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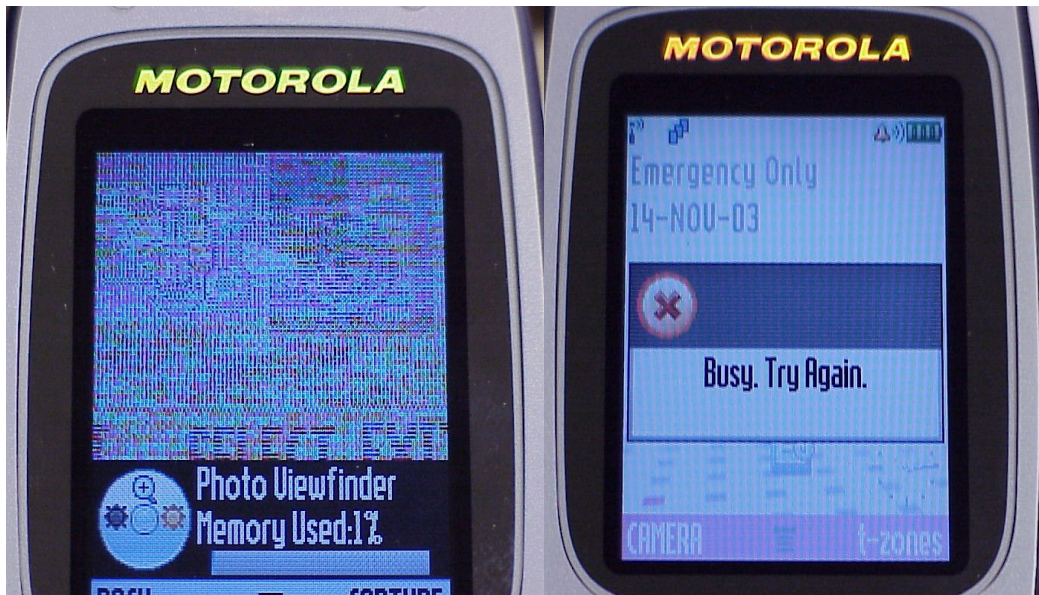
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FIELD SERVICE BULLETIN

FSB Number: LVCCFSB2004-6
Author: Tony Bryan
Date: January 20th, 2004
Total No. of Pages: 4
Subject: **GSM Triplets – Integrated Camera Module**
Model Affected: V300, V400, V500, V525
Level of Repair: 3

Problem

Service is aware of an issue identified during the 1st 200 NPI Analysis on V300, V400 and V500/V525. Some units, returned with a customer complaint of “Camera–No Operation” or “Error Display-Shows Busy”, were found to have cracked solder joints on the integrated camera module between the imager and flex. The images below show examples of the failure symptoms, visible to the user when attempting to activate the camera, that are a result of these broken solder connections.

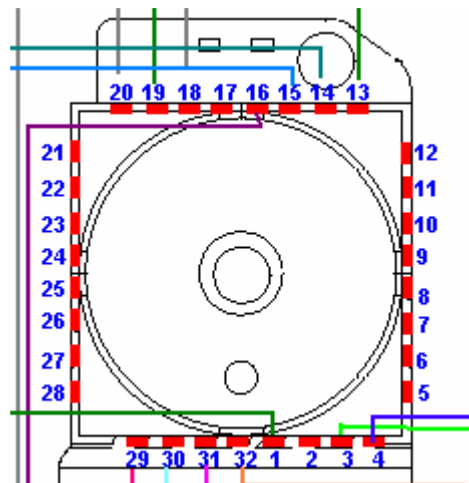


This issue affects the 7289123N01, N02, N06, and N07 Phillips Camera Modules that were built with the original Phillips 8489420N02 Flex.

Approximate Exposure:

Field Exposure of 783K Units shipped with affected Phillips Camera Modules.

The root cause of the defect is stress to the solder joints of the imager, at both the bend and alignments sides, during the assembly of the camera module into the flip. Pins 13, 14, and 15 are the most susceptible to opens. See images below.

