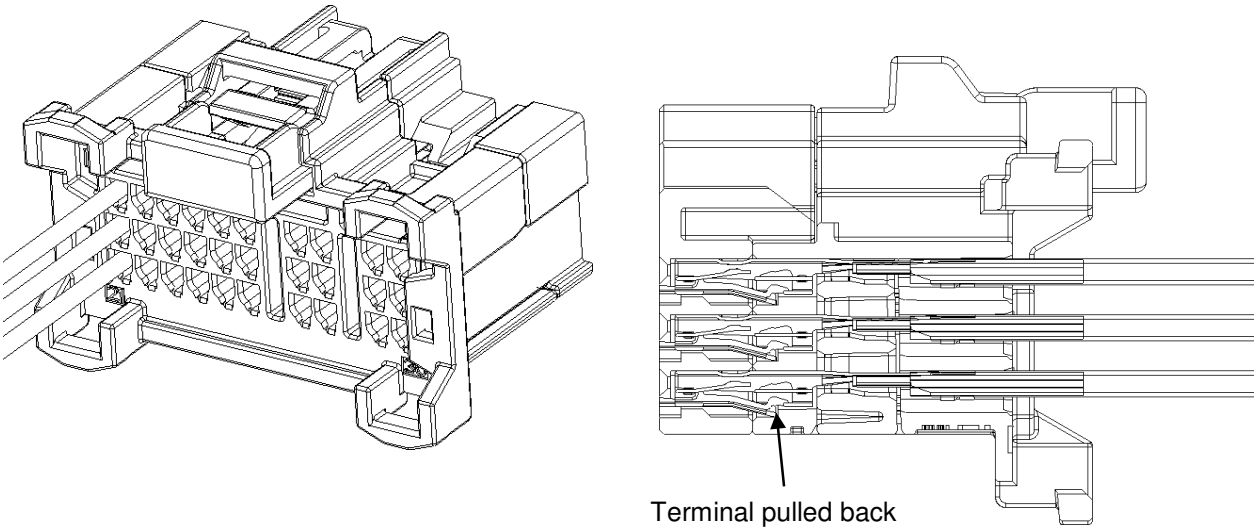


Figure 4

3.3. Circuit Testing

On the connector housing, test probe windows are located at each contact cavity on the mating face to accommodate test probes for circuit testing. Individual test probes, or equivalent, must have a diameter of 0.85±0.05 mm with a minimum pin length of 1.0 mm.

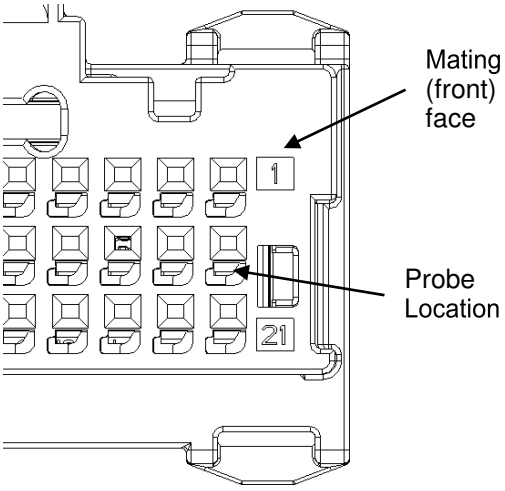


Figure 5

CAUTION

The test probe should not enter into the terminal mating area.

The force exerted by the probe should be no more than 10 N [2.25 lb] per contact cavity. Test probe location layout is shown in Figure 5.

CAUTION

Pointed or sharp instruments MUST NOT be used for probing; otherwise, damage to the socket connector could result. To avoid system failure, the wire insulation MUST NOT be pierced.

3.4. Servicing

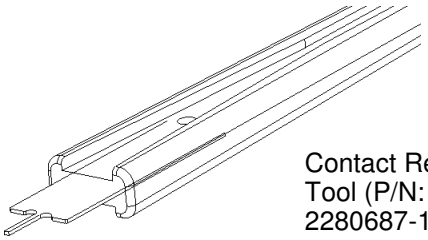
The connector must be removed from the header prior to service. To unmate the connector, disengage CPA by sliding back to the pre-set position. Press on the connector latch and remove the connector from the header.

CAUTION

To avoid damage to the connector, avoid the use of tools to remove the connector from the header or to apply leverage.

The secondary must be in the OPEN position before any contacts can be removed from the contact cavities. A small jewelers screwdriver with a maximum width of 3.5 mm must be used to pry open the latch.

The primary locking lance of the contact must be

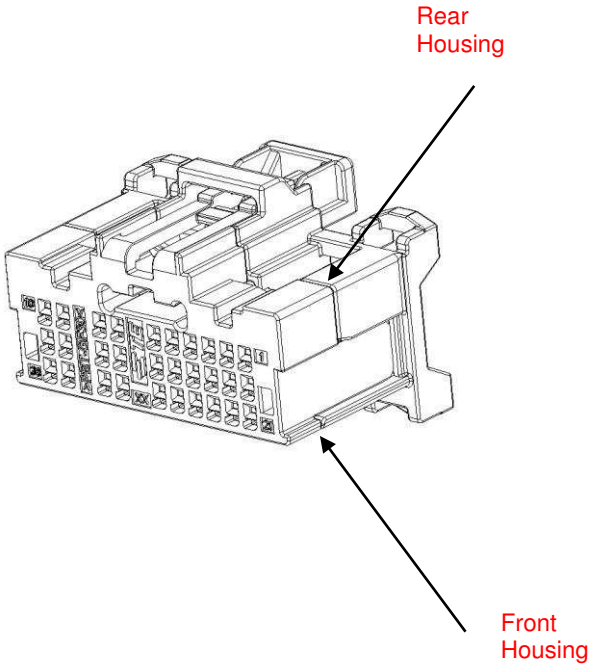


Contact Removal Tool (P/N: 2280687-1)

Figure 6

deflected before the contact can be removed from the connector. A suitable tool, (see Figure 6), must be inserted into the corresponding contact removal window to deflect the primary contact locking lance, and the wire must be gently pulled (while still using tool to deflect lance lock) to remove the contact from the connector.

