

Massy Ferguson TEA-20 HIGH Compression Pistons



One might ask, why would you want to put high compression pistons in a Ferguson TEA-20?

I would ask, why not? Let's start with, I hate waste. If I am going to put fuel in the tank, why should I not get the optimum amount of power out of the fuel and I certainly won't get that with the low compression standard pistons. My quest started during the rebuild of my little grey Fergy.

I found the original compression on a TEA-20 is 5.77-1 compression ratio and a paltry one degree of ignition lead and with 1850 cc of displacement it produces a paltry 20 horsepower. Being performance minded I could not fathom why the original engine would only have 5.77-1 compression. Even in 1948 the fuel

quality was more than adequate for heaps more compression to optimize the power of the fuel being consumed. A bit of pondering left me with the conclusion that the factory did this so the engine could be hand cranked. I will state right now that if my tractor won't start on the new 12volt starter I have on it now I sure as hell am not going to hand crank it so why should I not have more compression. I know the Standard Vanguard engine the little grey Fergy is the same engine used in the Triumph TR2 sports car which has 8.5-1 compression so at first it seemed logical to just get a set of high compression Triumph pistons only to discover they too were flat top just like the original Fergy pistons. So it seemed like the cylinder head must have smaller combustion chambers so I tracked down a used Triumph cylinder head and it does have smaller combustion chambers for the higher compression but it also has much bigger ports for the higher rpm range the sports cars has while the Fergy has a maximum engine rpm of only 2200 making the much smaller ports on the tractor cylinder head much more desirable for the tractor application. Don't even mention the \$1600.00 they wanted for a used cylinder head. So we are destined to keep the original cylinder head on the tractor.

So it seemed like getting a set of forged custom made pistons was the answer. So I had a set of custom pistons produced by a custom racing piston manufacturer. I took a mold of the combustion chamber and with it locked to the piston I supplied them with a sample of what the piston and combustion chamber was. It was from this we designed the piston we are using today. The original pistons were a cast piston and strong enough for that application but for our purpose we used a piston forging to start with our pistons.

The result is that little Fergy has enough power to easily pull a mower designed for a 40 horsepower tractor. When you start the engine you immediately know this is no little stock grey Fergy, as it sounds like it has much more beans. It worked so well I wanted to offer them to everyone.

There are two size engines for the Fergy, one is the original 1850cc engine with a original bore of 3.150" and the later engine which is 2088cc with 3.346" bore. We supply both engines with a .020 oversize bore. You can purchase cylinder sleeves for the later 2088cc engine which will have the original bore of 3.346" so we can supply pistons for that application as well. No rebalancing is necessary on a four cylinder engine. The piston rings that come with the piston set are custom file fit rings that have to be fitted to the bore. The piston set comes with new wrist pins and lock rings too.

A little tune up tip is to advance the distributor a few more degrees to utilize the better fuel we have today and the higher compression of your new pistons. Take your crank handle and hang it up in the shed because you won't be using it now. **Delivery is 5-7 weeks as they are special order.**

Ferguson Forged Piston HIGH Compression set of four with rings, pins and lock rings -

1850cc 3.150" bore + .020 PN 39547-18020 \$950.00

2088cc 3.346" bore + .000 PN 39547-20000 \$950.00

2088cc 3.346" bore + .020 PN 39547-20020 \$950.00



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