Spicer® Hydromechanical Variable Transmission

HVT1

Superior transmission inside. Superior performance outside.

https://www.dana.com/oh/transmission/hvt1
The Spicer® HVT1 is the world’s first powersplit transmission specifically designed for agriculture telehandlers. Its advanced technology is engineered to deliver superior benefits to equipment manufacturers, owners, and operators alike.

However you measure performance, it supplies clear advantages over competing conventional transmissions, helping next-generation telehandlers achieve new levels of productivity, sustainability, control, refinement, fuel efficiency, ease of use, and operator comfort.

The Spicer® HVT1 features a unique combination of hydrostatic and powershift in an integrated 90-degree gearbox that offers exceptionally precise low-speed maneuvering control and smooth, progressive response for loading and handling cycles. It also enables best-in-class on-road travel speeds, exceptional climbing, and high-speed towing capabilities.

Simply put, the Spicer® HVT1 is the superior choice for agriculture telehandlers in every way.
The Spicer® HVT1 features a unique combination of hydrostatic and mechanical drives that provides more efficient engine utilization, high power for work functions, increased travel speeds, best-in-class towing capacity, and expanded machine versatility.

- Supports power inputs from 80 to 115 kw (110 to 155 horsepower)
- Fully decouples engine speed from travel speed, allowing the engine to work at its optimal speed for maximum efficiency
- Enables on-road travel and high-speed towing speeds of up to 50 km/h (31 mph) to accelerate deployment from jobsite to jobsite
- Supplies maximum torque, even at standstill, to support a wide range of rigorous work demands, such as digging and loading
- Fits within current telehandler design envelopes, providing OEMs with the flexibility to either downsize the engine or improve overall system capabilities
More Work, Less Effort
Superior Efficiency

The Spicer® HVT1 uses an advanced electronic control system to continually adjust the mix of hydrostatic and mechanical power depending on the duty cycle. This allows the engine to maintain a consistent speed in its most efficient operating range at all times.

- Offers fuel savings when compared with agriculture telehandlers that use conventional transmissions
- Delivers maximum torque at a consistent engine speed for all work functions
- Provides quick, precise maneuverability to shorten work cycles
- Increases equipment utilization by supplying maximum torque for a wide range of work demands
Get More Done
Superior Productivity

By using a powersplit design, the Spicer® HVT1 supplies equipment operators with an unbeatable combination of power and precision needed to finish any job quickly, efficiently, and safely.

- Uses an advanced electronic control system to automatically adjust the mix of hydrostatic and mechanical power, maximizing machine productivity in every duty cycle
- Enables exceptionally precise low-speed maneuvering control
- Provides smooth, progressive response for loading and handling cycles
- Delivers superior climbing and high-speed towing capabilities
Hard Work Easier On Operators
Superior Comfort

Advanced operator controls and lower engine speeds help the Spicer® HVT1 provide best-in-class driver ergonomics.

- Provides smoother shifting, simplified handling, and decreased vibration
- Reduces noise to improve the overall work environment
- Minimizes reliance on the parking brake through hill-hold capability
Lower Operating Costs
Superior Savings

The Spicer® HVT1 offers numerous benefits that minimize costs for agriculture telehandler OEMs while reducing long-term owning and operating costs for equipment buyers.

- Enables a downsized engine to achieve the same performance as a comparable system with a conventional transmission
- Reduces fuel consumption, which also helps to reduce carbon taxes
- Expands work function versatility, decreasing the need for additional machines at the jobsite
- Lowers engine service and maintenance costs through reduced demands on the engine
The Spicer® HVT1 supports more environmental responsibility by helping to improve the efficiency of agriculture telehandlers across many dimensions.

- Reduces greenhouse gas emissions through lower fuel consumption, depending on the duty cycle
- Minimizes noise in the workplace by enabling the engine to maintain a consistent speed in its most efficient operating range for every duty cycle
Superior transmission inside. Superior performance outside.

The Spicer® HVT1 Hydromechanical Variable Transmission.
The advanced transmission that delivers superior performance combined with maximum support for sustainability.

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