## SHIFT PRESSURE CONTROL (DIRECT ELECTRIC SHIFT CONTROL) [FW6A-EL, FW6AX-EL]

id0517h2362600

#### **Outline**

• The TCM drives shift solenoids No.1, 2, 3, 4, the pressure control solenoid, and the on/off solenoid based on inputs signals from each switch and sensor, and performs direct electronic control of the clutch engagement pressure. As a result, precise hydraulic pressure control of the clutch engagement, not possible using a conventional accumulator, is achieved.

# Construction CONTROL VALVE BODY TCM TRANSAXLE RANGE SENSOR SHIFT SOLENOID NO.1 TURBINE/INPUT SHAFT SPEED SHIFT SOLENOID NO.2 SENSOR SHIFT SOLENOID NO.3 **OUTPUT SHAFT SPEED SENSOR** SHIFT SOLENOID NO.4 TRANSAXLE FLUID TORQUE CONVERTER CLUTCH (TCC) TEMPERATURE (TFT) SENSOR **CONTROL SOLENOID TRANSAXLE** OIL PRESSURE SWITCH CONTROL PRESSURE CONTROL SOLENOID AREA **PCM** ACCEL FRATOR PEDAL DEPRESSION AMOUNT **ENGINE TORQUE SIGNAL ENGINE SPEED**

am3uun00002380

## Operation

## N to D. and N to R selected

• When N to D, and N to R are selected, the TCM drives the pressure control solenoid and shift solenoids No. 1 and 3 for optimum clutch engagement pressure control.

#### Shifting

- During shifting, the TCM drives shift solenoids No.1, 2, 3, and 4 to directly control the clutch engagement pressure for optimum clutch engagement pressure control.
- During each gear shift, the engagement side clutch pressure and release side clutch pressure are controlled simultaneously. As a result, the torque capacities of both clutches can be controlled in connection to each other when switching clutches, engine over-speed during shifting and interlock among clutches is prevented, and smooth and responsive shifting is achieved.