SERVICE MANUAL

T8.320 / T8.350 / T8.380 / T8.410 / T8.435 / T8.380 SmartTrax™ / T8.410 SmartTrax™ / T8.435 SmartTrax™

Continuously Variable Transmission (CVT)

Tractor

PIN ZFRE05001 and above

Part number 47917988
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September 2015

NEW HOLLAND AGRICULTURE

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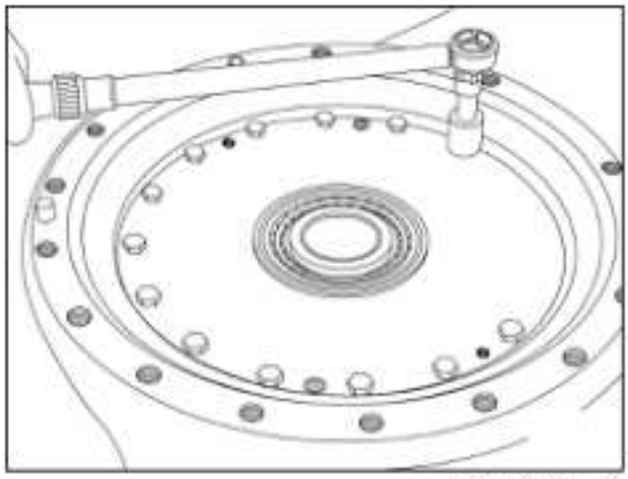
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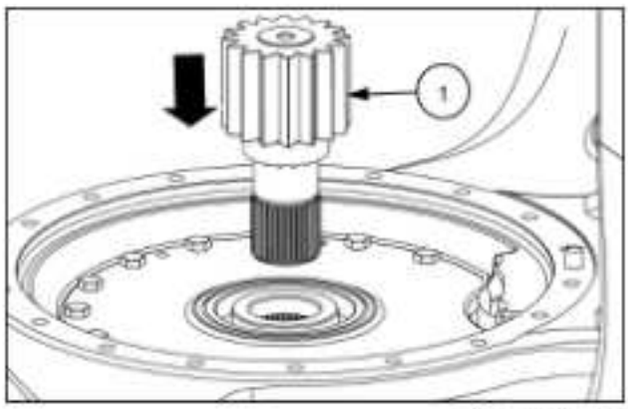
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21. Install the thirteen mounting bolts and torque to **101 - 113 N·m** (**74 - 83 lb ft**).

