

MAINTENANCE

The Model 802 MERCURY PROBE requires only minimum maintenance to remain in proper working order. The required procedures are given here.

MERCURY REPLENISHMENT

Turn off any vacuum applied to the probe. Slide the front of the MERCURY PROBE off the edge of the table so that you have access to the two glass vials of mercury that are directly under the measurement platform. Keeping the probe in an upright position, unscrew the two vials of mercury being careful to avoid spillage. Recycle the mercury in an approved manner. Fill two clean glass vials with 1.5 milliliters each of triple distilled, reagent grade mercury and install the vials by screwing them into the threaded holes in the bottom of the measurement platform.

The mercury level in the vials should bring the mercury well into contact with the larger stainless steel capillary tubes.

The two rear vials are used to collect any mercury that is accidentally pulled into the vacuum lines. Under normal use, these vials should always be empty. If mercury collects in these vials, check for proper vacuum level, proper mercury level, and look for damage to the measurement platform.

BACK CONTACT ARM ADJUSTMENT

The back contact arm is equipped with a spring and screw assembly to hold the arm down and to stop the arm from being lifted too high. To adjust the tension on the back contact arm, locate the spring and nut on the underside of the probe casting. Tighten or loosen the nut holding the spring to increase or decrease the back contact arm tension.

GENERAL PROBE CLEANING

If necessary, the measurement platform may be cleaned with water or a dilute solution (50:50) of water and isopropyl alcohol. Never use any stronger solvent like acetone or trichloroethylene, as these may dissolve the platform. If the capillaries are contaminated, remove the mercury vials, and blow the capillaries out with a stream of clean, compressed air or dry nitrogen.

Also, clean the mercury ring contact area. The tip of a cotton swab may be used to clean out this area. If the ring contact area is not clean, mercury droplets can remain after a measurement.

Use clean, compressed air or dry nitrogen to blow off the measurement platform prior to wafer placement to remove any particles. If compressed air or dry nitrogen are not available, wipe off the platform with a dry, clean, soft cloth.