Magnum™ 180 PST
Magnum™ 200 PST
Magnum™ 220 PST
Powershift Transmission (PST)
Tractor

PIN ZFRH05001 and above

SERVICE MANUAL

Part number 48015888
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July 2016

CASE IH AGRICULTURE

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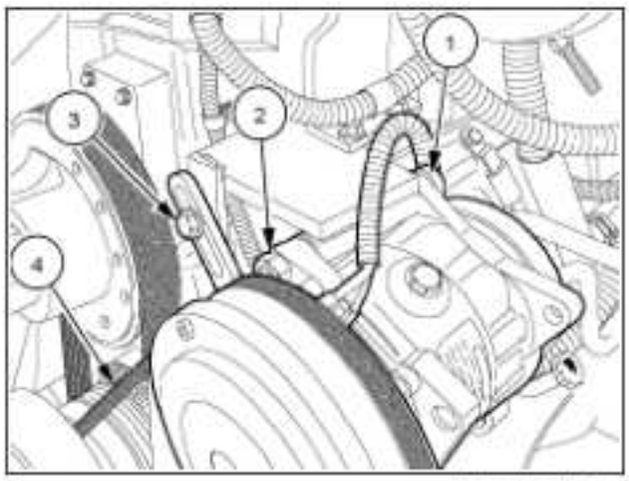
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Air-conditioning compressor - Install

Prior operation:
Air-conditioning compressor - Remove (50.200)
Prior operation:
Air-conditioning compressor - Level make up (50.200)

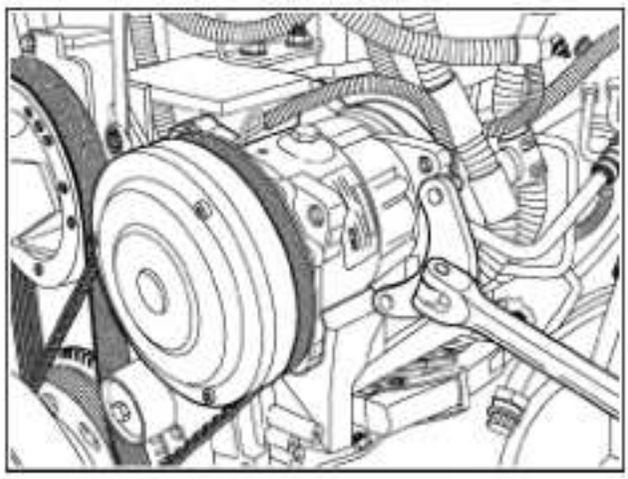
1. Install the compressor with the pivot bolt **(1)** and nut **(2)**, removed earlier. Install bolt **(3)** through adjustment bracket. Install compressor drive belt **(4)** to pulleys.



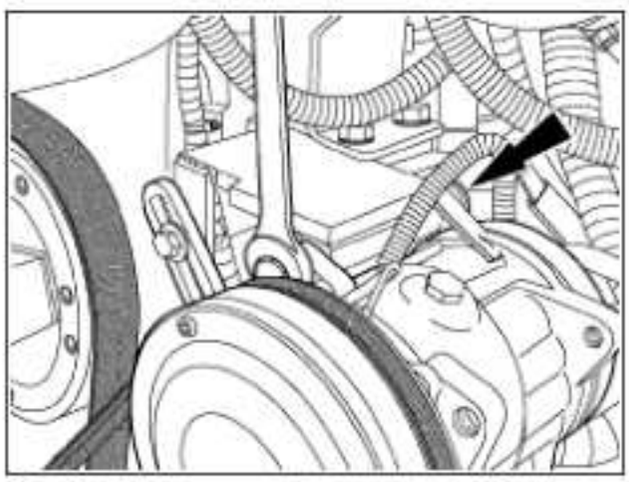
2. Using the shop made tool and a 1/2 inch drive breaker bar, pivot the compressor to tighten the drive belt. Belt tension should be **384 N (86 lb) ± 35 N (8 lb)**. Tighten the nut in the adjustment bracket. Torque the nut to **78 - 82 N·m (58 - 60 lb ft)**.

NOTICE: *Do not pry on the body of the compressor. This can cause internal damage and may lead to early failure.*

NOTE: *This tool is no longer available for purchase. You can shop build this tool using the diagram in* ***Air conditioning - Special tools (50.200)****.*



3. Tighten the pivot bolt while holding the nut. Torque the nut to **78 - 82 N·m (58 - 60 lb ft)**.



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Connector X-9006 - Coolant temperature sensor

CONNECTOR X-9006 - Coolant temperature sensor			
PIN NUMBER	**WIRE NUMBER**	**CIRCUIT REFERENCE**	**ELECTRICAL SCHEMATIC FRAME**
1	EN-014	Signal	**SHEET 05**
2	EN-013B	Ground	

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2364-Clutch C not calibrated

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

Context:
Poor clutch performance of the uncalibrated clutch.

