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FIELD SERVICE BULLETIN

FSB Number: LVCCFSB2004-50 (Rev A)
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Subject: **GSM Triplets - Neptune IC (Power Down in Sleep Mode)**
Model Affected: GSM V300, V303, V400, V500, V525, V600
Level of Repair: 3

Problem

Service is aware of an issue, identified in the 1st 200 NPI Analysis of the all GSM Triplets models, with the Neptune LTE IC. A large percentage of the customer returns, returned with complaints of "Power Down in Standby" and "Phone Powers Down" were found to display the following symptoms. The unit will power down upon entering Sleep Mode when powered on using a battery. Analysis revealed the failure was caused by a faulty Neptune LTE IC where the Neptune's PLL circuitry- the divider circuit in the PLL circuit is getting corrupted when the part is in sleep mode. During normal operation the Neptune will wakeup periodically as part of the operation of the phone but it is during this wakeup mode the failure occurs-the Neptune goes to deep sleep mode and then completely shuts down.

Solution

The solution is a software patch to address a hardware problem. The problem has been corrected in software versions TRIPLETS_G_0B.09.38R and all later versions.

Field Service Action

Customer Returns:

The following procedure **must** be preformed on all GSM Triplets phones returned through service, which has software older than Triplets_G_0B.09.38R.

1. Screen unit using either the Automated or Manual Screening procedures detailed in this FSB to determine if it is affected by this issue.
2. If the unit fails the screening procedure(s) and is related to this issue then, per the normal Service Procedure, reflash the unit with the latest approved software for your region equal or later than Triplets_G_0B.09.38R.
    a. If the unit passes the screening procedure(s) and is not related to this issue, then follow the normal troubleshooting techniques per the customer complaint.

3. Re-Run the unit through the screening procedure(s) to confirm unit was successfully repaired and no longer displays the failure.
    a. If unit is not fixed by Re-Flash/Re-Flex, then proceed with normal troubleshooting techniques as per the customer complaint.

Note: Pending the approval of software version TRIPLETS_G_0B.09.38R by your region, units that are confirmed to be this issue should be processed as swaps. The failed unit can be held and re-flashed once this software version is approved by your region. Replacement Units **<u>must</u>** pass the screening procedure(s).

Service Inventory:
Screen all existing inventory using either the Automated or Manual Screening procedures detailed in this FSB to determine if it is affected by this issue.
Re-flash / Reflex all affected GSM Triplets units from inventory to software versions TRIPLETS_G_0B.09.38R or latest approved version for region.

<u>Call Center Action:</u>
If the customer calls with any Power Down complaints, instruct them to perform Step 1 under Manual Screening Procedure detailed in this FSB to determine if the unit is affected by this issue. If complaint is confirmed to be related to this issue, then have the customer return the unit to an authorized service center for SW upgrade.

<u>Service Entry Code</u>
Please ensure that repairs of this type are logged on the Service database as follows:
Global M-Claims Codes:
Customer Complaint: TON03-Auto Power Down in Standby
Problem Found: TON04-Auto Power Down in Standby
Reference Designator: U-Integrated Circuit and Module
Repair: SWU07-SW Upgrade/ Reflash-Corrupt

ASIA Service Entry Code:
Fault Code: 17-Auto Power Off
Repair Code: 03-Reprogram/Realign

PRC E-service Entry Codes:
Fault Code: 2003-Auto Power Down in Standby
Repair Code: 2107-SW Upgrade/ Reflash-Corrupt

Automated Screening Procedure:

- **Screening to be performed on a PC with the latest approved version of Motorola PST**
- **Installing this test screen will temporally disable the normal flash operation of the PST Program**
- **Removal of this test screen will enable the normal flash operation of the PST Program. See Note 2 below.**

1. Browse to the folder location "C:\Program Files\Motorola\PST" and locate the file "pst_flash.ini".
2. Rename the "pst_flash.ini" file to "pst_flash_old.ini"
3. Download automated test file from the following link and save it to a working directory:
   <div align="center">Neptune Power-Down Automated Screen</div>
4. Extract the two files contained in the .zip file (CLOCK_TEST.shx and pst_flash.ini) to the folder location "C:\Program Files\Motorola\PST".
5. Open the PST Flash application.
6. Connect the phone to the PST Flash application using USB Cable (SKN6311B).
7. Click on "Browse" to locate and load automated test file "CLOCK_TEST.shx" from the folder location "C:\Program Files\Motorola\PST"

