

SERVICE MANUAL

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

PIN ZFRE05001 and above

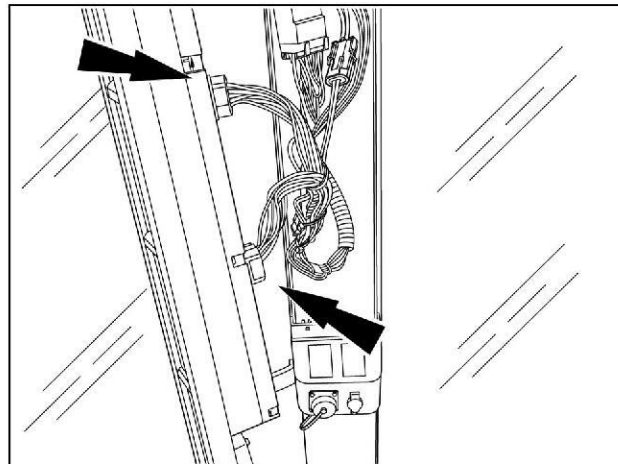


Part number 47917989

1st edition English
September 2015

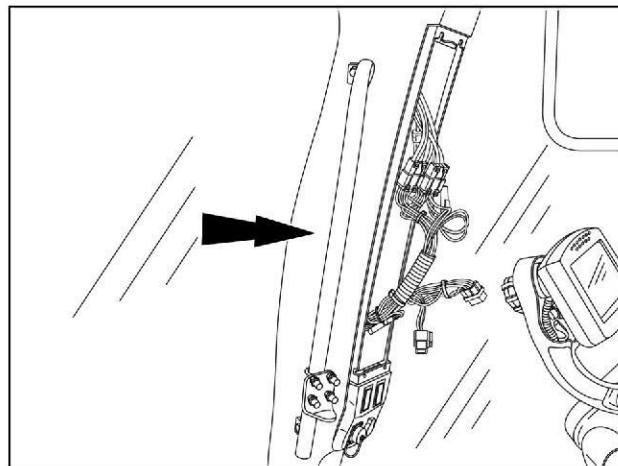


11. Move the instrument panel away from the corner post, and tag and disconnect the harness connectors from the back of the panel.



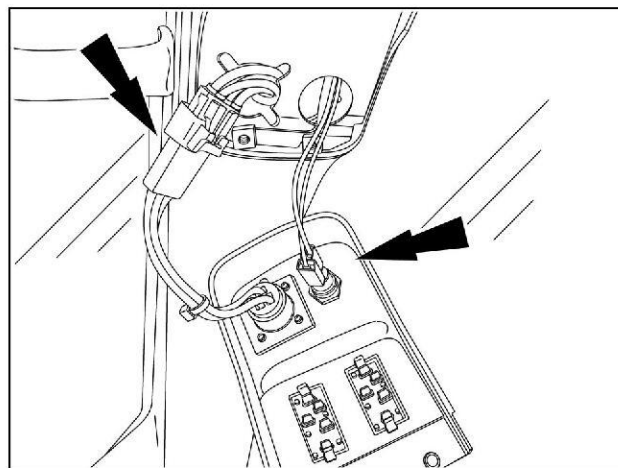
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12. If equipped, remove the front display bracket from the right front corner post.



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13. Remove the two lower screws from the auxiliary power supply panel.
14. Disconnect the electrical connectors, and set the panel assembly aside.



