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 47918010
1st edition English
October 2015

NEW HOLLAND AGRICULTURE

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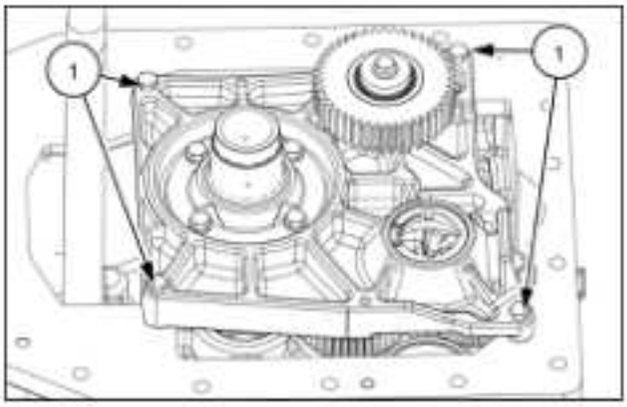
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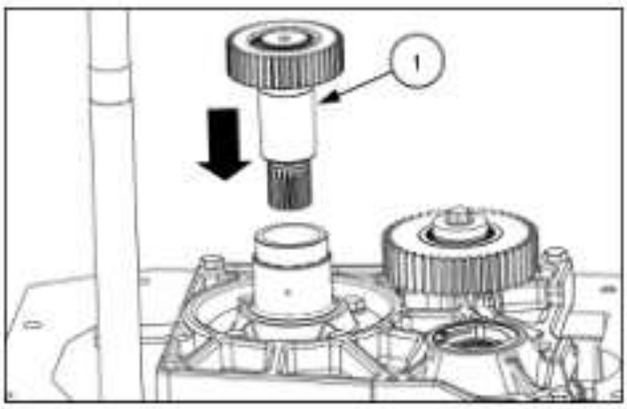
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16. Torque the four bolts **(1)** to **252 - 280 N·m** (**186 - 206 lb ft**).



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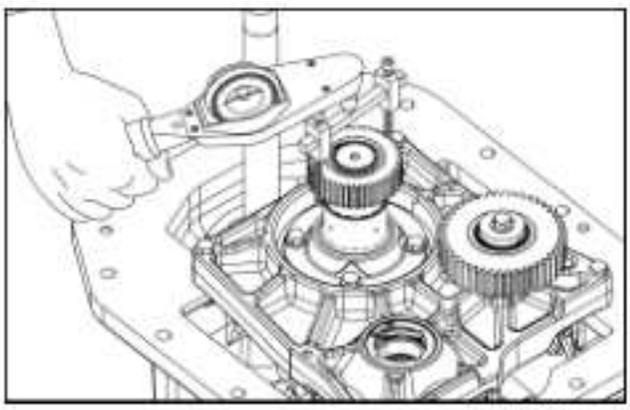
17. Temporarily insert the planetary input gear assembly **(1)** through the bearing carrier until it mates with the forward shaft assembly.



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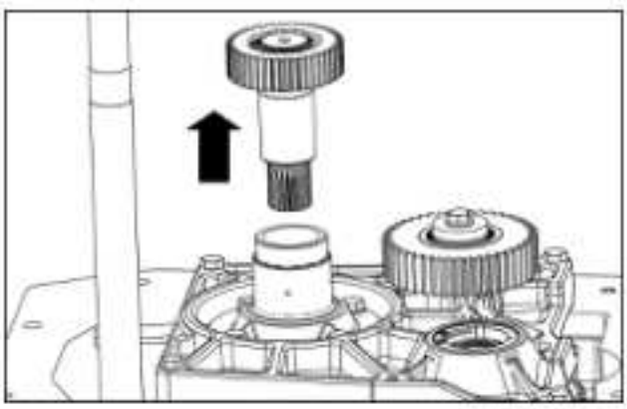
18. Using the small universal rolling torque tool **380003339** on the planetary input gear assembly **(1)**, measure the rolling torque of the forward shaft assembly. Rolling torque should be **0.3 - 2.0 N·m** (**3.0 - 18.0 lb in**). Repeat step **10** to step **18**, adding shims to increase rolling torque and removing shims to reduce rolling torque as necessary.

