The Alternative Line

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Before and After – Reviewing PDK – The Aftermath (and the after physics, and the after psychology, etc... ;-)

Thanks to the gracious and generous assistance of Lee Smith at Burdick's Driver Village Porsche of Syracuse, I have now been somewhere NEAR an actual PDK. About two feet away as the crow walks, carrying an empty gas can. In truth, I just drove a PDK equipped Carrera coupe with sunroof . I think you can't get any 911 (997 for those in the know) coupe without the sunroof. But there is good news there as well; for those who have been forced to lie down to drive with a helmet, there is plenty of headroom. That will be true for all the models, including the glass-roof Targa. But I digress.

I won't bore you with all the various improvements of the 2009 models, and there are many. Despite looking very much like the '98 models, that's where most of the similarity stops. I am reminded of the famous Rock Classic by the Who, "Magic Bus"; " I want it... I want it... I want it... I want it... Ya Can't have it!" Damn.

Well, my expectations and pre-conceived notions were partly correct, and dramatically wrong in other ways. As I had noted earlier, I expected the car would be fast. That's a given. But I also expected that slow speeds would be problematic, because I was envisioning a normal clutch action. I was in for a huge surprise. And it was not until I actually felt the car that it hit me how they did it. Let me explain; those of you who have developed sciatica from working a Porsche clutch are all too familiar with the diaphragm spring forces which have to be overcome to release drive through the clutch. And I have already described the difference vs the Tiptronic, which has a conventional automatic torque converter to allow slip. But there is a third paradigm at work here which caught me off guard, and impressed the hell out of me. First; in a normal automatic, the drive clutches which cause the proper gear set to move the car are essentially a binary setup – either they are disengaged or they are engaged. The slip for stationary idle is handled by the fluid in the torque converter. But that same slip remains, unless they use a "lockup" clutch on the converter. You all know it when the car goes into a gear from neutral – it clunks. Happens with every automatic I've ever driven, even with the best damping. And that slip results in heat buildup in the fluid, which is why "Trannytrash" so often ALMOST made it up the hill at Watkins Glen. Not good.

So imagine my surprise when I felt no such "thump" when I selected drive or reverse with the PDK. Well, THAT wasn't really the surprise – I had actually expected it because there is NOT a torque converter; the clutch HAS to be disengaged. But if I merely wanted to slowly creep forward or backwards, how would the PDK achieve this? Turns out it was simpler than I suspected, and resulted in a big Ah-Ha moment for me. When you have your foot on the brake, the brake light switch (or a similar switch) disengages the drive by removing pressure from the clutch. Since first and reverse are on the same input shaft (the inner – I was right about the odd gears being there), hydraulic pressure pushes the clamp disks apart. But when I quickly removed my foot from the brake (something you would be very unlikely to do in actual driving) I could feel a momentary lack of drive, followed by a light application of torque. Then it hit me; in either first or reverse, below a threshold engine speed (which might actually be the physical control device, since engine oil pressure is the source of the drive hydraulics for the clutches, so it will drop in pressure as the RPM's drop – I need to find out more about the physical mechanism) the pressure on the clutch plates is modulated to a point where there is a slight transfer of torque only; slipping just enough to slowly creep forward or back, and would be resisted by the brakes. So it FEELS just like a regular automatic. BRILLIANT! As soon as I realized that, all my "testing" at low speeds became unnecessary – the action was obvious and perfect.

But stand on it and the clutch pressure goes to hard pretty fast, as does the acceleration. I did NOT do any "two foot" driving, like those who cause accidents in winter by trying to keep revs up while braking against them. I suspect those people will have a few problems – like short lived clutches, or no drive at all until the brakes are released. And if you think a clutch job on a PDK will be cheap, guess again. But absent parking on an incline with the clutch torque cooking the clutches from holding on the hill (instead using the brakes, which makes more sense to MOST people) the clutches should have life expectancy like any automatic's clutches. Elegant way to address a real world situation; the brakes disengage the clutch – let them off and you probably wanted to roll, right?

I took the liberty to try two " extremes", and was again happily impressed. Remember my comments about autocross? This will be one hot setup, as it had NO problem shifting itself up and down (including to first) as I hammered and lifted the gas. As I have advised on the track with my Tip; leave the thing in Drive and let it do the deciding – it's a lot smarter than me. And when I wanted it to shift, or to hold a gear, I had only to move the gas pedal. Anyone with Tip experience will acclimate to this in an afternoon. Those who haven't experienced a Tip yet will take longer, but not a long as the Tip. The PDK is simply like a regular manual if you want to "be in control" of shifting, and like the recent Tip S which allows wheel button shift overrides without moving the lever to the manual gate.

Engine braking can be done just as readily with a simple pull of either wheel tab (again, it will NOT allow a shift which will over-rev the engine), and if you want to get good fuel economy, just leave it in drive. It went to sixth gear at under 30 mph on a light pedal. Smooth as glass. Obviously, under hard throttle the shifts will feel more abrupt, but I was still favorably impressed, as they seemed no worse than the Tip. I suspect Porsche detunes the engine momentarily during shifts to reduce harshness. It is hardly noticeable, and certainly not a problem when considering the potency of the car.

Speaking of which; Lee noted that he would call me when they got in an S with the Chrono package, as he wants me to see the "Launch Control" which allows you to hold the brake, blast the engine to redline, and then feel the rear of your seatback meeting your spine ;-) Not necessary, I told him. After all, as my first "Parade T Shirt" so succinctly stated: You need not be impressed by my 911 – I am.

If there is any "downside", it is the simple truth that the more complicated, the more likely to break. And when it breaks, the more costly to fix. But let's be honest, isn't that what sets Porsche apart; its reliability and its excellence in engineering? So hopefully that offsets some of the complexity. I do lament the loss of "shade tree mechanic" repairability, but something's gotta give.

Again, I want to thank Lee Smith at Burdick for the opportunity to learn about a car we both know I am not about to be able to buy, unfortunately. He said that every one of the few Tiptronic 911s they sold was a specific customer order, so he thought that might have contributed to the relatively few they saw. Here's to those enlightened few. But he (and Porsche AG) thinks the PDK will sell 50% in the US, especially since they will have cars for people to actually try. Maybe he'll let me have a test drive when they get a Turbo Cab PDK in – for , oh, three years or so? ;-) And if anybody who buys one wants some private lessons in getting the most from their PDK, I'll be happy to help them consume some brakes, gas and tires ;-)

If you wonder what engineering really looks like – drive a PDK. When you THINK about what it does, you will be amazed.