Magnum™ 250
Magnum™ 280
Magnum™ 310
Magnum™ 340
Magnum™ 310 Rowtrac™
Magnum™ 340 Rowtrac™
Powershift Transmission (PST)
Tractor

PIN ZERF08100 and above

SERVICE MANUAL

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November 2014

CASE IH AGRICULTURE

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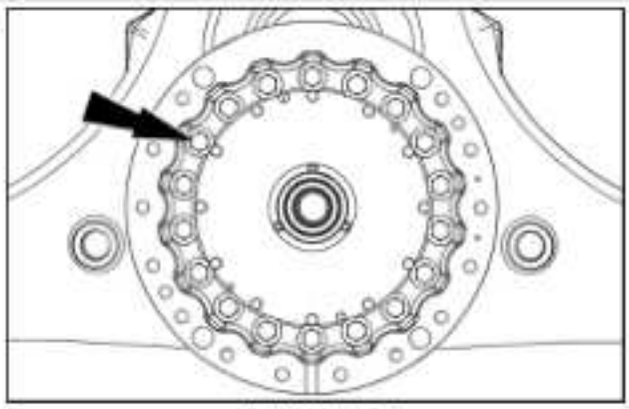
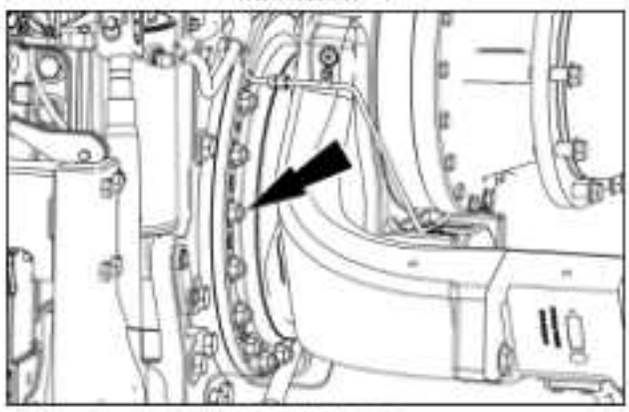
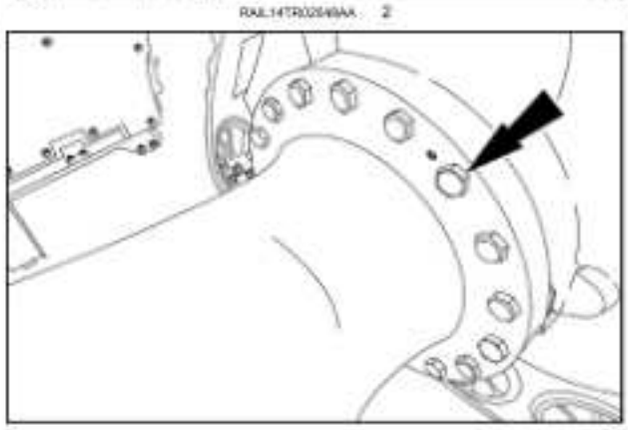
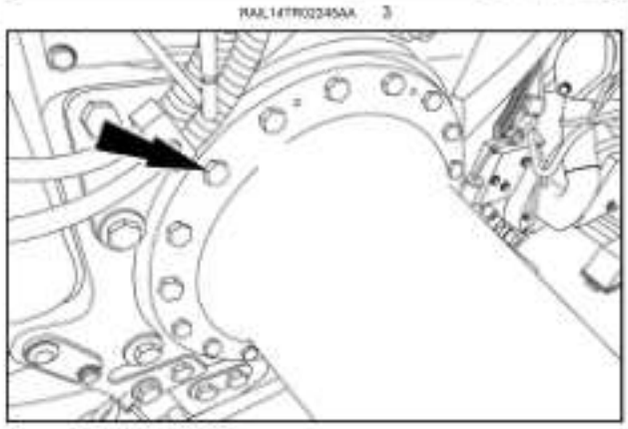
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Rear axle track yoke assembly - Torque