NOTE: *Rotate the gear several times to seat the bearing rollers before taking a rolling torque reading.*



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19. Remove the planetary input gear assembly



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Pin	From	Wire	Description	Color-Size	Frame
12	**X-010 (Female) pin AA7** TO CAB HARNESS	OC-144	FRONT PTO LAMP	YE - 0.8	**SHEET 19**
13	**X-010 (Female) pin BB8** TO CAB HARNESS	OC-2091	EXHAUST BRAKE	WH - 0.8	**SHEET 23**
14	**X-028 (Male) pin 8** TO OUTSIDE CAB HARNESS	OC-939A	FSUS PISTON SENSOR SIGNAL	YE - 0.8	**SHEET 14**
15	**X-061 (Male) pin 2** TO OUTSIDE CAB HARNESS	OC-544	FSUS AXLE SIGNAL	YE - 0.8	**SHEET 37**
16	**X-026 (Male) pin AC2** TO OUTSIDE CAB HARNESS	OC-922	SEC STRG PRESS SIGNAL	YE - 0.8	**SHEET 47**
17	SP-432-P-X	OC-432B	+12 VF3	OR - 0.8	**SHEET 13**
20	SP-526-P-X	OC-526	REAR HITCH EXT LOWER SW	YE - 0.8	**SHEET 40**
21	**X-010 (Female) pin BD2** TO CAB HARNESS	OC-510	RH BRAKE PEDAL SWITCH	YE - 0.8	**SHEET 23**
22	SP-757A-P-X	OC-757B	BRAKE LIGHT MONITOR	YE - 0.8	**SHEET 26**
23	SP-513-P-X	OC-513	REAR HITCH EXT RAISE SW	YE - 0.8	**SHEET 40**
24	**X-010 (Female) pin AD2** TO CAB HARNESS	OC-184B	FNRP START OUT	WH - 0.8	**SHEET 08**
26	SP-188-P-X	OC-175F	POWER GROUND	BK - 0.8	**SHEET 13**
27	SP-956-P-X	OC-956	FENDER RPTO NO SW	YE - 0.8	**SHEET 34**
28	**X-010 (Female) pin AD7** TO CAB HARNESS	OC-551A	FORWARD	YE - 0.8	**SHEET 38**
29	**X-008 (Female) pin C6** TO CAB HARNESS	OC-412	HANDBRAKE SW SIG	YE - 0.8	**SHEET 15**
30	**X-010 (Female) pin BA4** TO CAB HARNESS	OC-315A	FORWARD OR REVERSE	YE - 0.8	**SHEET 38**
31	**X-918 (Female) pin 4** IMPLEMENT POT	OC-916	IMP EHR2 F/B SENSOR	YE - 0.8	**SHEET 35**
33	**X-026 (Male) pin AB2** TO OUTSIDE CAB HARNESS	OC-921	PRIMARY STEERING PRESSURE SIGNAL	YE - 0.8	**SHEET 47**
34	SP-188-P-X	OC-175G	POWER GROUND	BK - 0.8	**SHEET 13**

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18046-EHR (remote valve) float control switch error

NOTE: *When the cause of the error code has been rectified, clear the error code and test the system for normal operation.*

