Brake System Inspection

To start you should find a level spot to work and jack the truck up and support the vehicle on jack stands at the front and rear axle so all 4 tires are off the ground and spinning freely while mounted.

The first step is to check the front and rear wheel bears. Loose wheel bearings can cause the rotors to wobble and open up the calipers. This appears as a low brake pedal because you need to close the calipers some before the pads contact the rotor and build resistance.

Front Bearing check:

Grab the tire at 12:00 and 6:00 o'clock and try and tilt the tire back and forth. Any ability to do so is evidence of a loose wheel bearing and will require further inspection and servicing to resolve the problem.

Rear Bearing check:

It's best to have the caliper removed for this but a quick check prior to that can be revealing. Grab the tire at 9:00 and 3:00 o'clock and try to push the tire in and then pull the tire out. Any ability to do so is evidence of a loose wheel bearing and will require further inspection and servicing to resolve the problem. This is more of a problem on full floating axles and semi-floating axle can have a slight amount of movement which can be considered normal.

Soft lines and LSPV check:

Remove the 4 tires and request the help of another person. At this point the truck should be running and idling normal and the windows rolled down to help communication. With the helper in the drivers seat you will be checking the soft lines at wheel while they apply and release the brakes with a panic stop amount of pressure. You will command the driver to apply and then release the brakes while you watch for movement in the soft lines. Any movement in the lines will appear as a soft brake pedal. Brand new lines under pressure will tense up when the pedal is applied, what you are looking for is more of a move which indicates the hose is expanding and needs to be replaced.

Note: One thing to look for is a hose that hasn't been clocked properly. The factory hose end indexes into the mount on the axle side to ensure the hose has no amount of twist in it. That is if it is the correct hose and was installed correctly. Aftermarket hoses might not have this feature and require the installer to align the hose manually.

It's not uncommon to see some deflection in the sensing spring for the LSPV when under high pressure, and yes that deflection shows up as a soft brake pedal. You should now remove the sensing spring at the LSPV and look for signs of brake fluid in the rubber boot. If there is some the LSPV is leaking and should be replaced.

Caliper Check:

You will want to remove the calipers and inspect the brake pads for even and consistent wear not only for the pads of a single caliper but also between both calipers front and rear. Any difference between all 4 pads of either the front calipers or the rear calipers should be assessed and any part replacement/rebuild should be performed for both sides of the axle equally.

Bearing Re-check:

If the bearings passed the first check it's a good idea to recheck them with the calipers removed so there is no chance that a problem caliper had masked a bearing issue.

Master Cylinder Check:

Loosen the 4 nuts that holds the Master Cylinder to the brake booster and pull it slightly off the booster. You are looking for brake fluid and by taking a paper towel and sliding it into the crack on the underside you can check for transfer to the paper towel.