1. Insert a suitable tool (as described in Section 3.4) into the tapered slot on either end of the secondary lock. See Figure 7.



For proper servicing of this connector, there is no need to separate the front and rear housings.
Doing so can result in permanent damage to the connector.

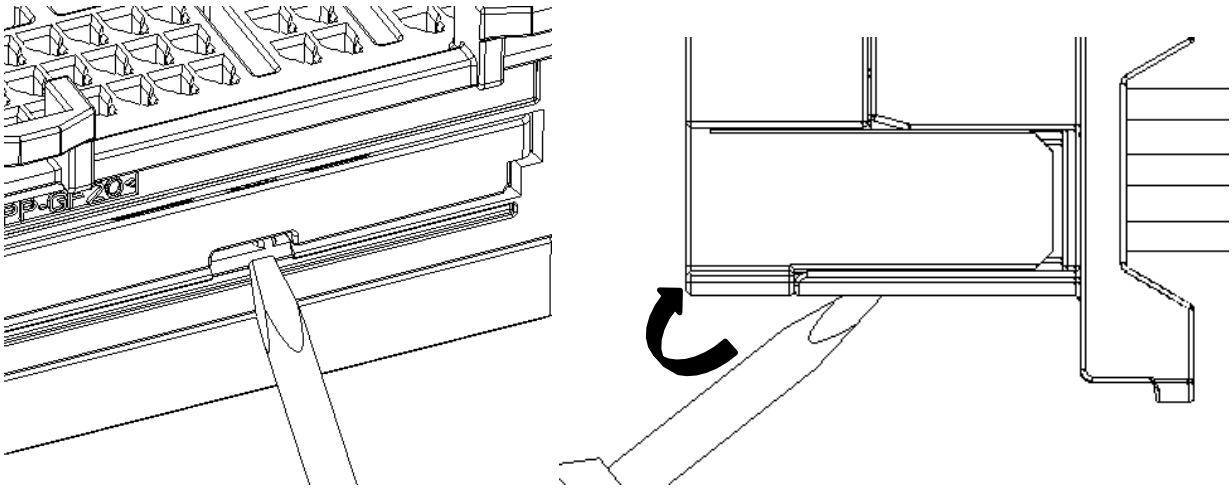


Figure 7

1. Gently rotate towards housing and lift the secondary lock until it opens (Figure 7).

2. Insert contact removal tool (as shown in Figure 6) into the selected exposed contact cavity, as shown in Figure 8. Follow instruction sheet 408-32201 for complete instructions on how to use the Extraction tool.

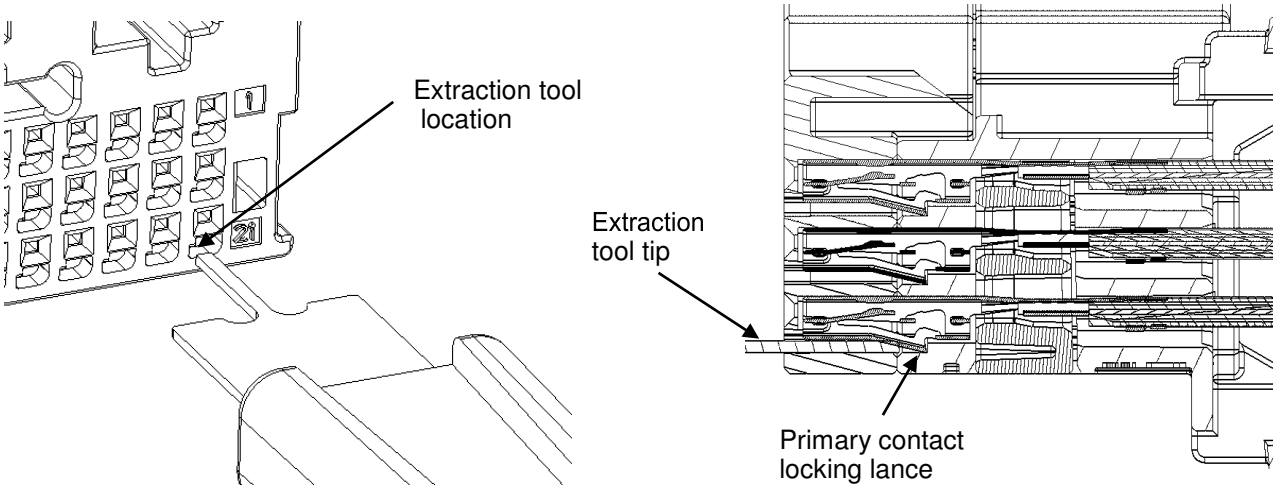


Figure 8