

S E R V I C E N O T E

SUPERSEDES: 5071A-05

5071A Primary Frequency Standard**A11 Power Steering Logic Assembly failure can cause loss of internal battery capacity**

Serial Numbers: 3132a00101 / 3249A00815 (excluding Option #048 instruments)

To Be Performed By: Agilent Service technicians

See Also: 5071A-04, 5071A-07

Parts Required:

Refer to the text before ordering the parts below.

P/N	Description	Quantity
05071-60029	A11 Power Steering Logic Assembly	1
2110-0699	A11F1 5.0 Amp Fuse	1
1420-0514	BT1, BT2 Lead-Acid Battery	2

Tools Required:

T-10 TORX~ Driver t-15 TORX~ Driver Soldering Tools Anti-Static workstation

Continued

DATE: May 1999

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:			
MODIFICATION RECOMMENDED			
ACTION CATEGORY:	☐ IMMEDIATELY ☒ ON SPECIFIED FAILURE ☐ AGREEABLE TIME	STANDARDS: LABOR 2.0 Hours	
LOCATION CATEGORY:	☐ CUSTOMER INSTALLABLE ☐ ON-SITE ☒ SERVICE CENTER	SERVICE INVENTORY: ☐ RETURN ☒ SCRAP ☐ SEE TEXT	USED PARTS: ☐ RETURN ☒ SCRAP ☐ SEE TEXT
AVAILABILITY:	PRODUCT'S SUPPORT LIFE		AGILENT RESPONSIBLE UNTIL: May 2001
AUTHOR: DC	ENTITY: 0200	ADDITIONAL INFORMATION:	

Introduction:

Introduction of the Telecommunications Option #048 for the 5071A required a re-design of the A11 assembly to accommodate the higher dc voltage range. Since a new design of the board was necessary some improvements were also introduced to allow the same basic design to be used for both standard instruments and the 48 volt option. This also afforded an opportunity to improve the operating characteristics of the battery charging circuit to help prevent rare lock-outs during very low ac mains inputs.

Situation

Because this new design is more robust and relatively inexpensive, Agilent recommends that it be replaced when any A11 failure occurs or the instrument is returned to a Service Center for other reasons and A11 is tested and found to be defective.

Symptoms

Usually the first indication of a problem is that the internal batteries fail to provide power to the instrument when it is needed in the absence of ac mains power and External dc power. If the A11 has failed, those internal batteries may not have any usable terminal voltage remaining when needed. This may not be caused by a defective A11. It could also be because of exhausted batteries or a blown fuse on the A11 assembly. It is necessary to follow the procedure below to determine the cause.

NOTE

If the 5071A has been operating only on External dc power (no ac mains connected) the batteries will never receive charging current and therefore not be available for standby operation. The only way to charge the internal batteries is to connect the 5071A to ac mains for at least 16 continuous hours.

Procedure

Refer to the Assembly-Level Service Manual (P/N 05071-90003) for assistance in replacing the A11 assembly.

CAUTION

Be sure that the internal battery wires are physically disconnected before working near the A11 assembly.

1. Locate the 5.0 amp axial-lead fuse A11F1 soldered on the A11 assembly near the red/black battery wires. If this fuse is open, replace this with P/N 2110-0699, charge the batteries with ac for at least 16 hours, and re-test. If this fixes the problem then it is not covered under this Service Note.
2. Replace A11 with a new (p/n 05071-60029) assembly, apply ac mains to the 5071A for at least 16 hours, and re-test. If this fixes the problem the replacement will be covered under this Service Note.
3. If the batteries do not charge in step "2" above, first re-install the original A11 assembly and order two batteries (1420-0514), connect to ac mains for at least 16 hours, and re-test. If this is the case, the batteries were at fault. Do not consider this case covered under this Service Note.
4. If both the A11 and batteries were defective all three parts are covered under this Service note.

Additional Checks

Check the "BATTERY DISCONNECT" SWITCH opening on the rear panel. There should be a nylon barrel inserted to act as a guide for inserting a tool for pressing this switch. If this guide is not installed request kit P/N 05071-67004 and follow the instructions.

Service Note 5071A-07 describes this kit and procedure.

Manual Changes

The new A11 assembly operates identically to the older assembly. However, the Assembly-Level Service Manual is affected by part number changes. If the A11 was replaced in the above procedure with a new 05071-60029 make the following changes to your documentation:

1. Change all references from P/N 05071-60011 to 05071-60029.
2. The 5.0 amp fuse mounted on the board has a new part number as well. The old number is 2110-0699, an axial-lead device. the new part number is 2110-0863, a Surface-Mount device.

Further Reading

Service Note 5071A-04 is an Information only note that helps to describe how the internal batteries work, and some conditions that may not provide them with sufficient charging times.