

John Deere New Holland T8.380, T8.350, T8.380, T8.410 and SmartTrax with PST, Tier 4B Tractor service manual

SERVICE MANUAL

**T8.320 / T8.350 / T8.380 / T8.410 /
T8.380 SmartTrax™ / T8.410 SmartTrax™
Powershift Transmission (PST)
Tractor**

PIN ZFRE05001 and above



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Type: Service Manual

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Compatibility: Windows/Mac/Tablet/Mobile

This service manual contains important information for the maintenance, troubleshooting and servicing of the **John Deere New Holland T8.380, T8.350, T8.380, T8.410 and SmartTrax with PST, Tier 4B Tractor service manual**

In this manual you will find detailed specifications, illustrations, schematics, diagrams and step-by-step procedures to properly service and diagnose the machine to the manufacturer's standards.

Contents:

- General Information
- Specifications
- Serial Number Location
- Engine Specifications
- Engine Diagnostics
- Engine Tests and Adjustments
- Engine Repair
- Power Train
- Transmission
- Axles
- Differential
- PTO
- Hydraulic System
- Electrical System
- Electrical Tests and Diagnostics
- Wiring Diagram / Schematic
- Ignition and Charging
- Steering
- Brakes
- Wheels
- Operator's Platform
- Body Panels
- Disassembly and Assembly
- Diagnostics, Tests and Adjustments
- Troubleshooting
- and much more...

Please note this manual is in **downloadable PDF format only**. If you have any questions about this product or would like to request sample pages, please contact us and reference the product name or SKU.

PTO power management (FPS)

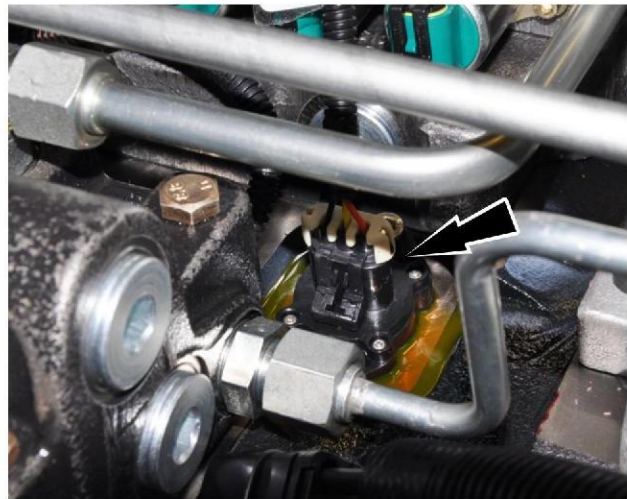
The PTO power management (power boost) feature allows the engine to supply up to an additional **35 Hp** as required during periods of high PTO load while the tractor is in motion. The power boost feature is not available during stationary PTO use, and PTO horse power is limited to the (non-boosted) power curve of the engine .

The torque sensor is only used on the FPS transmissions, The CVT does have the power boost feature, but load for the transmission is calculated by the TCU monitoring the transmission ratio and pressure in the hydrostatic system along with the engine load. Additional power is made available when system requirements are met and the transmission is not overloaded.

PTO power boost does not allow more than the stated maximum (non-boosted) power to be exerted through the PTO or transmission.

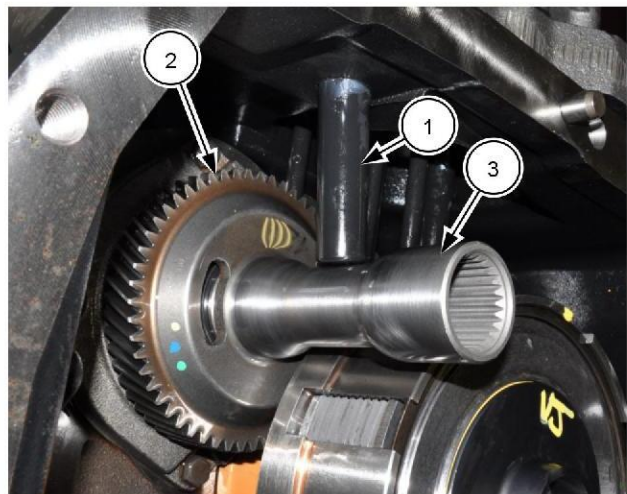
The torque sensor measures the total torque with in the gear (cannot distinguish between pump load and PTO load). Based on the measured torque and the known engine torque, software within the tractor controller will use the torque signal to enable the power boost function and provide additional boosted power to the drivetrain.

With this system, productivity can be maintained without overloading the PTO and driveline.



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The torque sensor **(1)** is located in the range housing of the transmission. The pump drive gear **(2)**, not only drives the hydraulic pumps, but is a coupling **(3)** between the transmission input shaft and the PTO clutch shaft. The pump drive gear has a geometry that allows for more twist (strain) when torque is applied. This drive gear has a low level of magnetism so that the torque sensor can measure the change in the magnetic field or twist of the gear (torque).



