

## Overdrive Clutch Assembly

### Overdrive Clutch

For overdrive clutch operation,

REFER to: Overdrive Clutch Assembly (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€” 6R100, Description and Operation).

For hydraulic circuit identification,

REFER to: Transmission Description - System Operation and Component Description (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€” 6R100, Description and Operation).

### Overdrive Clutch

| Condition                       | Possible Sources                                                             | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------------|------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Overdrive clutch does not apply | SSD mechanically stuck OFF, SSE mechanically stuck ON                        | INSTALL a new solenoid.<br>REFER to: Shift Solenoids (SS) (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€” 6R100, Removal and Installation).                                                                                                                                                                                                                                                                                                               |
|                                 | Clutch E regulator valve is stuck OFF                                        | DISASSEMBLE, CLEAN and INSPECT the clutch E regulator valve. If the bore or valve is damaged, INSTALL a new main control valve body.<br>REFER to: Main Control Valve Body (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€” 6R100, Removal and Installation).<br>REFER to: Main Control Valve Body (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€” 6R100, Overhaul).                            |
|                                 | CLE, DRIVE, VFS4, SS1, CLECF, CLEC, BREV5 hydraulic circuits blocked/leaking | DISASSEMBLE and INSPECT the main control valve body and separator plate passages for debris/blockage/damage. CLEAN as necessary.<br>REFER to: Main Control Valve Body (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€” 6R100, Removal and Installation).<br>REFER to: Main Control Valve Body (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€” 6R100, Overhaul).                                |
|                                 | Solenoid multiplex valve or drive enable valve is stuck                      | DISASSEMBLE, CLEAN and INSPECT the solenoid multiplex valve and the drive enable valve. If the bore or valve is damaged, INSTALL a new main control valve body.<br>REFER to: Main Control Valve Body (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€” 6R100, Removal and Installation).<br>REFER to: Main Control Valve Body (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€” 6R100, Overhaul). |
|                                 | Shift solenoid control check ball missing/damaged                            | REMOVE and DISASSEMBLE the main control valve body. INSPECT all check balls for missing/damage.<br>REFER to: Main Control Valve Body (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€” 6R100, Removal and Installation).<br>REFER to: Main Control Valve Body (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€” 6R100, Overhaul).                                                                 |

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|                                 | Input shaft, input shaft Teflonâ¸ seals or intermediate shaft                | DISASSEMBLE and INSPECT the components for wear and damage. INSTALL new components as necessary.<br>REFER to: Transmission (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â¸ 6R100, Overhaul).                                                                                                                                                                                                                                                             |
|                                 | Overdrive clutch friction plates                                             | DISASSEMBLE and INSPECT the overdrive clutch friction and steel plates. INSTALL new components as necessary.<br>REFER to: Transmission (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â¸ 6R100, Overhaul).                                                                                                                                                                                                                                                 |
|                                 | Overdrive clutch piston seals                                                | DISASSEMBLE and INSPECT overdrive clutch piston seals for damage and wear. INSTALL new components as necessary.<br>REFER to: Transmission (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â¸ 6R100, Overhaul).                                                                                                                                                                                                                                              |
| Overdrive clutch always applied | SSD mechanically stuck OFF, SSE mechanically stuck ON                        | INSTALL a new solenoid.<br>REFER to: Shift Solenoids (SS) (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â¸ 6R100, Removal and Installation).                                                                                                                                                                                                                                                                                                              |
|                                 | Clutch E regulator valve is stuck ON                                         | DISASSEMBLE, CLEAN and INSPECT the overdrive clutch regulator valve. If the bore or valve is damaged, INSTALL a new main control valve body.<br>REFER to: Main Control Valve Body (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â¸ 6R100, Removal and Installation).<br>REFER to: Main Control Valve Body (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â¸ 6R100, Overhaul).                    |
|                                 | CLE, DRIVE, VFS4, SS1, CLECF, CLEC, BREV5 hydraulic circuits blocked/leaking | DISASSEMBLE and INSPECT the main control valve body and separator plate passages for debris/blockage/damage. CLEAN as necessary.<br>REFER to: Main Control Valve Body (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â¸ 6R100, Removal and Installation).<br>REFER to: Main Control Valve Body (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â¸ 6R100, Overhaul).                                |
|                                 | Solenoid multiplex valve or drive enable valve is stuck                      | DISASSEMBLE, CLEAN and INSPECT the solenoid multiplex valve and the drive enable valve. If the bore or valve is damaged, INSTALL a new main control valve body.<br>REFER to: Main Control Valve Body (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â¸ 6R100, Removal and Installation).<br>REFER to: Main Control Valve Body (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â¸ 6R100, Overhaul). |
|                                 | Shift solenoid control check ball missing/damaged                            | REMOVE and DISASSEMBLE the main control valve body. INSPECT all check balls for missing/damage.<br>REFER to: Main Control Valve Body (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â¸ 6R100, Removal and Installation).<br>REFER to: Main Control Valve Body (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â¸ 6R100, Overhaul).                                                                 |
|                                 | Input shaft, input shaft Teflonâ¸ seals or intermediate shaft                | DISASSEMBLE and INSPECT the components for wear and damage. INSTALL new components as necessary.<br>REFER to: Transmission (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â¸ 6R100, Overhaul).                                                                                                                                                                                                                                                             |
|                                 | Overdrive clutch friction plates                                             | DISASSEMBLE and INSPECT the overdrive clutch friction and steel plates. INSTALL new components as necessary.<br>REFER to: Transmission (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â¸ 6R100, Overhaul).                                                                                                                                                                                                                                                 |
|                                 | Overdrive clutch piston return spring                                        | DISASSEMBLE and INSPECT the overdrive clutch piston return spring for damage. INSTALL new components as necessary.<br>REFER to: Transmission (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â¸ 6R100, Overhaul).                                                                                                                                                                                                                                           |

