
Replacing Assemblies

Disassembly and Reassembly

Introduction

This chapter contains the instructions for removing major assemblies in the 5071A. To install an assembly, reverse the removal instructions (except for A17 CBT).

WARNING

HAZARDOUS VOLTAGES ARE ON THE A16 POWER SUPPLY MODULE. WAIT AT LEAST THREE MINUTES FOR THE CAPACITORS ON THE A16 POWER SUPPLY MODULE TO DISCHARGE BEFORE WORKING ON THIS INSTRUMENT.

CAUTION

Do not replace assemblies with the instrument turned on. Damage to components can occur.

Figures 2-1, and 5-1 are provided to complement the removal and replacement procedures. Refer to Chapter 5, "Replaceable Parts," for the part number of assemblies and modules.

Tools Required

The following tools are required for the removal and replacement procedures:

- Hand TORX® 8 screwdriver and bit (T8)
- Hand TORX® 10 screwdriver and bit (T10)
- Hand TORX® 15 screwdriver (T15)
- Hand TORX® 25 screwdriver (T25)
- 9/16-inch Spintite®
- 7-mm Spintite®
- 1/4-inch open end wrench
- 7-mm open end wrench
- 7/16-inch socket and an 8.5 inch-pound torque wrench
- 6-mm combination wrench
- 5/16-inch combination wrench
- 9/16-inch combination wrench
- Small Diagonal Side Cutter
- Clean linen for dress-surface cleaning
- 95/100 % Methyl, Ethyl, or Isopropyl alcohol for cleaning

Replacing Assemblies
Do This First

Do This First

Before performing any of the removal and replacement procedures, turn off the 5071A by removing the ac-line power cord from the rear-panel ac line socket, disconnecting both internal-standby batteries, and external-dc power input if present.

To Remove the Covers

The following steps are for removing the covers. The covers are removed to access the board and cable assemblies, and all other internal parts.

WARNING

WHEN THE COVERS ARE REMOVED FROM THE 5071A, AC LINE AND A16 OUTPUT VOLTAGES ARE EXPOSED WHICH ARE DANGEROUS AND MAY CAUSE SERIOUS INJURY IF TOUCHED. DISCONNECT ALL EXTERNAL AND INTERNAL POWER SOURCES.

CAUTION

Always follow ESD precautions to prevent static damage to assemblies, modules, and any other internal components.

Refer to Figure 5-1. when performing the following steps:

- 1 Ensure that ALL external and internal power is OFF.
- 2 Remove the four rear feet from the instrument before attempting to remove the top or side instrument covers with a TORX® T10 driver. Refer to steps 4 and 5 below to remove the bottom cover.
- 3 Remove the top, and left-right side cover(s) with a TORX® T15 driver as required for access to assemblies and modules. (Carefully alternate between backing-out each screw 1 or 2 turns and then pulling the cover out 1/16" to avoid stripping these captive-screws.)
- 4 Remove the four bottom feet by grasping and un-latching the release tabs on each foot. (Pull-up, then slide forward/backward and out.)
- 5 Remove the bottom cover as described in step 3 if required for access.

To Remove A1 Motherboard Assembly

- 1** Ensure that ALL power is OFF and that the top, bottom, and inner-RF (top) shield (31 screws) covers are removed.
- 2** Remove all PCAs from A1 slots, disconnecting all attached coaxial and multiline cable connections present on any particular PCA.
- 3** Disconnect all module power/control connectors attached to A1.
- 4** Disconnect all power supply to A1 cable assemblies at A1.
- 5** Carefully reposition the instrument on its left side facing front.
- 6** Clip the wire tie that bundles the 05071-60222 cable assembly to the right-front unused mounting hole of A1 on the underside of the instrument.
- 7** Remove the four nuts that attach A15 to the chassis.
- 8** Clip the wire ties that bundle the cables connected to J2, J3, J4, and +4.5 Vdc on A15 (bottom side of instrument).
- 9** Carefully slide A15 out far enough to gain the clearance required to remove all SMA connectors.
- 10** Disconnect the SMA connectors from A15 J1 through J5.
- 11** Disconnect the A15 +4.5 Vdc cable from A18 top-side at A18J3.
- 12** Remove A15 and place aside.
- 13** Disconnect the semi-rigid A15-to-CBT cable assembly (05071-60271) at the CBT tube adapter.
- 14** Remove the semi-rigid cable assembly sideways from the right out through the bottom of the instrument and place aside.
- 15** Remove the 33 round-head screws that hold A1 in place.
- 16** Carefully remove A1 from the chassis and set aside

