PUMA 130 / PUMA 130 CVT
PUMA 145 / PUMA 145 CVT
PUMA 160 / PUMA 160 CVT

Tier 4

Tractor

SERVICE MANUAL

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CASE IH AGRICULTURE

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Wiring harness - Electrical schematic frame 33 WASHERS & WIPERS (Front & Rear)

Component	Connector	Description
K-001 & K-002	**X033** (1-5)	Wiper Module Front/Rear
K-001 & K-002	**X033** (6-10)	Wiper Module Front/Rear
M-004	**X201**	Wiper Motor Front
M-005	**X177**	Wiper Motor Rear
M-006	**X125**	Washer Motor Front
M-007	**X123**	Washer Motor Rear
S-065	**X011**	Front and Rear Wiper Switch
Additional Connectors: **X106**		

Wire Colour Codes			
BK Black	**GN** Green	**PK** Pink	**BL** Blue
TN Light Brown	**BR** Brown	**OR** Orange	**LG** Light Green
RD Red	**GY** Grey	**LB** Light Blue	
WH White	**YE** Yellow	**VT** Violet	

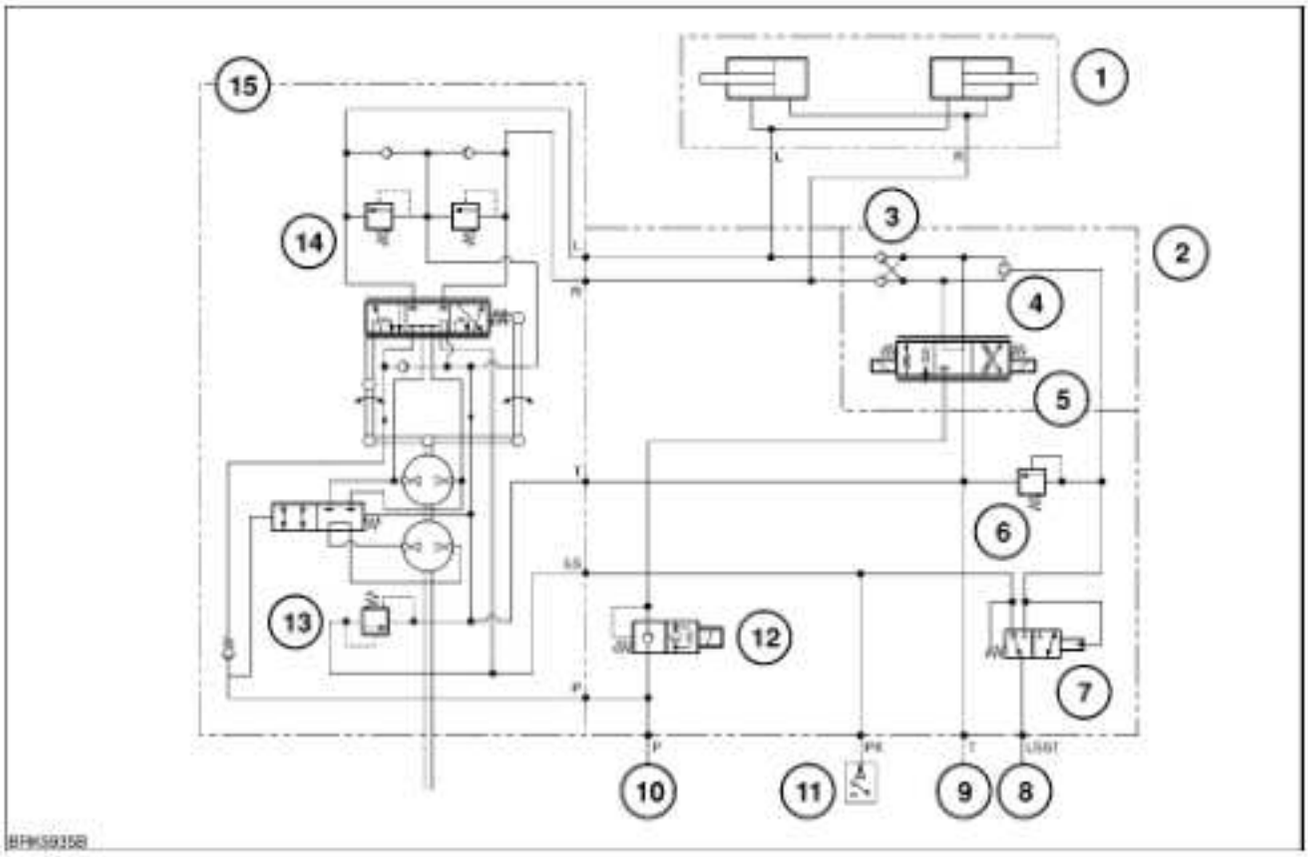
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Differential lock - Troubleshooting

