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## **REWORK FIELD SERVICE BULLETIN**

FSB Number	CHRAEFSB2016-34
Author	Tony Bryan
Date	12/05/2016
Subject	Moto Z, Moto Z Droid - Battery Swell
Model Affected	XT1650-01, XT1650-03, XT1650-05
Level Of Repairs	Level 2

### **Problem:**

Motorola is aware of a potential customer experience issue on the Moto Z product. A small number of Moto Z users have reported an issue in which the housing has separated due to an expansion of the battery. See Figure 1.0 below. Motorola has confirmed that this issue is manufacturing related and not due to how people use their phones, and does not pose a safety concern.



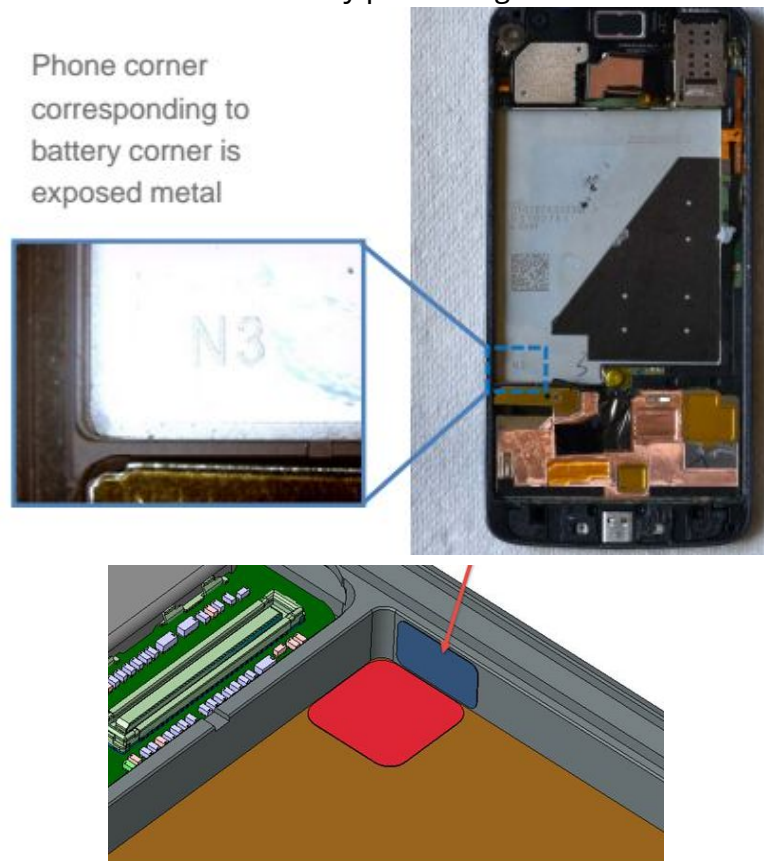
**Figure 1.0 - Swollen Battery Condition**

Engineering analysis determined that the Battery Pack insulator was peeled away from one corner leaving that corner of the battery pack exposed to possible damage during phone level assembly. Once the outer layer of the battery pack is damaged during initial assembly, interaction with exposed metal housing can cause chemical reaction within the pack, resulting in the swelling observed.

## **Solution:**

### **Short-Term:**

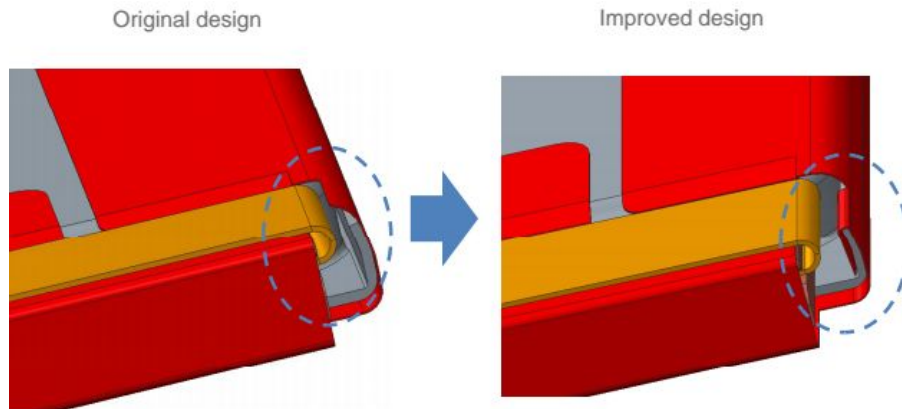
1. Motorola optimized the battery assembly method to align the battery pack along the right side of the pocket to avoid contact with housing along left side.
2. Motorola has implemented the placement of two pieces of kapton tape in the affected bottom left corner of the housing battery pocket to isolate the battery pack from the metal housing. See Figure 2.0 below for placement.
  - a. Tape #1 - 5.75mm x 5.75mm Kapton Tape (p/n: 11018063002) placed flat in bottom left corner of battery pocket aligned with corner edges.
  - b. Tape #2 = 5.0mm x 2.75mm Kapton Tape (p/n: 1105063003) placed along bottom left side of the battery pocket aligned with corner edge



