



**TF60-SN**

**PRELIMINARY INFORMATION**

**ADDITIONAL SOLENOID DETAILS**

**N88 Solenoid (#1 Solenoid)**

The N88 Solenoid is an On/Off solenoid and is On and Open in gears 4th through 6th. If this solenoid fails Closed (in the Off state), 4th through 6th will not be available.

**N89 Solenoid (# 2 Solenoid)**

The N89 Solenoid is also an On/Off solenoid and is On and Open to apply the converter clutch. When both the N88 and N89 solenoids are energized at the same time, the B2 brake clutch is applied in Tiptronic 1st Gear (Manual Low). If the N89 Solenoid fails in the Closed (in the off state) there will be no converter clutch apply and no engine braking in Tiptronic 1st gear (manual Low).

**N90 Solenoid (# 3 Solenoid)**

The N90 Solenoid is a normally applied pulse/width modulated solenoid controlling the apply of the K3 Clutch. When this solenoid is fully off, the K3 clutch is fully applied. If this solenoid fails in the off (Normally Applied) position, 3rd, 5th and Reverse shifts may be firm.

**N91 Solenoid (#4 Solenoid)**

The N91 Solenoid is a normally vented pulse/width modulated solenoid controlling the apply and release of the Converter Clutch. When this solenoid is fully off, the converter clutch is fully released. If this solenoid fails in the off (Normally Vented) position, there will be no converter clutch application.

**Solenoid N92 (#5 Solenoid)**

The N92 Solenoid is a normally applied pulse/width modulated solenoid controlling the apply of the K1 Clutch. When this solenoid is fully off, the K1 clutch is fully applied. If this solenoid fails in the off (Normally Applied) position, 1st through 4th shifts may be firm.

**Solenoid N93 (#6 Solenoid)**

The N93 Solenoid is a normally applied pulse/width modulated solenoid controlling the main line pressure. When this solenoid is fully off maximum line pressure is observed. If this solenoid fails in the off (Normally Applied), all shifting may be harder.

**Solenoid N282 (#9 Solenoid)**

The N282 Solenoid is a normally applied pulse/width modulated solenoid controlling the apply of the K2 Clutch. When this solenoid is fully off, the K2 clutch is fully applied. If this solenoid fails in the off (Normally Applied) position, 4th, 5th and 6th shifts may be firm.

**Solenoid N283 (#10 Solenoid)**

The N283 Solenoid is a normally applied pulse/width modulated solenoid controlling the apply of the B1 Clutch. When this solenoid is fully off, the B1 clutch is fully applied. If this solenoid fails in the off (Normally Applied) position, 2nd and 6th shifts may be firm.