Welcome to the Podium Club!
The information found at www.antiquetractorpullguide.com is like no other information out there. The tips, tricks and secrets of successful tractor pulling are designed to improve your performance at the next tractor pull, while having more fun at the same time.

Podium Newsletter
December 2010

Fabricated Brackets and Cross Section Strength
Often times with antique tractor pulling there is a need to fabricate custom hitches, weight brackets, platforms and so on. The load bearing structural components like hitches and weight brackets need to be strong enough to carry the loads involved with pulling, yet light enough to save weight in the overall machine. This is why there is no sense in using 6” wide x ½” thick steel plate on a 3000lb pulling tractor; it’s just too much.

Here are common cross section shapes that are used for fabrication, each are available in common sizes at any steel yard.

Flat stock, probably the most common material
Angle
Channel
Square Tubing
Fabricated Brackets and Cross Section Strength (cont)

Let’s look at examples of front weight bracket fabrication using each type of cross section.

Ford 800 – notice flat stock used for front weight bracket

John Deere G – channel used for main beam support in front weight bracket
Fabricated Brackets and Cross Section Strength (cont)

Minneapolis Moline U (red nosed) – angle used for front weight bracket

Allis Chalmers WD – square tubing used for main beam support in front weight bracket

(more pictures of this type of bracket in November 2010 newsletter)
Fabricated Brackets and Cross Section Strength (cont)

What are advantages of using one type of cross section over another? Sometimes it depends on the tractor and the mounting areas available, other times it rides on weight or multi-use fabrications such as a place to store the battery in the front weight bracket.

Flat stock used on edge works great and is very strong, but often times will need lateral (side to side) support, especially in long brackets.

Angles and Channels don’t need as much lateral support and are very strong, although sometimes are not used in favor of cleaner looking flat stock. Angles and channels work very well for hitches.

Square tubing is strong against bending in all directions and can be used as a single beam.

The real trick is being able to optimize brackets for weight – that is make them strong enough to not bend or break, yet light enough to save weight. Using aluminum in favor of steel can save a significant amount of weight but often times costs much more and is not as easy for the “do-it-yourself” sort of person to fabricate.

Interesting enough, it doesn’t take huge cross sections to produce good strength. In the case of the MM ZA, the front weight bracket is made from 2-1/2” x ½” thick steel. It is more than enough, even when putting several hundred pounds on the bracket in the 5000lb class.

The Massey Harris 444 hitch main beams were made from 5” x 3/8” thick steel. Since the vertical section is so tall, it has great strength.

Most metal suppliers will have charts that show weights (in lb/ft) for different size and shaped stock. This makes it very easy to choose a good size for the application.
What are stock tractor pulling classes?

From the beginning of antique tractor pulling there has always been a debate over what is “stock” and what is not. This is the very reason why so many rules, classes and divisions have been brought into the sport – mainly to give everyone a place to pull.

The very definition of “stock” varies from place to place, thus adding to confusion. Are aftermarket parts allowed? What about OEM upgrades, combine engines and so on? These are the questions that usually arise, mainly to keep the competitive atmosphere “fair” for all.

What about a “pure stock” class? This, in its very definition would be tractors literally out of the barn. No modifications are allowed, which means no weight brackets, no custom hitches, no oversized or altered tires, and certainly no major engine modifications. Believe it or not, in some places classes like this do exist. For pulling in these type of classes, the principles presented in The Antique Tractor Pull Guide become even more crucial. If no add on weights are allowed beyond factory type weights, it becomes more difficult to balance and compensate for different track conditions. Different types of factory weights (wheel weights, frame weights, etc) may be found to give a little bit more adjustment. The same restrictions exist for hitch location and hitch height. With limited adjustment, it’s even more important to pay attention to the overall configuration on a given day. Some manufacturers had hitches in different locations than others. This could be an advantage, although long, low drawbars were fairly common.

What about a Farmall pulling off the stock drawbar loop? Ah yes, and this is where controversy begins, and why the birth of modern day rules has taken over in most areas of the world. Rules are meant to seemingly level the playing field for all competitors. By standardizing hitch location, weight location, tire size & modification, and ground speeds, it opens up a little bit more room for adjustment and calms the cries for a fair competition.

There is change in the air this time of year, mainly for clubs that pull in the summer months. Often times there are wintertime meetings in which rules are reviewed, opinions are heard and any changes are documented for the
What are stock tractor pulling classes? (cont)

following pulling season. Recently in many areas of the country, USA Puller (USAP) rules seem to creep into more pulls every year. The main reason USAP rules have picked up popularity is that they have fewer rules than many other places. But how could fewer rules benefit a pull?