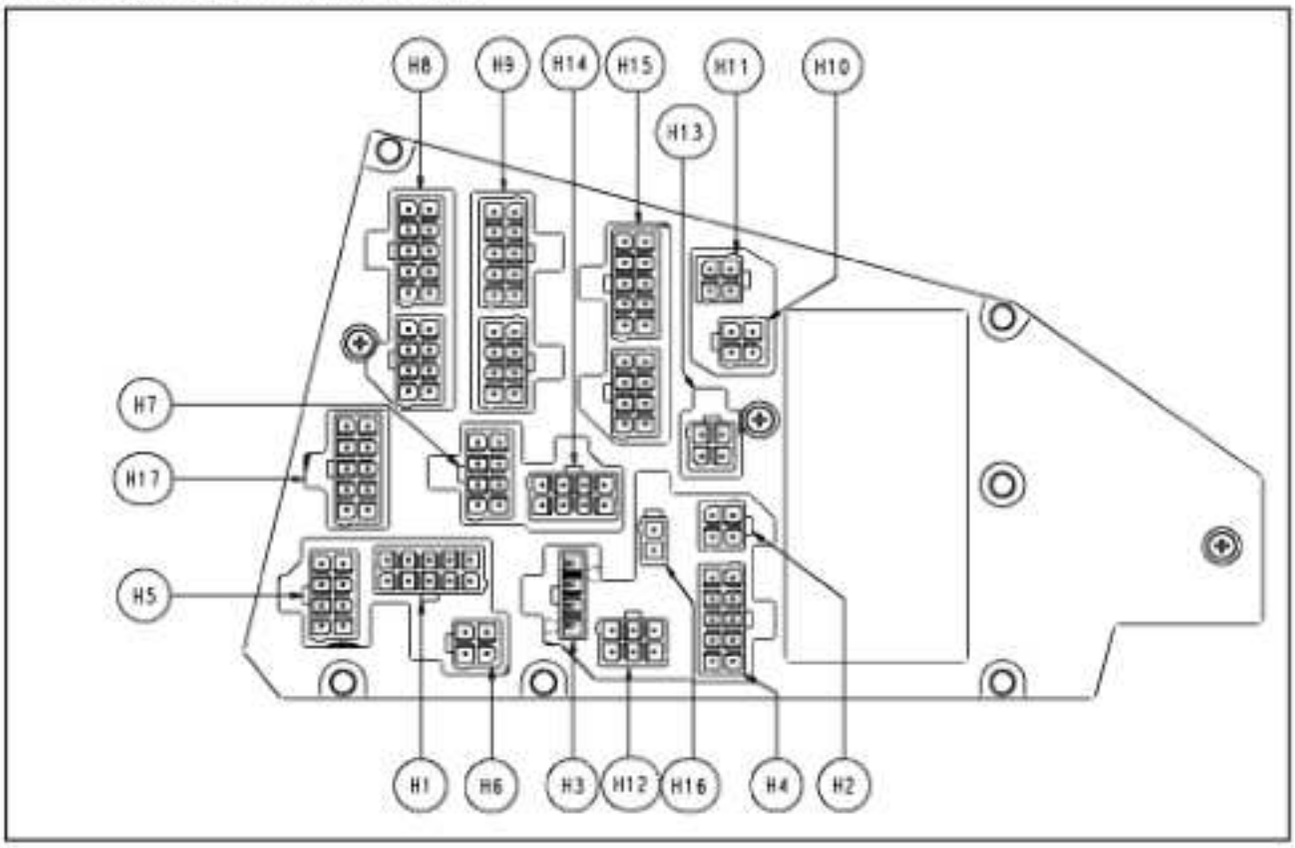
Cause:
Switch or connection is faulty.

Possible failure modes:

1. Faulty EHR float control switch
2. Incorrect armrest configuration
3. Faulty connector
4. Swapped connectors
5. Faulty armrest controller

Solution:

1. Check if the fault code is still active. Clear all fault codes. Operate the tractor under normal conditions.
   A. Fault code does not redisplay. Return unit to field operation and monitor for continuing problems.
   B. Fault code redisplays. Continue to step **2**.
2. Use the monitor screen function on the electronic service tool (EST) to check the float button operation. Refer to the EST user guide.
   A. Button not operating correctly. Continue with step **3**.
   B. Button operating correctly. Return unit to field operation and monitor for problem.
3. Check the armrest controller connectors.