To Remove A10 Output Frequency Distribution Amplifier Module

- 1 Ensure that the top, bottom, right-side, and inner-RF shield (31 screws) covers are removed.
- 2 Disconnect all SMA, SMB, and module-to-A1 cable assembly connections for A9, A10, and A18.
- 3 Remove the small plate holding A5, A9, and A18 at top left of the module group (as viewed from the front) attached with five screws.
- 4 Remove 2 round-head screws from the right-rear chassis for each module other than A10 (and A5 if its removal is not required).
- 5 Lift A9 and A18 out and set aside. (Install new/functional unit if either (or both) is being replaced at this time.)
- 6 If A5 is being replaced at this time, remove the 2 round-head screws holding it to the right-rear side chassis, lift it out and install a new/functional unit.
- 7 Remove the ten flat-head screws that hold A10 to the chassis from the rear panel located around the module's perimeter.
- 8 Push A10 towards the front until its rear-panel connectors clear the rear panel mounting hole, then lift out.
- 9 Reverse the above steps to install a new/functional A10 unit. (Remember to replace the A5 and A9 RF shields when reassembling these modules. Be sure to tighten semi-rigid coax connector to 8.5 inch-pounds to eliminate RF leakage.)

To Remove A12 Dc-Dc Power Converter Module

- 1** Ensure that the top, bottom, and left-side covers are removed.
- 2** Remove 3 screws from the plate that holds A16 in place, attached at the top of A12 (1 screw) and the Toroid power transformer T1 (2 screws).
- 3** Remove 11 flat-head screws from the left-rear chassis frame located within the perimeter of A12.
- 4** Remove 4 screws holding a small (11/16" x 1 3/16") plate (used for rack mounting).
- 5** Loosen (do not remove) 2 screws that hold the line filter/cable assembly to the rear panel to gain clearance for A12 removal.
- 6** Clip the A12 cable assembly wire tie.
- 7** Disconnect A12 power cable from A1.
- 8** Push A12 forward from the rear and up from the bottom, alternately back and forth until the unit is free.
- 9** Lift A12 out from the chassis and set aside and install a new/functional unit.
- 10** If either A16 or T1 require replacement at this time, disconnect their cable assembly-to-instrument connections and remove either/both from the instrument. (A16 must be removed temporarily to provide the clearance required to remove T1.)

(Be sure to tag the high-voltage lines attached to the CBT before unscrewing these connectors, using only your fingers to avoid damage.)

Use a 9/16" offset wrench to remove the T1 mounting nut from its chassis stud.

- 11** Install new/functional A16/T1 as required by reversing the above procedural steps.

To Remove A13 Front Panel Module

Use the following procedure only if the entire A13 front-panel assembly must be removed from the instrument chassis (If, for instance, there is damage to the front-panel frame that encloses the A13 subassemblies and components.). If the front-panel door or other component needs repair, use the disassembly procedure described on the next page.

- 1** Ensure that the top, bottom, and both-side covers are removed.
- 2** Open the front-panel door.
- 3** Carefully remove the 9/16" dress nuts that hold the 1 pps Output and Sync Input BNC connectors to the inside front panel.
- 4** Close the front door securely.
- 5** Remove trim strips from sides of the front-panel frame.
- 6** Remove the four screws that hold the front-panel assembly to the left and right side chassis members.
- 7** Carefully disconnect the front-panel ribbon cable assembly at its A13 front-panel connector end.
- 8** Install a new front-panel assembly by reversing the order of the above procedural steps.