The best thing about USAP rules is that they purposely have not defined what is “stock” and what is not. Engine upgrades and only engines that are a direct bolt in are allowed. This ends the debate about what parts are allowed for some makes and models but not others. So how do they keep it fair for everyone? The answer is with speed limits and tire rules. There are several different ground speed classes that are regularly run at their pulls. This allows folks to enter 3mph, 4mph, 6mph, 8mph or 12mph classes, or any combination of thereof. For tractors that are “barn fresh” or mildly rebuilt, there is a class to pull in – 3mph. The slowest class also has the strictest tire rules. For tractors that are considered “modified” with big engines & full cut tires, there are also classes to pull in for their drivers that crave more speed.

The greatest part is that there is no longer a debate about “what so and so did to their tractor”. If the tractor falls into the physical rules (hitch, weight location, tires) and adheres to the speed limit, then they are allowed a legal hook. With rules like this, most folks are a little more willing to share what they’ve done to their tractor, give recommendations, or even encourage others while at the pull. It also promotes different skill levels of pulling, from beginner to advanced to top end.

Think rules like this won’t work? Think again. The Tunica Southern Nationals were conducted recently at the beginning of December in Tunica, Mississippi. The Mean Green Pulling Team has adopted rules very close to the USAP rules and their pull is now the largest, most successful pull in the country with over 400 tractors entered and over 1200 hooks total.

To sum up, if the very definition of “stock” is always a debate in your pulling club, consider a set of rules such as USAP rules. To review their rules, visit www.usapuller.com. Also, to visit the rules used at the Southern Nationals, visit www.meangreenpulling.com.
Winter Project update

Here are pictures showing the wheels featured in last month’s Podium Newsletter mounted on the Massey Harris 101 Twin Power. Again, the tire size is 15.5-38.
Winter Project update (cont)

The Chrysler 265 flathead engine is now mounted on a movable stand and is ready for the test fire. Stay tuned for the “first start” video posted at www.antiquetractorpullguide.com.

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For more information, contact Zack at zack@antiquetractorpullguide.com
Quick Guide to Winterizing Your Tractor

With the wild weather across the country, most pulling tractors are parked this time of year. Here are a few tips to keep your tractor in top shape for next season:

Park the tractor inside or under cover out of the elements.

Relieve the weight from the rear tires. This will prevent flat spots in tires or old, seasoned, weather checked tires from cracking further. Also, if air leaks out of the tires during the winter, the sidewalls won’t be damaged if the weight is off of them. Remove all added weights used for pulling such as suitcase weights.

Drain out fuel, or put in fuel stabilizer such as Sta-Bil. This will keep carburetors, fuel lines and valves from gumming up. It’s an easy thing to do and remember – disassembling the fuel system and cleaning everything while you’re supposed to be loading up for the first pull of the season takes more time! Closed fuel systems such as diesel injection is less susceptible to the fuel going bad over one winter, but fuel stabilizer is a good idea here too.

Disconnect and remove the battery. Store the battery in a warm, dry place such as a garage shelf. If possible, leave it hooked up to a trickle charger that turns off when the battery is fully charged. This will ensure the battery is up when it comes time to fire up the tractor in the spring.

If the tractor has electronic ignition, no winterization is required. A points system may need to be covered or sealed to prevent moisture from corroding the points.

Finally, put some sort of drop cloth or cover on the tractor to keep dust and/or bird droppings off while in storage.

Kick back, relax and patiently wait for another great season!
It’s Almost Here…

The Antique Tractor Pull Guide: Ground Speeds

What’s inside:

• Ground speeds for most makes and models featured in The Antique Tractor Pull Guide.

• Ground speeds shown with respect to different RPM and different tire sizes.

• Ground speeds shown in every gear from near idle to full RPM, including USAP and NATPA allowed RPM’s.

• How to figure ground speeds for any tractor at any RPM, allowing for cut tires & lower tire pressures.

• Ground speeds for gearing variations including creeper gears, ring & pinion changes, M&W 9 Speed transmissions, Sherman transmissions and more!

The most anticipated action guide that EVERY PULLER should have!

Win Snap-on tools! Here is the official Snap-on ½” drive socket set that will be given away on January 19th, 2011. Enter the drawing today simply by getting a copy of The Antique Tractor Pull Guide or the brand new Antique Tractor Pull Guide: Ground Speeds at www.antiquetractorpullguide.com

Coming next month…

- How to beat the winter blues
- Tires and speeds, oh my!
- Winter project updates
- And more…

January issue will be available 1/26/11

I want to hear from you! If you have feedback, requests or information you would like featured, please send an email to: zack@antiquetractorpullguide.com.

Podium Member Randy Kerr on his Allis Chalmers D-17 with 16.9-38 tires.