

History of Tractor Pulling

It all started many years ago in the USA when neighbouring farmers argued about which had the most powerful tractor. These debates were finally decided by contest in the farmyard, chaining the tractors to a large weight, and seeing which tractor could pull it the furthest. It was soon found that the amount of weight required to provide a good test of strength was too much to allow the tractors to get moving in the first place. A system of progressively increasing weight was needed. This was developed first into spectators stepping onto a barn door, and, later into the weight transfer sled similar to that used today.

Tractor Pulling Today

Tractor Pulling crossed the Atlantic in the late 1970's and is now seen across Europe, both at stand alone events and agricultural shows.

The BTPA (British Tractor Pullers Association) is the sanctioning body for Tractor Pulling in the UK. The object of the sport is to pull a weight transfer sled as far as possible along a 100m track. Those that reach the full 100m 'Full Pull' mark, return to a heavier sled, and make a pull off run in order to determine a winner. The ability of the competitor depends not solely on power output, but also his ability to read the track, in order to balance his tractor optimally.

The Sled

The sled has developed into a very sophisticated weight transfer machine, which provides an effective range of load settings for each different class. On the top rails of the sled is a weight box, which is linked via chains and gearboxes to the front axle of the sled. At the start of the run, the weight box is positioned at the back of the sled over the twin axles. As the tractor pulls the sled down the track, the weight box is automatically driven up the rails towards the front end of the sled.

As the weight box moves up the length of the rails, the effect of its weight is lessened on the sled wheels, but begins to increase its effect on the large skid pad at the front of the sled. The weight of the box progressively increasing down on the skid pan increases the friction with the track and hence exerts increased drag, up to 96tonnes dead weight in the biggest classes.

The Classes

In the UK, there are three main classes in competition, Prostock, Superstock and Modified Tractors.

Prostock

Prostock Tractors are based on original farm tractors, and must contain the original engine block, transmission casing and rear axle casing. In the UK, Prostocks are separated into two classes of engine size limits, 401cid, and 510cid, as run in Europe. Modifications are limited to one turbocharger (albeit of any size) and diesel fuel must be used. These machines use water injection into the engine, in order to keep the pistons cool and prevent them from melting. This also increases the density of the air, allowing more air/fuel to be burned. The top machines in the Prostock class burn

approx 1.5 gallons of diesel in a 10second run, and about the same amount of water, with boost pressure of around 80-100psi.

Superstocks

Superstock tractors, as with Prostocks, must maintain the original engine block. They are allowed up to four turbochargers, and are also allowed to switch to methanol fuel. This produces a much longer, colder burn, allowing in excess of 3000hp to be obtained from a 6cyl. Engine block. The colder burn of methanol allows the tractors to run 'dry block.' Aluminium pistons and rods are used in order to obtain high rpm's, and many tractors also have billet aluminium cylinder heads in order to obtain greater flow. Methanol tractors, or alkyburners, can be easily identified by the clear burning exhaust, as opposed to the black plumes created from the diesel machines.

Modifieds

Modified Tractors are run at three different weight classes, 2.5, 3.5 and 4.5ton. They are basically allowed any combination of engine, gearbox and rear axle, and some engine limits to keep competition as fair as possible. Engines range from truck engines, tank engines, and V8 drag racing engines to the 27litre V12 Allison engines, and the 381 RR Griffon used in the Shackleton Bombers of WWII. With combinations of 5xV8s and 3xV12s, in excess of 8000hp can be fitted onto 4.5ton.

For More Information

For more information on the sport, please visit the Association Website www.tractorpulling.co.uk or visit one of the events this season, which can be seen below.

2nd May- North Somerset Show, Bristol
18/19th June- Carmarthen Tractor Pull, Wales
2/3rd July- Heddington and Stockley Steam Fair
17th July- Great Ecclestone Show, Lancashire
12/13th August- Yeovil Festival, Somerset
27/28th August- European Championships Great Ecclestone, Lancs