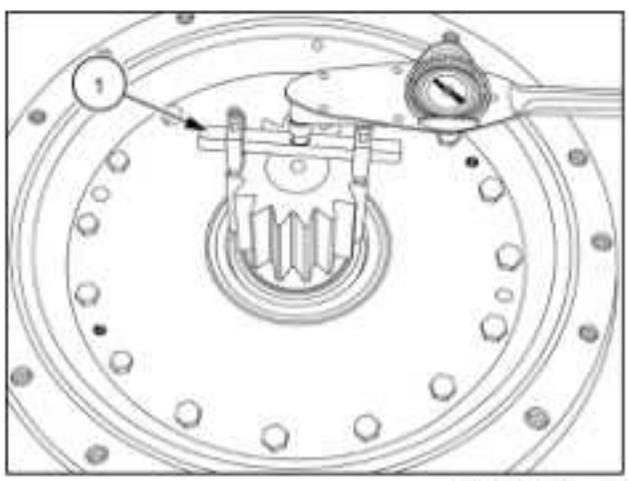


22. Insert the sun shaft **(1)** into the output gear.

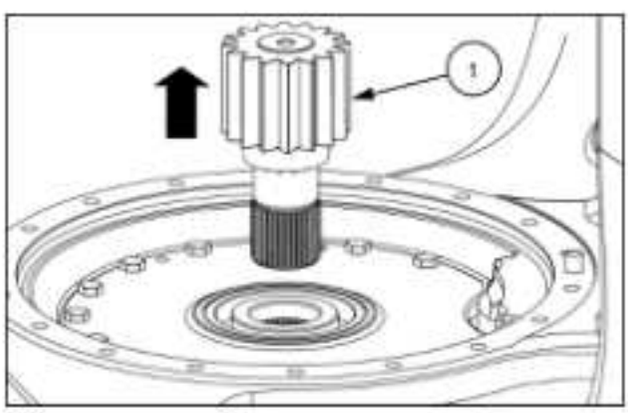
NOTE: *The sun shaft is used on the output side of the track yoke for the final drive assembly, removed in the procedure* ***Track yoke final drive assembly - Remove (27.610).*** *It is temporarily used on the input side to allow the use of the rolling torque tool.*



23. Assemble the special tool **380003339 (1)** on the sun gear as shown.
24. Check the rolling torque of the output gear.
    The rolling torque must between **2.84 - 7.34 N·m** (**25.14 - 64.964 lb in**).
    If the rolling torque is not within specifications, repeat steps **13** through **24**. Remove or add shims as needed until the rolling torque is within specifications.



25. Remove the sun shaft **(1)** from the output gear.



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Wiring harnesses - Electrical schematic sheet 40 - Seat

Type	Component	Connector / Link	Description
ECU	**A-044**	**X-058**	TCU CH24
ECU	**A-082**	**X-133**	SEAT ASSEMBLY
Connector	X-010	**X-010**	TO CAB HARNESS
Connector	X-133	**X-133**	SEAT ASSEMBLY
Connector	X-262	**X-262**	FUSE BLOCK
Connector	X-353	**X-353**	CN2A

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A. Error code does not redisplay. Return unit to field operation.

B. Error code redisplays. Continue to step **6**.

6. Swap the pilot head causing the error with another pilot head.

   Retest system operation.

   A. Error code follows the pilot head move. Replace the pilot head. Return unit to field operation.

   B. Error code does not follow the pilot head move. Return the pilot heads to their original location and submit a concern to ASIST.

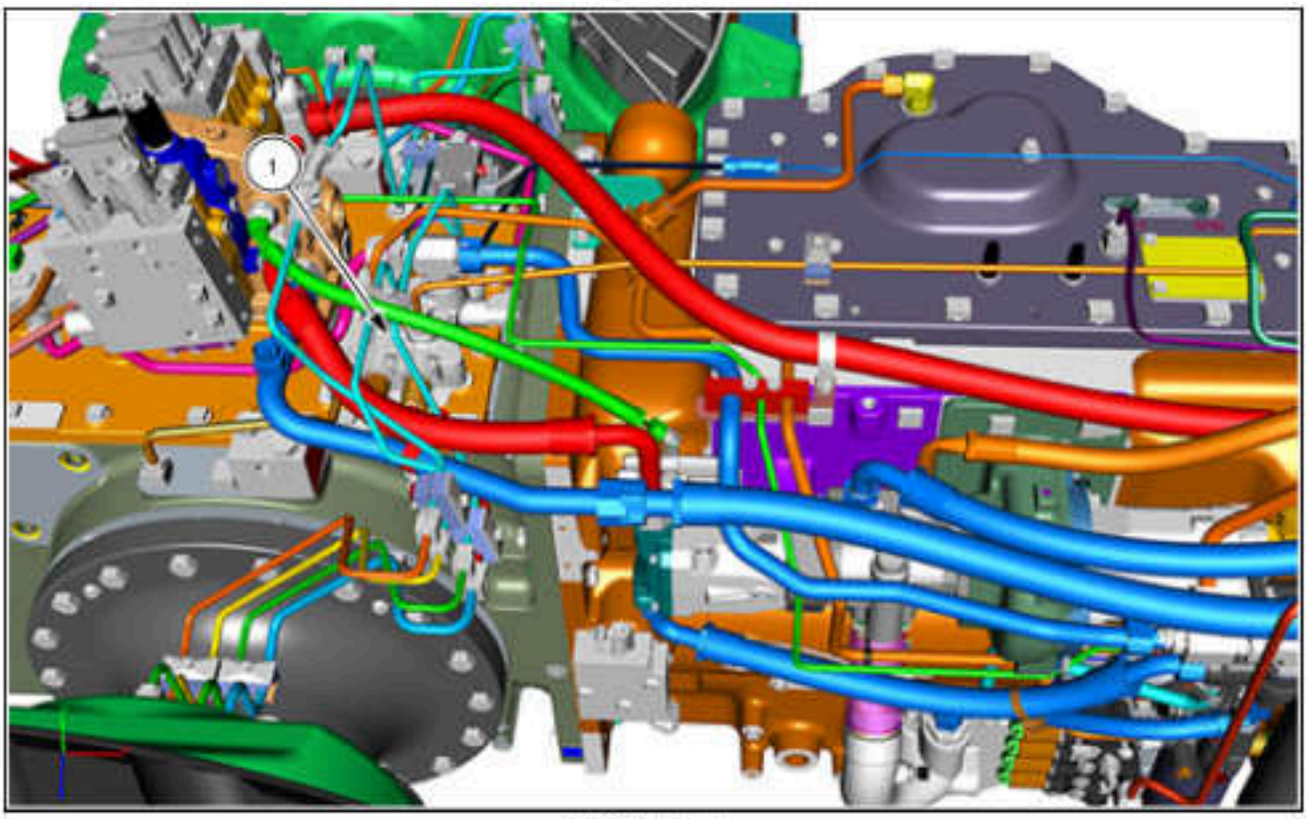
Wiring harnesses - Electrical schematic sheet 23 - Auxiliary remote valves (55.100.DP-C.20.E.23)
Wiring harnesses - Electrical schematic sheet 45 - Secondary CAN bus (55.100.DP-C.20.E.45)

