Power Gear Leveling Jacks

Although the Power Gear leveling system is normally very reliable, your jacks are exposed to weather, dirt and grime that make them prone to problems. Like any mechanical/electrical system, it is likely that you will eventually experience some problems with your jacks. These tips will hopefully help you fix your problem yourself, or at least save you money if you have someone else repair your jacks.

The Power Gear manual leveling system is a hydraulic system based on the following components:

- Control panel located in the cockpit on the driver's side.
- An electric pump for the hydraulic fluid.
- Four solenoid valves that control the hydraulic fluid.
- Hydraulic fluid Reservoir.
- The hydraulic jacks themselves.

Your motorhome has four jacks. However, the two jacks in front are hydraulically connected together. Three of the solenoid control valves control hydraulic fluid TO the jacks (for jack lowering) and the fourth solenoid is the dump solenoid that allows the hydraulic fluid to return to the reservoir so the jacks can retract. Although your jack control pad has four buttons, you cannot control each jack independently. The REAR button lowers both rear jacks simultaneously. The FRONT button lowers both front jacks simultaneously. The LEFT button raises the left rear and left front jacks simultaneously. The RIGHT button raises the right rear and right front jacks simultaneously. So, leveling your coach is somewhat akin to leveling a three-legged stool.

In a properly operating system, here is what happens when you use your jacks:

1. When you turn on the power to your jacks, 12v is applied to the control solenoids.

2. When you push one of the jack buttons, the 12v hydraulic pump is turned on and GROUND is applied to the appropriate solenoid, causing it to open and send hydraulic fluid to the jack, lowering the jack. When you release your finger from the jack button, ground is removed from the solenoid and the solenoid closes, which closes this hydraulic line.

3. When you retract the jacks, the dump solenoid is actuated which allows the hydraulic fluid from ALL the jacks to be returned to the hydraulic fluid reservoir, and the springs on the jacks pull them up and forcing the hydraulic fluid back to the reservoir.

Most problems are either a failure of the jacks to retract, or the "Jacks Down" alarm will not go off. Another less common failure is that the jacks will not go down.

"Jacks Down" Alarm Stays On The Power Gear system monitors the hydraulic fluid level in the reservoir to determine if the jacks have been retracted. The most common problem - and the easiest to fix - is an incorrect hydraulic fluid level. You can also look at your jacks to determine if they are retracted - if your jacks are retracted and the "Jacks Down" alarm is on, then you most likely have a low hydraulic fluid level. It is absolutely necessary that you only check your hydraulic fluid when the jacks are RETRACTED. When you open the cap on your hydraulic fluid reservoir, you will notice that it has a dipstick attached to it. For a round reservoir, the fluid should be 1/8" from the bottom of the dipstick and for a square tank; it should be 7/8" from the bottom. Be very careful not to overfill the reservoir.

If low hydraulic fluid was the cause of your problem, you need to inspect your jacks and hoses for a leak. Most likely, the seal on one of your jacks has developed a slow leak. If you have a leaking jack, the most cost-effective solution is to remove the jack and take it to a place that repairs hydraulic jacks.

If your jacks still will not retract, your solenoid dump valve is probably not working. This could be a bad solenoid (a problem mostly with late 1997 and all 1998 coaches) or it could just be a bad ground. With your volt-ohm meter or electrical tester, you will find that one lead on the solenoid will have 12v on it. The other lead is the ground lead. Try a new ground lead, as this is mostly likely the problem. With 12v on one terminal and a good ground on the other terminal of the dump solenoid, your jacks will retract if the solenoid is good. If the solenoid is bad, the jacks will still not retract. In this case, the solution gets messy as you can disconnect the hydraulic hose forward of the dump valve to retract the jacks.

Maintenance It is recommended that you (at least) monthly wipe down your jack shafts (with the jacks extended, the shiny surface) and lubricate the shiny surface with a lubricant that will not attract dirt. Also, it is a good idea to use some "jack blocks" . This serves two purposes. First, it will give your jacks a solid footing so that they will not sink into loose or wet soil, getting the jack arms dirty. Also, it will minimize the jack travel required to level your coach.

Before you retract your jacks, it is also a good idea to inspect the inside of the jack pads for dirt and rocks. Rocks are especially dangerous - at least one owner suspects that a loose rock from his jack pad was responsible for a hole in his radiator.