

FIELD SERVICE BULLETIN

FSB Number: LVCCFSB2004-120
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Date: July 16, 2004
Total No. of Pages: 4
Subject: **GSM Triplets - Flip Detect Switch**
Model Affected: GSM V300, V303, V400, V500, V525, V600
Level of Repair: 2

Problem

Service is aware of an issue identified during NPI Analysis on all GSM Triplets models. Some units, returned with a customer complaint of “Corrupt/Error CLI Display”, were found to have intermittent operation of the Flip Detect Switch. As a result of the flip switch not activating properly, the units would show the Carrier Logo upside down, on the CLI Display with the flip closed, rather than showing the Time/Status. In some cases, slight pressure applied to the top of the flip would allow the flip switch to activate and the CLI Display to return to normal. The root cause of these failures was confirmed to be a result of either foreign material or corrosion collecting on the PCB or Keypad, which would interfere with the gold puck of the keypad making a good electrical connection with the flip switch contacts (S550) on the PCB.

Foreign Material: The main source of the foreign material was the side-key flex, where some excess material would extend over the cutout for the flip switch contacts (S550). See diagram 1 below.

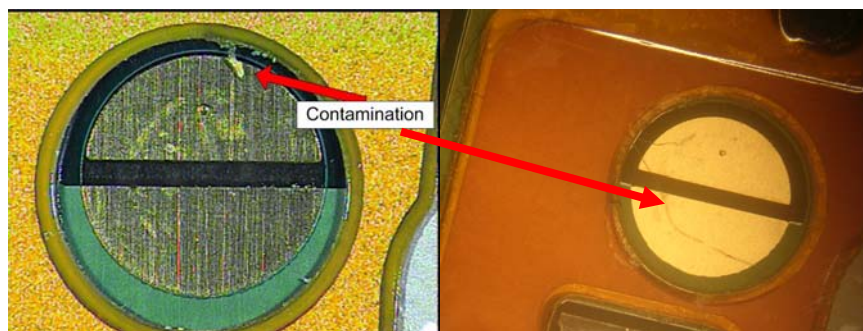


Diagram 1.0 - Contamination from Side-Key Flex

Corrosion: The main source of the corrosion was isolated to the 3888844N01 keypad supplied by Sinco. The gold pucks sourced by Sinco were sub-standard in quality and had a high susceptibility to corrosion when exposed to environmental conditions in the field. See diagram 2 below. In addition, the Sinco keypads had an additional air port which directed air inward towards the contact increasing the opportunity for field failure. The 3888844N01 keypad is used on V303, V400, V500 and V525.



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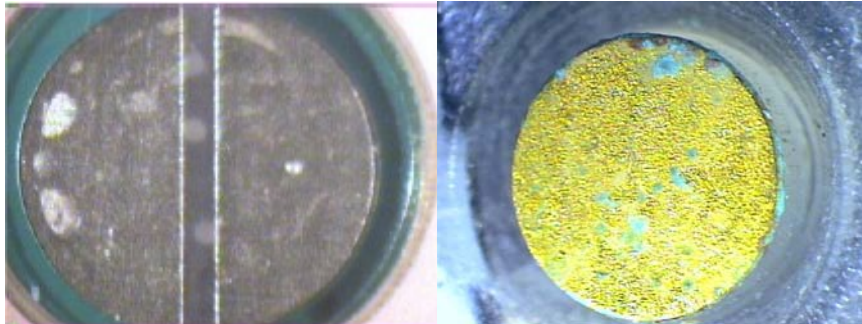


Diagram 2.0 - Corrosion caused by environments (3888844N01 Sinco Keypad)

Solution

Foreign Material: Supplier Process Improvements including the use of side-key flex with a non-fiber based peelable paper. Factory Process Improvements including increased inspection under magnification for foreign material.

Corrosion: The 3888844N01 Sinco keypad was redesigned to remove the extra air vent, which was leading to a higher susceptibility to foreign material, completed 12/31/2003. Sinco began sourcing higher quality gold pucks from Shin-Etsu on February 22, 2004. Sinco obtained and crossed over to new supplier, with improved quality, for the gold pucks as of March 31, 2004. Motorola changed the specification for the keypad where an aggressive salt spray requirement was added.

Other: Product Development is evaluating a design change to the artwork of the PCB contact and/or the mechanical design of the flip for further improvement of flip switch performance.