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Power Take-Off (PTO) control valve - Dynamic description

T8.380 SmartTrax™ CVT TIER 4B [ZFRE05001 -]	
T8.410 SmartTrax™ CVT TIER 4B [ZFRE05001 -]	
T8.435 SmartTrax™ CVT TIER 4B [ZFRE05001 -]	

The Power Take-Off (PTO)/differential lock/lube valve is located on top of the rear frame housing. The PTO/differential lock/lube valve controls the PTO and differential lock operation and distributes lube flow.



RAIL14TR04012GA 1

1. PTO/differential lock/lube valve	

The regulated pressure circuit supplies the PTO and differential lock functions. The regulated supply to both the PTO and differential lock is limited to **22.4 - 24.5 bar** (**325 - 355 psi**). The supply to the PTO clutch and differential lock are internally ported through the rear frame assembly.

The charge/lube circuit supplies the lubrication functions of the valve for these lubrication points: differential lock, pinion, front and rear hydro bearings, rear axle final drives, and service brakes. The amount of lube to the left and right brakes is controlled with the lube solenoid valve. The lube solenoid is used by the Tractor Control Unit (TCU) to minimize lube to the brakes and direct oil to the lube points when the brakes are not applied. When the brakes are applied, a signal from brake pedal switch energizes the lube solenoid to increase flow to the brakes.

The Tractor Control Unit (TCU) controller lubricates the rear axle final drive when these conditions are met:

- engine speed is above **1400 RPM**
- or ground speed is above **35 km/h** (**22 mph**)
- and oil temperature is above **65 °C** (**149 °F**).

