SERVICE NOTE

Supersedes: HP 8515A-2

HP 8515A TEST SET

All Serial Number Prefixes

PORT 1 and 2 CENTER CONDUCTOR AND OUTER NUT REPLACEMENT

These test sets have 3.5mm connectors that use the small center conductor pins at port 1 and 2. And these pins often wear out or get bent after repeated use. This service note has a figure drawing and a procedure that describes how to repair worn out center conductor pins and the outer nuts on ports 1 and 2. The HP 8515 test sets have triax bridges on both ports 1 and 2. The HP 8513 test sets have the triax bridge only on port 1; port 2 has an attenuator that has the same type of connector assembly as the triax bridge. Therefore, this service note applies to both ports on both test sets.

REQUIRED PARTS AND TOOLS

Parts: Assembly **B** (pin and bead assembly) HP P/N 5061-5355.
Assembly **C** (3 piece outer nut) HP P/N 5061-5389.

Tools: 9/16 inch wrench – 1/10 inch wide (grind down if necessary)
Freon or alcohol and tissue paper

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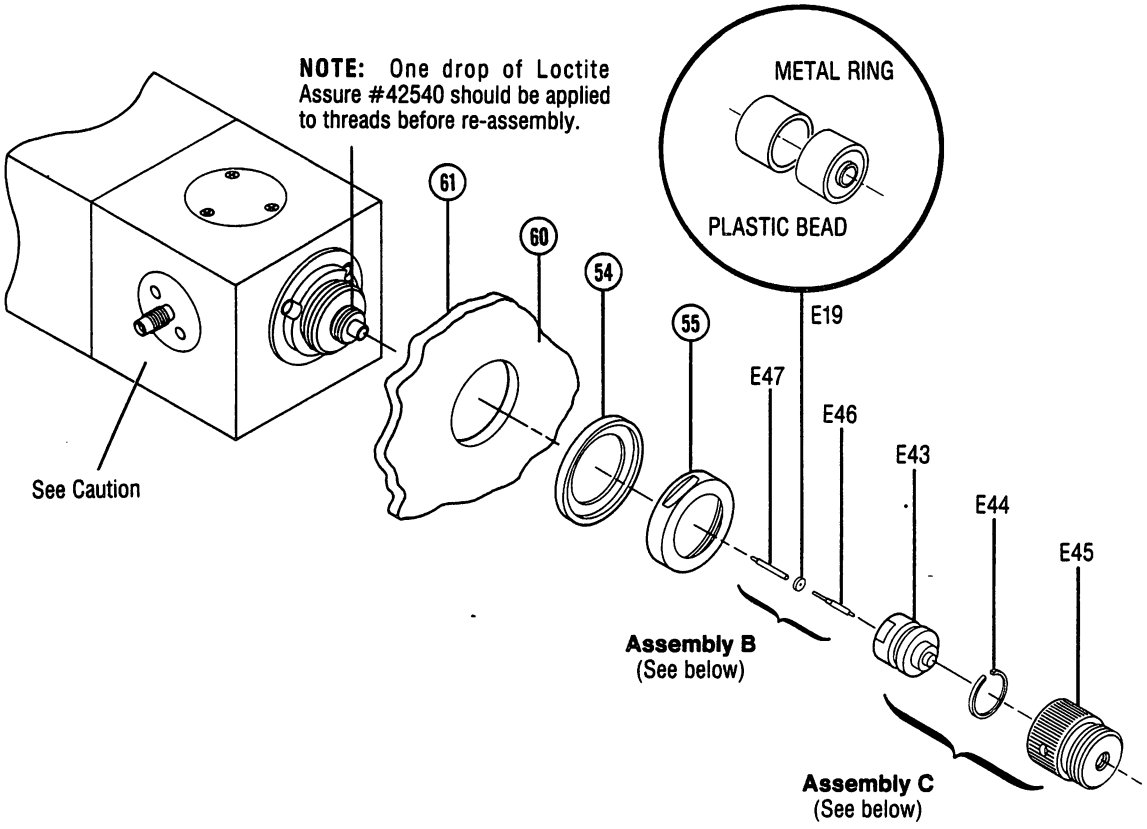
CAUTION

Never open the triax bridge for any reason. Return it to the factory for repair. Only the exterior connections shown here can be replaced in the field.



