



from Neutral to Drive (Figure 12) and it requires only 36 psi to engage, we can imagine what 50 psi can do with the second clutch on with up to 130 psi. When these vehicles are being driven in fourth gear, it also does not take much throttle increase to get a downshift to second. On my many road tests on this car, 4-2 downshift was a normal shift when I entered the freeway.

It is also my opinion that by increasing the size of the third piston in 2004, Honda made the problem worse, since now you have about 1 square inch more application area. I believe the solution would require a software change for the PCM or else the third clutches would have to be made to take this kind of abuse without sacrificing the 2-3 shift comfort.

In the past four months I have been trying to find a solution. In looking into the PCM strategy, it would have to be programmed not to lower the amperage on linear solenoid B during a forced 4-2 downshift (Figure 9). In other shift situations linear solenoids A and B are modulated independently of each other. There may be other reasons why Honda has decided to program it this way, but trying to talk with the company did not produce any results.

My next approach was through the clutches. I tried talking with some clutch manufacturers, but the only one that took the time to talk was Raybestos. The company's GPX plates seem to be the best choice at the moment, because of their unique material and special grooved pattern that makes them run cooler when third clutches are being dragged. Raybestos told me that with this new information they'll look for options that may result in even more durability. I still have more testing to do, so my research continues. **TD**

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