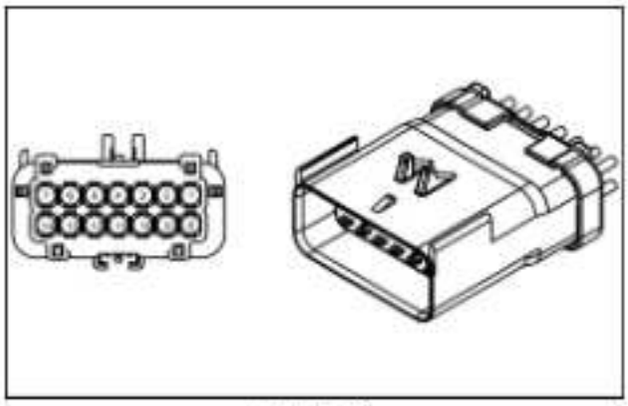
Magnum™ 310 Rowtrac™ 696110073 PST TIER 4B [ZERF08100 -]	NA
Magnum™ 340 Rowtrac™ 696110083 PST TIER 4B [ZERF08100 -]	NA

Component	N·m	Identification	lb-ft/lb in
Extension housing to yoke bolts for **1930 mm** (**76 in**) and **2032 mm** (**80 in**) spacings	**490 - 550 N·m**	 RAIL14TR02647AA 1	**361 - 405 lb ft**
Extension housing to rear axle housing nut for **1930 mm** (**76 in**) and **2032 mm** (**80 in**) spacings	**430 - 485 N·m**	 RAIL14TR02648AA 2	**317 - 358 lb ft**
Extension housing to yoke bolts for **2235 mm** (**88 in**) spacings and above	**490 - 550 N·m**	 RAIL14TR02645AA 3	**361 - 405 lb ft**
Extension housing to rear axle housing bolts for **2235 mm** (**88 in**) spacings and above	**430 - 485 N·m**	 RAIL14TR02644AA 4	**317 - 358 lb ft**

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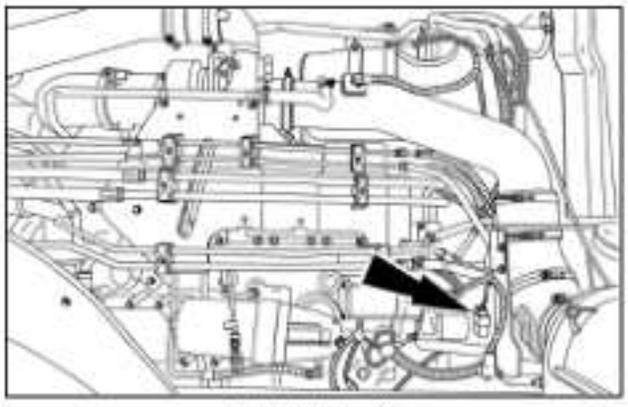
Pin	From	Wire	Description	Color-Size	Frame
1	SP-531BD-P-PIN1	FH-531BD	12V SUPPLY	OR - 0.8	**Wiring harnesses - Electrical schematic sheet 34 - Front hitch (55.100)**
2	**X-150 (Female) pin 7** TO ZUIDBERG HARNESS	FH-2816A	FRONT HITCH POT WIPER	WH - 0.8	
3	**X-150 (Female) pin 4** TO ZUIDBERG HARNESS	FH-557BD	FRONT HITCH POT LO	BL - 0.8	
4	**X-150 (Female) pin 10** TO ZUIDBERG HARNESS	FH-2817A	FRONT HITCH SW COMMON	WH - 0.8	
5	**X-150 (Female) pin 11** TO ZUIDBERG HARNESS	FH-2718B	FRONT HITCH SW UP	YE - 0.8	
6	**X-150 (Female) pin 12** TO ZUIDBERG HARNESS	FH-2819B	FRONT HITCH SW DOWN	YE - 0.8	
7	**X-2383 (Male) pin B** TO FRONT TRAILER HARNESS	FH-751AB	LEFT TURN	VT - 2.0	
8	**X-2383 (Male) pin C** TO FRONT TRAILER HARNESS	FH-752AB	RIGHT TURN	VT - 2.0	
9	**X-2383 (Male) pin F** TO FRONT TRAILER HARNESS	FH-2825C	AUX POWER	OR - 2.0	
11	**X-345 (Female) pin A** FRONT HITCH AUX B+ FUSE	FH-600	FRONT HITCH AUX B+	RD - 3.0	**Wiring harnesses - Electrical schematic sheet 08 - Starting/charging system and grid heater (55.100)**
13	**X-324 (Female) pin 1** FRONT PTO VALVE	FH-1316	FRONT PTO SOL HI	WH - 0.8	**Wiring harnesses - Electrical schematic sheet 34 - Front hitch (55.100)**
14	**X-324 (Female) pin 2** FRONT PTO VALVE	FH-1315	FRONT PTO SOL LOW	GY - 0.8	

