Podium Premium Newsletter

Nov-Dec 2014

Welcome to the Podium *Premium* Club!
The technical information found at *www.antiquetractorpullguide.com* is like no other information out there. In depth explanation of the **how and why** of successful tractor pulling are designed to improve your performance at the next tractor pull, while having more fun at the same time.

Farmall Fabrication

One of this month's features is some fantastic fabrication from Cliff Stugart of Cogan Station, Pennsylvania. For those avid readers of the newsletter, you may recall that Cliff visited the West Coast last summer and I had the honor of meeting him and his wife in person. Cliff is a devoted puller, favoring Farmall tractors and has travelled many miles to compete, especially on the NATPA circuit. He has a tough Super C that was the 2013 points champion in the 3250# Div III class. Always a fountain of knowledge, Cliff has shared some pictures of further enhancements he recently made to his Super C to help keep him on the podium.

Cliff's 1951 Farmall Super C

Farmall Fabrication (cont)

The biggest change was Cliff's front weight bracket. His old bracket hung weights around 10 feet in front of the centerline of the rear axle. Per NATPA rules, the furthest point forward that any part of the tractor may extend is 11 feet. After reading The Antique Tractor Pull Guide and deciding he needed to make a change, Cliff fabricated a brand new front weight bracket to allow weights to hang 1 foot further forward. This yields a little more adjustability, especially in the lightest classes pulled. Interestingly, Cliff elected to abandon his lightweight aluminum weight bracket and fabricate out of light 3/16" thick steel.

Cliff's original front aluminum front weight bracket

Starting with the basics, Cliff used thin pieces of flat stock to form the main beams.

The rear of the beams attach to the bell housing with welded on tabs.

Farmall Fabrication (cont)

Correctly sizing the length of the bracket so that the end of the weight sits just shy of 11 ft from the center of the rear axle.

Notice there is a secondary weight bracket for smaller weights, an integrated battery tray and strengthening ribs on the inside forward of the visible red bolt. The cross beams where the weights hang also have round bar on top and bottom for added strength.

Farmall Fabrication (cont)

This view shows the added tabs with cross bars to keep weights secure.

A nice coat of Farmall red to make it pretty. Total weight is 75 lbs

Farmall Fabrication (cont)

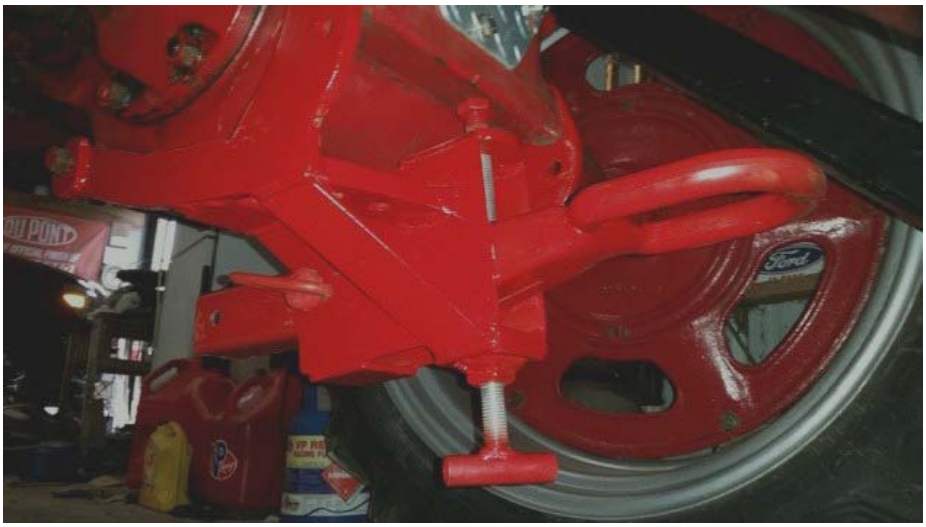
Here is the finished product. Notice the diamond plate battery cover, black painted weight retaining rods and the added stickers. The result is a longer, more effective weight bracket that relocates the battery from under the fuel tank. As many know, Farmall Super C's tend to be light in the front end and according to Cliff he has come up against some tough tracks that will fill his front weight bracket nearly full of weights. This weight bracket is 60lbs heavier than the old one, but it's where it's needed.

Farmall Fabrication (cont)

One other fabrication that Cliff completed recently was the hitch for his Super C. Below is a picture of the newly fabricated hitch (on the left) based on an original drawbar support frame (on the right). Cliff was able to save 18 lbs by reworking this hitch!

