

HP 16094A  
Test Fixture  
Operating Note

## 1. INTRODUCTION.

This operating note provides the information required to maintain and repair the Hewlett-Packard Model 16094A Probe Fixture. The Model 16094A, pictorially shown on the front cover, was specially designed for use with the Model 4191A RF Impedance Analyzer. How to use the 16094A, performance characteristic data, and operating instructions are given in the 4191A's Operation and Service Manual. To order additional copies of this operating note, use the part number listed on the rear cover and contact the nearest Hewlett-Packard Office.

## 2. MAINTENANCE.

### 2-1 PERIODIC AND PREVENTIVE MAINTENANCE OF THE APC-7 CONNECTOR CONTACTS.

Keep contact surface of the APC-7 connector (part of the test fixture) clean and dry. Replace the center pin of the APC-7 connector every 50 connections and disconnections or when the center pin is damaged or worn. The appropriate procedure and the precautions to follow when cleaning and replacing the contacts of the APC-7 connector are outlined in paragraphs 3 and 4.

### 2-2 PARTS REPLACEMENT.

Figure 1 lists all replaceable parts of the 16094A. To identify the locations of the individual parts listed, refer to the exploded view. Do not disassemble any further than shown in the figure.

To order the necessary replacement parts, identify them by their Hewlett-Packard part number. If a defective part is located in an assembly that cannot be disassembled, order the next higher assembly or return the whole device to the nearest Hewlett-Packard Sales/Service Office for repair or replacement. A list of the Sales/Service Offices is given inside the rear cover.

## 3. REPLACEMENT OF THE APC-7 CONNECTOR CONTACT.

To maintain optimum contact between the APC-7 connector contacts, it is recommended that the RF Connector Contact (HP Part No. 1250-0907) of the center conductor be replaced every 50 connections/disconnections or as required (when damaged or worn). The 11591A APC-7 Pin Replacement kit is required to remove the contact from the connector. The replacement procedure is outlined below:

- (1) Grip the Pin Vise, and fully open the vise chuck by pressing the button on the vise.
- (2) Place the Pin Vise over the center conductor of the APC-7 connector and guide pin into the hole of the contact.
- (3) Close the vise chuck by releasing the button; the chuck will close around the connector contact and extract it from the APC-7 connector.
- (4) Lift the Pin Vise up and away, and remove the extracted contact from the vise chuck.
- (5) Carefully insert the new contact into the center conductor using tweezers. Push the contact into the center conductor with a clean flat-head stick until it is seated.

#### 4. CLEANING APC-7 CONNECTORS.

The APC-7 connector contact surface of the UNKNOWN terminal, terminations and test fixtures must be kept clean, i.e., free of dust, oil or any foreign matter which will prevent good contact. To maintain clean contact surfaces, it is recommended that the operator perform periodic cleaning as necessary. Use a lint-free cloth and, if a cleaning fluid is needed, use isopropyl alcohol.

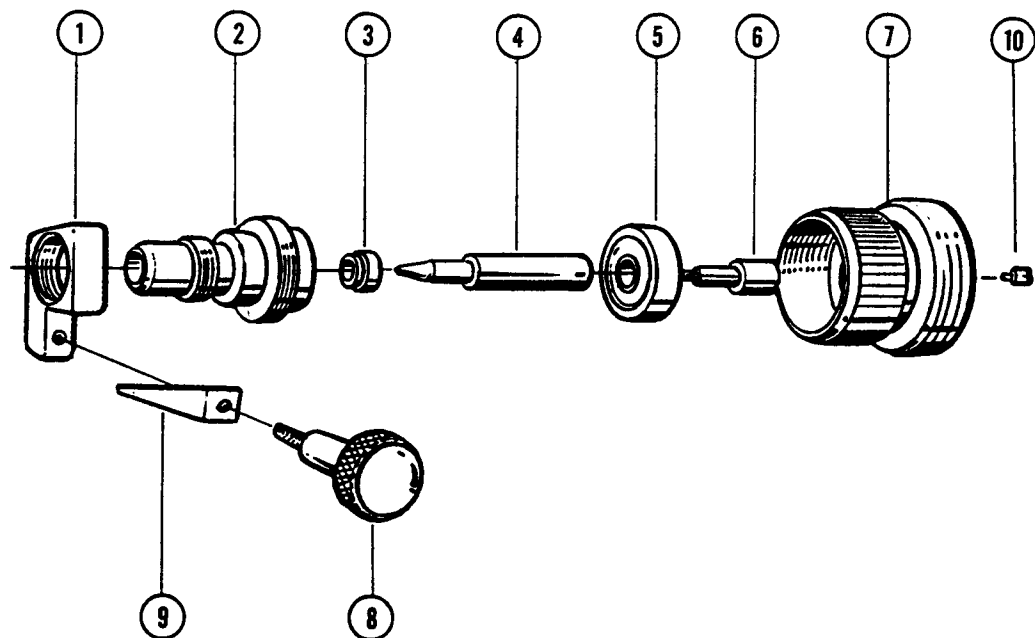
#### CAUTION

Do not use aromatic or chlorinated hydrocarbons, esters, ethers, terpenes, higher alcohols, ketones, or such chemicals as benzene, toluene, turpentine, dioxane, gasoline, cellulose acetate, or carbon tetrachloride. Keep exposure of the connector parts to both the cleaning fluid and its vapors as brief as possible.

#### 5. DESCRIPTION.

The 16094A Probe Fixture is used for measurement of circuit impedances and components mounted on circuit assemblies. The probe adapter unit can be attached at the tip of an extension line connected to the test port. The probe connector fits APC-7 connector of a coaxial test cable or a flexible air line. Probe needle interval is variable from 1mm to 15mm. Electrical length compensation in the instrument must be adjusted for probe cable length.

Usable frequency range: DC to 125MHz.  
Electrical length: 2.32cm (typ.).  
Maximum applied dc bias voltage:  $\pm 40V$ .



Reference	HP Part No.	Qty	Description
1	16094-24002	1	NUT
2	16094-20002	1	HOLDER
3	16094-25001	1	INSULATOR
4	16094-23001	1	PIN
5	5040-0306	1	INSULATOR
6	1250-0816	1	CONTACT-RF CONNECTOR
7	16094-20001	1	BODY
8	16094-24001	1	SCREW
9	16094-09001	1	PIN
10	1250-0907	1	CONTACT-RF CONNECTOR

Figure 1. Parts Identification for 16094A.



Reorder No. or  
Manual Part No.  
16094-90000

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Manufacturing  
Part No.  
16094-90000



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