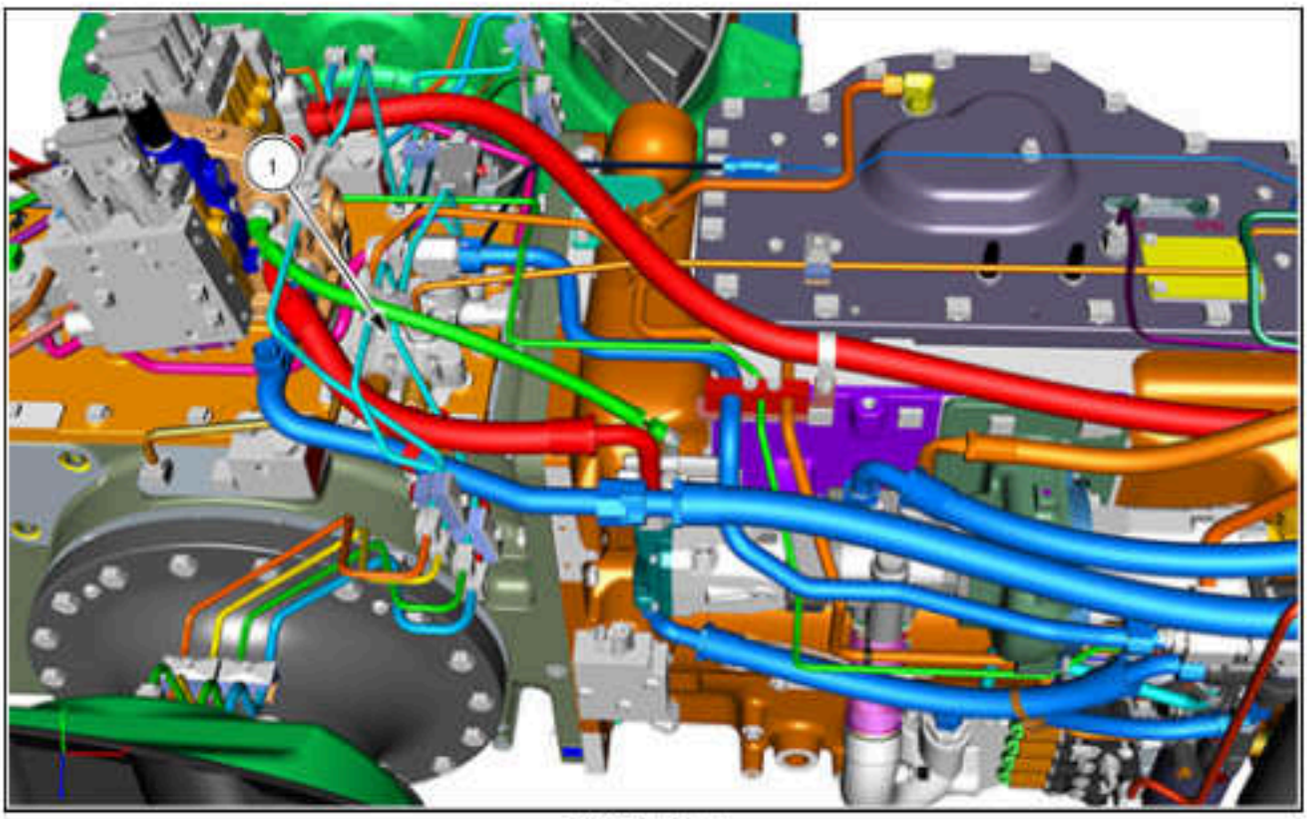


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Power Take-Off (PTO) control valve - Dynamic description

T8.380 SmartTrax™ CVT TIER 2 [ZFRE05001 -]	
T8.410 SmartTrax™ CVT TIER 2 [ZFRE05001 -]	
T8.435 SmartTrax™ CVT TIER 2 [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**).