To Remove A13 Subassembly Contents

Use the following procedure prior to repair of any A13 electronic or mechanical component.

CAUTION

Before you perform step six below, be ready to catch (prevent from falling) the door and hinge subassembly as the A13 component-panel contents slide forward and out of the front-panel frame.

- 1 Remove the front-panel dress-trim strips from the sides and top of the A13 front-panel assembly frame.
- 2 Remove ten T10 TORX® screws from the perimeter (top, bottom, and sides) of the front-panel frame.
- 3 Open the front-panel door.
- 4 Carefully remove the 9/16" dress nuts that hold the 1 pps Output and Sync Input BNC connectors to the inside front panel.
- 5 Close the front door securely.
- 6 Carefully slide the front-panel component subassembly contents out of the front-panel frame using the door-latch knob to pull and guide during the removal process.
- 7 Place the front-panel component subassembly contents on a clean work surface for further inspection and repair.
- 8 Reassemble the front panel by reversing the order of steps above.

To Disassemble the A13/LCD Front Panel Module

To Disassemble the A13/LCD Front Panel Module

This procedure provides information for disassembling and reassembling the 05071-60213 front-panel. The Procedure is divided into disassembly, assembly, and pre-assembly instructions. Damaged or non-functional hardware/assemblies may be replaced at a sub-assembly/modular level to simplify reassembly.

The following table lists the parts required to build an entire front-panel module. The completed A13 Front Panel module that includes the frame is available as part number 05071-60213.

Table 4-1. Front Panel Module Parts

Description	HP/Agilent Part Number	Quantity
Window Bumpers	0403-0806	2
Front Door	05071-00006	1
Dress Panel	05071-00007	1
Front Sub Panel	05071-00047	1
Key Clamp	05071-00011	1
Hinge Beam	05071-00018	1
LED Window	05071-20201	1
Hinge Pin	05071-20202	2
Door Frame	05071-20203	1
Board Clamps	05071-20219	2
Keypad	05071-40001	1
Front-Panel PCA	05071-60013	1
Front Label	05071-80001	1
Door Bumper	05071-80004	1
Door Latch	0510-0182	1
Cap Screw	0515-0348	1
Screw	0515-0377	12
Screw	0515-0458	4
Screw	0515-1605	10
Screw	0515-1612	2
Front Panel Frame	5021-8403	1
Nut	0535-0082	5
LCD Assembly	05071-60275	1
Ribbon Cable	8120-5652	1

Replacing Assemblies

To Disassemble the A13/LCD Front Panel Module

A13 Disassembly

Use the following procedure to disassemble the A13 front panel assembly after it has been removed from the instrument front-chassis mounting points.

Use only those procedural steps actually required to access a defective hardware or electrical component, halting disassembly where appropriate.

Removing the Front-Panel Door, Frame, and Hinge

- 1 Use the procedure on page 4-8 to gain access to the front-panel door, frame, hinge subassembly, and remaining subassembly contents.
- 2 Remove the pre-assembled door, frame, and hinge from the front-panel subassembly.
- 3 After you've repaired the front-panel door/frame/hinge, reassemble the front panel by reversing the order of the first two steps of this procedure.

Removing the Front-Panel Subassembly

- 1 Use the procedure on page 4-8 to gain access to the front-panel subassembly.
- 2 Place the preassembled front-panel subassembly on a clean work surface for further inspection, disassembly, and repair.