Possible failure modes:

1. Faulty solenoid
2. Faulty hydraulic circuit
3. Mechanical fault

Solution:

1. Perform the transmission calibration procedure. Refer to the controller configuration and calibration section in this manual.

   A. Error code is no longer displayed. Return unit to field operation and monitor for recurring problem.

   B. Error code is still displayed. Continue to step **2**.
2. Check for other error codes being displayed.

   A. Other error codes are displayed. Continue to troubleshoot the other error codes.

   B. No other error codes are displayed. Continue to step **3**.
3. Check the clutch C solenoid.

   Turn the keyswitch OFF.

   Disconnect connector **X-637** . Measure the resistance between the solenoid terminals:

Test point 1	Test point 2	Expected result
X-637 (Female) pin 1	X-637 (Female) pin 2	8 - 11 Ω

   A. Result is outside the expected range. Remove and replace the solenoid, and return unit to field operation.

   B. Result is within the expected range. Continue to step **4**.
4. Check the C clutch pack pressure. Refer to H7 menu vehicle test modes, channel 4, clutch pressure test. See controller configuration and calibration section in service manual.

   A. The clutch pressure is good. Submit a concern to ASIST.

   B. The clutch pressure is low. Continue to step **5**.
5. Thoroughly clean the area surrounding the clutch C solenoid. Refer to transmission powershift valve disassembly in service manual.

   Remove the solenoid valve assembly, check the seals and replace as required. Check the solenoid valve operation on bench top. Repair or replace as required.

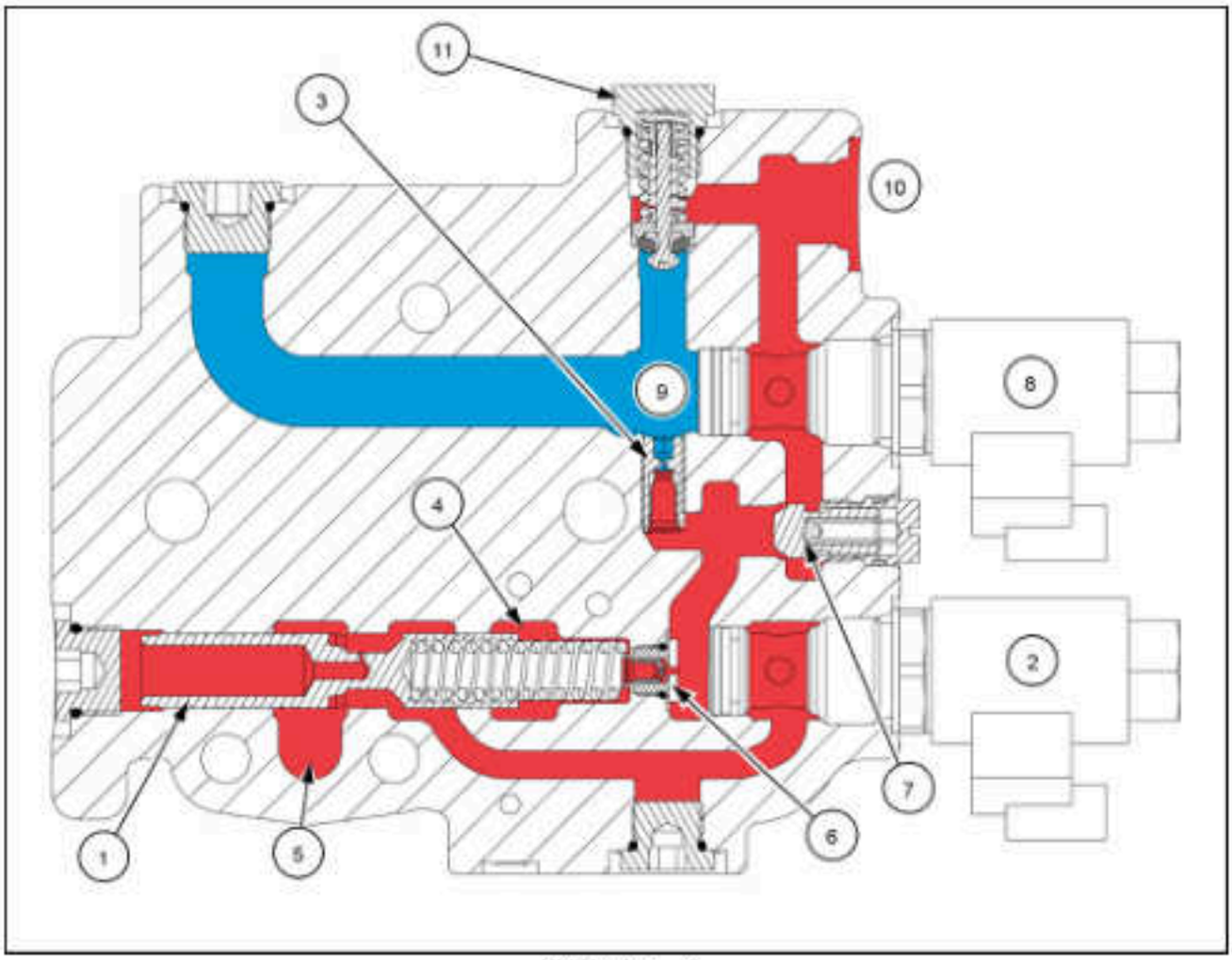
   Clear all active error codes, and test operation.

