



Middle East & North Africa
Personal Communication Sector

Field Service Information

E398-No or Distorted Earpiece Audio

Our Reference: SI70_12_2004

Date: Dec 28, 2004

Pages (including this page): 4

Prepared by:

Ehab Elhosary

Regional Technical Support Engineer
Middle East and North Africa.

Classification:

Motorola Internal Information

Strictly released for Motorola Authorized Service Center Use only.



Middle East & North Africa

Date: Dec 28, 2004

Our Reference: SI70-12_2004

Product/System: **E398**

Subject: **E398-No or Distorted Earpiece Audio**

FIELD SERVICE INFORMATION

Problem:

Analysis of audio-related failures on the 1st 200 E398 NPI returns has revealed inoperative or distorted Earpiece speakers, manufactured by Hosiden Electronics. The causes of these failures are a result of any one of the following:

- 1) Overheated voice coil which resulted in damage to the diaphragm
- 2) Voice coil winding deformed/slanted
- 3) Voice coil winding split
- 4) Insufficient bonding of coil windings

The Hosiden speaker uses a pyrolytic insulation coating that can thermally decompose with the resultant pyrolysate or pyrolyzate-like products vaporizing and depositing on cold yoke surface and vicinity. With most of insulation coating depleted, the coil stacking hollows out, allowing abundant opportunity for adjacent windings to touch, short and weld together which in turn feeds back for more pyrolysis of insulation coating and further over-heating of coil windings.

Solution

Short Term: An alternate supplier, American Audio (AAC), is qualified as a 2nd source for the Earpiece. The part number is 5089574N01. AAC is to be used in E398 production starting in January 2005 and on customer returns that require Earpiece replacement.

Long Term: Hosiden Electronics to start manufacturing samples of the Earpiece with different heat resistant voice coil bonder material. Motorola Engineering will evaluate these samples. The modified Hosiden Earpiece will be utilized in Service and future builds once approval is granted.

Service Action

Customer Returns:

Perform the following procedure on all E398 returns with a Month of Manufacture Dec 2004 or earlier that have complaints of "No or Distorted Earpiece Audio":

- 1) Disassemble the unit to obtain access to the unit's speaker. Refer to the Level 1 & 2 Service Manual for proper disassembly instructions.

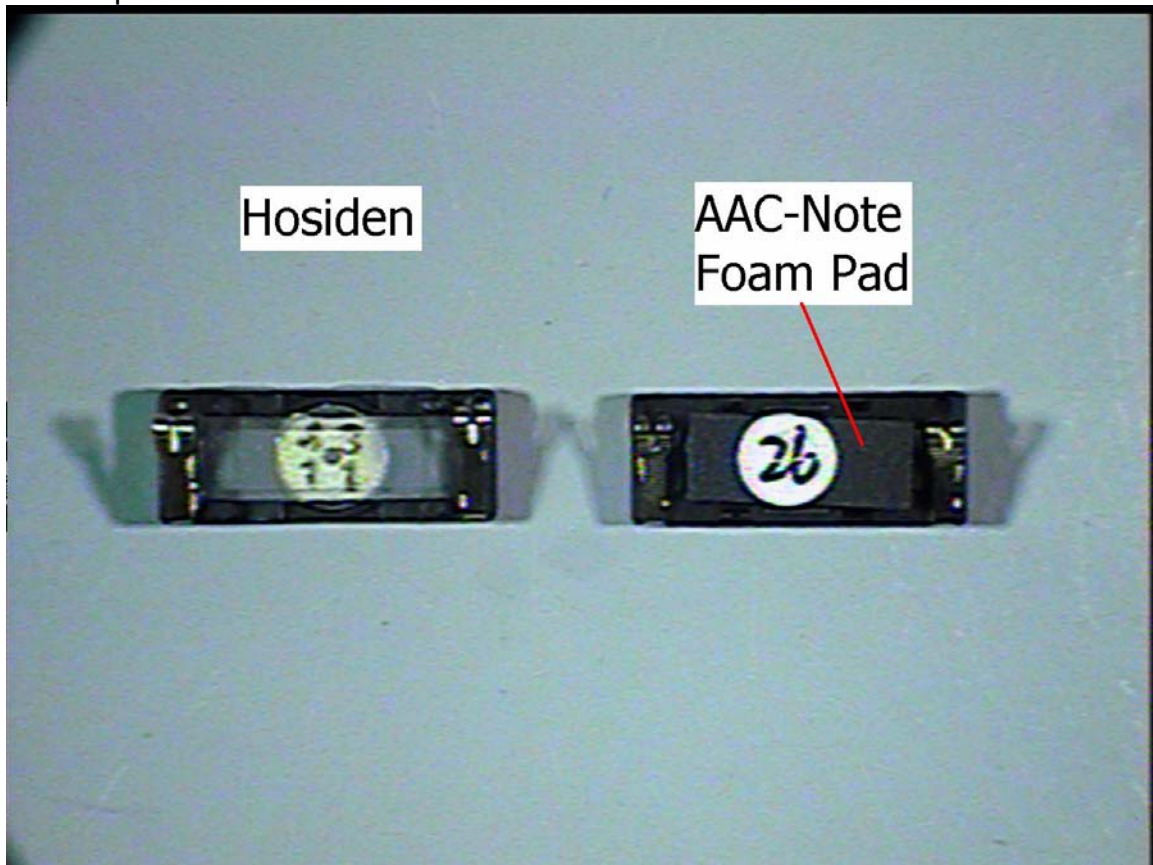
Classification:

Motorola Internal Information

Strictly released for Motorola Authorized Service Center Use only.



- 2) Observe the contact side of the Earpiece to determine if the manufacturer is Hosiden. The photo below shows Hosiden vs AAC Earpiece. Notice that the AAC Earpiece has a foam pad attached to the contact side (rear) of the component.



- 3) If the manufacturer is confirmed to be Hosiden, replace the Earpiece with AAC.
Note: Do not remove the foam pad from the AAC Earpiece. The foam pad remains attached to the earpiece.
- 4) Reassemble the unit and verify that earpiece audio is now functional.

Service Inventory:

Purge stock of 5089574N01 manufactured by Hosiden and substitute with AAC.

Call Center Action

Instruct customer to return unit for service per this FSB on complaints related of “No or Distorted Earpiece Audio”:

Classification:

Motorola Internal Information

Strictly released for Motorola Authorized Service Center Use only.



Service Entry Codes

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

Global Service Codes-

Customer Complaint:	AUD01	Audio-Earpiece, No
Problem Found:	AUD01	Audio-Earpiece, No
Reference Designator:	SPK	Speaker
Repair:	RMP10	Replace Mechanical Part-CSB/FSB

Classification:

Motorola Internal Information

Strictly released for Motorola Authorized Service Center Use only.