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| Overdrive clutch delayed/soft/slipping apply | SSD is mechanically stuck OFF, SSE is mechanically stuck ON                  | INSTALL a new solenoid.<br>REFER to: Shift Solenoids (SS) (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€“ 6R100, Removal and Installation).                                                                                                                                                                                                                                                                                                               |
|                                              | Clutch E regulator valve or latch valve is sticking                          | DISASSEMBLE, CLEAN and INSPECT the overdrive clutch regulator and latch valves. If the bore or valve is damaged, INSTALL a new main control valve body.<br>REFER to: Main Control Valve Body (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€“ 6R100, Removal and Installation).<br>REFER to: Main Control Valve Body (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€“ 6R100, Overhaul).         |
|                                              | CLE, DRIVE, VFS4, SS1, CLECF, CLEC, BREV5 hydraulic circuits blocked/leaking | DISASSEMBLE and INSPECT the main control valve body and separator plate passages for debris/blockage/damage. CLEAN as necessary.<br>REFER to: Main Control Valve Body (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€“ 6R100, Removal and Installation).<br>REFER to: Main Control Valve Body (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€“ 6R100, Overhaul).                                |
|                                              | Solenoid multiplex valve or drive enable valve is sticking                   | DISASSEMBLE, CLEAN and INSPECT the solenoid multiplex valve and the drive enable valve. If the bore or valve is damaged, INSTALL a new main control valve body.<br>REFER to: Main Control Valve Body (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€“ 6R100, Removal and Installation).<br>REFER to: Main Control Valve Body (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€“ 6R100, Overhaul). |
|                                              | Shift solenoid control check ball missing/damaged                            | REMOVE and DISASSEMBLE the main control valve body. INSPECT all check balls for missing/damage.<br>REFER to: Main Control Valve Body (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€“ 6R100, Removal and Installation).<br>REFER to: Main Control Valve Body (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€“ 6R100, Overhaul).                                                                 |
|                                              | Input shaft, input shaft Teflonâ„¢ seals or intermediate shaft               | DISASSEMBLE and INSPECT the components for wear and damage. INSTALL new components as necessary.<br>REFER to: Transmission (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€“ 6R100, Overhaul).                                                                                                                                                                                                                                                              |
|                                              | Overdrive clutch friction plates                                             | DISASSEMBLE and INSPECT the overdrive clutch friction and steel plates. INSTALL new components as necessary.<br>REFER to: Transmission (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€“ 6R100, Overhaul).                                                                                                                                                                                                                                                  |
|                                              | Overdrive clutch piston seals                                                | DISASSEMBLE and INSPECT overdrive clutch piston seals for damage and wear. INSTALL new components as necessary.<br>REFER to: Transmission (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€“ 6R100, Overhaul).                                                                                                                                                                                                                                               |
| Overdrive clutch harsh apply                 | SSD is mechanically stuck OFF, SSE is mechanically stuck ON                  | INSTALL a new solenoid.<br>REFER to: Shift Solenoids (SS) (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€“ 6R100, Removal and Installation).                                                                                                                                                                                                                                                                                                               |
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| Clutch E regulator valve or latch valve is sticking                          | DISASSEMBLE, CLEAN and INSPECT the overdrive clutch regulator and latch valves. If the bore or valve is damaged, INSTALL a new main control valve body. REFER to: Main Control Valve Body (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€“ 6R100, Removal and Installation).<br>REFER to: Main Control Valve Body (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€“ 6R100, Overhaul).            |
| CLE, DRIVE, VFS4, SS1, CLECF, CLEC, BREV5 hydraulic circuits blocked/leaking | DISASSEMBLE and INSPECT the main control valve body and separator plate passages for debris/blockage/damage. CLEAN as necessary.<br>REFER to: Main Control Valve Body (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€“ 6R100, Removal and Installation).<br>REFER to: Main Control Valve Body (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€“ 6R100, Overhaul).                                |
| Solenoid multiplex valve or drive enable valve is sticking                   | DISASSEMBLE, CLEAN and INSPECT the solenoid multiplex valve and the drive enable valve. If the bore or valve is damaged, INSTALL a new main control valve body.<br>REFER to: Main Control Valve Body (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€“ 6R100, Removal and Installation).<br>REFER to: Main Control Valve Body (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€“ 6R100, Overhaul). |
| Shift solenoid control check ball missing/damaged                            | REMOVE and DISASSEMBLE the main control valve body. INSPECT all check balls for missing/damage.<br>REFER to: Main Control Valve Body (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€“ 6R100, Removal and Installation).<br>REFER to: Main Control Valve Body (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€“ 6R100, Overhaul).                                                                 |
| Input shaft, input shaft Teflonâ„¢ seals or intermediate shaft               | DISASSEMBLE and INSPECT the components for wear and damage. INSTALL new components as necessary.<br>REFER to: Transmission (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€“ 6R100, Overhaul).                                                                                                                                                                                                                                                              |
| Overdrive clutch friction plates                                             | DISASSEMBLE and INSPECT the overdrive clutch friction and steel plates. INSTALL new components as necessary.<br>REFER to: Transmission (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€“ 6R100, Overhaul).                                                                                                                                                                                                                                                  |
| Overdrive clutch piston return spring                                        | DISASSEMBLE and INSPECT the overdrive clutch piston return spring for damage. INSTALL new components as necessary.<br>REFER to: Transmission (307-01A Automatic Transmission, Transfer Case and Power Transfer Unit - 6-Speed Automatic Transmission â€“ 6R100, Overhaul).                                                                                                                                                                                                                                            |

