

Trailer Statutes Summary 2012

Junior Agricultural Mechanic - JAM

- A. MAXIMUM WIDTH – Texas Transportation Code 621.201 and 23 CFR 658.15 and 658.16**
- B. TIRES – 49 CFR 393.75**
- C. BRAKES – Texas Transportation Code 547.08 and 49 CFR 393.42**
- D. LIGHTING – 49 CFR 393.11,12,13 and Texas Transportation Code 547.352**
- E. SAFETY CHAINS – Texas Transportation Code 545.410 and 49 CFR 393.71**
Additional Safety Chain requirements are found in Texas Administrative Code, Title 37, Part 1, Chapter 21, Rule 21.7
- F. Other Requirements and Recommendations identified on our JAM Premium List and *Trailer Check Sheet*. Also check the *Trailer Rules and Codes* HTM presentation on our WEB site. A *Trailer Construction Guide* is also posted on the WEB.**
- G. TRAILER INSPECTORS**

Information and Instructions for accessing Codes and Regulations

Information provided below is a summary of relevant State “Texas Transportation Code” and Federal “Federal Motor Carrier Safety Regulations – FMSCR” statutes for Trailers shown at the Junior Mechanics Mechanic (JAM) Project show in San Antonio. We will abide by the Texas Code in most cases but will also include provisions in the FMSCR. We will identify the Federal Codes as CFR Code of Federal Regulations. We have identified which codes are applicable below.

This summary is not exhaustive. Exhibitors are responsible for researching and applying those codes and regulations that apply to their trailer project.

The JAM Premium List – Special Rule 18 provides specific requirements and suggestions that apply to trailers shown at JAM, for example: no Agricultural Exemptions are allowed. The *Trailer Check Sheet* found on the JAM WEB site <http://jamshow.org> also identifies additional criteria Trailers Inspectors and Judges will use in evaluating trailers.

There is a link Texas Transportation Codes under *Helpful Links* to the Texas Transportation Codes on the JAM WEB site.

EXAMPLES: How to search for Maximum Width in both State and Federal Codes. You may use these same search procedures illustrated below to search for other State and Federal codes as well.

Under **A. Maximum Width** in the Summary below we have identified both Texas Transportation Code 621.201 and Federal Code 23 CFR 658.15 and 658.16.

1. State Code Example. Texas Transportation Code 621.201

For example when searching the Texas Codes relating to maximum trailer width the following procedure can be used.

Click on the Texas Transportation Codes link found on the jamshow web page. The Texas Constitution and Statutes Home Page will appear.

By knowing the Chapter 621 and Section 201 you can do a quick search to find code using the search window at the top of this Home Page

1. **Code** – click on down arrow and scroll down to Transportation Code and click on it. (Transportation Code will be inserted on the line)
2. **Article/ Chapter** – click on down arrow and scroll down and select CHAPTER 621.
3. **Art/ Sec.** – click on down arrow and select 201
4. Click on **GO** (Starts the search)
5. **Maximum Width will appear in SUBCHAPTER C. SIZE LIMITATIONS.**

“(a) The total width of a vehicle operated on a public highway other than a vehicle to which Subsection (b) applies, including a load on the vehicle but excluding any safety device determined by the United States Department of Transportation or the Texas Department of Public Safety to be necessary for the safe and efficient operation of motor vehicles of that type, may not be greater than 102 inches.”

Another method for searching - If you do not know the Chapter or Section you are looking for but you are interested in finding codes related to *Maximum Size* you can scroll down through this home page :

TRANSPORTATION CODE

TITLE 7. - VEHICLES AND TRAFFIC

SUBTITLE E. - VEHICLE SIZE AND WEIGHT

CHAPTER 621. - GENERAL PROVISIONS RELATING TO
VEHICLE SIZE AND WEIGHT.

(Note: this document is available in three formats a) Adobe PDF, b) text and c) Word doc. Select the format you are the most familiar with by clicking on it.)

Scroll down through this *Transportation Code* document to SECTION 621.201 which is under SUBCHAPTER C. - SIZE LIMATIONS.

2. Federal Code Example United States Department of Transportation (Code of Federal Regulations) 23 CFR 658.15 and 23 CFR 658.16

You can search for these by entering 23 CFR 658.15 and 23 CFR 658.16 in your search window in your browser. This will take you to the specific codes alluded to. For example when measuring width we will exclude safety devices and items such as license plate hangers, and non-property carrying devices or components as identified in Title 23 CFR 658.16.

Summary of Important State and Federal Transportation Codes pertaining to Trailers shown at JAM

Our Trailer Inspectors and Judges will use those codes identified below. We will also elaborate or include specific clarification - interpretations of the code.

We will also be posting on the Jamshow web site a *Trailer Construction Guide* which will address some of the design and construction issues of building a trailer.

A. MAXIMUM WIDTH – Texas Transportation Code 621.201 and 23 CFR 658.15 and 658.16

Maximum width of a vehicle operated on public highway **may not be greater than 102”** It does not state where that measurement is to be taken, so one must assume it is at the widest point, whether it be tire bulge or fender width. CFR 658.16 does exclude safety devices, such as a tail light bracket, license plate hanger etc. No safety device can extend more than 3 inches on each side. Code also excludes tire bulge if it is load induced. Note: If the total width of trailer measured at the tire bulge is 102 ½ inches, when showing at JAM, it is over width because it has no load (weight) on it.

