

		SOLENOID #						
		1	2	3	4	5	6	
F 1st	X						X	8.20
F 2nd	X					X		4.64
F 3rd		X					X	3.53
F 4th		X				X		2.00
F 5th			X				X	1.41
F 6th				X			X	.80
R1	X						X	8.20
R2		X				X		3.53
R3			X	X				1.41
GEAR	8.2:1 Low Ratio							

		SOLENOID #						
		1	2	3	4	5	6	
F 1st	X						X	5.20
F 2nd		X					X	3.53
F 3rd	X					X		2.94
F 4th		X				X		2.00
F 5th			X				X	1.41
F 6th				X			X	.80
R1	X						X	5.20
R2		X				X		3.53
R3			X	X				1.41
GEAR	5.2:1 Low Ratio							

To troubleshoot the electric circuit of the valve, the above charts show what solenoids are charged when that gear is selected. The transmission ratio must be known.

		LONG DROP OUTPUT CCW (SAME AS ENGINE) 3 - 3 SOLENOID #					
		1	2	3	5	6	
F1	X				X		
F2		X			X		
F3			X		X		
R1	X					X	
R2		X				X	
R3			X	X			

		SHORT DROP OUTPUT CCW (SAME AS ENGINE) 3 - 3 SOLENOID #					
		1	2	3	5	6	
F1	X					X	
F2		X				X	
F3			X			X	
R1	X					X	
R2		X				X	
R3			X	X			

The model 2000 with 3 forward and 3 reverse speeds, that utilizes directional headset gears on 1st and 2nd stage shafts.

Note: #4 Solenoid is not utilized in this model of the 3-3.

Note: #6 Solenoid is for forward clutch in short drop which gives the transmission output shaft engine wise rotation. #5 Solenoid is for forward clutch in long drop which gives the transmission output shaft engine wise rotation. In some vehicles, forward and reverse solenoids may be reversed depending on transmission location direction and or axle rotation.

## CLUTCH SOLENOID VOLTAGE REQUIREMENTS

**NOTE:** Checks should be  
At the valve.

\* This coil must be used  
with a Funk approved  
electronic control  
module.

NOMINAL VOLTAGE	6V*	12V	24V
ALLOWABLE VOLTAGE	4.8-7.2V	9-14V	23-26V
CURRENT DRAW		2 AMPS	1 AMP
CURRENT DRAW MAX.	3.2	2.29 AMPS	1.4 AMPS
RESISTANCE	1.72 OHM ± 4%	6.3 OHM ± 3%	24 OHM ± 3%

### PRESSURE AND FLOW CHECKS

Note: All pressure and flow tests must be accomplished at 2000 rpm at a converter out temperature of 105-125°F (40.6-51.7°C).

Port #1 is for clutch pressure, which should be 240-260 psi (1655-1790 kPa). (Page 10)

Port #2 is for pump pressure which will be higher than clutch pressure but, is not to exceed clutch pressure by more than 15 psi (105 kPa). (Page 10)

Port #3 is for converter in pressure which is not to exceed 85 psi (585 kPa), at operating temperature. (Page 10)

Note: Initial start up and in cold weather operation until the transmission is warmed up, pressures above 85 psi (585 kPa) can be expected.

Refer to page 7 for location of the following:

Pump out flow at 2000 rpm, 105-125°F (40.6-51.7°C) is 19.6 gpm (74.5 Lpm)

