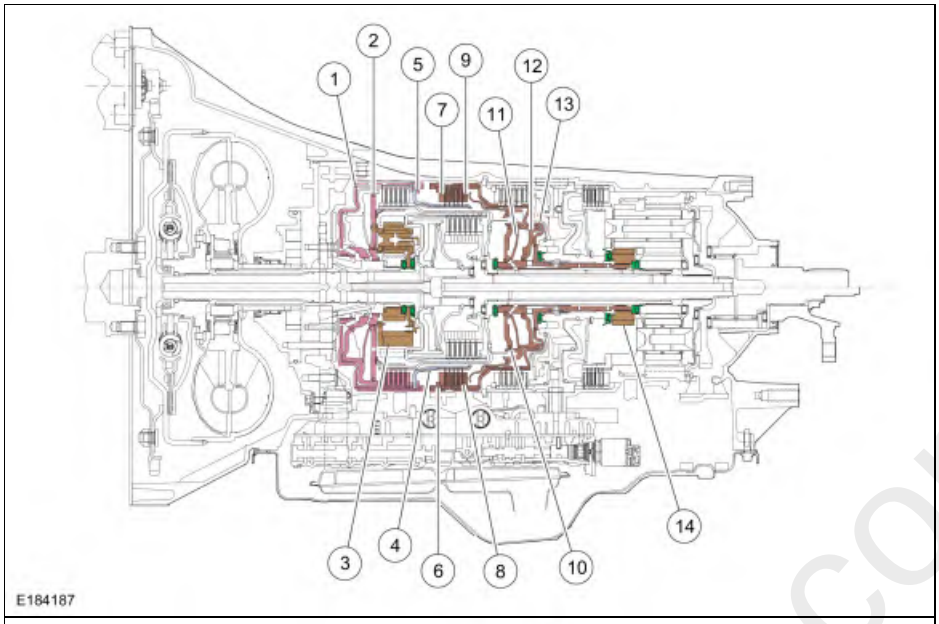
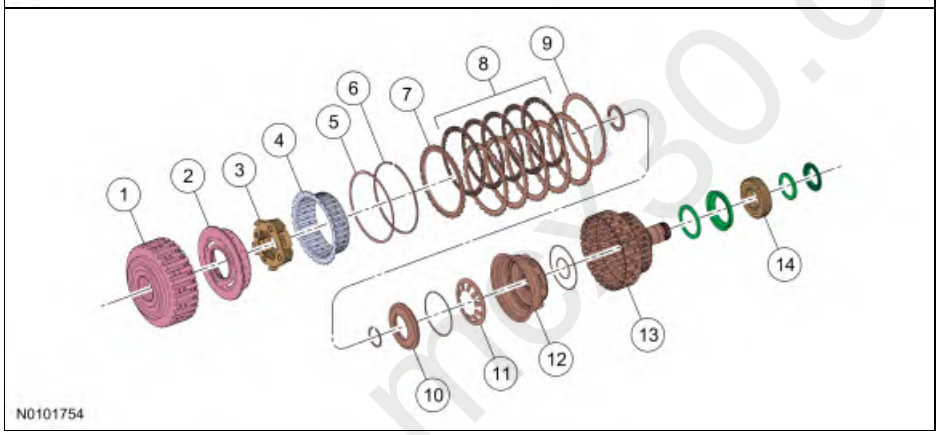
Direct Clutch Assembly

Direct Clutch Cutaway View





Direct Clutch Exploded View

Item	Description
1	Forward clutch (A) cylinder
2	Forward clutch balance piston
3	Front planetary carrier assembly
4	Direct clutch (B) hub
5	Direct clutch pressure plate retaining ring (selective)
6	Direct clutch pressure plate retaining ring (selective)
7	Direct clutch pressure plate
8	Direct clutch assembly (quantity model dependent)
9	Direct clutch cushion plate
10	Direct clutch balance piston
11	Direct clutch piston return spring

