

## Brake Fluid Contamination

**Date:** 08-06-19

**Vehicles Involved:** All

**Condition:** Low Brake Pedal

We recently had a late model Chevy Silverado come into our shop with a complaint of a low brake pedal. The owner had put new calipers on all four wheels and bled them the best he could. However, he was still getting a low pedal.

Our first step was to verify that the master cylinder was operating correctly. We took the brake lines off the master and plug the ports on master and start vehicle. Sure enough the pedal was low and spongy. This meant that the problem was with the master cylinder.

We noticed when we removed the brake lines that the master cylinder would not gravity bleed. After removing the master and inspecting it, we noticed that the piston was stuck in the bore (See Image 1).



**Image 2**

What caused this? We found out that the culprit was contaminated brake fluid. Someone mistakenly put petroleum-based fluid into the master cylinder. The petroleum-based fluid caused the rubber components in the master cylinder to swell, including the cap (See Image 2) and the seals. The swollen seals led to the piston becoming stuck in the bore. This resulted in a low pedal.



**Image 2**

### **Repair Procedure:**

If brake fluid becomes contaminated, you must replace any component in the brake system that has rubber components. This includes the master cylinder, brake hoses, calipers, wheel cylinders and ABS system.