11612A/B-01

S E R V I C E N O T E

SUPERSEDES: None

HP 11612A K20 Bias Network
HP 11612A K22 Bias Network
HP 11612B K21 Bias Network

Serial Numbers: Not serialized

Ship Dates: August 15, 1993 to December 14, 1993.

Modification to correct the open DC force path caused by incorrect wiring.

To Be Performed By: Customer or HP-Qualified Personnel

Tools Required:

Ohmmeter
Screwdriver - posidriv #1
Needle nose pliers
Soldering iron
Solder
Solvent to remove excess solder flux

Continued

DATE: 24 January 1994

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION: **MODIFICATION RECOMMENDED**					
ACTION CATEGORY:	☐ IMMEDIATELY ☐ ON SPECIFIED FAILURE ■ AGREEABLE TIME	STANDARDS: LABOR: 1.0 Hour			
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 : End of Support Life			
AUTHOR: DL	ENTITY: 5300	ADDITIONAL INFORMATION:			

HEWLETT PACKARD

Situation:

It is possible that the bias network is wired incorrectly. The wiring error causes a DC open circuit in the path from the center pin of the DC FORCE connector to the center pin of the DC/RF OUT connector. DC biasing of the device-under-test is impossible. The error also causes a leakage path from the center pin of the DC FORCE connector to ground and bias network case. The leakage path has a DC resistance of 51 Ohms.

Solution:

Move the DC FORCE wire to the correct location.

Action:

Check for the wiring error:

A. With an ohmmeter:

1. Disconnect any connections to the DC FORCE and SENSE triax BNC connectors of the bias network.

2. Disconnect any connection to the DC/RF OUT connector.

3. Measure the DC resistance from the center pin of the DC FORCE connector to the outer conductor of the RF/DC OUT connector. Take care to not damage the connectors. The DC resistance should be greater than 10 megohms.

4. Measure the DC resistance from the center pin of the DC FORCE connector to the center pin of the RF/DC OUT connector. The DC resistance should be less than 10 Ohms.

5. If either resistance measurement fails, continue with the visual inspection below.

B. With a visual inspection:

1. Disconnect all connections from the bias network.

2. Remove the six screws attaching the two halves of the case.

3. Separate the two case halves.

4. Check the red wire going from the center conductor of the DC FORCE connector to the force bias tee. The wire should connect to the terminal lug to which a capacitor and beaded wire are also connected. If it is incorrectly wired, it will be connected to the terminal lug to which a capacitor and resistor are connected.

5. If the red wire is incorrectly wired, continue with the wiring correction below.

Wiring correction instructions:

1. Cut or unsolder the DC FORCE red wire from the terminal lug located on the terminal strip mounted on the force bias tee.

2. Connect and solder the red wire to the other terminal lug which has a capacitor and beaded wire connected. Clean off any residual soldering flux that could provide a current leakage path to ground.

3. The final location point will be similar to the location point of the DC SENSE blue wire on the sense bias tee.

4. Confirm the repair by performing the 'Check for the wiring error with an ohmmeter' above. If the resistances are correct, re-attach the case halves making certain that no wires short out to the case.