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

   B. Error code redisplays. Submit a concern to ASIST.

Wiring harnesses - Electrical schematic sheet 15 (55.100)

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RAISE POSITION

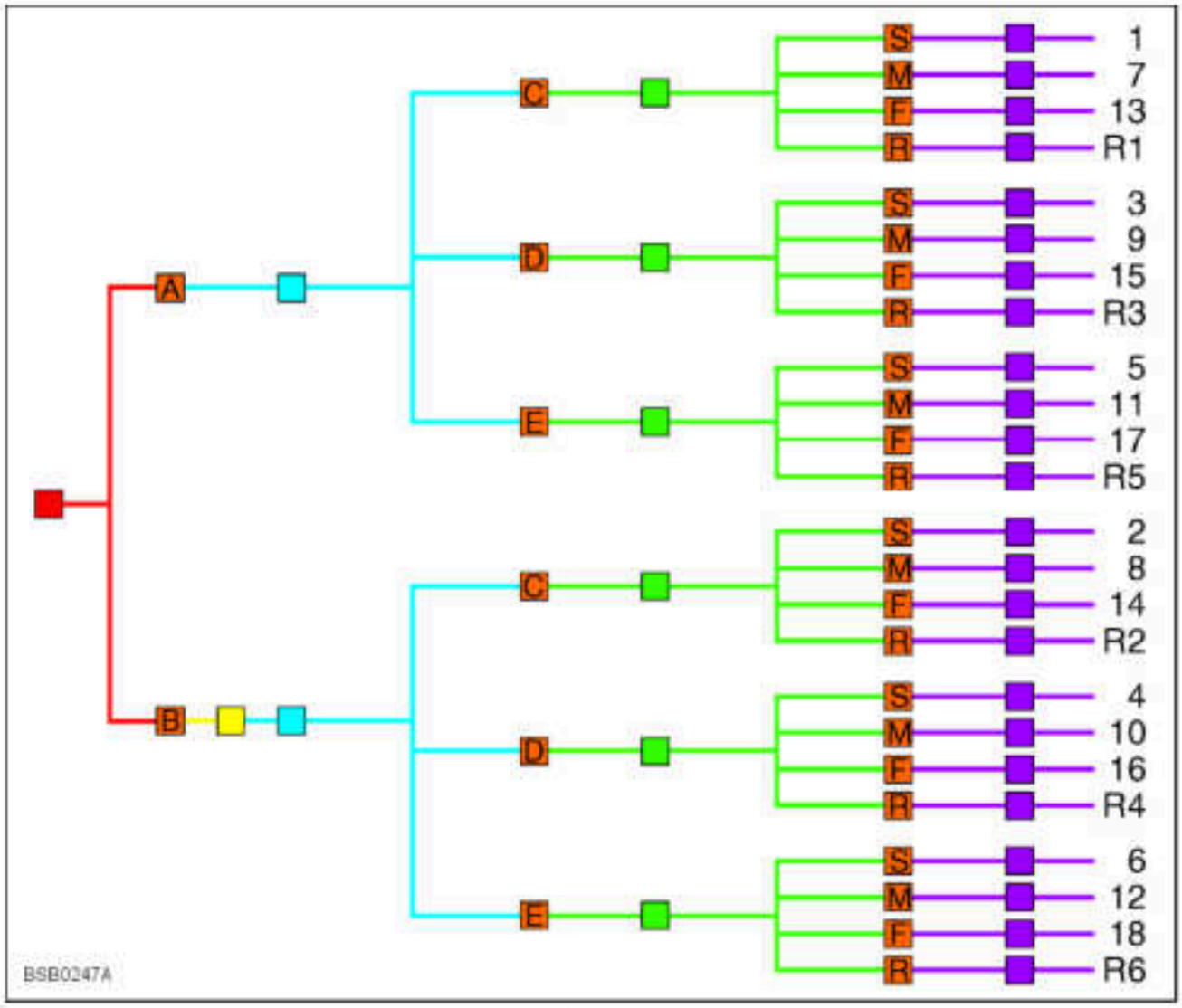
PFC pump pressure	Return to tank pressure
Trapped oil	
1. Flow control spool	7. Load check
2. Raise solenoid	8. Lower solenoid
3. Screened orifice plug	9. Return to tank
4. Pilot signal to compensator	10. Hitch cylinders
5. PFC pump supply	11. Relief valve
6. Check/orifice plug	