X-2382 - TO ENGINE HARNESS (87382929) (Male)



87382929 30

87382929



RAIL14TR00822AA 31

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4167-Rear remote no. 5 - internal position sensor faulty

NOTE: *Each remote valve consists of a valve body and a pilot head. The pilot contains the extend and retract solenoids, a sensor to determine spool position, as well as a microprocessor. The pilot head can only be serviced as a compete assembly. The microprocessor controls the extend and retract solenoids and reports the position of the main spool over the CAN bus to the Armrest Control Unit (ARU) and the lower display on the Instrument Control Unit (ICU).*

Cause:
Faulty internal position sensor detected at the pilot head for remote valve 5.

Possible failure modes:

1. Faulty spool position potentiometer
2. Faulty pilot head on the remote valve

Solution:

1. Check if the error code is still active.

   Clear the error code and test the system for normal operation.

   A. Error code does not redisplay. Return unit to field operation and monitor for recurring problem.

   B. Error code redisplays. Continue to step **2**.
2. Download the most current software into all remote valves. (All pilot heads must be at the same software level.)

   Renumber the remote valves.

   Calibrate the armrest control levers using the procedure in this manual. When calibration is complete, set all timers to continuous and set the flow controls to continuous.

   Calibrate the remote valves using the procedure in this manual.

   Test remote system operation.