Removing the PCA Subassembly

- 1 Remove the two screws (0515-0377) that attach the two board clamps using a TORX® T10 screwdriver.
- 2 Remove the two board clamps (05071-20219).
- 3 Using a TORX® T10 screwdriver, remove the four screws (0515-0377) that hold the PCA subassembly and the six screws (0515-0377) holding the Key Clamp to the Sub Panel. The six screws holding the Key Clamp to the Sub Panel are recessed into the PCA, and do not provide any attachment to the PCA itself. DO NOT remove the four short screws holding the Key Clamp to the PCA at this time.
- 4 Remove the key pads from the front-panel subassembly if necessary.
- 5 Remove the PCA subassembly if necessary.

Replacing Assemblies

To Disassemble the A13/LCD Front Panel Module

A13 Sub-Assembly Pre Assembly

Use the following procedures to build the appropriate front-panel instrument sub assembly(s) that require(s) replacement. Refer to the A13 part list at the beginning of this subsection for part information.

Door-Frame Pre Assembly

- 1 Screw (1) cap screw (0515-0348) into one end of the door frame (05071-20203) until the head of the screw is level with the top of the hinge-beam slot.
- 2 Clean the longer groove of the door frame with alcohol.
- 3 Affix the door bumper into the clean groove.

Key-Clamp Pre Assembly

- 1 Clean the BNC connector area (two larger holes) of the key clamp (05071-00011) with alcohol.
- 2 Separate the 1 PPS output label and Sync Input label from the front-label packet (05071-80001) which includes five different labels.
- 3 Affix the two labels onto their correct positions on the clean BNC area.

PCA Pre Assembly

- 1 Separate the key (05071-40001) into two pieces: white (with numbers), and gray (with letters).
- 2 Drop both the gray and white pieces over the test pins of the front-panel PCA (05071-60013).
- 3 Place the key clamp (05071-00011) over the "GRAY and WHITE" key pads.
- 4 Hold firmly together, turn the assembly over, and secure using four screws (0515-0458) with a TORX T10 bit to 8.0 inch-pounds of torque.

Replacing Assemblies

To Disassemble the A13/LCD Front Panel Module

Front-Door Pre Assembly

- 1 Clean the inside of the front door (05071-00006) with alcohol.
- 2 Orient the front door so that the latch hole is to your right.
- 3 Affix the door label (Quick Reference Guide to Controls: 05071-80001) onto the inside of the front door using the holes a positioning reference.
- 4 Unscrew the nut of the door latch (0510-0182).
- 5 Insert the door latch through the hole of the front door, from the label side.
- 6 Replace the latch nut and tighten it *very carefully* with a 3/8 inch open-end wrench.
- 7 Ensure that the door latch is aligned straight up when the door is fully open.
- 8 Apply a small drop of LOCTITE® A sealant using a toothpick into each hinge-pin hole on each side of the front door.
- 9 Install the two hinge pins (05071-20202) into the front-door hinge-pin holes.

Sub-Front-Panel Pre Assembly

- 1 Install the two window bumpers (0403-0806) from the front side of the sub-front panel (05071-00047).
- 2 Trim the tabs off the bumpers.
- 3 Clean the sub-front panel surface with alcohol.
- 4 Install the sub-panel spacer (part of 05071-80001) onto the left side of the sub-front panel (five-hole alignment).
- 5 Install the two door pads taking care to match each door-pad size with the correct mounting position, aligning them exactly straight.
- 6 Install the DATA ENTRY/FUNCTION and ACTIONS label (part of 05071-80001) onto the right side of the sub-front panel.

Replacing Assemblies

To Disassemble the A13/LCD Front Panel Module

A13 Assembly

Installing the Door Frame

- 1 Install the pre-assembled door frame into the front-panel frame (0521-8403) locating it to the area with the two small slots.
- 2 Secure the door frame to the front panel with three screws (0515-1605) and LOCTITE® A sealant using a TORX® T10 bit to eight inch-pounds of torque.

Installing the Sub-Front Panel

- 1 Carefully insert the pre assembled sub-front panel into the door frame pre-assembly slot.
- 2 Install the assembly into the front-panel frame.
- 3 Secure it with six screws (0515-1605) and LOCTITE® A sealant using a TORX® T10 bit to eight inch-pounds of torque.

