2010 Edge, MKX Workshop Manual



Hydraulic Operation

Line pressure hydraulic circuits:

- Line pressure from the pump is supplied to the manual valve.
- Line pressure is regulated by the pressure regulator valve.
- The pressure regulator valve is controlled by varying pressure from the LPC solenoid through the LPC circuit.

Torque converter circuits:

- Line pressure from the manual valve is directed to the multiplex shift valve through the DRIVE 1 hydraulic circuit.
- The multiplex shift valve directs DRIVE 1 pressure to the TCC regulator apply valve through the DRIVE 2 hydraulic circuit.
- When the TCC is applied, the TCC regulator apply valve directs regulated DRIVE 2 pressure to the TCC control valve through the REG APPLY hydraulic circuit. The TCC control valve directs DRIVE 2 pressure to the TCC APPLY hydraulic circuit to apply the TCC.
- Transmission fluid from the TCC APPLY circuit returns to the TCC control valve unpressurized through the TCC RELEASE circuit and returns to the sump through the EXH port.

Cooler and lubrication hydraulic circuits:

- Regulated line pressure from the pressure regulator valve is directed to the TCC control valve through the CONV FD hydraulic circuit.
- The TCC control valve directs transmission fluid from the CONV FD circuit to the COOLER FEED circuit.
- In the COOLER FEED circuit, transmission fluid flows through the transmission fluid cooler or the thermal bypass valve to the LUBE circuit.

Solenoid hydraulic circuits:

- The LPC solenoid applies varying pressure to the pressure control valve through the LPC hydraulic circuit. The LPC solenoid regulates line pressure by controlling the position of the pressure regulator valve.
- SSC applies pressure to the intermediate (2, 6) clutch regulator valve to apply the direct (2, 6) clutch.
- SSD applies pressure to the low/reverse/overdrive (4, 5, 6) clutch regulator valve to apply the O/D clutch.
- The TCC solenoid applies pressure to the TCC control valve and the TCC regulator apply valve to apply the TCC .

Clutch hydraulic circuits:

- Line pressure from the manual valve is directed to the multiplex shift valve through the DRIVE 1 hydraulic circuit.
- The multiplex shift valve directs DRIVE 1 pressure to the intermediate (2, 6) clutch regulator valve through the DRIVE 2 and CB26FD/CB1234FD hydraulic circuits.
- Line pressure from the pump is supplied to the low/reverse/overdrive (4, 5, 6) regulator valve.
- Regulated line pressure from the low/reverse/overdrive (4, 5, 6) regulator valve is sent to the multiplex shift valve assembly through the CBLR/C456 SUPPLY hydraulic circuit.
- The multiplex shift valve directs the CBLR/C456 SUPPLY transmission fluid to the multiplex manual valve through the C456 SUPPLY hydraulic circuit.
- The multiplex manual valve directs pressure from the C456 SUPPLY circuit to the O/D (4, 5, 6) clutch through the C456 hydraulic circuit to apply the clutch.
- The C456 hydraulic circuit supplies pressure to the VALVE LATCH circuit to latch the multiplex shift valve and also supplies pressure to the intermediate (2, 6) clutch regulator valve to boost the SSC SIG circuit.
- Regulated CB26FD/CB1234FD pressure from the intermediate (2, 6) clutch regulator valve is directed to the intermediate (2, 6) clutch through the CB26 hydraulic circuit to apply the clutch. The CB26 hydraulic circuit also supplies pressure to the opposite side of the CB26 clutch regulator valve for gradual intermediate (2, 6) clutch engagement.

For additional hydraulic circuit and information, refer to Hydraulic Circuits in this section.

Electrical Operation

Solenoid operation:

6th Gear TCC Applied Solenoid Operation Chart

		Shift Solenoid					
Base Selector Lever Position	PCM Commanded Gear	SSA (VFS) NL (1, 2, 3, 4)	SSB (VFS) NH (3, 5, R)	SSC (VFS) NL (2, 6)	SSD (VFS) NH (L, R/4, 5, 6)	SSE (On/Off) NC	TCC (VFS) NL
D	6	Off	On	On	Off	Off	On

NC = Normally closed

NH = Normally high

NL = Normally low

Printable / zoomable view of this graphic

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Manual LOW Position and 1st Gear Below 8 km/h (5 mph)



NOTE: The transaxle operates differently in first gear above and below 8 km/h (5 mph). For transaxle operation above 8 km/h (5 mph), refer to 1st Gear Above 8 km/h (5 mph) in this section.