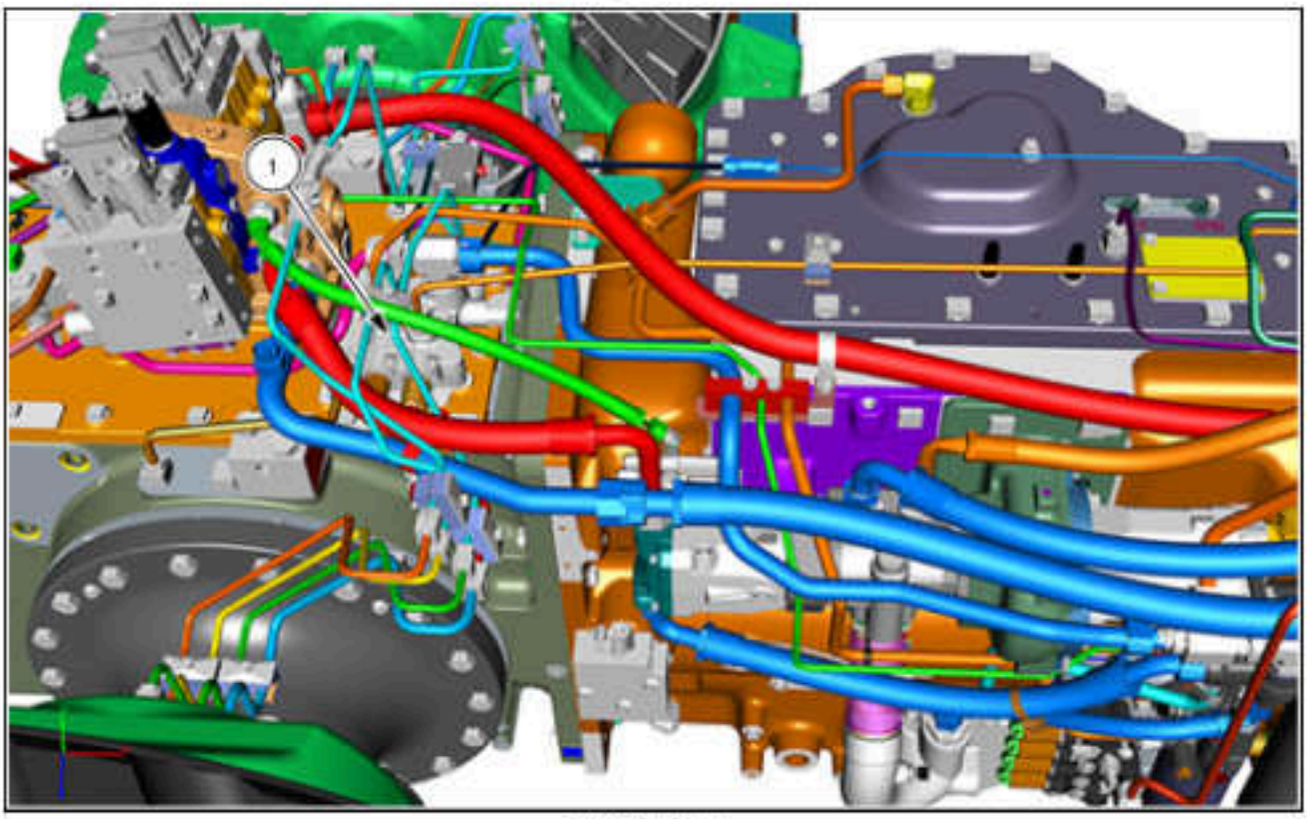
When the TCU detects no ground speed or when transmission temperature is below **65 °C** (**149 °F**), the lubrication solenoid is deenergized, which blocks lube oil flow to the rear axle final drives.

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Differential lock control valve - Dynamic description

T8.380 SmartTrax™ CVT TIER 4B [ZFRE05001 -]	
T8.410 SmartTrax™ CVT TIER 4B [ZFRE05001 -]	
T8.435 SmartTrax™ CVT TIER 4B [ZFRE05001 -]	

The Power Take-Off (PTO)/differential lock/lube valve is located on top of the rear frame housing. The PTO/differential lock/lube valve controls the PTO and differential lock operation and distributes lube flow.



RAIL14TR04012GA 1

1. PTO/differential lock/lube valve	

The regulated pressure circuit supplies the PTO and differential lock functions. The regulated supply to both the PTO and differential lock is limited to **22.4 - 24.5 bar** (**325 - 355 psi**). The supply to the PTO clutch and differential lock are internally ported through the rear frame assembly.