Installing the PCA Pre-Assembly

- 1 Install the PCA pre assembly.
- 2 Align the key pads into the sub-front panel pre assembly.
- 3 Secure with ten screws (0515-0377) and LOCTITE® A sealant using a TORX® T10 bit to eight inch-pounds of torque. (Ensure that one screw fastens the PCA pre assembly at the BNC area end.)
- 4 Install the two board clamps (05071-20219).
- 5 Secure with two screws (0515-0377) and LOCTITE® A sealant using a TORX® T10 bit to eight inch-pounds of torque.

Replacing Assemblies

To Disassemble the A13/LCD Front Panel Module

Assembling the Front-Panel Subassembly Contents

- 1 Insert the right hinge of the front-door pre assembly into the right hole of the door-frame pre assembly.
- 2 Insert the left hinge of the front-door pre assembly into the hole of the hinge beam (05071-00018), then guide the hinge beam into the cap screw on the left side of the door-frame pre assembly.
- 3 Close the door latch and hand tighten the cap screw (suggest using a ball driver) taking care to ensure proper door alignment.
- 4 Clean the LED window (05071-20201) using clean linen and alcohol.
- 5 Place the LED window into the left dress panel (05071-00007).
- 6 Install it into the sub-front panel pre assembly
- 7 Secure with five nuts (0535-0082) using a 7-mm Spintite®.
- 8 Position the LCD display (05071-60275) bottom up with five resistors.
- 9 Secure the LCD display with three screws (0515-1612) and LOCTITE® A using a TORX® T10 bit tightened by hand only.
- 10 Plug the backlight cable connector into the mating 05071-60013 PCA connector.
- 11 Plug the ribbon cable connector into the mating 05071-60013 PCA connector.

To Remove A14 Signal Amplifier Module

- 1 Ensure that the top cover and inner-RF (top) shield (31 screws) are removed.
- 2 Clip the wire tie that bundles the A19 input/output SMA connector cable assemblies.
- 3 Clip the wire tie that bundles the A16 power/control/HV output cables to the A19 ground strap(s).
- 4 Clip the wire tie that bundles the small-black CBT output coax, A19 power/control cable, and A16 power/control cable assemblies.
- 5 Disconnect the A19 A1P11 power/control cable assembly from A1J11.
- 6 Disconnect both input/output A19 SMA and SMB connectors from A19.
- 7 Remove the 2 round-head screws that mount the A19/A14 bracket to the 5/16" thick vertical aluminum CBT bulkhead.
- 8 Carefully slide the A19/A14 bracket and units upward until the A14 connections are about even with the top of the CBT bulkhead.
- 9 While holding the A19/A14 units in this position, carefully disconnect the A14 SMB CBT input cable connector and unplug the 05071-60243 six-wire power and output connector from A14.
- 10 Place the A19/A14 modules/bracket on a clean-flat work surface.
- 11 Remove the three round-head screws that hold A19 to the three rubber shock-absorbing grommets and mounting bracket.
- 12 Replace A19 with a new/functional module if replacement is required at this time.
- 13 If A14 requires replacement, remove the 2 round-head screws that hold it to the bottom of the A19/A14 mounting bracket.
- 14 Install a new/functional A14 module
- 15 Reverse the order of the appropriate steps to reinstall A19/A14.

NOTE

Be sure to tighten semi-rigid coax connector to 8.5 inch-pounds to eliminate RF leakage.

To Remove A15 9.2 GHz Microwave Generator Module

- 1** Refer to the A1 removal and replacement procedure at the beginning of this section.
- 2** Use the appropriate steps to remove and replace A15.
- 3** Reverse the order of steps used to install a new/functional module.

To Remove A16 High Voltage Supply Module

- 1 Refer to the A12 removal and replacement procedure near the beginning of this section.
- 2 Use the appropriate steps to remove and replace A16.