**Figure 2.0 - Kapton Tape Placement**

### Long-Term:

The battery supplier will increase the size of the battery insulator to better protect the corner of the pack. See Figure 3.0 below for details. This will be a running change to the existing GV30 Battery Pack (p/n: SNN5972A).



**Figure 3.0 - Battery Insulator Change**

**NOTE:** The Short-Term Solution (Kapton Tape Placement), although not required, can be combined with the Long-Term Solution (Battery Insulator Change).

### **Field Service Action:**

**A.** When servicing any Moto Z customer returns which are confirmed to show the “Swollen Battery” condition (Reference Figure 1.0 above), then:

1. Process an exchange to swap out the customer’s device as engineering has determined devices exhibiting this condition should not be repaired by global service teams.

**B.** When servicing all other L2 or higher Moto Z customer returns, that require removal of the GV30 Battery Pack (p/n: SNN5972A) as part of the normal repair process, then:

1. If not already placed, place the two pieces of Kapton Tape in bottom left corner of housing battery pocket to isolate the battery pack from the metal housing. Reference Figure 2.0 above for details on placement.
  - a. Tape #1 - 5.75mm x 5.75mm Kapton Tape (p/n: 11018063002) placed flat in bottom left corner of battery pocket aligned with corner edges.
  - b. Tape #2 = 5.0mm x 2.75mm Kapton Tape (p/n: 1105063003) placed along bottom left side of the battery pocket aligned with corner edge
2. Place GV30 Battery Pack (p/n: SNN5972A) making sure to align the battery pack along the right side of the pocket and avoid contact with housing along left side.
3. Following the Service Manual document, complete reassembly.
4. Per normal service procedures, completely retest to ensure proper repair.

## **Service Inventory:**

Please stock inventory of parts below to support this rework:

- 11018063002 - 5.75mmx5.75mm Kapton Tape (NEW ADDED PART)
- 11018063003 - 5.0mmx2.75mm Kapton Tape (NEW ADDED PART)
- SNN5972A - GV30 Battery Pack

## **Call Center Action:**

When responding to Moto Z consumers reporting housing separation due to battery swell, then:

1. Confirm to consumers that this issue is covered under warranty.
2. Inform consumer:
  - a. they should not attempt to squeeze the unit back together, or otherwise apply pressure to swollen battery;
  - b. they should not attempt to further disassembly or repair the device themselves.
3. Tell the consumer to stop using the device, and offer them an advance exchange, or tell them to return the product to their point of purchase.

## **CUSTOMER SERVICE Q&A**

Q: Has this affected a lot of customers?

A: I don't have that information. However, this situation is covered under warranty.

Q: Have you personally had other cases like this?

A: I can't discuss other cases or customer calls. However, this situation is covered under warranty.

Q: Is a swollen battery dangerous?

A: Swollen batteries are not typically a safety risk. However, the battery performance will generally degrade.

Q: If there isn't a safety issue, why shouldn't consumers attempt to open the housing or repair the device?

A: While the swelling does not cause a safety issue, any time a consumer disassembles a phone or attempts to service it themselves there is a risk of causing further physical damage to the battery. Lithium batteries should be

handled with due caution even when in fine conditions.

**Service Entry Code:**

**Global M-Claims Codes:**

Customer Complaint Code: C0018 - Housing

Problem Found Code: P0048 - Internal Battery Fail

Repair Code(s):

R0013 - REPL LVL 2 Part CSB

R0019 - REPL PCB CSB

R0037 - REPL Phone - ENG/OPS REQ

**Note:**

Only apply the designated Service Entry Codes, listed in this bulletin, if the unit fails a test or has a customer complaint that matches the issue described in the bulletin

If the unit fails a test or has a customer complaint that does not match the issue described in the bulletin, the Service Entry Codes used should accurately reflect the true problem found

If the unit passes all tests and inspections and does not have a related customer complaint, the Service Entry Code used should be NFF