

# **TROUBLE SHOOTING**

## **PRELIMINARY INSPECTION**

1. Ensure vehicle is thoroughly road tested to verify driver's complaint. Determine if problem occurs during upshift, downshift, coasting or engagement. If noise is diagnosed, check if noise is affected by RPM, vehicle speed, gear selection or temperature. Ensure vehicle is at normal operating temperature when checking.
2. Inspect fluid level and condition. Visually inspect for vehicle modifications, electronic add-ons, fluid leaks and/or incorrect linkage adjustment. See applicable symptom diagnosis.

## **SYMPTOM DIAGNOSIS**

### **Slow Initial Engagement**

Improper fluid level or plugged filter. Improperly adjusted linkage or low control valve pressure.

### **Rough Initial Engagement**

Improper fluid level. Idle speed too high. Sticking valve body or high control valve pressure.

### **No Or Delayed Forward Engagement, Reverse Okay**

Manual linkage improperly adjusted. Forward clutch stator support seal rings leaking or clutch assembly burnt. Valve body sticking. Improper torque on valve body attaching bolts.

### **No Or Delayed Reverse Engagement, Forward Okay**

Manual linkage improperly adjusted. Reverse clutch stator support seal rings leaking or clutch assembly burnt. Valve body sticking. Improper torque on valve body attaching bolts.

### **No Or Delayed Reverse Engagement And/Or No Engine Braking In Manual Low**

Planetary low one-way clutch damaged. Reverse-high or low-reverse servo seal leaking.

### **No Engine Braking In Manual 2nd**

Intermediate band improperly adjusted or servo leaking. Intermediate one-way clutch damaged. Glazed intermediate band.

### **Forward Engagement Slips, Shudders Or Chatters On Engagement**

Improperly adjusted linkage. Low control valve pressure. Valve body sticking or improperly torqued. Defective forward clutch assembly. Low one-way clutch damaged.

### **Reverse Engagement Slips, Shudders Or Chatters On Engagement**

Improperly adjusted linkage. Low control valve pressure. Low one-way clutch damaged. Reverse clutch piston seals defective or clutch assembly defective.

### **Starts Up In 2nd Or 3rd Gear**

Improper intermediate band adjustment. Defective governor sticking or loose valve body. Cross leaks between valve body and case mating surfaces.

### **Incorrect Shift Points, Harsh Or No Upshift**

Defective vacuum diaphragm unit. EGR system inoperative. Improper vacuum to diaphragm unit. Sticking or improperly adjusted throttle valve rod. Improper control valve pressure. Dirty or sticking valve body or governor assembly. Vacuum Regulator Valve (VRV) improperly adjusted or defective (7.3L Diesel).

### **Early, Soft Or Slipping Upshift**

Low control valve pressure. Dirty or sticking valve body or governor. Leaking or improperly torqued valve body. Throttle valve control rod sticking. Burnt clutches. Improperly adjusted VRV. (7.3L Diesel).

### **Erratic Shifts**

Poor engine performance. Improper valve body bolt torque. Valve body or governor sticking. Governor collector body seal rings leaking.

### **No Forced Downshift**

Improperly adjusted or sticking throttle valve rod. Damaged internal linkage. Dirty or sticking valve body or governor.

### **Engine Overrevs On 3-2 Downshifts**

Intermediate band out of adjustment. Leaking or damaged intermediate servo. Sticking or leaking valve body. Control valve pressure too low. Glazed band or drum.

### **Transmission Overheats**

Improper fluid level. Engine idle too high. Engine cooling system defective. Transmission pressure too low. Restriction in cooler or cooler lines. Seized converter one-way clutch.

### **Transmission Noisy (Valve Resonance)**

Improper fluid level. Improperly adjusted linkage. Improper control valve pressure. Internal oil pressure leaks. Dirty or sticking valve body.