Lowering Function

To lower the hitch, the lower proportional solenoid valve must be energized by the central control unit (RM). 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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Powershift transmission - Logical diagram



BSB0247A 1

Powershift transmission power flow

Transmission output drive

Clutch pack engaged

Drive out of C,D or E clutch, depending on ratio selected

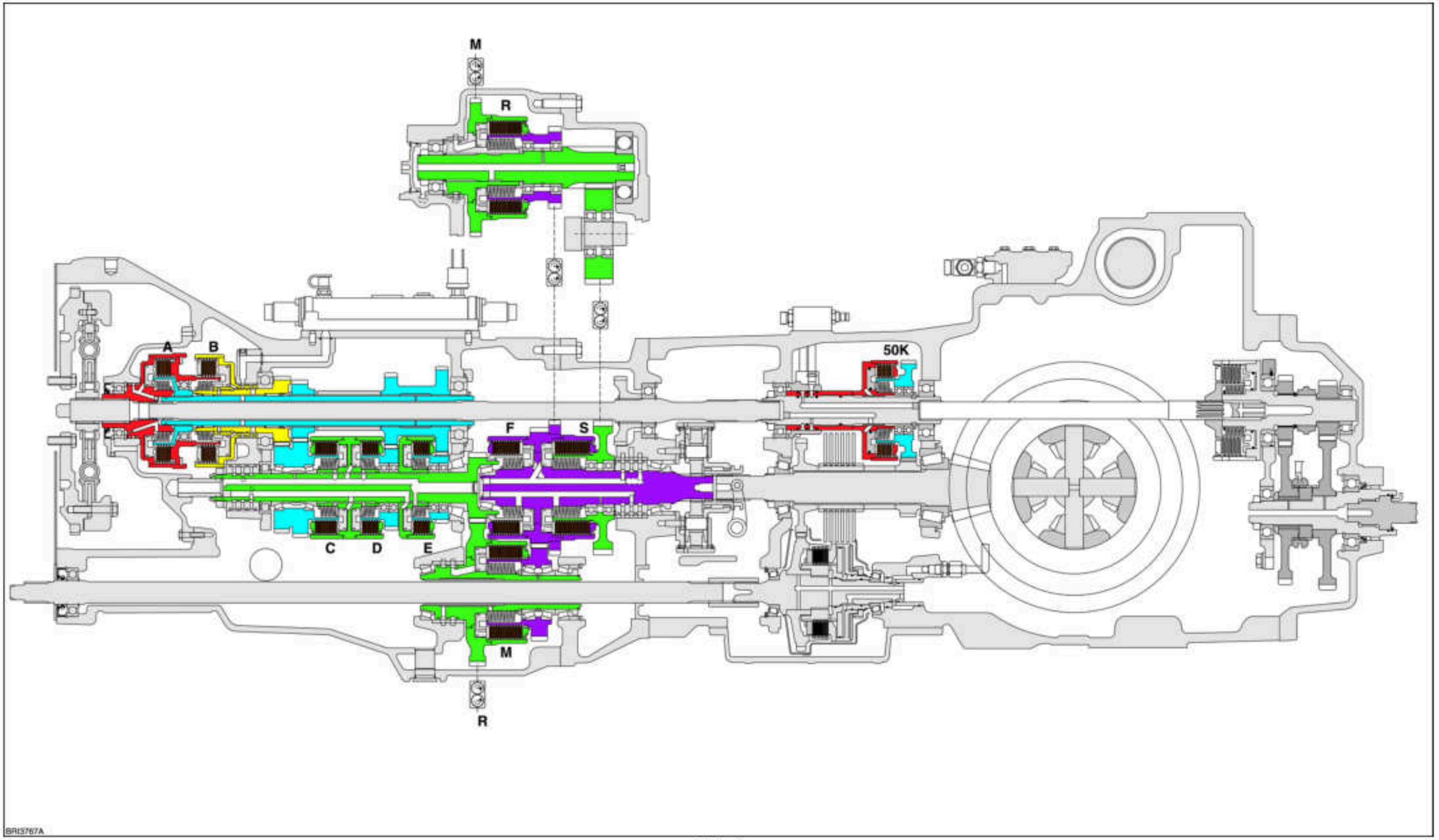
Drive after A or B clutch

Drive from B clutch when B engaged

Drive in from engine

A = clutch A
B = clutch B
C = clutch C
D = clutch D
E = clutch E
F = fast range clutch
S = slow range clutch
M = medium range clutch
R = reverse range clutch

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