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

   B. Error code redisplays. Continue to step **3**.
3. Swap the pilot head causing the error with another pilot head.

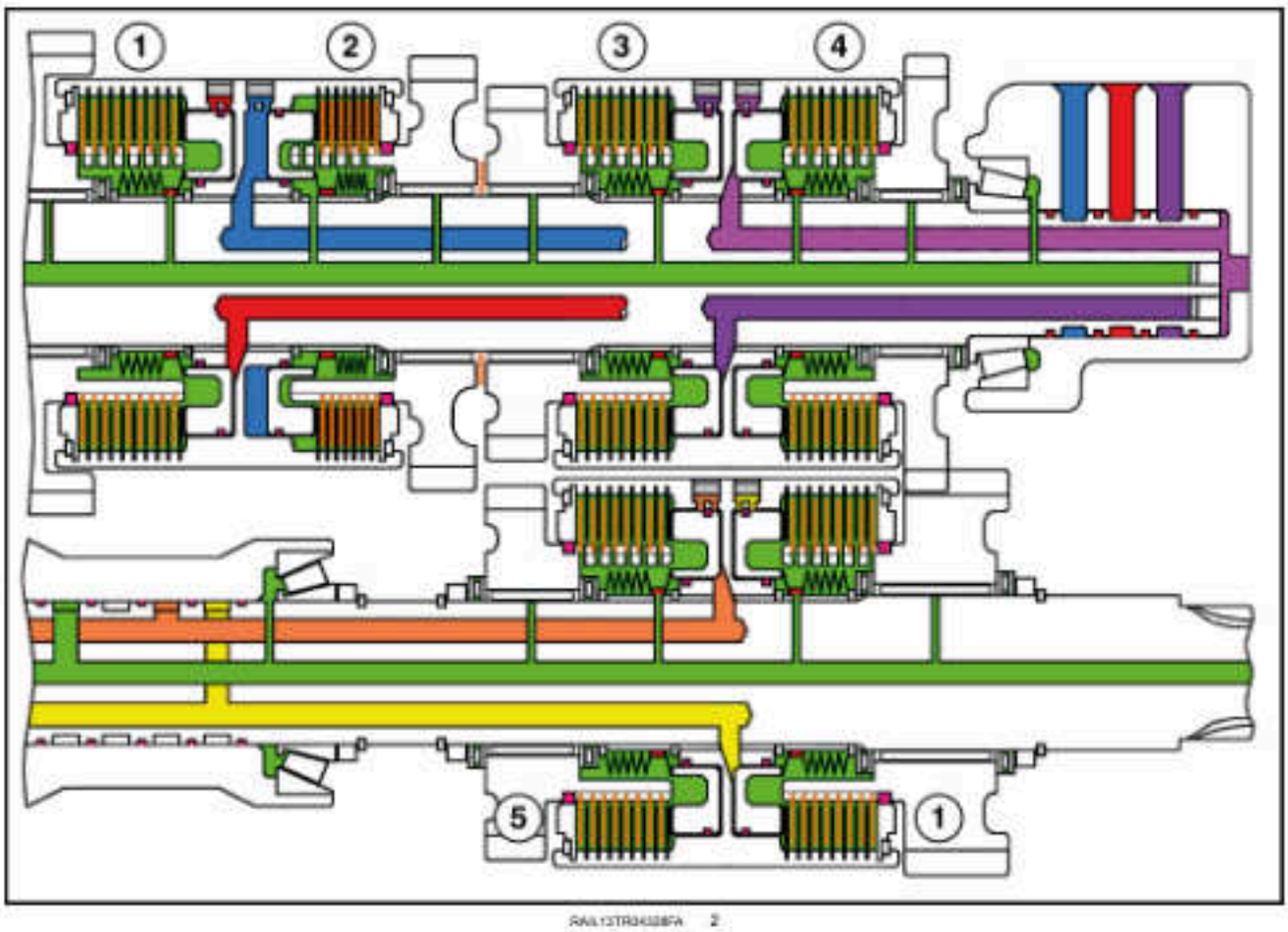
   Retest system operation.

   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.

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Speed housing clutch oil supply



