

FACE Program Alert

Fatality Assessment and Control Evaluation

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Avoid Serious Injury or Death from Manure Spreaders

The Wisconsin Fatality Assessment and Control Evaluation (FACE) program warns farm operators and farm workers to be alert for potential hazards from conventional, V-tank, and liquid manure spreaders. Contact with moving parts of these spreaders has resulted in injuries and fatalities in Wisconsin and other states.

Hazards:

- Becoming entangled in the drive system of the spreader
- Becoming entangled/dismembered in the manure processing components of the spreader
- Being entangled in or struck by components of the mixer during maintenance or servicing
- Being involved in a motor vehicle collision or losing control during transport
- Being involved in a tractor overturn during operation
- Becoming overcome by gasses during pumping and filling liquid manure

Preventive Measures:

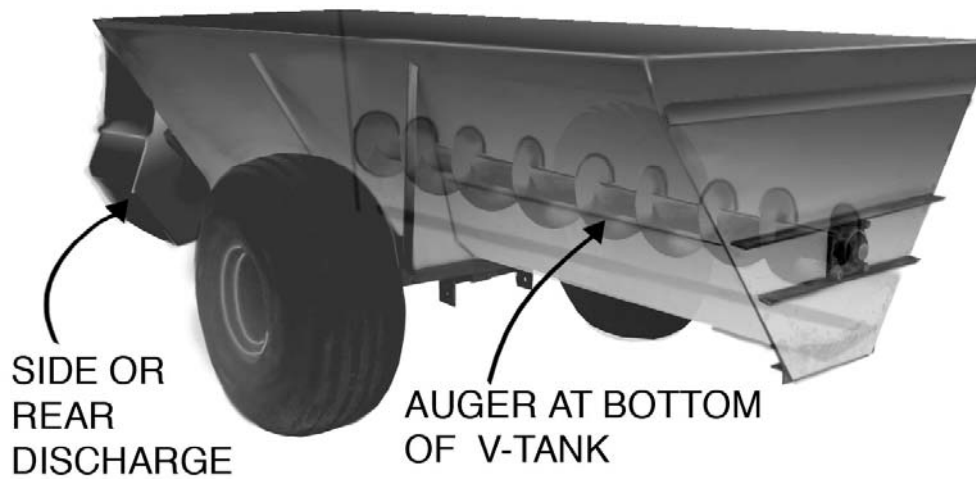
1. Never stand on or above a spreader while it is running, or on the wheels, a platform, or anything else alongside at a height where they could lean over and fall in. In 2003, a Wisconsin farm worker fell into a slowly running V-tank spreader while standing on a wheel to scrape down the sides, and was entangled in the auger and killed (see Wisconsin FACE Report 03WI001 on the NIOSH FACE website, <http://www.cdc.gov/niosh/face/WIFACE.html>).
2. Shut off and lock out all power to prevent entanglement or unexpected startup prior to any cleaning, maintenance, or service activities. This means shutting off the tractor engine and removing the key to prevent it from being started. The incident described above would not have resulted in death or even serious injury had the machine been shut off prior to scraping. This is absolutely critical during cleaning or servicing, when another worker might be unaware that anyone is working on the spreader and could start the tractor. (For more information on

lockout procedures, see DHHS (NIOSH) Publication No. 99-110, “ALERT: Preventing Worker Deaths from Uncontrolled Release of Electrical, Mechanical, and Other Types of Hazardous Energy.”)

3. Block or lock all moving components that could move or rotate freely and cause injury or death prior to servicing. This would include augers, beaters, doors and regulating gates, and arms on hydraulically-supported transport tailgates.
4. All shields over power transmission components must be in place and functioning properly during operation. This includes shields over side shafts, chains and sprockets, belts and pulleys, gears, and any other power transmission components. Many operators have lost arms or have even been killed when becoming entangled in unshielded side shafts running the length of conventional box-type spreaders. It also includes power take-off (PTO) driveline shielding, the tractor PTO shield, and the implement input connection (IIC) shield, where the driveline connects to the spreader. These shields are intended to prevent contact with the rotating shaft, attachment mechanisms, universal joints, slip clutches, and other driveline components. In 1999, a Wisconsin farmer died after becoming entangled in an unshielded PTO driveline following a repair.
5. Avoid falls when climbing inspection ladders or when scraping the sides. Ladders attached to spreaders should be kept clean, and good portable ladders used when needed to reach other areas. Do not stand on wheels. Non-slip footwear should be worn.
6. Treat tanks on liquid manure spreaders as confined spaces containing toxic manure gas, and never enter without proper ventilation and confined space entry procedures.
7. Follow good preventive maintenance procedures, such as keeping apron chains in good condition, to prevent malfunctions that require in-field service or other contact with the spreader. This also prevents the need for manual unloading. Keep tires properly inflated and in good condition.
8. Do not allow operation by untrained operators, or by young workers lacking the mental and physical skills needed to recognize and safely handle unexpected or hazardous situations. Good judgment is required, and lack of judgment can result in injury or death. Proper training, and periodic retraining and review, are important. Trainers should always read and understand the operator’s manual and train workers to follow the manufacturer’s safety instructions. [Note: As with all powered farm equipment, federal labor laws apply to operation of manure spreaders by children under age 16 on farms other than those operated by their parents or legal guardians.]

This is a general list of hazards and injury prevention measures and is not meant to cover every possible circumstance. Individual operations, facilities, systems, machines, or situations may have unique hazards, and it is the responsibility of the farm operator or manager to be aware of such hazards and take appropriate action.

V-TANK MANURE SPREADER



The Wisconsin Department of Health and Family Services, in agreement with the National Institute for Occupational Safety and Health (NIOSH) conducts research on occupational fatalities. The Fatality Assessment and Control Evaluation (FACE) Program focuses on identifying factors that increase the risk of work-related fatal injuries. The Wisconsin FACE Program helps in the development and use of improved safety measures for preventing fatal work injuries.

PLEASE POST

FACE information is produced and distributed to provide current, relevant education on methods to prevent severe work-related injuries.

If you have any comments or questions, please call the FACE Project at 608-264-9879, or write:

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