12	Direct clutch piston
13	Direct clutch cylinder
14	Rear planetary sun gear No. 2

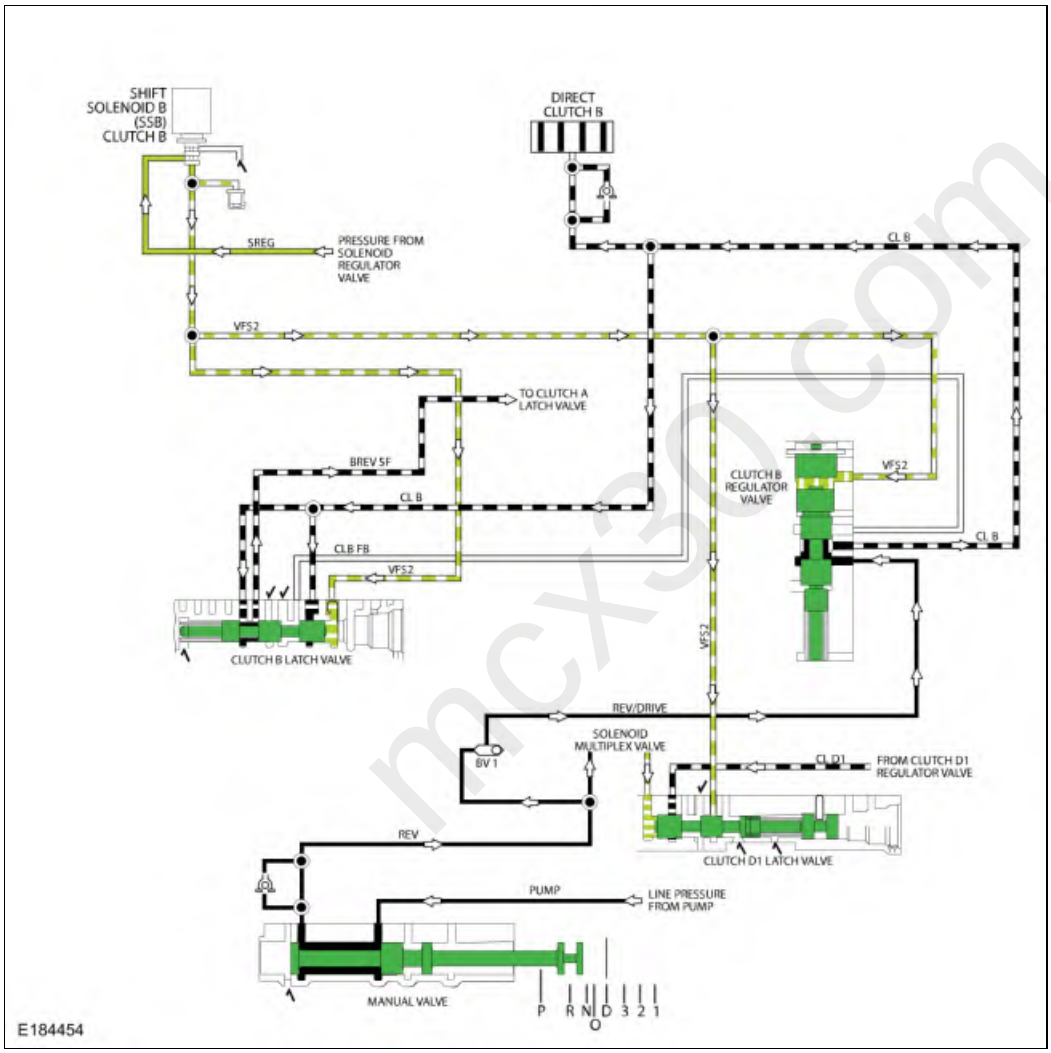
Direct Clutch (B) Hydraulic Circuits

To apply the direct clutch (B), the manual valve can be in the REVERSE, DRIVE, 3, 2 or 1 position to provide line pressure to the clutch B regulator valve through the REV/DRIVE circuit.

For the direct clutch (B) to apply in reverse, SSB provides regulated solenoid pressure from the SREG circuit to the clutch B regulator and latch valves through the VFS2 circuit.

