

# MAFES Dawg Tracks

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MISSISSIPPI STATE UNIVERSITY™  
MS AGRICULTURAL AND  
FORESTRY EXPERIMENT STATION

Securing Loads

The proper loading, positioning, and securing of cargo in a truck or on trailer can prevent accidents in transit. Securing a load properly is the key element to prevent cargo from coming loose and damaging equipment or causing harm to you and other drivers on the road.

MS code 63-5-55 states “No vehicle shall be driven or moved on any highway unless such vehicle is so constructed or loaded as to prevent any of its load from dropping, sifting, leaking, or otherwise escaping therefrom...”

## Assess Load Type & Devices

- Know the weight of your cargo & select a restraint system to secure it based on the working load limit of each device.
- Manufacturers offer a variety of tie-downs, blocks, braces, etc., for securing cargo, but tie-downs are the most frequently used. Tie-down assemblies may consist of rope, chain, cable, or webbing as well as ratchets, binders, bolts, or hooks. Never base your selection on price. The most important criteria are strength and durability.
- Remember the weakest component determines the entire assembly’s limit. We commonly think of the webbing, chains, & hooks, but don’t forget about other components. Vehicle structures, floors, walls, decks, tiedown anchor points, header boards, bulkheads, stakes, posts and associated mounting pockets used to contain or secure articles of cargo must be strong enough and not reduce the working load limit.
- Never load unsecured items on the backseat or interior of the vehicle. This can cause the load to hit passengers or the driver when the vehicle comes to a sudden stop. As much as possible, use a compartment or tool box to keep small items secure in a vehicle. You could possibly even take advantage of an empty seatbelt.

*For more info contact – Leslie Woolington*  
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Sources:

49 CFR 392.100-136;  
<https://www.safetyservicescompany.com/topic/equipment-and-vehicles>  
<https://www.extension.purdue.edu/extmedia/PPP/PPP-75.pdf>

## Restraint Positioning

- Cargo securement must be capable of withstanding forces applied rearward (under acceleration), forward (under deceleration and so cargo will remain on vehicle, not penetrate operators cab), lateral (acceleration, like from side impact), and vertical (downward with force of at least 20% weight of cargo).
- It’s best to always use at least 2 tiedowns.
- Use one tie-down for every ten linear feet or fraction thereof for articles greater than ten feet.
- When hauling equipment (tractors, loaders, bulldozers, or such operating on tracks/wheels) that weighs more than 10,000 pounds:
  - Accessory equipment must be completely lowered and secured.
  - Equipment on articulated vehicles shall be restrained to prevent any change of position during transit.
  - Equipment must be restrained against movement by using at least 4 tiedowns; 2 tie-downs each must be affixed as close as possible to the front and as close as possible to the rear of the vehicle being transported, or to specifically designed mounting points on the vehicle.
- Understand how to safely tension & release tiedowns. Do not use cheater pipes, only hand tighten. When using chain binders, be careful of kick back and secure the handles from popping loose during transport.

## Maintain Restraint Devices

- Keep devices clean from debris.
- Inspect frequently for excessive wear, bent hooks, stretched chain, holes or tears in webbing, broken cable strands, damaged ratchet & binder components.
- Remember to also inspect anchor points for damage.
- Ensure chains & webbing are free of knots or kinks, as this can decrease their strength.

## Check the Load Frequently

- When on the road, stop frequently to check your cargo. This is all the more necessary when traveling long distances.