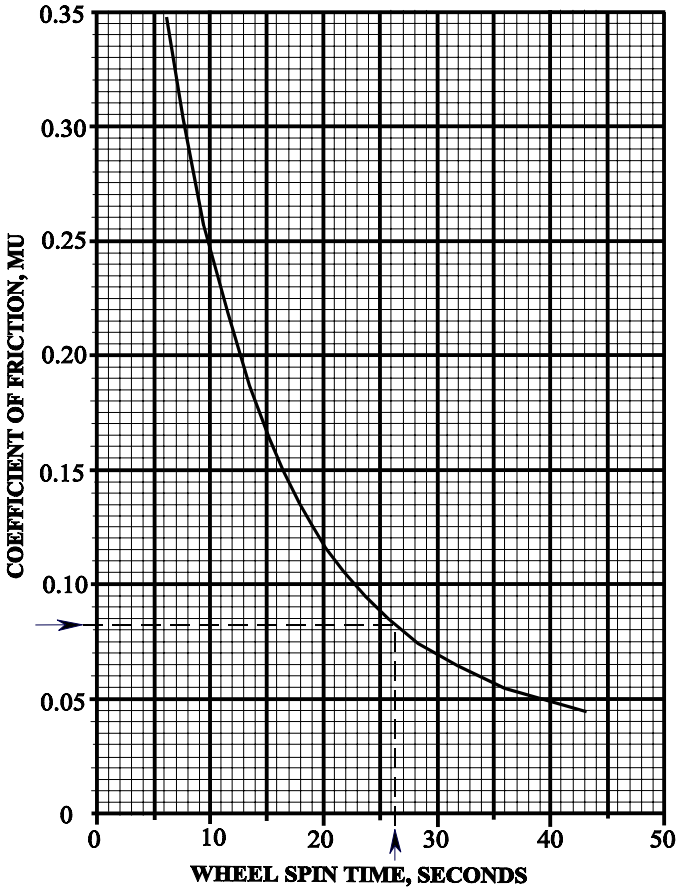
Physics Lecture 18 - Video Showing the Finger Spin Graphite Friction Test

Taken from the **Car Construction E-Book**

This Lecture shows a finger spin video of a wheel/axle that has gone through the lubrication procedure of Lectures 16 and 17. The procedure uses the Speed Package— the bore polish, the axle polish, & the Super Z Graphite to produce low friction. The finger spin method is a good way to estimate a value for the wheel/axle coefficient of friction. In the video (time it yourself) we show visible proof of the effectiveness of the Speed Package products if they are applied according to the directions of Lectures 16 & 17. Careful application is just as important as the products themselves. For the spin time of 26 seconds the graph shows approximately that MU = 0.08. The record for careful polishing & lube is 34 seconds (MU = 0.06).

Click Left on Image to Play



- Note that the Super Z Oil can make the coefficient of friction even lower at high speeds as described in Lecture 13. However, this oil improvement cannot be measured by the Finger Spin method because the oil effectiveness only shows up when the actual weight or loading of the car body is on the wheels at high speeds. A good rule of thumb is take the dry lubricant (graphite) MU finger spin value and subtract 0.01 from it to get the Super Z Oil MU value. Thus, considering the video example of 26 seconds that gives MU = 0.08, then with Super Z Oil, you can estimate that MU = 0.08 - 0.01 = 0.07.