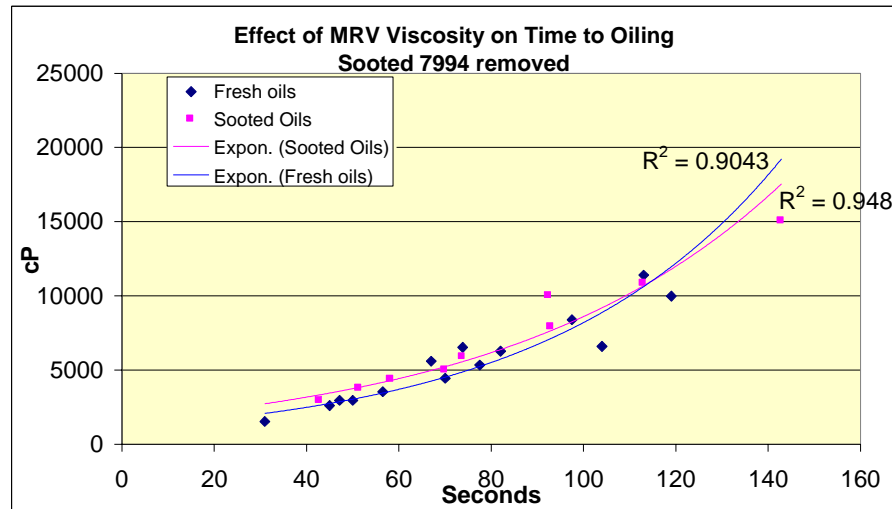
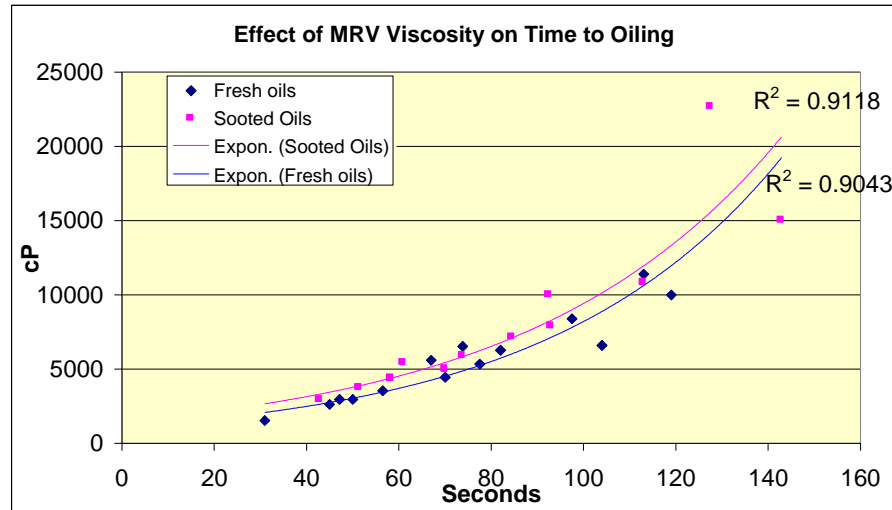


# Correlation between MRV and Time to Oil Pressure



## Relation of MRV Vis to Cold Pumpability in M11 Engine

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- **Cummins Inc. and Mack sponsored cold pumpability work in an M11 engine**
- **Fresh oils were compared to oils sooted to 6.0% to 6.5%**
- **Used oils with low dispersancy showed higher than expected viscosity in MRV.**
- **There is a strong correlation between MRV viscosity by modified ASTM D4684**