Service Action

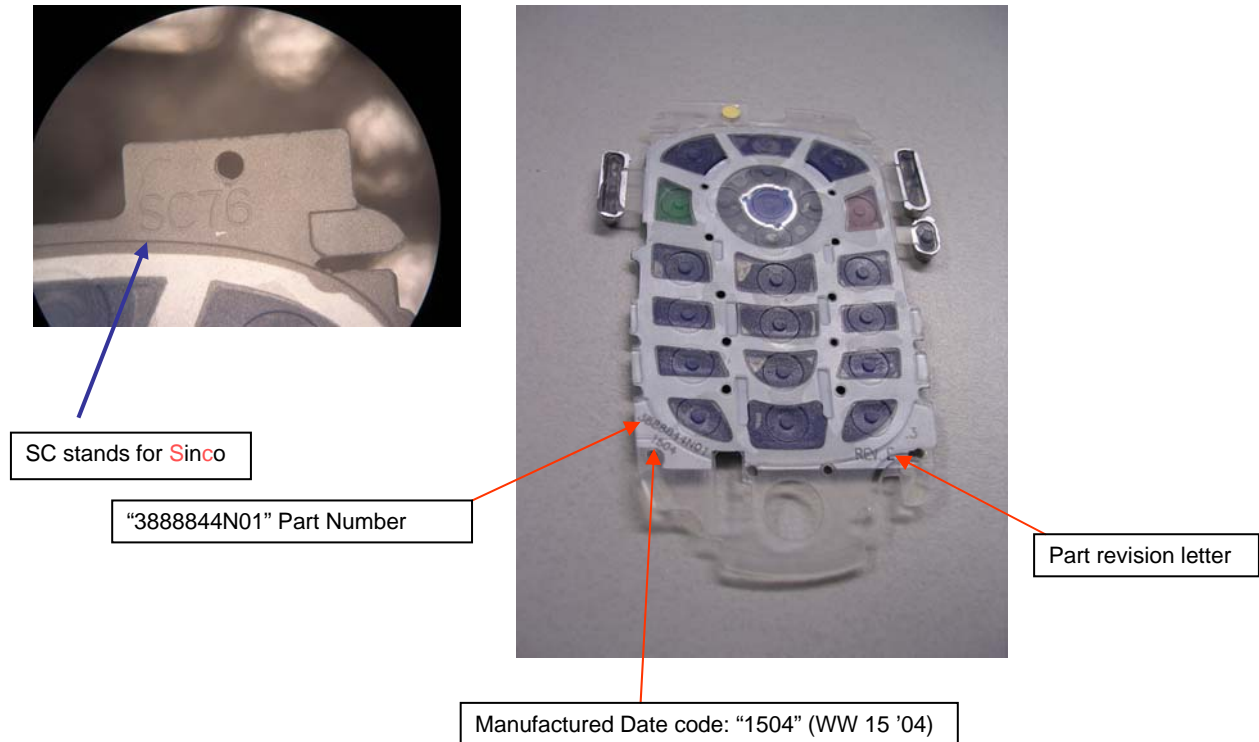
Customer Returns:

When servicing any GSM Triplet customer returns, with customer complaints of "Corrupt/Error CLI Display", then:

1. Test and evaluate the unit for proper performance of the Flip Switch
 - a. If Flip Switch operates normally, then follow normal troubleshooting procedures to determine the fault per the customer complaint.
2. Dis-Assemble the unit and inspect the PCB contact and Keypad gold puck for foreign material or corrosion, which may be interfering with the gold puck of the keypad making a good electrical connection with the flip switch contacts (S550) on the PCB.
3. Remove any foreign material found from PCB or keypad. IPA (Isopropyl Alcohol) can be used to clean any remaining adhesive residue on the gold contacts.
4. Replace keypad or side-key flex if necessary to repair unit.

Note: When servicing any GSM Triplet customer return, Service should inspect and replace **all** 3888844N01 Sinco keypads, built prior to WW12 2004, to prevent future reliability issues due to corrosion.

V500 Keypad from SINCO



Service Inventory:

Service Inventories of the 3888844N01 keypads should be purged to remove Sinco keypads, built prior to WW12 2004.

Call Center Action

When responding to GSM Triplets customer problem product inquires related to "Corrupt/Error CLI Display", please use the information in this FSB to determine if customer is experiencing this issue and, if related, direct customer to have their phone serviced per this FSB.



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Service Entry Code

Please ensure that repairs of this type are logged on the Service database as follows:

Global M-Claims Codes:

Customer Complaint Code: DIS03 (Display Secondary - Corrupt/Error Display)

Problem Found Code: DIS03 (Display Secondary - Corrupt/Error Display)

REF Designator Code: S (Switch)

Repair Code: RAS02 (Reassemble - Clean Contact), RMP06 (Replace Mechanical Part - Oxidized)

Asia Codes:

Fault Code: 36 (Display - Corrupt/Error Display)

Repair Code: 07 (Mechanical Repair), 04 (Replace part)

PRC E-service Entry Codes:

Fault Code: 3103 (Display Secondary- Corrupt/Error Display)

Repair Code: 1306 (Replace Mechanical Part - Oxidized)