The charge/lube circuit supplies the lubrication functions of the valve for these lubrication points: differential lock, pinion, front and rear hydro bearings, rear axle final drives, and service brakes. The amount of lube to the left and right brakes is controlled with the lube solenoid valve. The lube solenoid is used by the Tractor Control Unit (TCU) to minimize lube to the brakes and direct oil to the lube points when the brakes are not applied. When the brakes are applied, a signal from brake pedal switch energizes the lube solenoid to increase flow to the brakes.

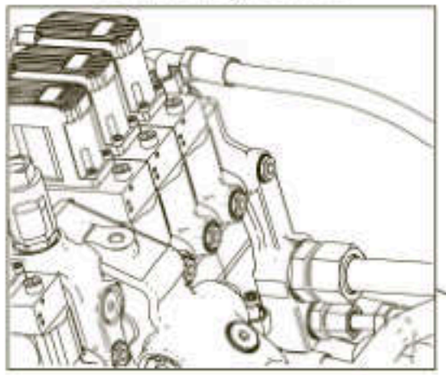
The Tractor Control Unit (TCU) controller lubricates the rear axle final drive when these conditions are met:

- engine speed is above **1400 RPM**
- or ground speed is above **35 km/h** (**22 mph**)
- and oil temperature is above **65 °C** (**149 °F**).

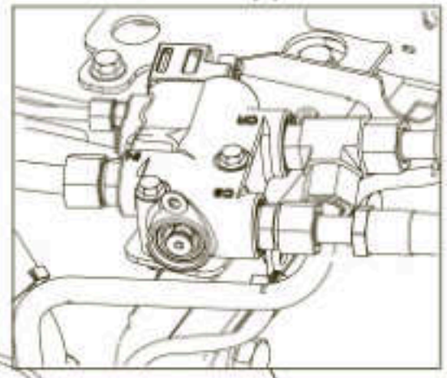
When the TCU detects no ground speed or when transmission temperature is below **65 °C** (**149 °F**), the lubrication solenoid is deenergized, which blocks lube oil flow to the rear axle final drives.

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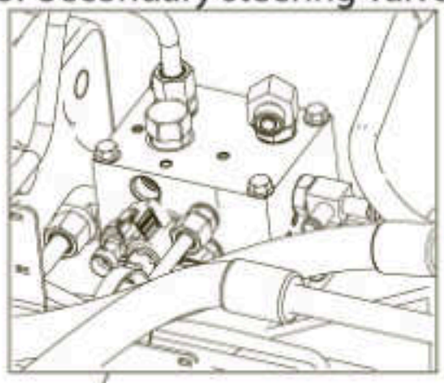
1. Priority valve