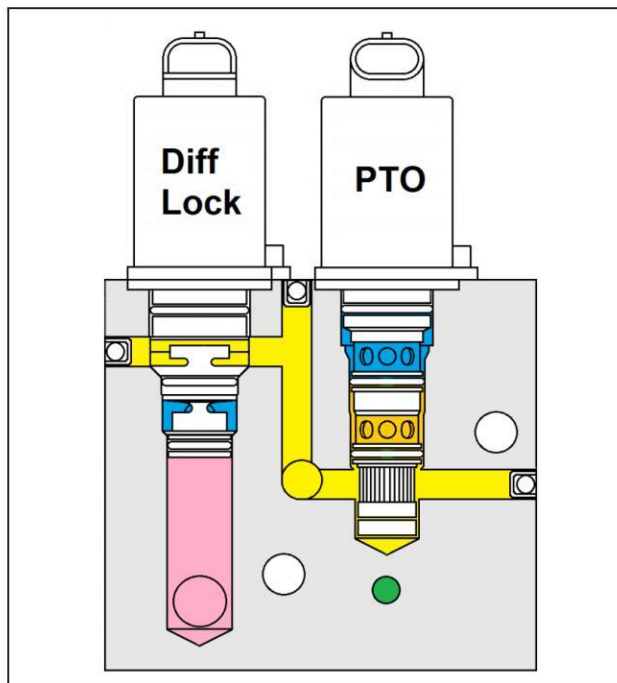
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PTO clutch supply and lube

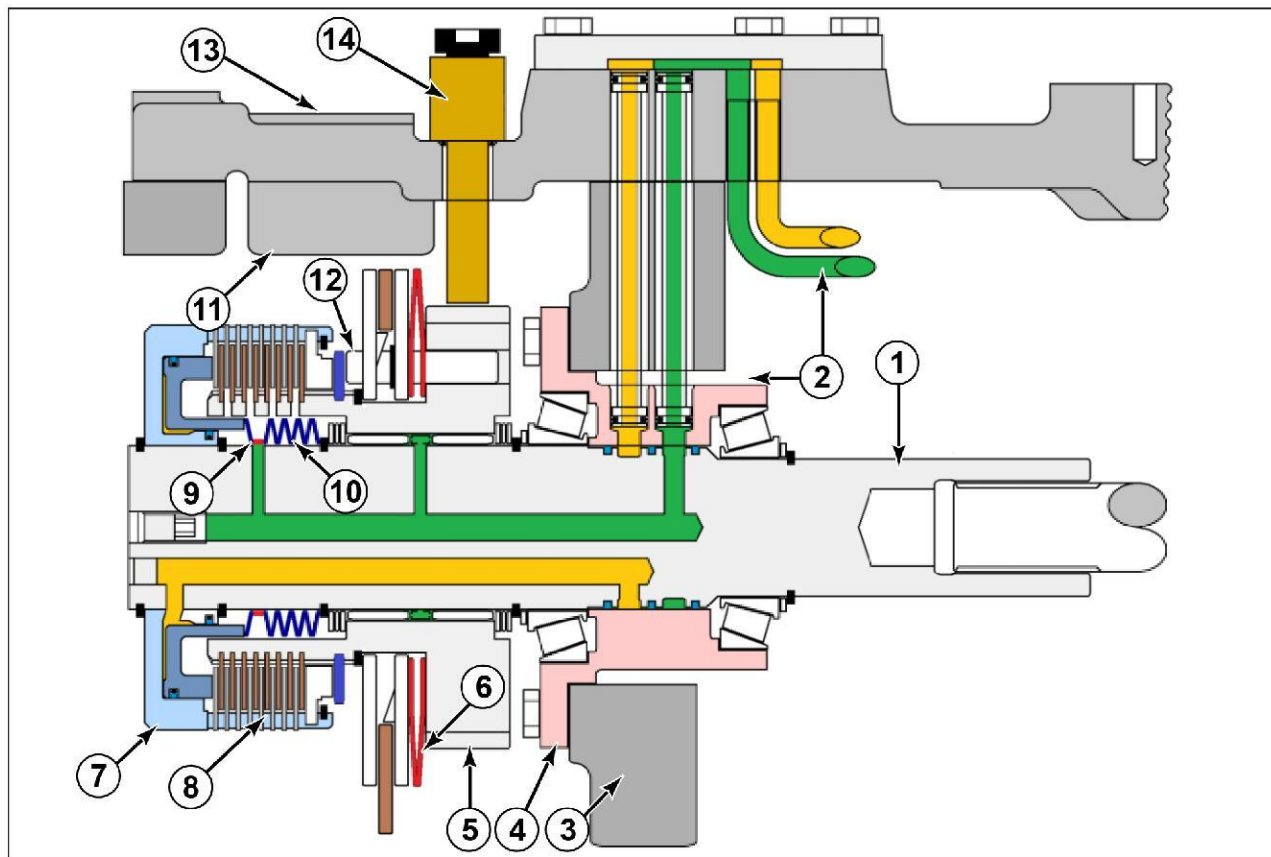
PTO valve as used on the FPS transmission