Notice the integrated height adjustment from below and the cross pin for adjusting the drawbar length.

See page 12 for how to contact Cliff.



Allis D12 weight loss and power up

Since putting the narrow front under the Allis D12 project, it has sat waiting its turn for attention. The first order of business was removing any and all heavy parts that are not needed for a pulling tractor. On the D12, it's the rear end parts including the 3pt hitch, drawbar frame, hydraulics and fenders where the weight is at. The most interesting part about this exercise is the amount of weight that is removed. By carefully weighing all components that are unbolted, a good estimate can be made when it comes to fabricating the hitch, weight brackets and wheelie bars to complete the final pulling tractor.

Here is a breakdown of the parts removed:

Hydraulic rams, 3pt arm, tool box = 96 lbs

Top link bar & link = 65 lbs

Drawbar = 36 lbs

Fenders = 48 lbs

Drawbar support = 65 lbs

Snap coupler = 62 lbs

Total weight removed = **372 lbs**

Everything on the tractor

Hydraulic rams, 3pt arm, tool box = 96 lbs

Snap Coupler

Allis D12 weight loss and power up (cont)

The power up recipe is rather simple for the D12, at least for the next couple of seasons. The stock engine is a 138 cubic inch four cylinder and I was lucky enough to find a low hour rebuilt 149 cubic inch engine from a D14 tractor. Since these engines share the same block, the swap is very simple. The one upgrade to original equipment is the clutch. Since the tractor now sits on 13.6-28 tires, I wanted to make sure the clutch wouldn't slip since it is a lighter duty 9" disc. The neat thing is that aftermarket clutch pressure plates and discs are available, even in a heavy duty version. In fact, for this tractor I bought a heavy duty pressure plate assembly with high spring rate and a button disc to go with it. A **button clutch** has smaller pads that are made of ceramic material that hold higher torque than a conventional organic disc. The trade off is in the ease of actuation; where an organic disc can slip and smoothly engage, a button clutch is much more abrupt. The particular button clutch disc bought for the D12 has a spring center in it, which will give engagement somewhere between an organic disc and a solid button disc.

At right is the old clutch (top) and the new clutch (bottom). Notice the light colored 4 buttons on the new clutch disc.

Allis D12 weight loss and power up (cont)

The D12 before engine swap

G138 Engine Removed

G149 Engine

Allis CA drive shaft to use as a clutch alignment tool

Surfaced flywheel installed



Allis D12 weight loss and power up (cont)

Bell housing cleaned and new release bearing installed

Clutch installed, notice CA shaft used to align disc with pilot bushing

Special studs for the front end

Studs installed into front of engine block

Tractor reassembled



A fast trip

In mid November I decided to buy another tractor – a Case 211b. It's sort of a follow on model to the VAC for those who are familiar with Case tractors. This tractor will not be a pulling tractor but the trip to get it was a fast one. The tractor was located in a remote town called Bieber, California which is on a high plateau on the east side of Mt. Shasta in the north of the state. With an unusually cold and icy morning, I chose to drive the I-5 freeway to California, round the south of Mt. Shasta on Hwy 89 through McCloud and out to Bieber. In all, the trip down was 392 miles. I took off very early before dawn, arriving in Bieber just after 12pm. After driving the tractor around for a few minutes, I loaded it, shook hands with the previous owner and hit the road. It was about a 20min stop. The temperatures warmed during the day and I decided to head up the east side of the mountains where the drive is much flatter. It took almost 3 hours just to get to Klamath Falls, Oregon and I just felt like driving. I made it over Willamette Pass around 4:30pm just as it was getting dark and temperatures were just above freezing.

Sometimes you have to put the hammer down

I finally arrived home at 6:15pm and I had left at 5:55am, which means I drove 730 miles in 12 hours and 20 minutes. In doing the math, at any given moment during the day I was traveling at an average of 59.2 mph !!!

Pausing briefly for a photo with the 1958 Case 211b

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Coming up…

- Picking pull dates
- Engine mounting 101
- The steering project
- And more…

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.

January Newsletter available 1/28/15

Cliff Stugart is a guy that really loves tractor pulling. He is a great resource and helps promote pulling wherever he goes. Cliff also does a bit of engine work, fabrication and tire cutting. To chat about tractors, pulling or fabrication, Cliff can be reached at 570-220-2726.