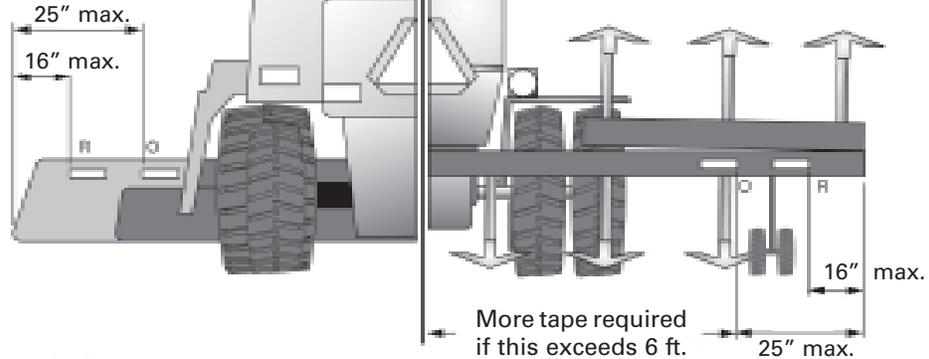


How to use reflective and fluorescent tape to increase visibility

Red reflective tape (R) for night visibility is near *outside edge* of equipment.



This shows correct placement of tape on a combine (left) and a tractor towing a field cultivator (right), with a slow-moving vehicle emblem in the center. Equipment

that is wider than about 17 ft. may need additional strips of reflective and fluorescent tape so they are spaced no farther than 6 ft. apart. All tape must be visible from the rear.

Reflective and fluorescent tape

Road safety is a critical issue for farmers. As people move to rural subdivisions, farm equipment gets larger, and farm operations include fields in numerous locations. The key to a farmer's safety on the road is being able to be seen by other motorists both during the day and at night.

The American Society of Agricultural Engineers (ASAE) has recommendations on the use of reflective and fluorescent tape to increase visibility of farm vehicles. Although not currently required by Iowa law, the tape can be used on the rear and front of tractors and farm equipment. The tape is in addition to the familiar slow-moving vehicle (SMV) emblems and lights required for vehicles that travel less than 35 miles per hour on public roads in Iowa.

What is reflective and fluorescent tape?

Look for self-adhesive tape, sold either by the roll or in precut strips 2 inches tall and 9 inches wide. It is designed to be mounted horizontally on farm equipment. Tape that meets the ASAE standard (S279.16) lasts longer and reflects more light than traditional marking material.

The red and yellow tape is retroreflective and visible at night. Orange tape is fluorescent and visible in daylight. Only red and orange tape should be visible from the rear of a tractor, implement, or farm vehicle. Yellow tape is reserved for visibility for front and sides of vehicles.

When should it be used?

ASAE suggests reflective and fluorescent tape for:

- Farm vehicles more than 12 ft. wide (Farm vehicles are tractors and self-propelled machines such as combines, as well as towed or mounted and semi-mounted implements) and
- Farm equipment that extends more than 6 ft. from the center line of the tractor or vehicle by which it is towed. This could include tillage equipment, planters, sprayers, and fertilizer or manure applicators.

Equipment operators may want to consider using reflective tape on narrower vehicles, such as wagons, mowers, or utility tractors for an extra measure of safety.

Where should tape be mounted?

1. Place a strip of red reflective tape near the left and right outside edges of equipment. The red tape should be no more than 16 inches from the extreme left and right projections, visible from the rear.
2. Just inside the red tape, place an orange fluorescent strip. The orange tape must be no more than 25 inches from the extreme left and extreme right projections, also visible from the rear.
3. On the front of the vehicle, place yellow reflective tape near the left and right outside edges of equipment. The yellow tape must be no more than 16 inches from the extreme left and right projections, visible to oncoming traffic. Yellow tape may also be used on 16 ft. intervals along the side of an implement to indicate length.
4. Make sure red and orange strips on the rear of the vehicle are no more than 6 ft. apart and mounted on a horizontal line. The SMV emblem may substitute for reflective strips in the center of the vehicle; however, additional strips may be needed on implements wider than about 17 ft.
5. Reflective tape is to mark the extreme projections of equipment. Although red and orange tape must be visible from the rear of the vehicle, it may not always be mounted on the rear of the vehicle. For example, red and orange tape that provides rear marking on a combine may be mounted on the back side of the cornhead if the head protrudes much beyond the sides of the combine itself. Likewise, yellow tape must be visible from the front of the vehicle, but it may not always be mounted on the front. Make sure yellow tape is used on the front of a tillage implement if its width extends more than a foot beyond the tractor or vehicle that pulls it.

Other questions?

The cost to mount reflective tape and replace the SMV emblem is about \$10 to \$20 for each farm vehicle or implement. Ask your local farm equipment dealer or farm supply outlet about these reflective materials. Reflective materials also can be ordered from safety supply catalogs, but make sure it meets the ASAE standard (S279.16).

For more information about road safety for farm vehicles, check out these publications available at any county extension office:

- *Sharing the Road with Farm Vehicles*, PM 1629;
- *Use SMV Emblems for Your Safety*, PM 1265j, and
- *Reduce Farm Accident Risks on Roads*, PM 1563e.

AE 3104 Revised May 2013

This publication was prepared by Mark Hanna and Charles Schwab, agricultural and biosystems engineers. All information is based on standards set by the American Society of Agricultural Engineers and American National Standards Institute.



This is a project of Safe Farm, an Iowa State University Extension and Outreach program helping to make Iowa farms a safe place to live and work.

Find more Safe Farm information on the web at www.abe.iastate.edu/.

... and justice for all

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue SW, Washington, DC 20250-9410, or call 800-795-3272 (voice) or 202-720-6382 (TDD). USDA is an equal opportunity provider and employer.

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Cathann A. Kress, director, Cooperative Extension Service, Iowa State University of Science and Technology, Ames, Iowa.