

307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80  
 Diagnosis and Testing

2019 Ranger

Procedure revision date: 05/17/2018

## F Clutch

### Principles of Operation

### Symptom Chart

#### F Clutch

For F clutch operation,  
 REFER to: [F Clutch](#) (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Description and Operation).

#### F Clutch

Condition	Possible Sources	Action
F clutch does not apply	SSF is mechanically stuck OFF	INSTALL a new solenoid. REFER to: <a href="#">Shift Solenoids (SS)</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Removal and Installation).
	F Clutch regulator valve stuck OFF	DISASSEMBLE, CLEAN and INSPECT the regulator valve. If bore or valve is damaged, INSTALL a new main control valve body. REFER to: <a href="#">Main Control Valve Body</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Removal and Installation). REFER to: <a href="#">Main Control Valve Body - Vehicles With: Auto-Start-Stop</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Removal and Installation). REFER to: <a href="#">Main Control Valve Body - Vehicles With: Auto-Start-Stop</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Removal and Installation). PERFORM the Transmission Strategy Download, REFER to: <a href="#">Transmission Strategy Download</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, General Procedures).
	F CL CONTR, hydraulic circuit blocked/leaking	DISASSEMBLE and INSPECT the main control valve body and separator plate passages for debris/blockage. CLEAN as necessary. REFER to: <a href="#">Main Control Valve Body</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Removal and Installation). REFER to: <a href="#">Main Control Valve Body - Vehicles With: Auto-Start-Stop</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Removal and

		Installation). REFER to: <a href="#">Main Control Valve Body - Vehicles With: Auto-Start-Stop</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Removal and Installation).
	F clutch hub	INSPECT components wear and damage. CLEAN and/or INSTALL new components as necessary. REFER to: <a href="#">Transmission</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Overhaul).
	F clutch friction plates	INSPECT components wear and damage. CLEAN and/or INSTALL new components as necessary. REFER to: <a href="#">Transmission</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Overhaul).
	F clutch piston seals	INSPECT components wear and damage. CLEAN and/or INSTALL new components as necessary. REFER to: <a href="#">Transmission</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Overhaul).
F clutch always applied	<u>SSF</u> mechanically stuck	INSTALL a new solenoid. REFER to: <a href="#">Shift Solenoids (SS)</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Removal and Installation).
	F Clutch regulator valve or CL F latch valve stuck ON	DISASSEMBLE, CLEAN and INSPECT the regulator valve. If bore or valve is damaged, INSTALL a new main control valve body. REFER to: <a href="#">Main Control Valve Body</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Removal and Installation). REFER to: <a href="#">Main Control Valve Body - Vehicles With: Auto-Start-Stop</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Removal and Installation). REFER to: <a href="#">Main Control Valve Body - Vehicles With: Auto-Start-Stop</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Removal and Installation). PERFORM the Transmission Strategy Download, REFER to: <a href="#">Transmission Strategy Download</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, General Procedures).
	F CL CONTR, hydraulic circuit cross leaks	DISASSEMBLE and INSPECT the main control valve body and separator plate passages for debris/blockage. CLEAN as necessary. REFER to: <a href="#">Main Control Valve Body</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Removal and Installation). REFER to: <a href="#">Main Control Valve Body - Vehicles With: Auto-Start-Stop</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Removal and Installation). REFER to: <a href="#">Main Control Valve Body - Vehicles With: Auto-Start-Stop</a> (307-01 Automatic Transmission - 10-

