



Natural Resources Conservation Service
210 Walnut Street, Room 693
Des Moines, IA 50309-2180

April 10, 2012

IOWA BULLETIN NO. IA-360-12-17

SUBJECT: PER – TRIMBLE HL 700 LASEROMETER SAFETY CONCERNS

PURPOSE. To notify employees of safety concerns when using the Trimble HL 700 Laserometer.

EXPIRATION DATE. September 30, 2013

A number of incidents have been reported with the laser target mounting bracket supplied with the Trimble HL700 Laserometer. The Iowa NRCS Safety Committee has completed their report of these incidents and determined there is a safety concern.

The report indicates that the mounting bracket clamp does not always keep the laser target mounting bracket securely attached to oval rods. Some problems have been noted with the rectangular rods too. In response to the potential for injury should the target and mounting bracket fall off the survey rod, the Iowa NRCS Safety Committee has developed the following recommendations:

Recommendations to prevent future incidents with the existing equipment:

1. Tighten and check laser brackets often when surveying.
2. Survey with all or most of the rod sections retracted to keep the survey rod short. Surveying with most or all the rod sections extended, especially on long terrace projects, creates fatigue and opens the door to injury.
3. If a tall rod is necessary, provide protection. Employees should have hardhats and safety glasses available for their use.
4. Do not make modifications to original equipment. If equipment does not work as it is designed, remove the equipment from use and request repair or replacement of the equipment through proper channels.

The purchase of new equipment is subject to availability of funds and approval. If the preceding recommendations for existing equipment are not adequate to assure safe working conditions when using laser level equipment, the following recommended equipment improvements may be considered:

1. A top-mounted laser bracket would keep the laser target attached to the rod more securely. The estimated cost of this type of bracket is approximately \$60 each. Different receiver styles require different top-mounted brackets so there may be some variation in cost.

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2. The existing mounting bracket attaches more securely to a rectangular rod than an oval rod. Replacing an oval rod with a rectangular rod would reduce the potential for the laser target and bracket to fall off. The estimated cost for a 17-foot rectangular rod is approximately \$140 each.
3. Augmenting the existing mounting bracket and oval rod with Personal Protective Equipment (PPE) would mitigate the safety concerns. The PPE would consist of a hardhat and safety glasses. Any new hardhats must meet ANSI Z89.1-1986.

Requests for equipment should be forwarded to the area engineer and submitted with equipment needs.

Safety is the first priority as staff performs their duties in serving customers and the public. As with much of our work, one size does not fit all. Each office manager should work with their staff to ensure that equipment is working correctly and make corrections as necessary.

/s/Richard Sims
State Conservationist