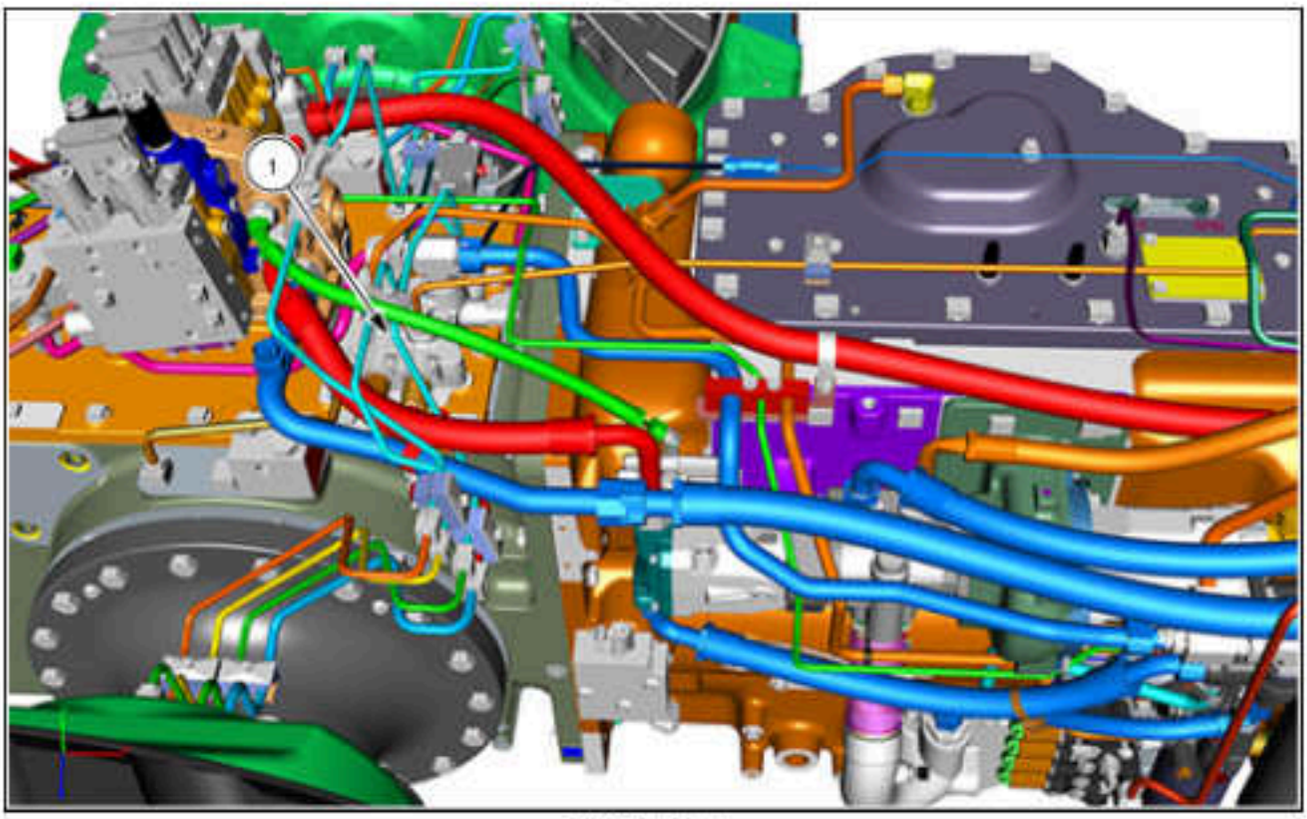
When the TCU detects no ground speed or when transmission temperature is below **65 °C** (**149 °F**), the lubrication solenoid is deenergized, which blocks lube oil flow to the rear axle final drives.