- 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 |



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Standard PTO clutch assembly used on CVT and FPS transmission

PTO power management (FPS)

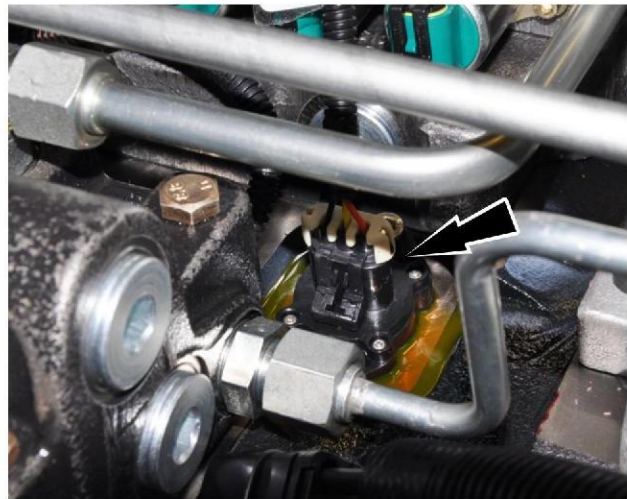
The PTO power management (power boost) feature allows the engine to supply up to an additional **35 Hp** as required during periods of high PTO load while the tractor is in motion. The power boost feature is not available during stationary PTO use, and PTO horse power is limited to the (non-boosted)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

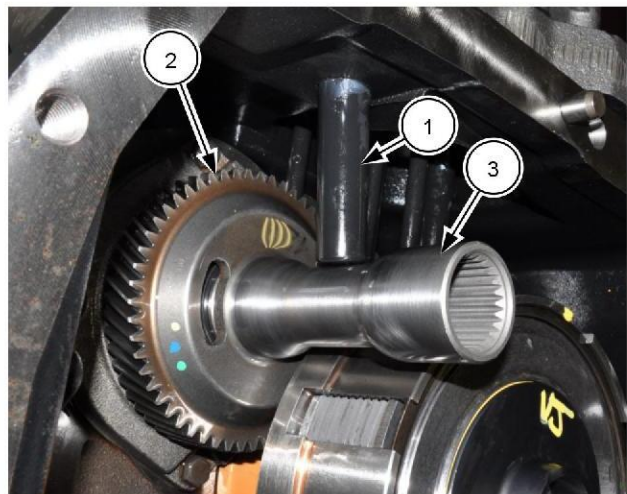
The torque sensor measures the total torque with in the gear (cannot distinguish between pump load and PTO load). Based on the measured torque and the known engine torque, software within the tractor controller will use the torque signal to enable the power boost function and provide additional boosted 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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John Deere New Holland T8.380, T8.350, T8.380, T8.410 and SmartTrax with PST, Tier 4B Tractor service manual

Illustrated Factory service manual for New Holland Tier 4B Tractors with PowerShift transmission, Models T8.320, T8.350, T8.380, T8.380 SmartTrax, T8.410, T8.410 SmartTrax (North America, Australia, New Zealand) This manual contains high quality images, diagrams, instructions to help you to operate, maintenance, diagnostic, and repair your truck. This document is printable, without restrictions, contains searchable text and bookmarks for easy navigation. Language: English Format: PDF, 4906 pages Covered models (North America, Australia, New Zealand): T8.320 (PST TIER 4B [ZFRE05001 -]) T8.350 (PST TIER 4B [ZFRE05001 -]) T8.380 (PST TIER 4B [ZFRE05001 -]) T8.380 SmartTrax (PST TIER 4B [ZFRE05001 -]) T8.410 (PST TIER 4B [ZFRE05001 -]) T8.410 SmartTrax (PST TIER 4B [ZFRE05001 -])



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for your reading.
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to get more information.