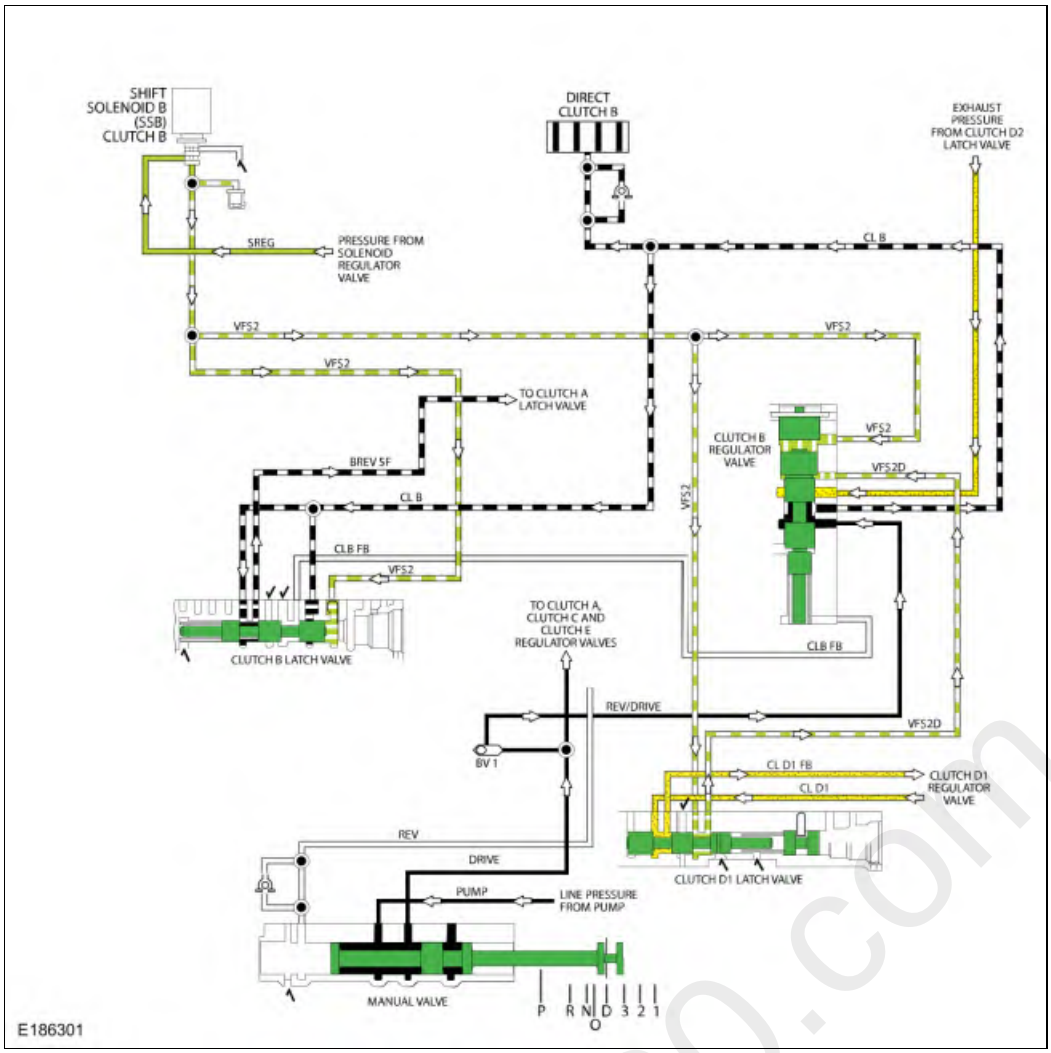
The clutch B regulator valve provides regulated line pressure to the CL B circuit to apply the direct clutch (B).

Direct (3, 5, R) Clutch Hydraulic Circuits (Applied in reverse)



The direct clutch is applied the same way in 3rd and 5th gear with one exception. VFS2 pressure is routed through the Clutch D1 Latch valve into the VFS2D circuit. VFS2D is routed to the clutch B regulator valve where it opposes VFS2 pressure. This action effectively reduces the amount of VFS2 force acting on the regulator valve and results in a smooth shift.

