

Hitching – Drawbar Connection Stats and Facts

FACTS

1. The two most common tractor-hitching methods use the drawbar or the 3-point hitch assembly. In either case, there can be multiple elements involved in the process including connecting the implement using a hitch pin, adjusting a jack stand, attaching safety chains, connecting the PTO shaft, connecting hydraulic couplings, or plugging in electrical connections.
2. If drivers hitch their trailers properly and drive safely, then accidents involving hitched trailers are unlikely. An improperly hitched trailer is more likely to become detached from the towing vehicle. After a trailer becomes detached from its towing vehicle, it becomes an uncontrolled “missile on the highway.”
3. There are common injuries that occur during hitching like pinch points, crush points, blunt trauma, and run over.
4. Farmers and others who use tractors are at risk for severe injury or death if proper hitching methods are not used when towing or pulling objects with tractors.
 - In a recent article, NIOSH warned that improperly attaching a tow chain to a point above the **tractor's drawbar** can cause tractors to suddenly flip backward. These rear rollovers often result in injury or death.

STATS

- 27 incidents of sudden rear rollover of tractors were documented in New York by NIOSH's Occupational Health Nurses in Agricultural Communities program. Sixteen of these incidents resulted in death. Improperly hitching equipment or material for towing caused the rollovers in 60% of these

incidents. Environmental circumstances such as muddy conditions, wet ground, snow-covered, hilly or uneven terrain may have contributed to some of the incidents.

- In 16 (59%) of the 27 reported incidents, **improper hitching** of equipment or material for towing was believed to be the primary cause of the rollover; 10 (63%) of these 16 rollovers resulted in fatalities. The remaining 11 rollovers were associated with various factors, including ensnaring the towed item on a stump, imbalance resulting from pulling an excessively heavy load, or ascending a steep incline in forward gear rather than backing up the hill; five of these incidents resulted in fatalities.
- In each of the 16 rear rollovers attributed to **improper hitching**, attachment of the tow chain to a point above the drawbar was the principal cause of the rollover. Six incidents occurred while the operators were pulling logs, four while removing stumps, and six while pulling vehicles or implements. Only one of these 16 tractors had been equipped with a ROPS; the operator of this tractor had not been wearing a safety belt and had sustained fractures of the clavicle and humerus after being thrown from the tractor.
- Of the 16 injured persons, 13 were male. One was aged 13 years; three, 20-40 years; seven, 40-60 years; and five, greater than 70 years. All 10 persons with fatal injuries had sustained massive chest and/or head injuries; in comparison, five (83%) of the six persons with nonfatal injuries had sustained pelvic and/or limb injuries.