

Virtual Weigh Station WIM Scale Auto Calibration

Overview

In order to ensure the best possible WIM scale performance a regular check of a WIM scale's accuracy must be made. At weigh stations METTLER TOLEDO provides WIM scale auto calibration via a serial link between the static and WIM scale electronics. In virtual (unattended) weigh station locations a direct static scale link doesn't exist. For these applications METTLER TOLEDO now offers an auto calibration feature that provides an automatic and low cost method for checking the accuracy and, if necessary, adjusting the calibration factors of the WIM scale. This feature is currently in place at the Indiana State Route 1 Virtual WIM location that uses METTLER TOLEDO WIM technology.

System Operation

Immediately after an overweight truck crosses the WIM scale an image of the overweight vehicle appears on the patrol officer's laptop PC located in the patrol car, approximately one mile from the scale. The violating vehicle is pulled over and weighed statically using portable wheel weighers. The officer enters the portable wheel weigher readings into the same screen that shows the trucks WIM weight record and an overview image—see figure 1.

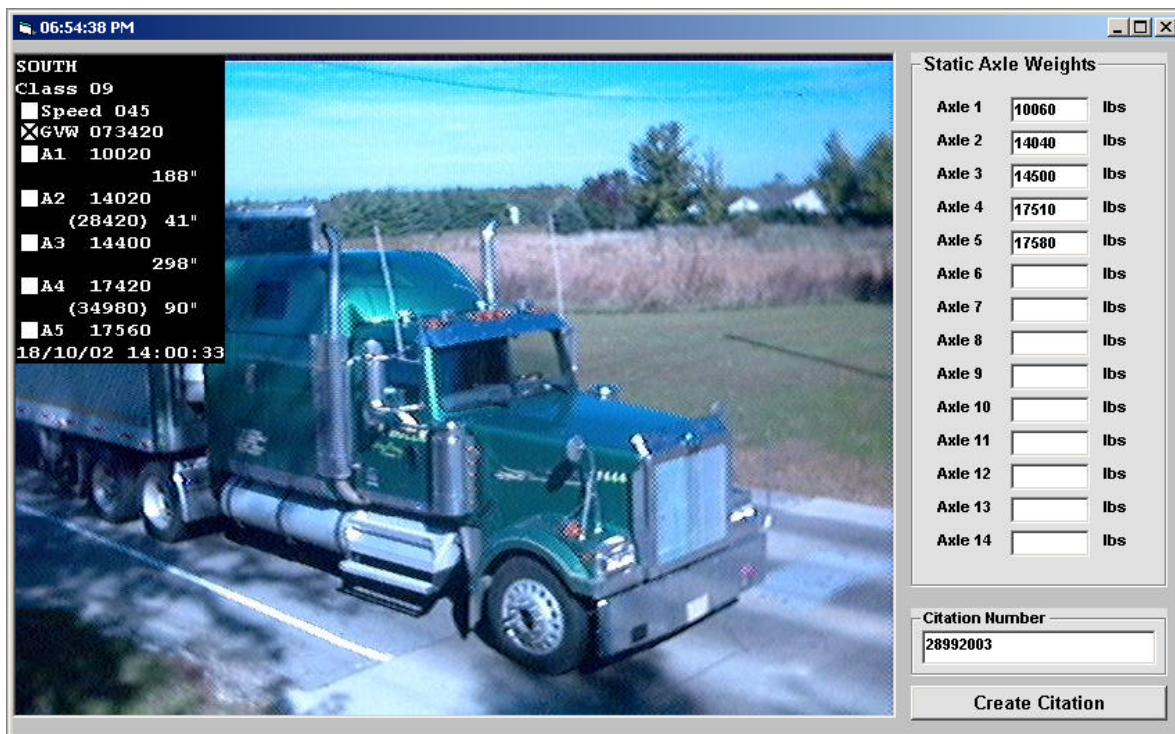


Figure 1

The software also provides a means to generate a printed citation during an inspection. When the weight information has been entered, the officer clicks the *CREATE CITATION* button. A preview copy of the citation is then displayed – see figure 2.

Citation Number: 28992003

***** WEIGH TICKET *****

Location: STATE OF INDIANA SR1 SCALES DOVER DEARBORN CO.
Travel Direction:
Date: Thursday, October 24, 2002
Time: 6:54:38 PM

Weight 1:	10060 lbs
Weight 2:	14040 lbs
Weight 3:	14500 lbs
Weight 4:	17510 lbs
Weight 5:	17580 lbs
Total:	73690 lbs

Print Ticket

Figure 2

If the citation is complete and accurate the inspector then clicks the *PRINT TICKET* button. If the information requires editing, the inspector closes the preview citation window and edits the data.

When the *PRINT TICKET* button is pressed, the citation is sent to a printer and sent via a wireless connection to the WIM electronics near the scale. Once a statistically valid sample of static weights are available for comparison to WIM weights, an adjustment to the WIM calibration factor is made. Any suspect data, possibly caused by incorrectly keyed data or static weighing errors, is discarded from the calibration adjustment data set.