

Tyre Pressures

Ferguson TE20 series / TO20 & TO30 / FF30 series / FE35 / MF35

On small Tractors, such as those above, rear tyre pressures are most important if you wish to be able to obtain maximum traction when operating implements on the 3 point linkage. While the Hydraulic system, if it is in good order and set correctly, will assist the traction, it requires the Tyre pressures also to be correct for the conditions in which you are operating.

Tyres that are too hard will not clean themselves and soon clog up the tread with mud and then they won't be able to grip. Tyres that are too hard will only grip on the centre of the tread, a maximum of a couple of inches; this will depend on how high the tyre pressures are. **The normal pressure of rear tyres is 12lbs. psi** and running at this pressure will, in most instances, give maximum traction unless the ground is wet.

If the ground is wet or slippery then it is often beneficial to lower the tyre pressures to 10lbs psi or even 9lbs psi in extreme conditions. What you want from a tyre to get maximum traction is that the tyre makes contact with the ground over as large an area as possible, lowering the pressure will allow the tyre to be flat on the bottom where it sits on the ground, so instead of maybe a couple of inches in contact with the ground, it will now be across the full width of the tyre, from this you will be able to see that the traction has got to be greatly increased, and combined with the Draft Control, the Tractor should be quite capable of handling much bigger loads than previously but with much more ease. It is important that the outer ends of the bars on the tyre tread are in digging into the ground to enable the Tractor get maximum grip.

If you look at any Tractor and see that the centre couple of inches of the Rear Tyre are worn then you can assume that the tyre pressures have been too high, this will cause excessive wheel spin and no matter how good the Draft Control System, you just will not get the traction. The more the wheel spins the faster the tyres wear out and if the tread is more than 1/3rd to 1/2 worn then it will no longer be efficient when ploughing and really the tyres need changing to restore full traction, when using a tiller or cultivator the problem will be even worse.

When using a conventional plough, you very often find that the left hand rear wheel will try to spin as there is not enough weight on it. To overcome this, drop the pressure on this left rear tyre to about 9lbs.psi, this will give the tyre more contact with the ground and improve traction. You should restore the pressure again once you start other work.

Often the claims a model of tractor is poor because it won't pull, is something that is usually greatly over exaggerated by an operator who never checks his tyre pressures, sometimes it is unnecessary that ballast will even be required when the tyre pressures are set correctly for the work and ground conditions involved, just take the time to set the pressures and it will pay dividends by saving time and fuel and wear on the tyres.

If the tyre pressures are set too low for the load carried then the tyre walls will flex too much and then heat will be generated and failure will follow, so never drop the pressures below 9lbs.psi and this has to be for working under very wet conditions, with this pressure never travel at speed or the heat will be generated even faster. Any lower pressures than this can allow the tyres to "creep" under load on the rim, and this will break off the tyre inflator valve.

When operating ground breaking implements i.e. a plough or cultivator etc. then you should only use the lower gears and never travel too fast forwards as this has an effect on the Hydraulic system that will defeat the Draft Control when it tries to give you more traction. Travelling too fast forwards, with a ground breaking implement, will send excess pressure down the Top Link and move the Control Valve to the overload position where it no longer provides any traction. By travelling too fast the excess load down the Top Link compresses the Draft Control Spring at the rear of the

driver's seat, and it allows the Control Valve to move beyond its normal working range this causes the oil to be dumped from the lift cylinder and therefore no added weight from the implement is placed on the rear wheels to aid traction and the Tractor will just sit there and spin its wheels, this is what it is supposed to do, it is a safety device should the implement strike anything below ground and it will prevent damage, but it is not what you need when you are trying to work the ground. The remedy is to slow your forward speed and this will reduce the load down the top link to the Tractor and it will restore traction once again. If the wheels are spinning when you are working with the hydraulic Draft Control then there is something wrong and it should be investigated. It is vital that tyres are never inflated to more than the recommended pressure or you can NEVER expect to get a good grip.

Tyres that do have water ballast should never be completely filled, if you do, this is the same as having the tyres inflated too hard, they just will not flex and will only be in contact with the ground on the central couple of inches, this defeats any benefit that you may normally get from water ballasting. The wheels should not be filled beyond the recommended maximum of 75%, this will allow the tyre-walls to flex and the tyres to grip properly.

The engine revs should be between half and three-quarter throttle when working; this is the most economical speed range, too many revs can cause wheelspin.

Slow the Engine speed right down when you have to manoeuvre at the end of the field or in the yard, this saves wear and tear on the Clutch and also helps prevent accidents should your foot slip off the pedal.

WARNING

Tyres that have cracks in the sidewalls should never be over inflated or run under inflated as there is a danger that the cracks will increase in length and make the tyres unusable

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NEVER tow using the Top Link Connection on the tractor, it is set far too high and will make the tractor unstable if pulling a heavy load. If at the load end it is pulled from a low point this could make the tractor rear-up as the traction will be increased and it may cause the tractor to flip over backwards crushing the operator.

**It can also cause serious damage to the hydraulic Draft sensing mechanism.
THIS APPLIES TO ANY MAKE OR MODEL OF TRACTOR**