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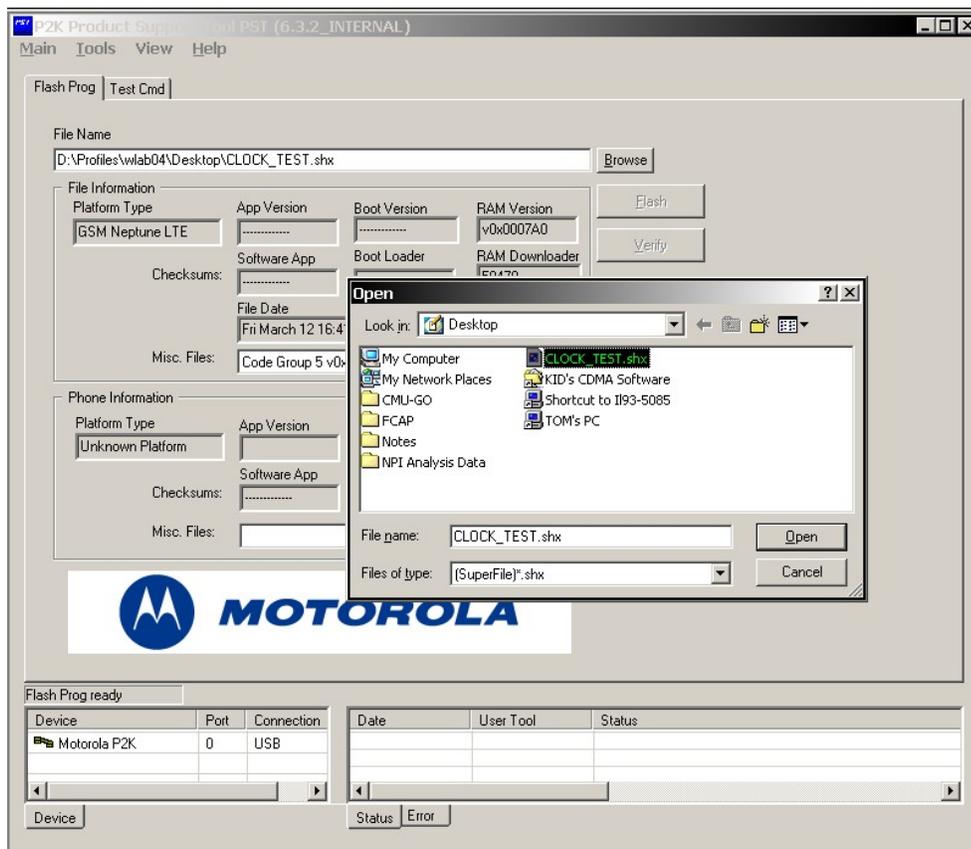
8. Double Click on the "Motorola P2K" icon shown in the Device section of the window to put the unit into flash mode.
9. Click on "Flash" to start the test sequence. Test averages 20 seconds to complete.
10. When test is completed, the phone's display will indicate either PASS or FAIL. See examples below.

PASS

FAIL

11. Repeat Steps 6 thru 10 to screen the next unit.

Note 1: This test may not be compatible with some older software versions due to the ROM boot loader. If this is the case you will get the following Error Message when attempting to run the Automated Screening Procedure.
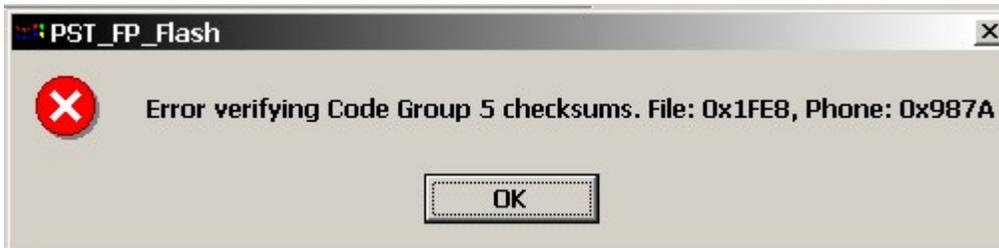
If the Automated Screen is not compatible due to boot loader or test result is inconclusive, then perform the Manual Screening Procedure detailed below

Note 2: **Removal of the Test Screen to enable the normal flash operation of the PST Program**
1. Delete the file "pst_flash.ini"
2. Rename the "pst_flash_old.ini" file to "pst_flash.ini" from the folder location "C:\Program
    * "CLOCK_TEST.shx" file can also be removed from the directory, if desired, but will not affect normal use of the PST Program.

Manual Screening Procedure:

1. Power up the unit with **battery** and wait until display's backlights time out. **Do not attach a charger or USB cable because when using these, the unit will not fail.** After the backlights time out the unit will freeze but CLI will still be on. After a few seconds the CLI will also turn off and unit will completely shut down.

2. If the unit displays the failure mode described in Step 1, then the unit has FAILED the screen.
    a. If the unit does not display the failure mode described in Step 1, then the unit has PASSED the screen.
3. Repeat Steps 1 thru 2 to screen the next unit.