WARNING

HAZARDOUS VOLTAGES ARE PRESENT ON THE A16 POWER SUPPLY MODULE. WAIT AT LEAST THREE MINUTES FOR THE CAPACITORS ON THE A16 POWER SUPPLY MODULE TO DISCHARGE BEFORE WORKING ON THE INSTRUMENT.

- 3 Reverse the order of steps used to install a new/functional module.

Replacing Assemblies
To Remove A17 CBT Assembly

To Remove A17 CBT Assembly

The following procedures provide information required to remove and replace the standard or high-performance Cesium-Beam tube.

NOTE

During CBT replacement it is advisable to check (and if necessary adjust) the VCXO set-point. Refer to procedure 3.9.1.8 in chapter 2.

Preparation

If any questions about operation and programming arise while performing the procedures in this section, refer to the 5071A Operating and Programming Manual (part number 05071-90029).

With power still applied to the instrument do the following:

- 1 Connect a terminal or printer to the RS-232C port and configure for serial data communication to monitor and record the power-up sequence after installation is complete.
- 2 Set 5071A serial communications parameters so that they match the printer/terminal connected.
- 3 Set 5071A Diagnostic Log mode to "Service."
- 4 Save the settings in 5071A memory using the Store function.
- 5 Check that communication works by selecting Info/Print and pressing Enter.

Replacing Assemblies

To Remove A17 CBT Assembly

CBT Removal

- 1 Remove all power from the instrument and disable the internal battery by momentarily pressing the Battery Disconnect switch.
- 2 Use a TORX® T10 driver to remove the four rear feet from the instrument.
- 3 Use the TORX® T15 driver to remove the bottom and top covers, being careful to “work” the covers toward the rear of the instrument. This “push and turn” process will prevent the cover screws from being stripped.
- 4 Look for the black coax cable that comes from the left side of the CBT and enters under a perforated RF cover. This is held in place with a tie wrap in a bundle with other wires. If the tie wrap is easy to access, proceed to step 5. If not, it may be necessary to remove the inner-top shield. This requires using a TORX® T10 driver to remove the 31 screws holding the cover in place.
- 5 With the bottom exposed, disconnect the right-angle SMB connector from the A14 Signal Amplifier module. This connector is part of a black coax cable connected to the Cesium Beam Tube.

Perform the remaining steps from the top of the instrument.

- 6 Clip the tie wrap holding the black signal coax cable in a bundle with other cables.
- 7 Use the 5/16” open-end wrench to carefully loosen SMA nut holding the rigid coax to the Microwave Adapter. Continue to loosen the SMA nut with your fingers until it is completely disconnected. The Microwave Adapter is a small metal device that is part of the CBT, towards the rear, near the tube center.
- 8 Record the position of the two High Voltage cables for later reassembly.
- 9 Unscrew the two High Voltage connectors using only your fingers. Do not use any pliers or wrenches, as these can crack the plastic or ceramic.

Replacing Assemblies

To Remove A17 CBT Assembly

- 10 Remove the two multiple pin connectors from the A2 CBT Controller assembly. These are held in place with sliding locks.
- 11 Use the TORX® T25 driver to remove the four screws holding brackets and CBT in place.
- 12 Being careful not to bend the rigid coax, lift the CBT directly up from the cavity. The black signal coax should come free without interference, but pay attention to it to be sure it is not damaged.

CBT Installation

NOTE

Follow the installation instructions carefully. They are NOT simply the reverse order of the previous process.

- 1 While guiding the black signal coax into its proper place, lower the replacement CBT into the cavity in the same position as the one removed.
- 2 Affix snugly, but DO NOT TIGHTEN the brackets to hold the CBT in place, allowing for rotation of the CBT.
- 3 Rotate the CBT so that the SMA nut and rigid coax are aligned as straight as possible with the connector on the Microwave Adapter.
- 4 Using your fingers only, begin screwing the SMA nut onto the Microwave Adapter. If aligned properly, the SMA nut should rotate easily until it is "finger tight". It may be necessary to rotate the CBT slightly while tightening the SMA nut.
- 5 Finish tightening the four T25 TORX® screws to hold the CBT firmly in position.
- 6 Now, finish tightening the SMA nut to a final torque of 8.5 inch-pounds, using the 1/4" wrench to hold the semi-rigid coax in position while tightening the SMA nut.

