

Error Analysis of Center-of-Gravity Measurement Techniques. Society of Automotive Engineers, Inc., Paper no. 950027, Warrendale, Pennsylvania, February 1995. Shapiro, Steven C., Charles P. Dickerson, Stephen M. Arndt, Mark W. Arndt, and Gregory A. Mowry, Arndt & Associates, Ltd.

The height of a vehicle's center-of-gravity (CG) is one factor that influences its handling characteristics. A number of height methods are used to measure CG within the automotive industry. This research determined which method has the greatest potential to produce accurate CG height measurements, given anticipated measurement tolerances.

Several techniques for measuring vehicle CG height were analyzed mathematically. The contributions of various parameters to total error were determined and the total error inherent in each method was then compared.