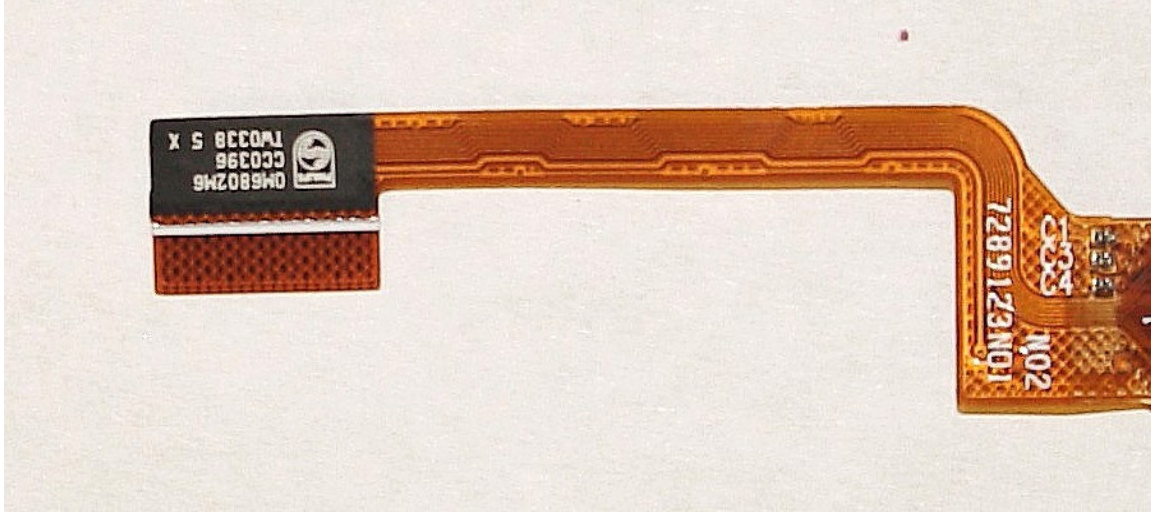


Solution

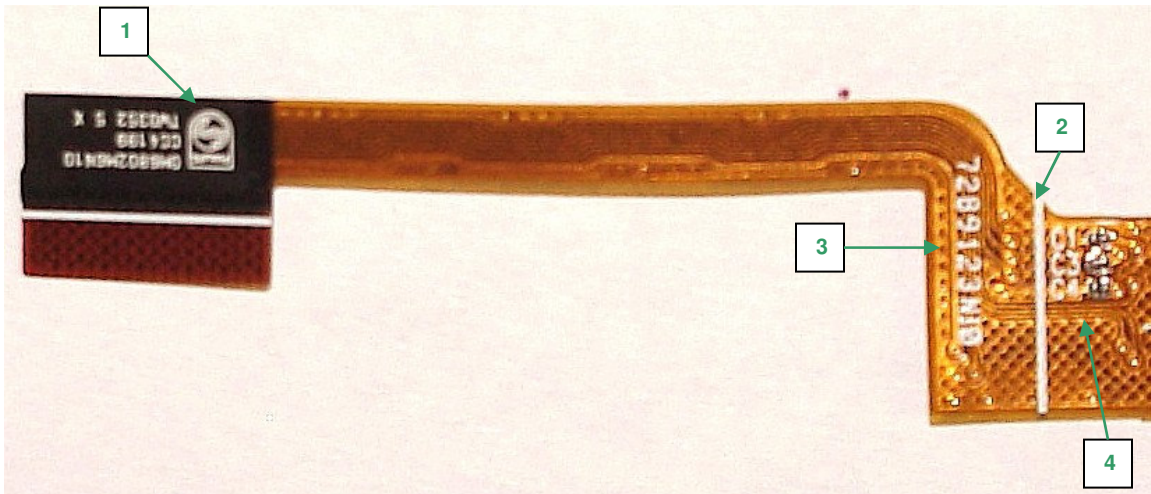
There have been several corrective actions taken by both the supplier and in the factory to increase the robustness of the camera and reduce the amount of stress applied to the camera during the assembly process.

1. Phillips has changed the design of the flex from the original 8489420N02 Part to a new 8489420N03 Part with some of the surface layer traces re-routed to the bottom layer to increase the overall flexibility of the flex and reduce the amount of stress applied to the solder connections during the assembly process.
2. UV Glue will be added, by the factory, to the alignment side of the imager on all remaining Phillips Cameras built with the original N02 Flex. The UV Glue will add additional support to the affected solder connections.
3. Phillips will optimize the plating and hot bar processes to improve the overall robustness of their design.
4. Steps will be taken to optimize the assembly process of the Camera Module in the Flip Assembly to limit stress put on the imager's solder connections.

PHILLIPS 8489420N02 FLEX



PHILLIPS 8489420N03 FLEX



Noted Identification Markings:

1. Phillips Marking at connector
2. White line above imager part number and below components.
3. Part number printed on the flex will read 7289123N10 or 8489420N03
4. Smaller number of traces visible on surface layer

Field Service Action

Customer Returns:

When servicing GSM Triplet customer returns with a customer complaint of “Camera–No Operation” or “Error Display-Shows Busy“, then:

1. Perform testing to confirm the customer’s complaint is related to the issue described above.
 - a. If the unit is not related to this issue, then proceed with normal troubleshooting techniques as per the customer complaint.
2. Disassemble the unit and flip assembly to replace the camera module, with a Phillips camera built with the improved 8489420N03 flex. See Images Above.

Note: Please follow assembly procedures outlined in the Service Manual carefully and avoid over-stressing the new camera module during the assembly process.

- a. If unit is not repaired by replacing the camera module, then proceed with normal troubleshooting techniques as per the customer complaint.
3. Fully retest the phone and camera to ensure unit was successfully repaired.

Service Inventory:

Quarantine all existing stock of 7289123N01, N02, N06, and N07 Phillips Camera Modules. Affected modules should be sorted, using the images shown above, to identify modules built with the original Phillips 8489420N02 Flex. All modules confirmed to have been built with the Phillips 8489420N02 Flex should be removed from inventory.

Service Entry Codes

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

Global M-Claims Codes

Customer Complaint: ACC09 (Accessory – Camera, No Operation)

Problem Found: ACC07 (Accessory – Camera, No Operation)

Reference Designator: Camera

Repair: RCA01 (Replace Camera, No Operation)

Asia Service Entry Codes

Fault Code: 36 (Camera Failure)

Repair Code: 04 (Part Replaced)