S E R V I C E N O T E

SUPERSEDES: 5061B-05

HP 5061B Cesium Beam Frequency Standard

Serial Numbers: 0000A00000 / 9999A99999

Duplicate Service Note: 5061A-23

HP 5061B Cesium Beam Frequency Standard identified IC can cause failure of A11 oven controller (HP P/N 05061-6144)

To Be Performed By: Customer Technician or HP Qualified Technician

Parts Required: Only as needed, see Text

Introduction:

The Hot Wire Ionizer circuit in the A11 Cesium Oven Controller is a switching regulator capable of providing 3 amperes at approximately 1.2 volts dc. It is specifically designed to be used with HP Cesium Beam Tubes (CBT) over all ranges of serial numbers.

We have been recommending that this A11 Oven Controller (HP P/N 05061-6144) be used for replacement of the older unit (HP P/N 05061-6009) whenever there is a failure, or when a new CBT is installed. This is because the new Hot Wire Ionizer circuit is a dc supply, rather than an ac supply. The dc supply promotes longer life in the Hot Wire Ionizer ribbon inside the CBT.

We also specify that the new A11 always be used with installation of new CBTs to validate the warranty, as stated on the CBT label.

Continued

DATE: 24 June 1993

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:

MODIFICATION RECOMMENDED

ACTION CATEGORY:	☐ IMMEDIATELY ☐ ON SPECIFIED FAILURE ■ AGREEABLE TIME	STANDARDS: LABOR: 2.0Hours		
LOCATION CATEGORY:	■ CUSTOMER INSTALLABLE ☐ ON-SITE ☐ HP LOCATION	SERVICE INVENTORY:	☐ RETURN ■ SCRAP ☐ SEE TEXT	USED PARTS: ☐ RETURN ■ SCRAP ☐ SEE TEXT
AVAILABILITY:	PRODUCT'S SUPPORT LIFE	RESPONSIBLE UNTIL : June 1995		
AUTHOR: DC	ENTITY: 0200	ADDITIONAL INFORMATION: Use only specified parts. 5061B-05 had incorrect page 2.		

HEWLETT PACKARD

Situation:

Recently, we discovered one manufacturer's part in the Hot Wire Ionizer circuit (A11A1U1) did not switch properly causing the switching transistors to draw excessive current and fail. We found that one particular manufacturer's IC has this problem but not others. To facilitate a quick solution of the problem, we have set up a new part number for the proper IC to be used in the A11 Oven Controller. This new part number excludes the parts which do not operate properly in the circuit. The new part number must always be used as replacement for A11A1U1. additionally, we recommend it be used in replacement of A11A1U2 and A11A1U6 to ensure consistency with current production units.

Symptoms:

If there is going to be a problem it will occur within 1 to 2 minutes of applying power to the HP 5061B. All of the observed failures have been found when installing a new A11 into an instrument and initially applying power.

Repair:

Because this IC can cause failure of either one or both A11A1Q1 and A11A1Q2 do to overheating, and degrade common ICs A11A1U2 and A11A1U6, we recommend that all these parts be changed at the same time in the event of a failure.

Use the following part numbers in the repair:

Table 1. Recommended Part Numbers

Reference Designator	HP Part Number
A11A1Q1, A11A1Q2	1854-0263
A11A1U1, A11A1U2, and A11A1U6	1826-2764

NOTE

We recommend purging any stock of HP Part Number 1826-0428 or equivalent. Alternatively, they should be specified to not be used in HP P/N 05061-6144 as replacement.

Manual Changes:

Make the following changes to your 5061B Operating and Service Manual:

Section VI, A11 Oven Controller Replaceable Parts (HP P/N 05061-6144)

Change part number for A11A1U1, A11A1U2, and A11A1U6:

From: 1826-0428
To: 1826-2764