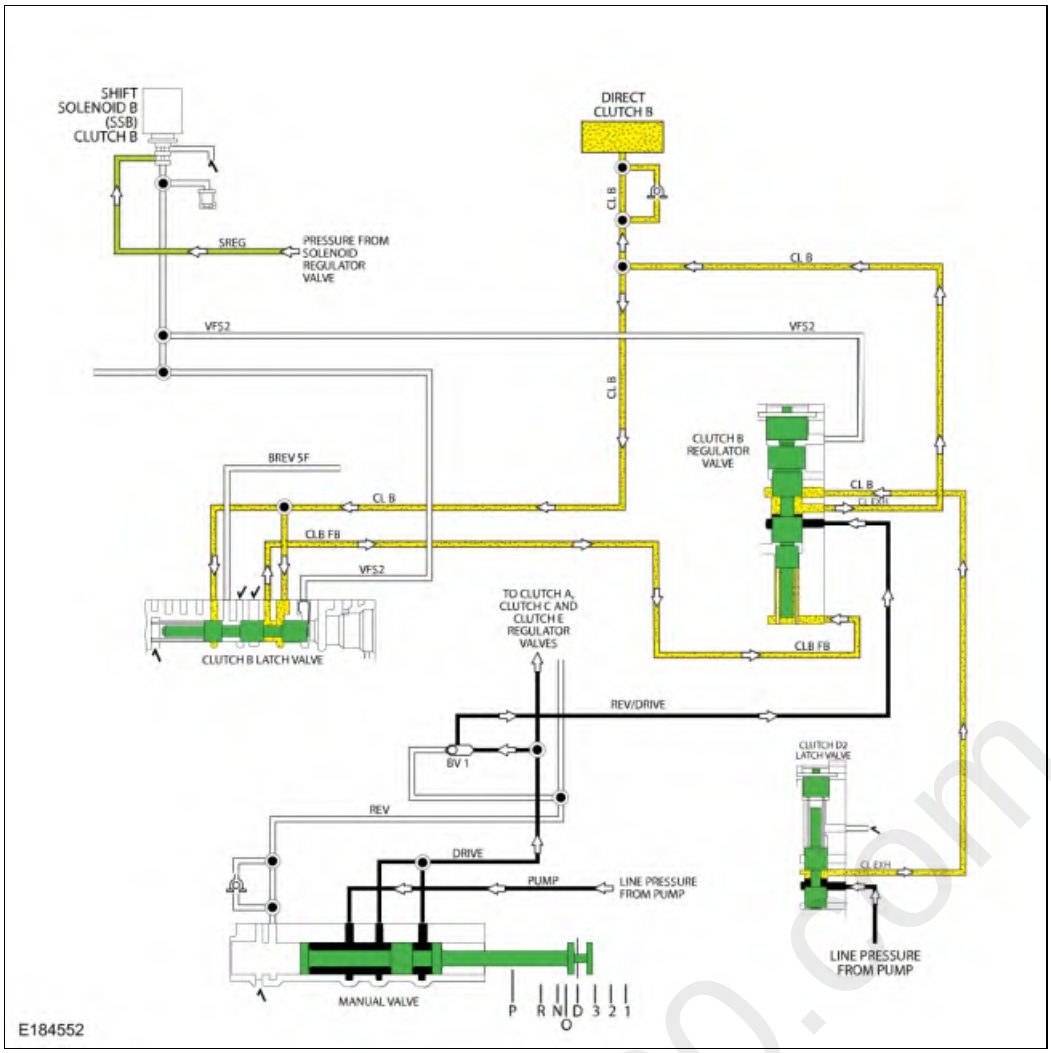
Direct (3, 5, R) Clutch Hydraulic Circuits (Applied in 3rd and 5th gear)



To release the direct clutch (B) , In 1st, 2nd, 4th or 6th gear, the manual valve supplies line pressure to the clutch B regulator valve. The SSB lowers pressure to the clutch B regulator and clutch B latch valve to position the valves to lower the regulated line pressure in the CL B circuit to release the clutch.

In 2nd, 3rd, 4th, 5th and 6th gear, the D2 Latch valve directs exhaust circuit pressure from the CL EXH circuit to the CL B circuit to fill the circuit and the direct clutch (B) with fluid at low pressure, approximately 21 kPa (3 psi). This keeps air out of the Clutch B circuits resulting in smooth shifts when the clutch is applied in 3rd or 5th gear.

Direct Clutch (B) Released in 1st, 2nd, 4th and 6th Gear


SHIFT SOLENOID B (SSB) CLUTCH B
DIRECT CLUTCH B
CL B
SREG
PRESSURE FROM SOLENOID REGULATOR VALVE
VFS2
BREV 5F
CLUTCH B REGULATOR VALVE
CLB FB
CLUTCH B LATCH VALVE
TO CLUTCH A, CLUTCH C AND CLUTCH E REGULATOR VALVES
REV/DRIVE
BV 1
REV
DRIVE
PUMP
LINE PRESSURE FROM PUMP
CLUTCH D2 LATCH VALVE
CL EXH
MANUAL VALVE
P R N D 3 2 1
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