



*Service Note 1092-208*

## **Installing Modified He3 Sample Stage**

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In February 2010, Quantum Design modified the PPMS sample chamber assembly to shorten the pins in the electrical feed through at the puck interface. This change reduces the probability of bending the feed through pins. He3 systems with serial number before HE-170 may not make reliable electrical contact to the pins, resulting in open connections to the He3 sample thermometer and sample wiring. (Normal pucks do not have this problem.) Quantum Design will retrofit He3 systems to work with these new sample chambers.

PPMS sample chambers that have serial numbers starting with "SCF" have shortened pins and require short-pin compatible He3 system. DynaCool PPMS sample chambers all have shortened pins, so DynaCool systems all require short-pin He3 systems were been shipped with shorter pins in the electrical feed, hence all the HE3 options been used or planned to use should have the retrofitting discussed above.

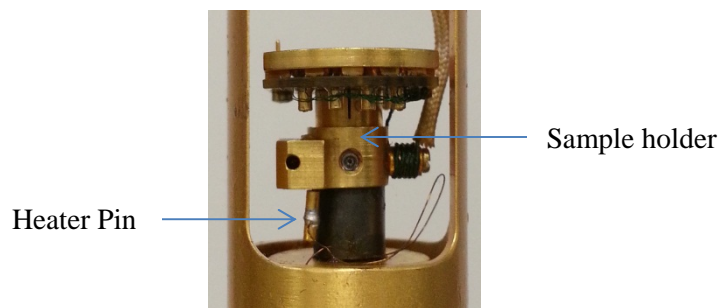
He3 systems with serial number HE-170 or later are compatible with shortened pins. He3 systems with earlier serial numbers must be retrofitted for use with short-pin sample chambers.

In order to retrofit a He3 system to make it short-pin compatible, you remove the He3 sample stage and send to Quantum Design for modification. Follow the instructions below to remove the sample stage and pack it.

Removing Sample Stage Assembly from Probe:

These are instructions for removing a sample stage assembly from the probe.

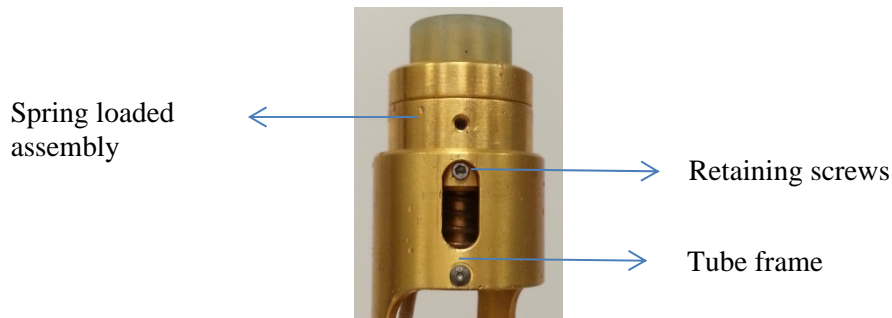
1. Carefully remove the heater wire socket from the pin sticking out of the bottom of the sample holder.



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2. Slightly push the spring loaded assembly down and carefully remove the 3 retaining screws in the three slots of the tube frame.



3. Carefully remove the set screw and the small hex clamp screw.



4. Carefully pull the spring loaded assembly and sample mount assembly from the end of the tube frame. Pay close attention to not damage the sample stage wirings.
5. Securely pack the sample stage assembly and send to Quantum Design for modification.



He3 Sample Stage Assembly



He3 Sample Stage Assembly  
Installed in He3 Probe