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Consumer Solutions & Support
US Competency Center
600 North US Highway 45
Libertyville, Illinois 60048
Website: gs.mot.com

FIELD SERVICE BULLETIN

FSB Number: LVCCFSB2005-167
Author: Max Dekirmandjian
Date: May 23, 2005
Total No. of Pages: 3
Subject: E398 MFT Distortion
Model Affected: E398 GSM
Level of Repair: 2

Problem

Analysis of audio-related failures on the 1st 200 E398 NPI returns has revealed audio distortion initiating from the Multi Functional Transducer (MFT) manufactured by Citizen Electronics. The distortion can occur at the start-up tone, when listening to music, playing ring tones, or using the speakerphone. It has been determined that MFT's with distorted audio are a result of any one of the following:

1) Overheated voice coil
2) Voice coil winding deformed/slanted
3) Voice coil winding split
4) Insufficient bonding of diaphragm

Visual evidences of brittle fracture surface of torn bonder for split coil windings and inadequate bonder fillet between sliding windings in deformed or slanted stacks of coil windings suggest grossly under-cured bonder as the root cause.

Solution

A supplier Product Change Notice (PCN) was issued to Citizen Electronics on 12/2/2004. The PCN specifies two modifications to the MFT:

1) Material and process changes used during the manufacture of the MFT voice coil-specifically a more adequately and consistently cured bonder
2) Increasing the magnet plating of the voice coil assembly

These changes were implemented starting at date code 0520. These MFT's are marked with a black dot to identify that they are date code 0520 or later.

Service Action

Customer Returns:

Perform the following service procedure on all E398 returns with a Month of Manufacture May 2005 or earlier that have complaints of:

- No/Distorted Alert/Ring Tone or
- No/Distorted Speakerphone:

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Service Procedure

1) Disassemble the unit to obtain access to the Chassis Speaker Assembly. Refer to the Level 1 & 2 Service Manual for proper disassembly instructions.
2) Verify that each MFT is date code 0520 or later by observing a black dot on each MFT. The photo below shows the location of the black dot.

Note: Ensure that **both** MFT's on the Chassis Speaker Assembly have a black dot.

3) If no black dot is present on either MFT, replace the Chassis Speaker Assembly with a new assembly that contains MFT's date code 0520 or later.
4) If both the MFT's in the returned unit are date code 0520 or later, proceed to troubleshoot the unit per normal service procedures.

Service Inventory:
N/A

Call Center Action

Instruct customer to return unit for service per this FSB on complaints related to No/Distorted Alert/Ring Tone or Speakerphone.

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Service Entry Codes

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

Global Service Codes-

Customer Complaint:	**ALT03**	**Alert-Ring Tone, Noise/Distortion**
Problem Found:	**ALT03**	**Alert-Ring Tone, Noise/Distortion**
Reference Designator:	**AL**	**Alert**
Repair:	**RMP10**	**Replace Mechanical Part-CSB/FSB**

PRC Service Codes-

Customer Complaint:	**1003**	**Alert-Ring Tone, Noise/Distortion**
Repair:	**1310**	**Replace Mechanical Part-CSB/FSB**