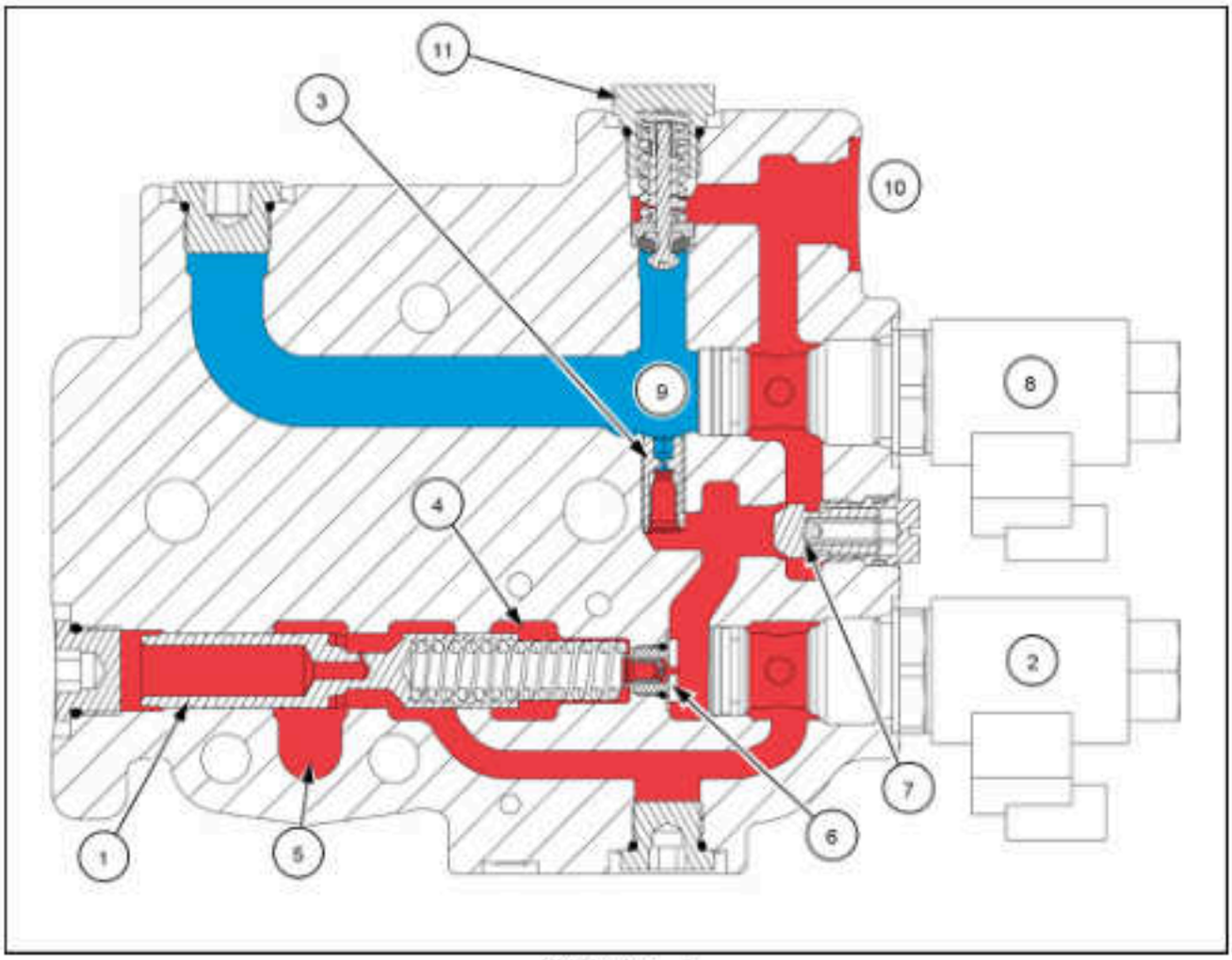
RAIL12TR04328FA 2

Lubrication oil
Odd clutch supply
Even clutch supply
1-2 clutch supply
3-4 clutch supply
5-6 clutch supply
Reverse clutch supply

1. 1-2 clutch	4. Reverse clutch
2. 3-4 clutch	5. Odd clutch
3. 5-6 clutch	6. Even clutch

As oil is supplied to a clutch, the clutch locks and its gear is locked to the shaft. Torque is transmitted from the shaft through the clutch to the gear, or from the gear through the clutch to the shaft. Gears are in constant mesh, and the even gear is in mesh with the reverse gear/clutch and a countershaft gear. The even gear is used as an idler in some reverse gears and as direct drive to the reverse clutch in others. The master clutch is located between the speed output shaft and the range input shaft. All clutches are constantly supplied pressurized lubricating oil to keep them clean and cool.