NOTE

Following the above procedure ensures that there will be no RF leakage at the SMA connection after final torque has been applied.

Replacing Assemblies

To Remove A17 CBT Assembly

- 7 If a settable wrench is not available, use both a standard 5/16" and a 1/4" open end wrench and do your best to assure a tight connection. A good rule of thumb is to make the connection as tight as it was when initially removed.
- 8 Connect the two multiple-pin connectors to the A2 CBT Controller assembly, being sure to lock them into place.
- 9 Refer to your notes to correctly and carefully re-connect the High Voltage leads snugly to the CBT. DO NOT OVER TIGHTEN. Use only your fingers to prevent breaking the plastic or ceramic threads.
- 10 Turn the unit on its side to allow connecting the right-angle SMB connector to the A14 Signal Amplifier module.
- 11 Attach a new wire tie to bind the black signal coax to the same bundle as before. Trim excess tie wrap.
- 12 Before replacing the top and bottom covers, be sure that there are no cables or wires that will be pinched in the process.
- 13 Replace the top and bottom covers and the rear feet.

Operation Verification

- 1 Be sure the printer/terminal is on and that there will be a hard copy of the information captured.
- 2 Connect power to the instrument, noting the time.
- 3 If the message "Cs Oven is Up" does not appear within 25 minutes, there may be a problem with the connections to the A2 CBT Controller assembly. Remove all power, disconnect the internal-standby battery, and re-check your work.
- 4 When the message "Operating Normally" appears, the instrument is operating. No further adjustments are needed.

Disposal Procedure for Agilent Cesium Beam Tubes

Both the Standard (10890A) and High Performance (10891A) Cesium Beam Tubes contain non-radioactive cesium. After a defective cesium beam tube has been removed from the 5071A chassis, it must be disposed of properly, applying WORLDWIDE to all 5071A customers.

Replacing Assemblies

To Remove A17 CBT Assembly

Two methods of disposal are described: a. local-regional environmental procedures or, b. direct shipment to the Agilent factory. One of these methods must be used for disposal.

Local-Regional Environmental Procedures

The defective A17 CBT assembly is considered hazardous waste in some countries. **Dispose only in accordance with local environmental regulations. Contact your nearest regional office of environmental health service for guidance.**

Direct Shipment to the Agilent Factory

The following steps describe how to package and ship a defective 5071A cesium beam tube back to the Agilent factory.

- 1 If you do not have appropriate CBT packaging materials, you can obtain a CBT Packaging Kit from your nearest Agilent Sales
 - model number HP/Agilent 59991A Option J19 or,
 - part number HP/Agilent 59991-91102.
- 2 Use the packaging diagram that comes with the kit to package the cesium beam tube correctly.
- 3 Send a letter with the defective cesium beam tube stating that the tube is being returned for disposal by the Agilent. The letter should also state the date that the determination to scrap was made and who made the determination (that is, Agilent or the user).
- 4 Customers should send scrap cesium beam tubes directly to Agilent Santa Clara Site without routing through any Agilent Sales office. The shipping container should be clearly labeled on the outside with "FOR RECYCLING." Address to:

Agilent-Technologies, Inc.
5301 Stevens Creek Boulevard
Santa Clara, California 95051-7299

ATTN: Cesium Beam Tube Recycling

To Remove A19 Reference Oscillator Module

- 1** Refer to the A14 removal and replacement procedure near the middle of this section.
- 2** Use the appropriate steps to remove and replace A19.
- 3** Reverse the order of steps used to install a new/functional module.

Replacing Assemblies

To Remove A19 Reference Oscillator Module