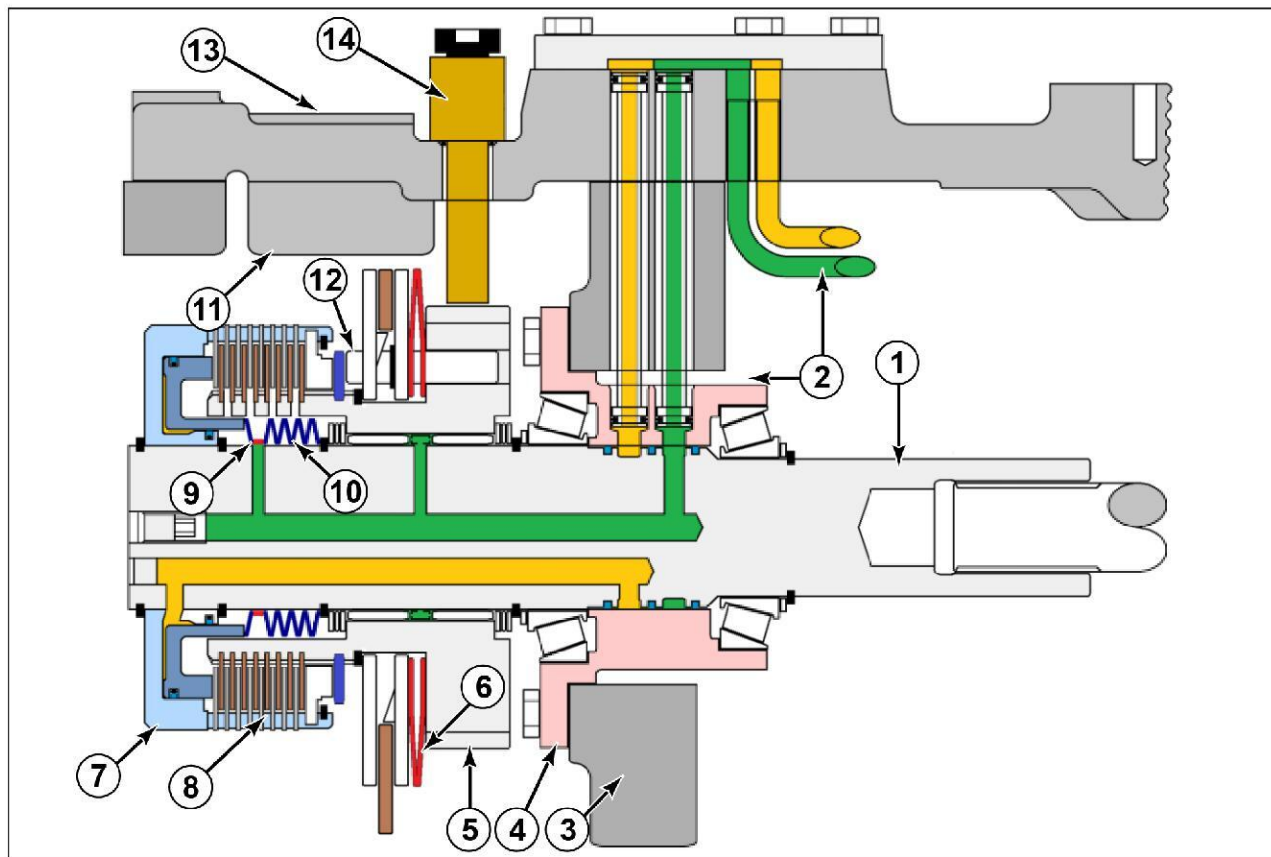
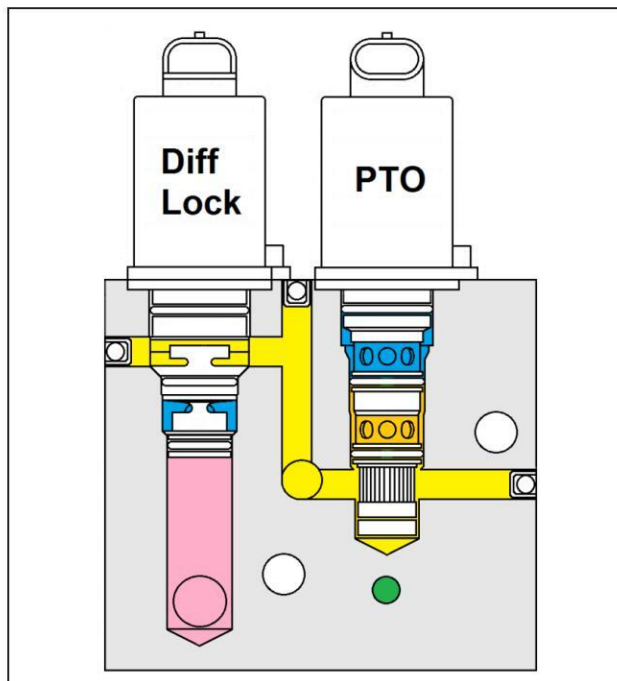
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PTO clutch supply and lube

PTO valve as used on the FPS transmission

- Regulated
- Differential lock supply
- PTO clutch supply
- Return to tank
- PTO and ring and pinion lube

- | |
|--------------------------------------|
| 1. Input shaft |
| 2. Supply tubes |
| 3. Transmission housing |
| 4. PTO shaft carrier |
| 5. PTO output gear |
| 6. Brake belleville springs |
| 7. PTO clutch carrier |
| 8. Friction and separator plates |
| 9. Lube control ring |
| 10. Piston return belleville springs |
| 11. Brake reaction boss |
| 12. Brake self adjust mechanism |
| 13. Top cover |
| 14. PTO clutch speed sensor |



Standard PTO clutch assembly used on CVT and FPS transmission



Thank you very much
for your reading.
Please click here
to get more information.