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RCIL08CCH014GAE 7

Raise position

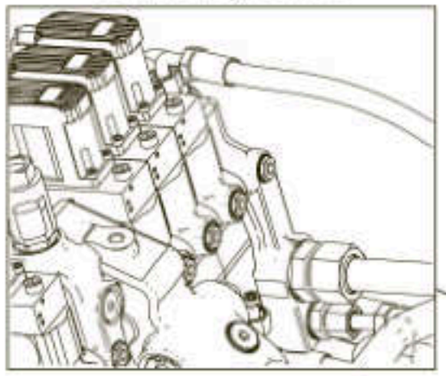
PFC pump pressure	Return to tank pressure
Trapped oil	
1. Flow control spool	7. Load check
2. Raise solenoid	8. Lower solenoid
3. Screened orifice plug	9. Return to tank
4. Pilot signal to compensator	10. Hitch cylinders
5. PFC pump supply	11. Relief valve
6. Check/orifice plug	

Lowering function

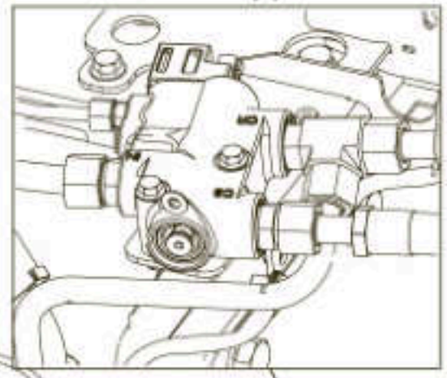
To lower the hitch, the lower proportional solenoid valve must be energized by the tractor control unit (TCU). The amount of spool movement depends on the amount of current supplied by the controller to the proportional solenoid. Once the lower solenoid is energized, the solenoid valve shifts, opening a flow path directly back to tank.

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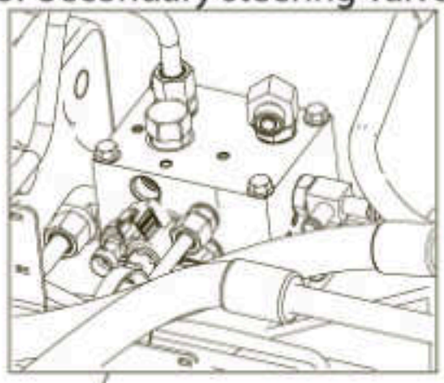
1. Priority valve