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Differential lock control valve - Dynamic description

T8.380 SmartTrax™ CVT TIER 2 [ZFRE05001 -]	
T8.410 SmartTrax™ CVT TIER 2 [ZFRE05001 -]	
T8.435 SmartTrax™ CVT TIER 2 [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.

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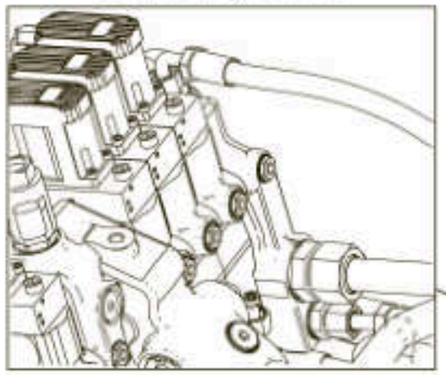
The Tractor Control Unit (TCU) controller lubricates the rear axle final drive when these conditions are met:

- 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**).

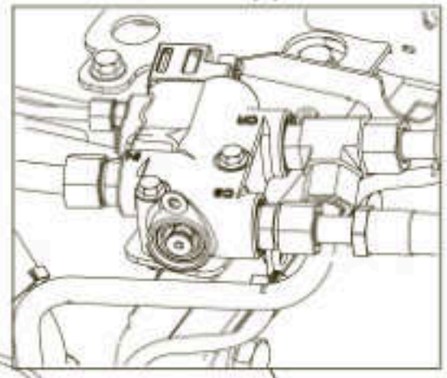
When the TCU detects no ground speed or when transmission temperature is below **65 °C** (**149 °F**), the lubrication solenoid is deenergized, which blocks lube oil flow to the rear axle final drives.

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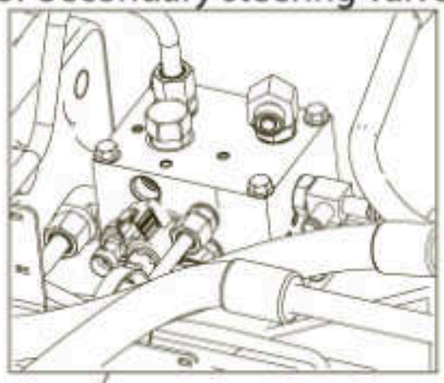
1. Priority valve