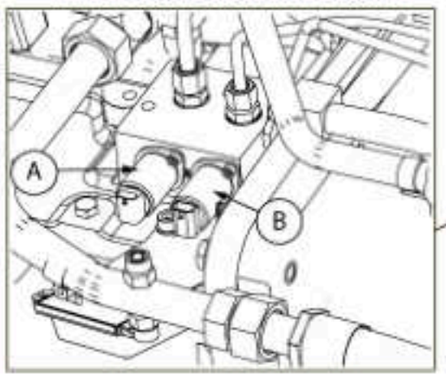
2. Oil cooler bypass valve

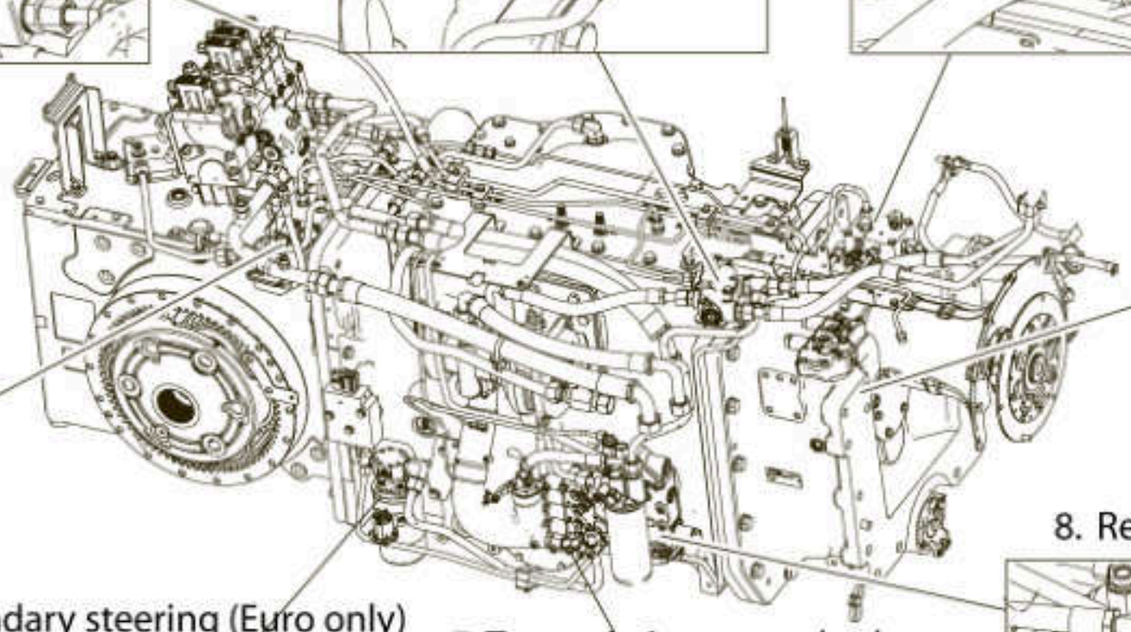


3. Secondary steering valve (Euro only)

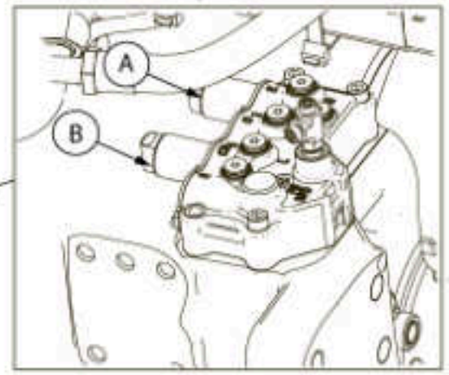


4. Rear PTO brake
MFD Differential lock

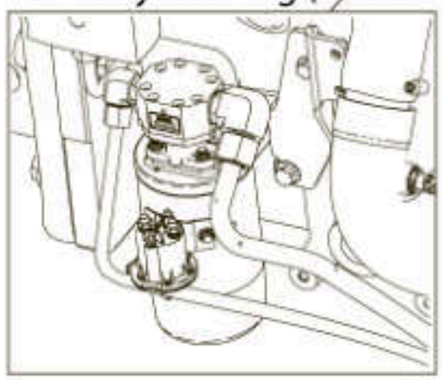




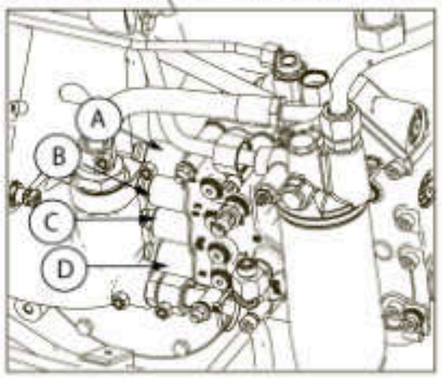
5. Forward/Reverse valve



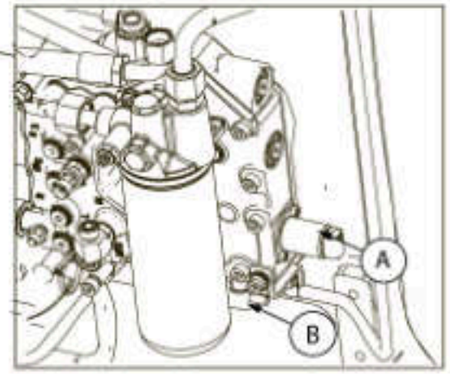
6. Secondary steering (Euro only)



7. Transmission control valve



8. Regulator valve



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