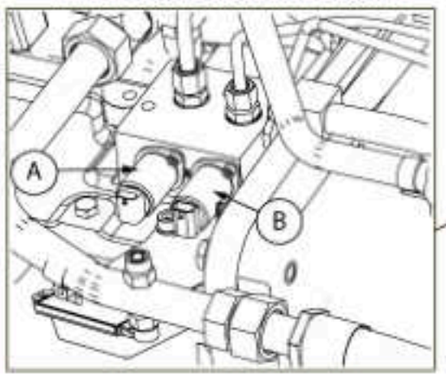
2. Oil cooler bypass valve

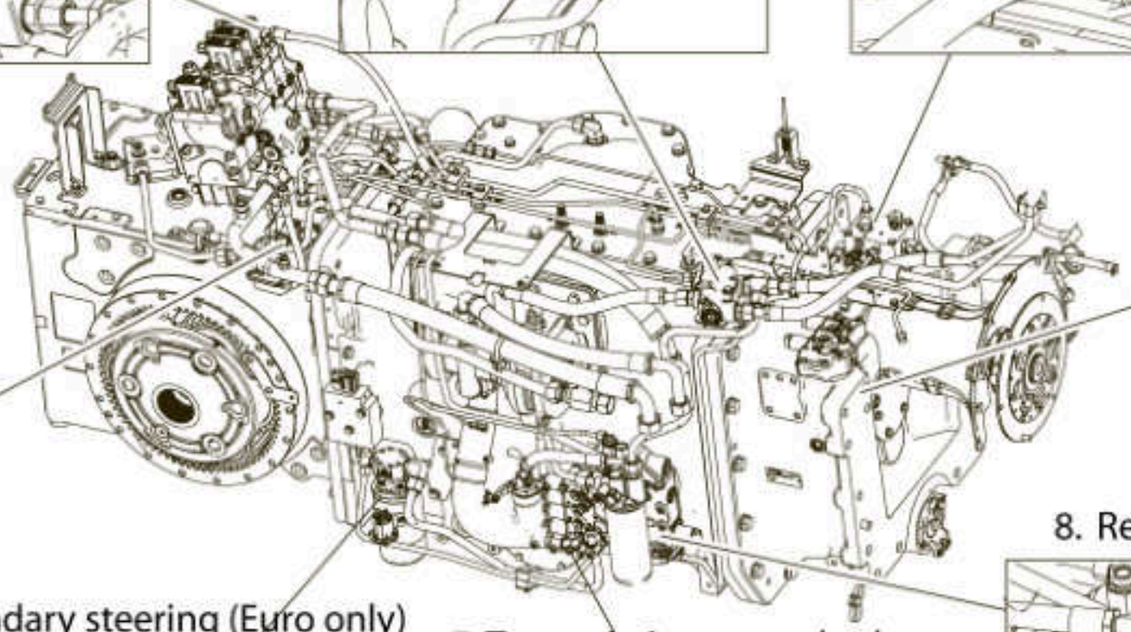


3. Secondary steering valve (Euro only)

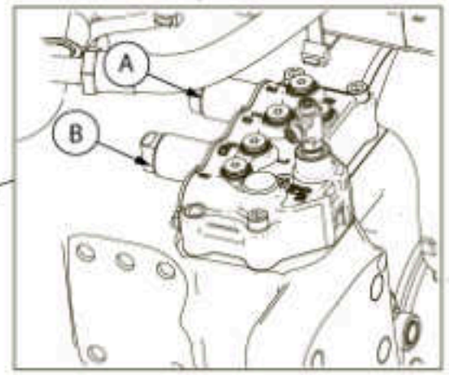


4. Rear PTO brake
MFD Differential lock

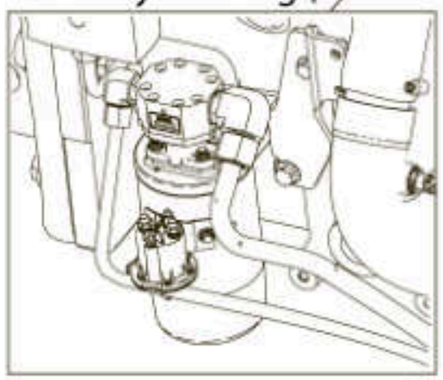




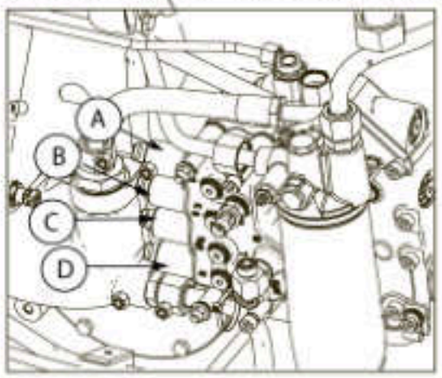
5. Forward/Reverse valve



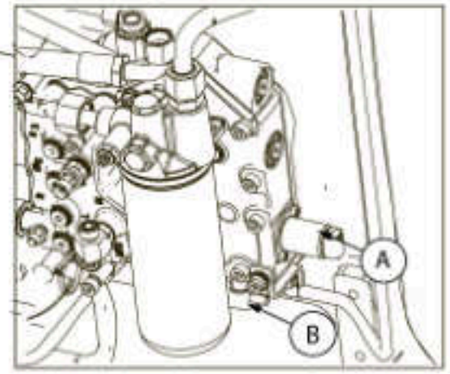
6. Secondary steering (Euro only)



7. Transmission control valve



8. Regulator valve



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