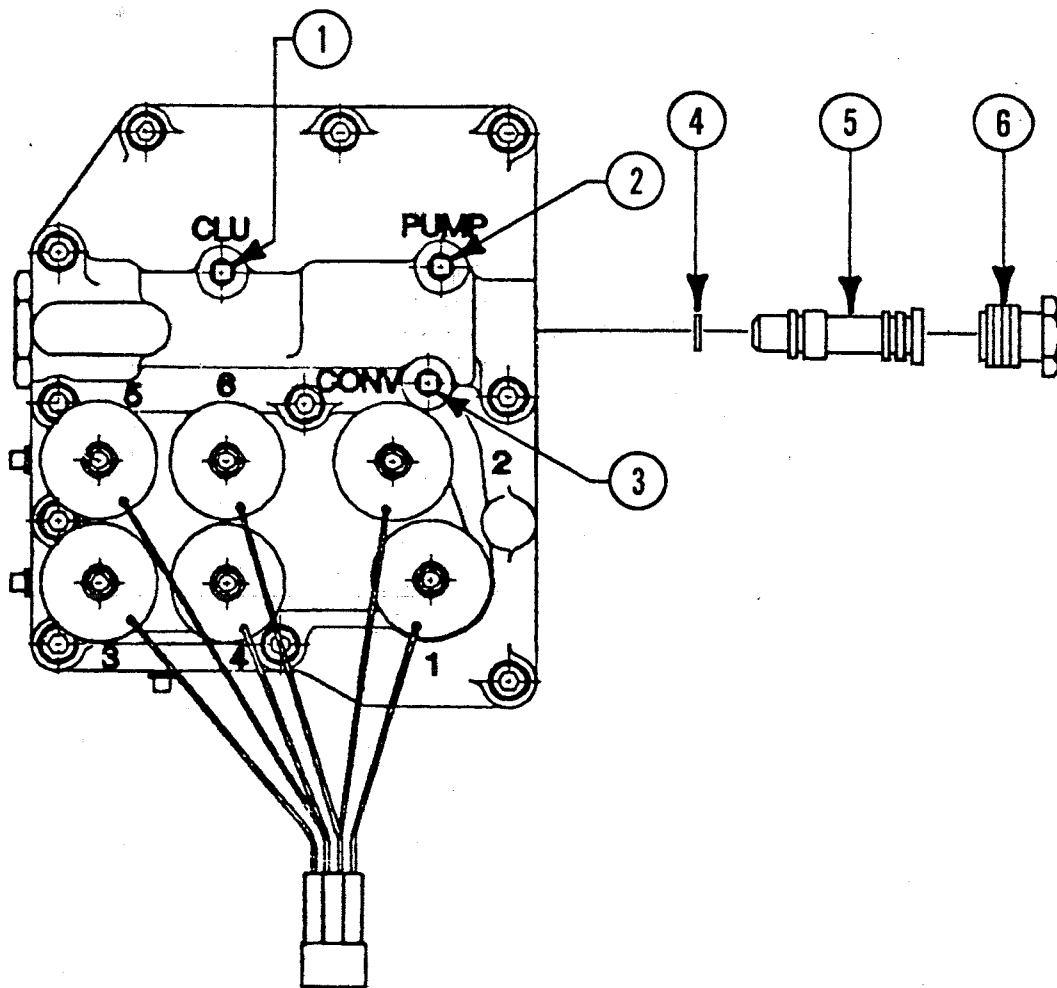
Converter out flow at 2000 rpm, 105-125°F (40.6-51.7°C) is 17 gpm (64.6 Lpm)

Converter out pressure at full throttle stall is not to be less than 35 psi (241 kPa) at 180-200°F (82.2-93.3°C).

**WARNING:** WHEN STALLING THE CONVERTER MAKE SURE THE TRANSMISSION IS IN HIGH GEAR, THE VEHICLE BRAKES SET, AND THE IMMEDIATE AREA IS CLEAR OF PERSONNEL AND OBSTRUCTIONS. DO NOT EXCEED 30 SECONDS OR 250°F CONVERTER OUT OIL TEMPERATURE, WHICHEVER COMES FIRST, AT FULL GOVERNED ENGINE RPM STALL SPEED.

Note: Full throttle stall speeds will vary depending on the engine and torque converter being used. Check with the vehicle manufacturer for the stall speed.

Lube in pressure at 2000 rpm, 105-125°F (40.6-51.7°C) is not to exceed 25 psi (170 kPa) or be less than 10 psi (70 kPa).



### SETTING THE CLUTCH PRESSURE

Note: On initial assembly of the pressure regulator, install (2) .030 shims.

To adjust the clutch pressure, remove the regulator cap #6, and the pressure regulator #5. The shims #4 will be installed inside the valve body against the spring retainer cap.

With the transmission in neutral, the engine speed at idle (750 rpm minimum), and the converter out oil temperature at 105-125°F (40.6-51.7°C), the clutch pressure should be 200 psi (1380 kPa) minimum. If the clutch pressure is below 200 psi (1380 kPa) add (1) .030 shim.

Advance the engine speed to 2000 rpm, with the same temperatures and check the clutch pressure to be 240-260 psi (1655-1790 kPa).

If the clutch pressure is below 240 psi (1655 kPa) add (1) or (2) .015 shims, to achieve the 240 psi (1655 kPa) minimum pressure.

If the clutch pressure is above 260 psi (1790 kPa) remove (1) .030 shim and install (1) .015 shim.

Note: A maximum of 5 shims may be used.