		Speed Automatic Transmission - 10R80, Removal and Installation).
	F clutch hub, clutch and planetary carrier, No.4 ring gear	INSPECT components wear and damage. CLEAN and/or INSTALL new components necessary. REFER to: <a href="#">Transmission</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Overhaul).
	F clutch friction plates	INSPECT components wear and damage. CLEAN and/or INSTALL new components necessary. REFER to: <a href="#">Transmission</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Overhaul).
	F clutch piston seals	INSPECT components wear and damage. CLEAN and/or INSTALL new components necessary. REFER to: <a href="#">Transmission</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Overhaul).
F clutch delayed/soft/slipping apply	Incorrect transmission strategy programmed into <u>PCM/ TCM</u> .	PERFORM the Transmission Strategy Download, REFER to: <a href="#">Transmission Strategy Download</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, General Procedures).
	Low line pressure	PERFORM the line pressure test. REFER to: <a href="#">Special Testing Procedures</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Diagnosis and Testing).
	<u>SSF</u> mechanically sticking	INSTALL a new solenoid. REFER to: <a href="#">Shift Solenoids (SS)</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Removal and Installation).
	F Clutch regulator valve sticking	DISASSEMBLE, CLEAN and INSPECT the valves. If bore or valve is damaged, INSTALL a new main control valve body. REFER to: <a href="#">Main Control Valve Body</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Removal and Installation). REFER to: <a href="#">Main Control Valve Body - Vehicles With: Auto-Start-Stop</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Removal and Installation). REFER to: <a href="#">Main Control Valve Body - Vehicles With: Auto-Start-Stop</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Removal and Installation). PERFORM the Transmission Strategy Download, REFER to: <a href="#">Transmission Strategy Download</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, General Procedures).
	F CL CONTR, hydraulic circuits blocked/leaking	DISASSEMBLE and INSPECT the main control valve body and separator plate passages for debris/blockage. CLEAN as necessary. REFER to: <a href="#">Main Control Valve Body</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Removal and Installation).

		<p>REFER to: <a href="#">Main Control Valve Body - Vehicles With: Auto-Start-Stop</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Removal and Installation).</p> <p>REFER to: <a href="#">Main Control Valve Body - Vehicles With: Auto-Start-Stop</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Removal and Installation).</p>
	F clutch friction plates	<p>DISASSEMBLE and INSPECT the transmission passages for debris/blockage. CLEAN as necessary.</p> <p>REFER to: <a href="#">Transmission</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Overhaul).</p>
	F clutch piston seals	<p>DISASSEMBLE and INSPECT the transmission passages for debris/blockage. CLEAN as necessary.</p> <p>REFER to: <a href="#">Transmission</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Overhaul).</p>
F clutch harsh apply	Incorrect transmission strategy programmed into <u>PCM/ TCM</u> .	<p>PERFORM the Transmission Strategy Download, REFER to: <a href="#">Transmission</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Overhaul).</p>
	High line pressure	<p>PERFORM line pressure test.</p> <p>REFER to: <a href="#">Special Testing Procedures</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Diagnosis and Testing).</p>
	<u>SSF</u> mechanically sticking	<p>INSTALL a new solenoid.</p> <p>REFER to: <a href="#">Shift Solenoids (SS)</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Removal and Installation).</p>
	F Clutch regulator valve sticking	<p>DISASSEMBLE, CLEAN and INSPECT the valves. If bore or valve is damaged, INSTALL a new main control valve body.</p> <p>REFER to: <a href="#">Main Control Valve Body</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Removal and Installation).</p> <p>REFER to: <a href="#">Main Control Valve Body - Vehicles With: Auto-Start-Stop</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Removal and Installation).</p> <p>REFER to: <a href="#">Main Control Valve Body - Vehicles With: Auto-Start-Stop</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Removal and Installation).</p> <p>PERFORM the Transmission Strategy Download, REFER to: <a href="#">Transmission Strategy Download</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, General Procedures).</p>
	F CL CONTR hydraulic circuit blocked/leaking	<p>DISASSEMBLE and INSPECT the main control valve body and separator plate passages for debris/blockage. CLEAN as necessary.</p> <p>REFER to: <a href="#">Main Control Valve Body</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Removal and Installation).</p>

		<p>REFER to: <a href="#">Main Control Valve Body - Vehicles With: Auto-Start-Stop</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Removal and Installation).</p> <p>REFER to: <a href="#">Main Control Valve Body - Vehicles With: Auto-Start-Stop</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Removal and Installation).</p>
	F clutch friction plates	<p>DISASSEMBLE and INSPECT the transmission passages for debris/blockage. CLEAN as necessary. REFER to: <a href="#">Transmission</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Overhaul).</p>
	F clutch piston return springs	<p>DISASSEMBLE and INSPECT the transmission passages for debris/blockage. CLEAN as necessary. REFER to: <a href="#">Transmission</a> (307-01 Automatic Transmission - 10-Speed Automatic Transmission - 10R80, Overhaul).</p>

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