Problem	Possible Cause	Correction
Differential lock not engaging.	Rear axle oil level low.	Top up to the correct oil level.
	Blocked oil filter.	Replace oil filter.
	Faulty hydraulic pump.	Overhaul or replace hydraulic pump.
	Faulty differential lock switch.	Replace differential lock switch.
	Power supply not reaching the solenoid valve: detached or damaged electrical connectors.	Restore electrical connections and replace faulty parts.
	Differential lock solenoid valve stuck on discharge.	Repair or replace differential lock solenoid valve.
	Oil leaks through the seals with consequent pressure drop (piston or supply line seals). Multi-wet plate clutch only.	Replace faulty seals.
	Worn friction plates (multi wet plate clutch).	Replace friction plates.
With differential lock engaged in auto function, the differential lock does not disengage when raising lift arms using the FAST RAISE switch.	Faulty controller.	Remove and replace the controller.
With differential lock engaged, the differential lock does not disengage when brake pedals are pressed.	Faulty brake pedal switch.	Replace brake pedal switch.
Differential lock not disengaging.	Differential lock solenoid valve stuck on delivery.	Repair or replace differential lock solenoid valve.
	Differential unlock spring broken (dog clutch).	Replace spring.

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STEERING Autoguidance - Hydraulic schema Autoguidance system



Auto guidance system schematic

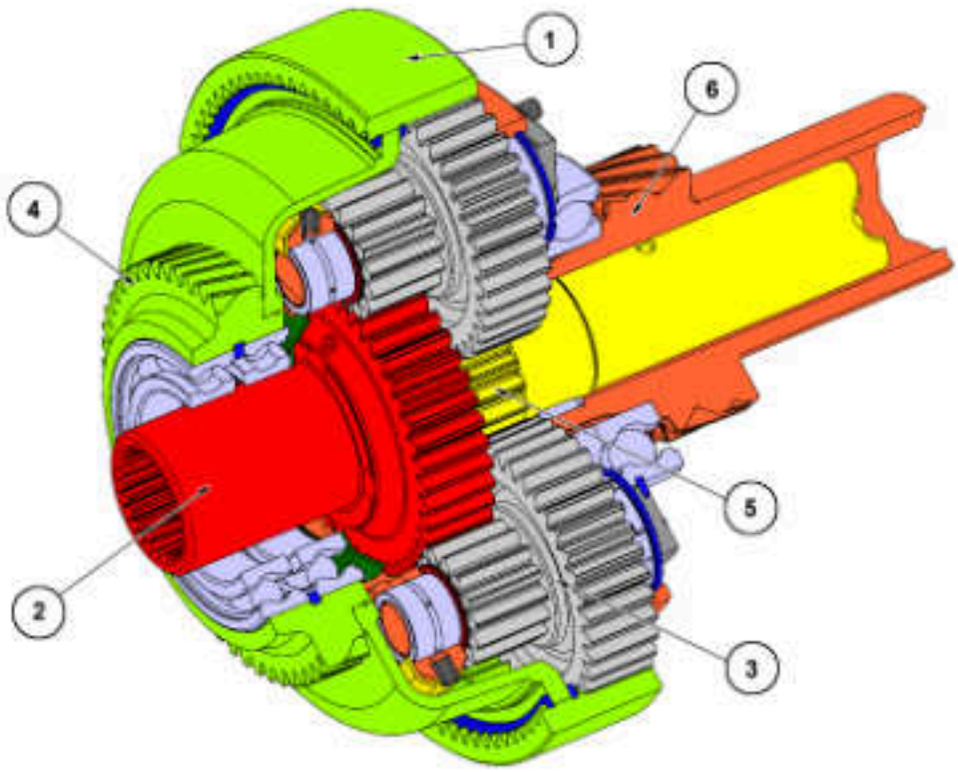
1. Steering cylinders
2. Autoguidance valve assembly
3. Lock valves
4. Pilot line shuttle valve
5. Directional control valve
6. Relief valve **185 - 190 bar** (**2682.5 - 2755.0 psi**)
7. Load sensing pilot operated shuttle valve
8. Load sensing line
9. Pressure sensor
10. Pressure feed
11. Pressure sensor
12. Isolation valve
13. Relief valve **185 - 190 bar** (**2682.5 - 2755.0 psi**)
14. Shock relief valves **220 - 240 bar** (**3190.0 - 3480.0 psi**)
15. Steering control unit **190 bar** (**2755.0 psi**)