ASSEMBLY B: These 3 parts are locked together. Replace all three at the same time by ordering Test Bead Assembly HP P/N 5061-5355. Don't confuse the metal ring with a shim.

NOTE: If a 0.001 inch shim is necessary to recess the pin depth, moisten the shim (HP P/N 1531-0298) with alcohol and insert it into the back of E43 so that it seats firmly into the bottom of the bead recess.

ASSEMBLY C: These 3 parts are locked together. Replace all 3 at the same time by ordering Outer Nut Assembly HP P/N 5061-5389. E43 is torqued to 25 in-lbs with a 9/16 inch wrench.

Figure 1. Pin and Bead Assembly and Outer Nut

PROCEDURE

HOW TO REPLACE THE CONNECTORS ON THE 8513 AND 8515 TEST SETS

This procedure is the same for ports 1 and 2 of both the HP 8513 and HP 8515 test sets. Even though the HP 8513 test set does not have a triax bridge behind port 2, the procedure for changing either the center conductor pin or the outer nut is the same.

NOTE: To only change assembly **C** – HP P/N 5061-5389, follow the procedure but do not remove assembly **B** (center conductor) except to clean it and be sure it is not loose or bent.

1. Do not bother to remove the nut flange **55.**
2. Use a 9/16 inch wrench that is 1/10 inch wide (ground down if necessary), and carefully fit it onto the **E43** wrench flats.
3. Unscrew **E43.** This is the same as removing the **C** assembly.

NOTE: Sometimes the outer ring of the bead assembly **E19,** or the entire pin and bead assembly **B** will come off into the **E43** nut. Do not confuse the ring with a shim. The **B** assembly does not require shims. Only some early models used one 0.001 inch shim.

4. Remove the **B** assembly. It should pull out easily.
5. To replace **B** (HP P/N 5061-5355): Do not replace **E46** or any of the three pieces of the **B** assembly separately. When you put the new **B** assembly in, be sure to insert it directly in the center of the receiving end on the bridge (look inside the opening to see how it fits). Remember that the **E47** end is the longer end of the entire B assembly. Be careful not to bend the fingers that receive the **E47** male pin. Also, be sure the **B** assembly is screwed together tightly before inserting it. It is treated with a *lock-tight* compound at the factory before it is screwed together. Also, it is very difficult to tighten this assembly without damaging or scratching it. Use only your clean fingers or tissue paper and be sure it is kept clean (use either Freon or alcohol). Remember that the male end **E46** gets the most wear because of the connections made to the test set.
6. When the **B** pin and bead assembly is properly inserted, you should only see the ring and bead **E19** and the outer pin **E46. E47** will not be showing because it fits all the way into the female bridge connector.
7. With **B** sticking straight out from the test set, carefully replace the **C** nut assembly over the **B** pin assembly. It's difficult to thread **C** on because **E45** spins freely on **E43.** Therefore, put some back pressure on **E45** and start to thread **E43** with the wrench. Try to do it without touching the pin and bead assembly. As you screw it onto the test set, be sure that the **B** pin and bead assembly is not bent or on an angle. If you look into the **E45** opening, the pin should be centered in the opening.
8. If the pin and bead are properly centered, torque the **E43** to 25 in-lb.
9. Check the pin depth of the new assembly. Using a calibrated gage (male gage receives male pin **E46** – see the 3.5mm Cal Kit manual for details), the pin depth should be 0.000 to 0.002 inches. The pointer will probably move around the gage about one and one half times until it comes to a rest. Be sure the gage end is seated flush with the test set port. The pointer will probably reach its greatest deflection if the seating is flush.

FOR MORE INFORMATION, CALL YOUR LOCAL HP SALES OR SERVICE OFFICE or East (201) 265-5000 • Midwest (312) 255-9800 • South (404) 955-1500 • West (213) 970-7500 or (415) 968-9200. OR WRITE, Hewlett-Packard, 1820 Embarcadero, Palo Alto, California 94303. IN EUROPE, CALL YOUR LOCAL HP SALES or SERVICE OFFICE OR WRITE, Hewlett-Packard S.A. / 7, Rue du Bois-du-Lan / Post Office Box 85 / CH-1217 Meyrin 2 / Geneva, Switzerland. IN JAPAN, Yokogawa-Hewlett-Packard Ltd., 1-27-15, Yabe Sagamihara City, Kanagawa Prefecture, Japan 229.

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