B. TIRES – 49 CFR 393.75

Tires must have at least a 2/32nd tread depth at a major tread groove. They must meet and match load capacity of the trailer or be greater than. Tire specifications must match at the least the trailer weight carrying specifications. Section D of Documentation and Research in Special Rule 16 in JAM Premium List requires Manufactures specifications for trailer undercarriage components including axle load capacity. Tires must meet or exceed this Gross Vehicle Weight Rating (GVWR) GVWR is based on axle rating.

C. BRAKES – Texas Transportation Code 547.08 and 49 CFR 393.42

Brake requirements for trailers: If trailer weight exceeds 40% of weight of the towing vehicle it must have brakes, in addition brakes are required if GWR (gross weight rating) is heavier that 4500 pounds.

Because code requirements are based on weight of the towing vehicle we have clarified the code for judging purposes as follows:

Basically if you have a trailer with one single axle with a carrying capacity or 3500 pounds, but the total weight of the trailer and its load does not exceed 40% of the weight of the towing vehicle, you do not need brakes. If you have a dual axle trailer with 2- 3500 pound GVWR rated axles, it must have brakes, because the total GVWR will be 7,000 pounds.

If the trailer is required to have brakes it MUST have a break-away breaking system capable of holding the brakes for a minimum of 15 minutes.

All trailers with a GVWR of 4,500 up to 15,000 pounds are required to have brakes on the back or drag axle.

All trailers with a GVWR of 15,000 pounds and over are required to have brakes on all wheels except tri-axles and only 2 axles are required to have brakes.

Dual tandem axle trailers must have mud flaps that are no more than 8 inches or less than 4 inches from the roadway and cover the width of both tires.

D. LIGHTING – 49 CFR 393.11,12,13 and Texas Transportation Code 547.352

The best summarized source for Trailer Lighting requirements is found in a link [Trailer: Federal Lighting Equipment Requirements](#) on the Jamshow web page. The *Trailer Inspection Sheet* also found on the web page identifies lighting and reflective requirements that the JAM judges use when inspecting a trailer.

Some of these rules are explained below:

On trailers of 80 inch width of wider, reflective tape must be 100 % across the back of the trailer and 50% along the sides.

All sizes of trailers must have stop lamps,(red only) and turn signal lamps(red or yellow) Rear reflectors,(red), one on each side of rear of trailer, each as far apart as is practicable. License plate light (white) above or on the side of license plate.

Trailers 30 feet or longer must also have intermediate side marker clearance lamps (yellow) each side of trailer.

Trailers 80 inches or wider must also have rear clearance lamps (minimum of 2 and red) at widest point on the rear or near the rear facing rearward as high as practical. Rear identification lamps (3-red) on rear center horizontally spaced 6" to 12" apart, facing rearward. There must be front clearance lamps (2 – yellow) at widest point-symmetrically on the front or near the front facing forward as high as practical.

On trailers of more than 80 inches in width and greater than 10,000 pound GVWR - example –dual tandem axle goose neck type) or more it is mandatory to also have

Rear Upper Body Markers, (see below) Bumper Bar Markings (red & white conspicuity tape) , Rear Lower Body Markings, (also red & white conspicuity tape covering 100 % of rear. Side conspicuity tape must cover at least 50% if both sides.) Red conspicuity tape must not be any closer than 75mm to the edge of any amber lamp and the edge of white tape no closer than 75mm to the edge of any lamp.

Rear Upper Body Marking. Stock Trailers and Cargo Trailers 80 inches or wider and GVWR of 10,000 pounds or more are to have two pairs of 12 inches wide 90 degree angle markers mounted on upper rear corners facing rearward.

Smaller trailers must have reflectors on front, side and rear as required by NHTSA.

You must follow the National Highway Transportation Safety Administration lighting requirements, (quoted above) It is the responsibility of each entrant to indulge themselves in learning these regulations.

E. SAFETY CHAINS – Texas Transportation Code 545.410 and 49 CFR 393.71

All utility type trailers, gooseneck style trailers and cargo enclosed type trailers must have at the minimum of 2 safety chains of sufficient strength to carry a loaded, to capacity trailer, without allowing the trailer to fall on the ground, and must be of sufficient length to allow for a safe turning radius.

Additional Safety Chain requirements are found in Texas Administrative Code, Title 37, Part 1, Chapter 21, Rule 21.7

Chains “shall not be directly welded to the towed vehicle...” (trailer). They may be attached to steel brackets - rods – rings - loops (that are greater in diameter and tensile strength than the chain) which can be welded to the trailer, or they may be attached by grade eight bolts or pins of sufficient size to meet necessary requirements. Bolt attachment must be reinforced or of such strength to sustain the load placed on it if hitch comes free. Washers if used must be of sufficient thickness to keep bolt from pulling through chain loop. Any device used to fasten the chain to the trailer must have a higher load capacity than the chain.

F. Other Requirements and Recommendations identified in our *Premium List and Trailer Check Sheet*. Also check the *Trailer Rules and Codes* HTM presentation on our WEB site. A *Trailer Construction Guide* is also posted on the WEB.

- Trailer Jacks
- Fender Clearance above tire
- Tie Downs (D Rings)
- Serial Number or Vehicle Identification Number
- Color Codes of insulated wires and grounding of wiring harness.
- All trailers towed to show must have license plate – may be farm tag
- No other Agriculture exemptions are allowed for trailers

G. TRAILER INSPECTORS

This Document was prepared by JAM Trailer Inspectors. All trailers exhibited at JAM are pre-inspected at Gemblar prior to going to Show Barn

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