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## Comparative Analysis of MAXFAP1b Coils with respect to Magnet Training Behavior.

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MQXFAP1b was the second test of a long prototype quadrupole magnet for AUP which ended with training clearly limited by a single coil (QXFP03). Post testing, an investigation was launched to try and determine what drove the difference in the performance of the limiting coil in comparison to one of the best performing coils (QXFP04). Visual observations were made, followed by electrical testing, glass transition temperature measurements and mechanical measurements. The mechanical measurements showed a substantial difference in coil mechanical properties, with QXFP03 being much more robust than QXFP04, both in terms of coil pack adhesion and coil modulus. Additional coils have also been sectioned and measured to see if there is a correlation between coil performance and coil adhesion.

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