

MULTI FARMING SYSTEMS

NEW! Sensor Tine System for Multiplanters from Multi Farming Systems

Achieve massive reductions in fuel consumption by controlling the pressure to Multiplanter hydraulic tine assemblies. This is over and above the savings achieved by depth controlling the digging tip! Designed in conjunction with Beasley's Hydraulics of Bundaberg, Queensland, Australia.

A bit of history.....

Multiplanter tine assemblies do not need a great deal of pressure for optimal efficiency. However, in a manual system, this pressure is set by the tractor driver. Farmers are familiar with their own country and learn how to use their system to maximum efficiency over time, but contractors in new paddocks and inexperienced farm labourers do not have the benefit of this experience. The sensor tine system takes out all the guesswork by maintaining a constant 50 PSI under the press wheels across the entire Multiplanter.

In order to understand how the system works, it is important to understand how the Multiplanter tine assembly is designed. Each individual hydraulic tine unit includes a parallelogram depth controlled press wheel and digging tip for precision seed placement. The press wheel and digging tip access the same pressure from the hydraulic system, and the digging tip always "wins". If the tine encounters some very tough country, it will need more pressure to maintain a consistent depth, and therefore "steals" pressure from the press wheel.



▲ Multiplanter tine assembly with 2" (50mm) spertip.

As a result, the press wheel may have less than optimal pressure available to it to compress correctly. Conversely, when going through a very soft patch, the tine will ease off, which means the excess pressure in the system may cause the press wheel to press harder than the farmer would prefer.

The sensor tine system is designed so that the pressure under all of the press wheels is maintained at a constant 50 PSI – regardless of the requirements of the digging tip. As the digging tip requires more or less pressure, the system automatically adjusts the pressure in the system up and down.



▲ Load sensor pin fitted to the master hinged press wheel fork.

Sensor Tine System General Features:

- Load sensor pin fitted to a single hinged press wheel fork to control the entire machine.
- Hydraulic manifold mounted to the Multiplanter to control operations, with a consol in the tractor cab to monitor operations.
- Electronic to hydraulic system automatically sends a signal to the tractor to adjust the oil flow which adjusts the pressure available to the system.
- Hook into power beyond ports to leave all the remotes free for other uses such as autosteer and for the air cart.
- Pressure automatically locks in the system when the machine is lifted. This

ensures the pressure isn't increased as the master press wheel is lifted off the ground.

- System automatically switches back on when the machine is lowered back into the ground.
- Additional functions can be used to fold wings on flat fold Multiplanter models.
- Easily bypassed with a standard pressure gauge and hydraulic hoses so that any malfunction doesn't hold up planting operations.
- Can be fitted and retrofitted to any configuration Multiplanter.
- Fit sensor tine system for additional power and fuel requirement savings – over and above the savings achieved by depth controlling the digging tip.



▲ Hydraulic manifold mounted to the Multiplanter.

Sensor Tine System Customer Feedback

80ft (24m) Multiplanter with 48 Multiplanter tine assemblies sowing 4" (100mm) deep. Cat Challenger 75, 340hp.

Without Sensor	With Sensor
85% tractor power	53% tractor power

POWER SAVING OF 38%

100ft (30m) Multiplanter with 60 Multiplanter tine assemblies sowing 9" (228mm) deep to find the moisture. Very heavy going through tough country.

	Without Sensor	With Sensor
Metric	5 litre / ha	3.5 litres / ha
Imperial	.54 USgal / acre	.38 USgal / acre

FUEL SAVING OF 29%

160ft (48m) Multiplanter with 96 Multiplanter tine assemblies sowing into normal conditions. Case STX500, 500hp.

Without Sensor	With Sensor
100% tractor power	65% tractor power and up two gears

OVERALL SAVING WELL OVER 35%

For further information please visit www.multifarmingsystems.com.au, email multifs@tpg.com.au or call Multi Farming Systems on +61 7 4995 7230.



▲ The Case STX500 500hp pulling this 160ft (48m) Multiplanter went from 100% to 65% tractor power with the sensor tine fitted. This is over and above the savings achieved by depth controlling the digging tip. Photo courtesy of Wallaby Productions.