

Powerglide Diagnosis Guide

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The first thing to check in case of a transmission malfunction is the fluid level.

No drive in any gear

- No fluid, or very low.
- Front pump drive tips worn out, or stripped splines.
- Loose valve body, or blown out valve body gasket at the pickup passage.
- Snap rings holding front pump drive broken or off of the shaft (shaft hit on the end before assembly to differential).
- End broken off of shifter cable while selector was in neutral (bad battery ground to engine can burn it off).

Slow going into both low and reverse

- Manual valve out of adjustment because of stretched cable. Engine speed will also flare on upshifts.
- Loose valve body or leaking valve body gasket.
- All of the lip seals are hardened. Use TransX.

Slow going into reverse only, or no reverse only

- Rear pump bolts loose.
- Reverse piston lip seals hardened.
- Reverse piston broken around the center.

Quick upshifts

- Incorrect throttle valve (linkage) adjustment.
- Broken (missing) E-clip on throttle valve and the valve jammed to the rear.
- The throttle valve lever was broken off and welded back on at the wrong angle.
- Defective governor, broken internal parts (rare).

Late upshifts

- Incorrect throttle valve (linkage) adjustment.
- Badly worn governor outer shaft surface.

- The throttle valve lever was broken off and welded back on at the wrong angle.

No upshifts

- Broken governor driven gear or a badly worn shaft.
- Spool valve frozen in governor from sitting for years.
- Broken (missing) E-clip on throttle valve; a piece of the clip may be lodged in the low-drive shift valve.
- Hardened or broken lip seals in the high clutch.
- Broken drive lugs in the rear pump (rare).

Slips on upshift

- Low fluid.
- Worn out high clutch plates.
- Hardened lip seals in the high clutch piston.
- Low band way out of adjustment.
- Manual valve out of adjustment.

Hard upshifting

- Broken hose(s) on vacuum modulator line.
- Hole in steel modulator line at rear shroud.
- Stuck modulator valve (inactive a long time).
- Blown out valve body gasket at the pressure regulator.
- Hard reverse only: hardened reverse piston lip seals or a broken reverse piston.

Hard downshifting

- Idle speed too high.
- Vacuum modulator bad.
- Leak in vacuum modulator line or hoses.

Jumps out of gear under a load in low

- Low fluid level.
- Worn out low band or out of adjustment.
- Broken ear on the low band at the strut.

Drives in neutral

- Shifter cable was not installed into the transmission correctly (see instructions in shop manual).

Gray fluid and a hissing noise in low gear

- Bad torque converter.

Blows fluid out of the vent after an hour at high speed

- Bad sprag in torque converter
- Overheated cheap transmission fluid. Switch to synthetic.

Corvairs may be push-started since they have both a front and rear pump. Begin in neutral, when speed reaches 20 MPH, turn on key and shift into low.

Corvairs may be flat towed at lower speeds for short distances up to 50 miles without running since they have both a front and rear pump. The fluid must be at the correct level for proper lubrication. Watch for fluid loss or possible engine rotation if the cable is out of adjustment.