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Summing planetary gear

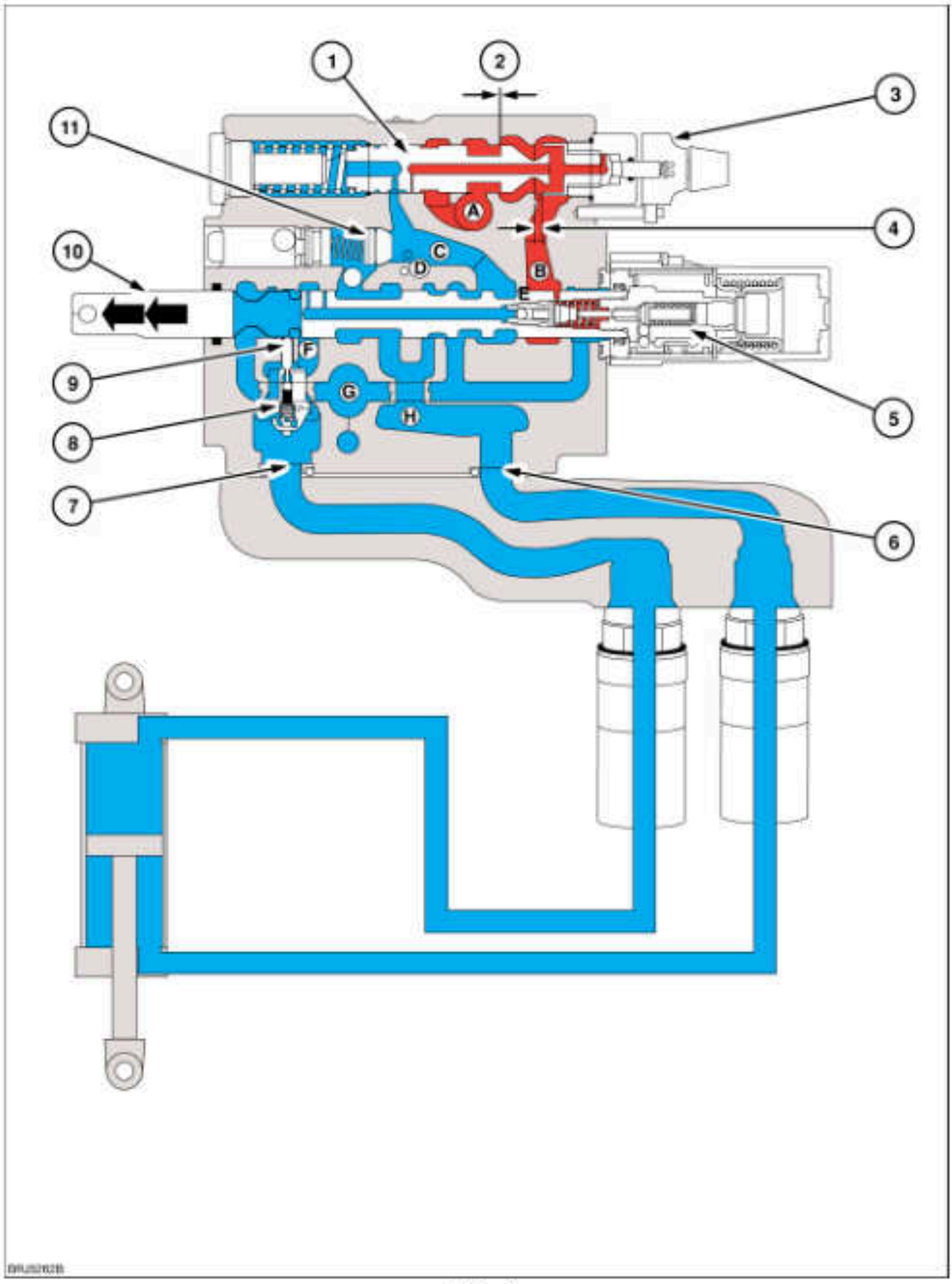
The summing planetary gear is a "four shaft planetary gear drive" with two input shafts and two output shafts. The sun gear **(2)** and the ring gear **(1)** are in a figurative sense the two input shafts.
The planetary carrier **(6)** and the sun gear **(5)** are each permanently attached to an output shaft. The ring gear **(1)** is powered directly by the hydro motor via the spur gear **(4)**. The sun gear **(2)** is powered directly by the combustion engine. The driving power **(3)** is transferred from the three twin planetary gears to the relevant output shaft either via the planetary carrier **(6)** or via the sun gear **(5)**.

