S E R V I C E N O T E

SUPERSEDES: None

83220A GSM Test Sets.

Serial Numbers: 0000A00000 / 9999Z99999

WARNING

Possible Shock Hazard

Possible serious injury could occur but 2 conditions must be met:

1. That the internal protective ground is not connected . We have confidence that this will be connected according to our manufacturing procedures but have not tested for it which is why we have issued this note.

2. The external ground requirements (three wire powercord) are not met.

Duplicate Service Notes: 83220E-04-S

To Be Performed By: Agilent-Qualified Personnel

Parts Required: None

Continued

DATE: February 2000

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION: **SAFETY**						
ACTION CATEGORY:	☐ ON SPECIFIED FAILURE ■ AGREEABLE TIME	STANDARDS: 0.5 Hours LABOR				
LOCATION CATEGORY:	☐ CUSTOMER INSTALLABLE ☐ ON-SITE ■ SERVICE CENTER	SERVICE INVENTORY:	☐ RETURN ☐ SCRAP ■ SEE TEXT	USED PARTS:	☐ RETURN ☐ SCRAP ■ SEE TEXT	
AVAILABILITY:	ALWAYS	AGILENT RESPONSIBLE UNTIL: ALWAYS				
AUTHOR: DO	ENTITY: EPSG-Q	ADDITIONAL INFORMATION: Check all units returned for calibration.				

Agilent Technologies

Situation:

There has recently been an issue in EPSG-Q with the HI-POT procedure used on the 83220 Manufacturing line. This procedure is carried out at the beginning (post assembly) and the end (Electrical Inspection Test) of the final test process. The procedure involves both an Earth leakage and Earth continuity test on each unit. It was discovered in November 1999 that the Earth continuity part of the test had been inadvertently disabled. Line audits carried out on the HI-POT testers point to the continuity test having been switched off sometime between May and November 1999. A risk assessment meeting was held with our product regulations expert where we looked at the assembly & test process of the 83220 PSU. Given all the information at our disposal it was decided that the risk to customers was extremely low and probably zero.

Solution / Action:

All units returned to Agilent for calibration should have the following checks performed on them in addition to any other procedures normally followed.

Electrical Safety

Warning:

The Hi-Pot Test involves the application of a hazardous voltage to the unit under test. The following operating procedure should be adhered to in addition to any generic safety procedures in place.

- Supervisors must ensure that only competent persons are authorized to conduct this test.
- Operators should be aware that a hazardous voltage is present during this test and that due care and attention is required.
- Operators must remove any ESD earthing wriststrap.
- Operators must ensure that other persons in the vicinity of the test are not allowed to participate or touch equipment during execution.
- Operators must remain well clear of the unit under test and the Hi-Pot output cord during execution.

Earth Continuity

Earth continuity is checked continuously between the mains protective earth and the metal chassis. A fail-safe operation exists whereby this continuity must be maintained before the following test is permitted.

Dielectric Voltage withstand or strength test
(This test is also known as a "flash test").

The insulation (dielectric) is tested between live and neutral (connected together) and the unit under tests protective earth.

The current that flows during the dielectric voltage withstand test is monitored; if the current exceeds a set point, an alarm is sounded and the test is automatically terminated.

Equipment

Hi-Pot Testers
Associated Research 5500DT (preferred) or equivalent
Specifications/Settings
Rise Time (10% to 90%): less than 2 seconds
Voltage: 1500V +/- 100V ac rms
Duration: at least 2 seconds
Current trip range: 0 to 25mA

1. Clear the work area. Ensure Hi-Pot Tester is turned OFF and unit under test is turned ON.

2. Ensure the Hi-Pot Tester trip current is correctly set. The trip current is directly related to, but is not the same as, the earth leakage current that flows to earth during normal operation.

8922 Trip Current	= 4mA.
83220 Trip Current	= 4mA.

3. Ensure that the other programmable parameters for the test are correct on the hi pot tester

4. Connect the unit to the hi pot tester, attaching the integral power cord to the instrument power socket and the earth wire to the chassis.

5. Turn ON the Hi-Pot Tester.

6. The Tester READY lamp should light; if it does not, the unit has failed the EARTH CONTINUITY TEST and remedial action is required before continuing.

7. Press the Tester START button.

8. Check that no ALARM sounds during the full duration of the test. This constitutes a PASS for the unit under test.

9. Should the test FAIL and the audible ALARM sound, the unit may be defective and the following re-test procedure should be followed:

The test should be repeated up to a maximum of two times. Two consecutive passes without the alarm sounding should be considered a PASS. If the ALARM sounds on the first or second re-test the unit is considered defective and remedial action is required. In this case please return to EPSG-Q using the Factory Return Form at Web address:

http://hpweb.sqf.hp.com/QMD_Mktg/prodsup/Forms/returns.htm

or send to

FAO:EPSG-Q RFComms Product Support
Agilent Technologies
South Queensferry
W. Lothian
Scotland
United Kingdom
EH30 9TG

with a Fault Description and clearly state who it is from and the return address.