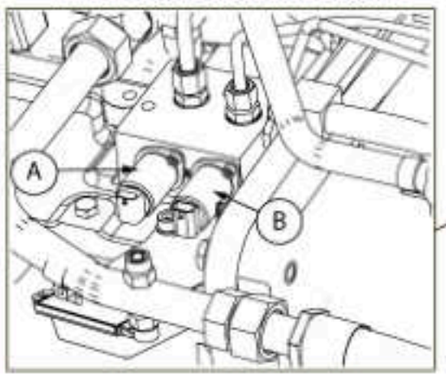
2. Oil cooler bypass valve

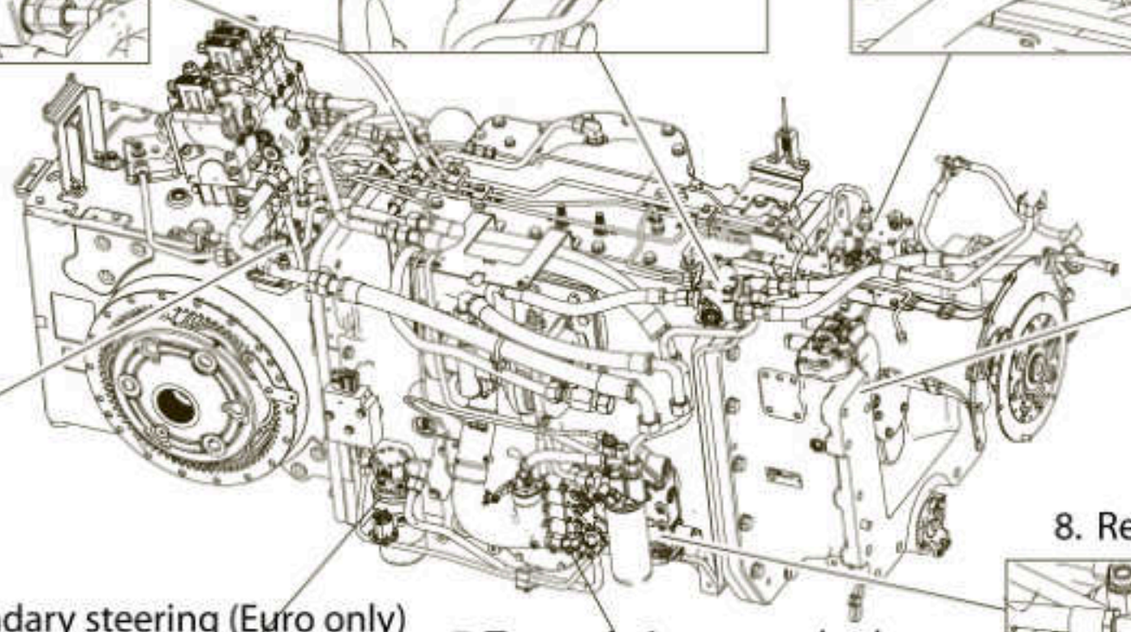


3. Secondary steering valve (Euro only)

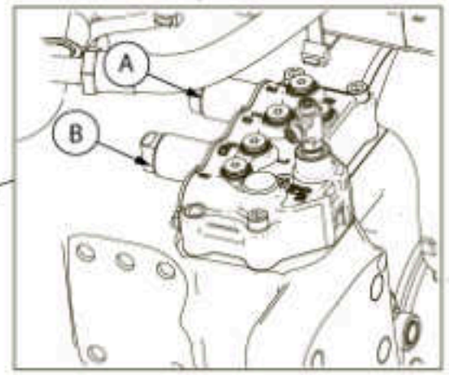


4. Rear PTO brake
MFD Differential lock

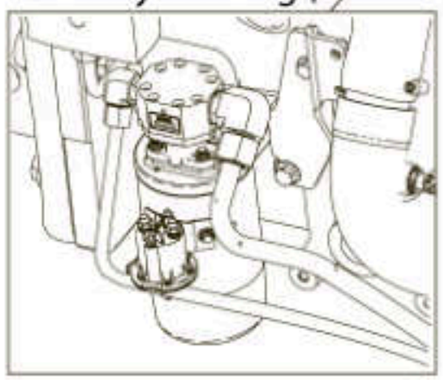




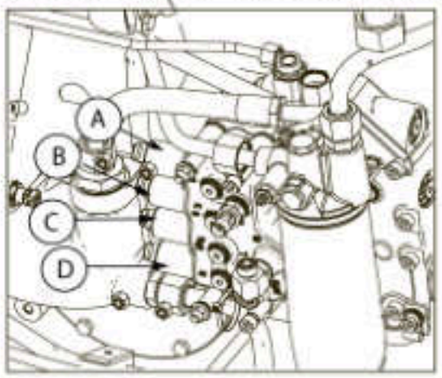
5. Forward/Reverse valve



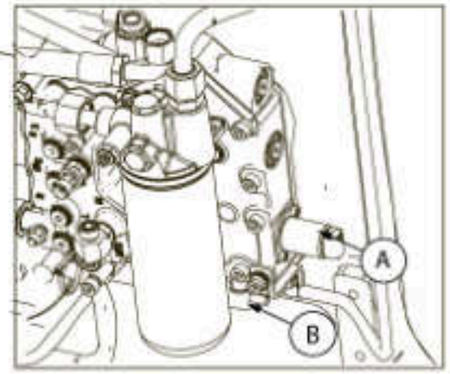
6. Secondary steering (Euro only)



7. Transmission control valve



8. Regulator valve



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