Two forwards and one reverse gear can be continuously realised with the aid of the summing planetary gear's two output shafts in connection with the downstream synchronisers and clutches. As a result all of the requirements such as a high degree of tractive force, high final speed, the necessary transmission spread and an excellent degree of efficiency are attained.



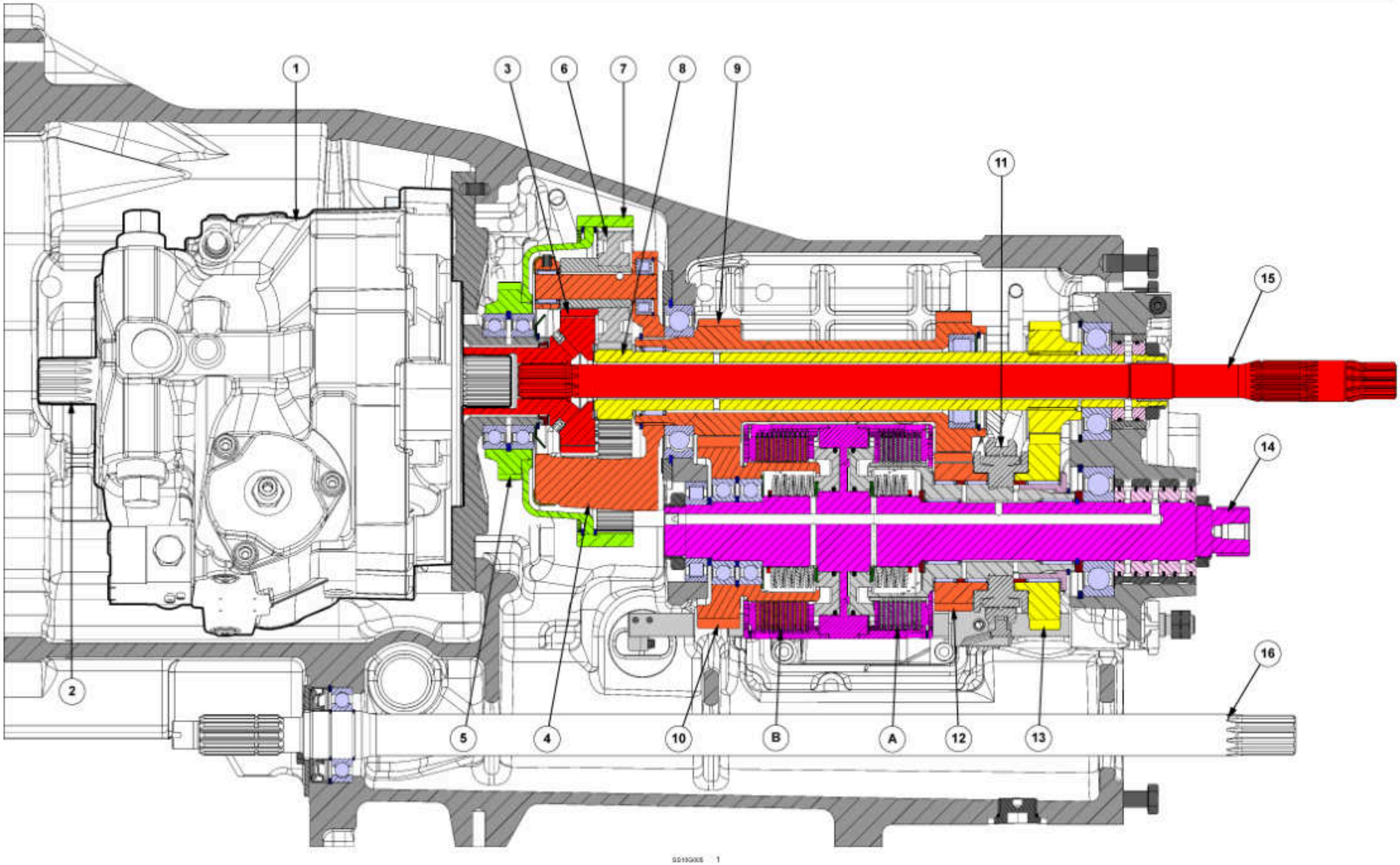
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