

Is this machine the ultimate 'systems tractor'?



Jim Breen | Nov 26, 2017, 2:00pm



Here's an interesting contraption (pictured above) from **Syn-Trac**; the manufacturer reckons that it's the ultimate 'systems vehicle'.

The company hopes that it will appeal to all manner of users, including **agricultural contractors**. Other potential users include forestry and municipal companies.



Among its 'claims to fame' is its ability to automatically '**dock**' (attach) with another powered (driven) axle.

It can also automatically 'couple' up to another power unit (connecting "seamlessly" to the main vehicle via the PTO).



It also has a relatively **low centre of gravity**, thanks to the siting of the engine and transmission.

It's possible to quickly '**dock**' with (or decouple from) the assembly that comprises the rear linkage and PTO output shaft.



The manufacturer claims that the vehicle is a world's first, in terms of overall versatility. But is it practical?

Key Numbers

Empty, the machine tips the scales at **10.3t**.

It's powered by a **420hp**, 9.3L CAT C9.3B six-cylinder engine. It meets EU Stage IV emissions regulations, thanks to **DPF** (Diesel Particulate Filter), **DOC** (Diesel Oxidation Catalyst) and **SCR** (Selective Catalytic Reduction) technology.



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The engine is mated to a **continuously variable transmission** – a hydro-mechanical, power-splitting unit. The so-called ‘slow’ driving range is from zero to 60kph; the ‘fast’ mode runs up to 80kph. In either guise, the machine reaches its top whack at a fuel-sipping 1,500rpm.



The axles are from Tatra; they incorporate independent suspension – an active, hydro-pneumatic system. Maximum axle loading – for each of the two axles – is a hefty 10t.



The Syn-Trac runs in permanent 4WD. The standard vehicle is a 4X4 machine; it can be configured as a 6X6 driveline (when an additional axle is 'docked').



In 4X4 guise, there are multiple **steering modes**, including: front-wheels only; four-wheel steering; and crab steering.

The braking system is from Wabco; it's an air-based approach, incorporating **ABS**.



The hydraulic system is fed by a load-sensing, axial-piston pump; maximum output is 180L/min (at 210 bar). The vehicle is home to six double-acting valves; the hydraulic tank can hold 120L.



1,000rpm PTOs are standard. There's also a 24V/125A electrical (output) connector. The machine is 2.55m wide; it stands 3.4m high. Depending on tyres, it spans 4.7m in length.



Syn-Trac is based in Austria. It attended the recent Agritechnica exhibition in Germany, where it unleashed a display unit to, mostly, unsuspecting show-goers.

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