



PPMS Service Note 1070-206

Overheating of the Red Lemo Magnet Connector Cable

In early designs of the Red Lemo magnet connector cable, between the magnet controller and the probe head, there has been evidence of overheating in the lemo end of the cable during extensive magnet charging. The heating of the cable can cause it to melt and short the positive and negative lines. This short will then lead to magnet charging problems. Therefore it is crucial to check for signs of overheating in order to maintain proper magnet operation.

The Red Lemo cables that are suspect for producing this problem are REV A and B (Figure 1). Check which REV your lemo connector is by looking for a white label along the cable, which contains both the part number and the REV of the cable.



Figure 1. REV Label on Red Lemo Cable.

If your system has a REV A or B cable, check the cable for overheating. To check for overheating of the Red Lemo cable, ensure the red boot of the lemo connector shows no sign of discoloration or melting due to heat. Figure 2 shows an example of a good lemo connector and a bad one after overheating.



Figure 2. Comparison of Red Lemo cable before (left) and after (right) overheating.

Quantum Design has redesigned the Red Lemo connector to reduce heating in the cable. The Red Lemo cables REV C and D have been modified specifically to avoid overheating.

If your system has the older style cable (REV A or B) and you suspect your cable is showing signs of overheating, contact Customer Service at Quantum Design to have a new replacement cable sent to you at no cost. If there is no evidence of overheating, continue normal magnet operation and periodically check the Red Lemo connector.