

# The Alternative Line

by Joe Holzer for CNY-PCA Redline Report Copyright 2010 <http://www.holzerent.com>

## Life With The Prince of Darkness

If you dear readers recall, I bought a well used '95 Range Rover a year ago. I had become fed up with my '96 Grand Caravan rusting away as it sat being rarely driven. Incremental costs per mile were becoming ridiculous. Having carbon steel brake lines and a gas filler spout which was steel encased in the body immediately ahead of where tires threw road salt and silt, thereby guaranteeing they would eventually fail, were just a few of the design defects in what was otherwise a decent concept. The filler spout was the last straw, as it connected to a plastic fuel tank. Why it was not similarly plastic is beyond me. And properly fixing it would cost twice what the van was worth. It's A/C was broken when I first bought it, and my purpose had been merely to acquire an ability to jockey my car trailer from its storage position ahead of the RV in my yard, and to haul things on the rare occasion. But I knew the jig was up when we had to haul some shelving from Rhinebeck in the summer. It would have been a sweatbox, and probably would have broken along the way. So we had to rent a pickup truck. That was its own nightmare story for another time.

Anyway, the stupid crap I had to go through with the van every time its NYSI came due, because of the OBD-II computer connection, convinced me to avoid all that hassle by limiting whatever I bought to '95 or earlier. And pretty much the only real requirement was that it have a trailer hitch, and cost no more than \$1600. Funnily, despite my utter disdain for SUVs, which to my mind stands for Stupid Urban Vehemouths, the short list was almost exclusively them, mostly because of the hitch.

I actually would have preferred to put a hitch on one or both of the Audi A8s I own. But nobody makes one for them. If it didn't come from Ingolstadt with one, you can forget it. And knowing my disdain for the Prince of Darkness, despite Jeremy Clarkson's love of Range Rover, I was actually surprised that I considered the one I found advertised. I had been told they were considered "the SUV to own" until the Porsche Cayenne came along, but that suggested more to me about their exclusivity, and therefore high cost for maintenance, than anything like their driving dynamics. Which are pretty bad, BTW. The solid front and rear axles with propellor shaft and universal joint assemblage within a big ball socket, combined with a ride height which requires me to CLIMB into the cabin, is a bad combination. And in a cross wind this gets REALLY scary.

But there was something about the circumstances which made it seem "right" at the time. As with any vehicle I have bought used, which is all but two in my long history of vehicle purchases – I get good deals because I am well practiced – I expected to have to put \$1000 into it, because nobody sells something they are completely happy with. Or at least I had never found one until I bought my first A8, the '97 which its owner listed as "Modified", which scared away most buyers, especially as I looked for it only two months after 9/11. I knew it was right when its owner told me he had replaced all the suspension, brakes, induction and exhaust with euro S8 parts, and was selling it because his actual 2001 S8 was arriving soon, the first they were imported to the US. And he let me have it for what the dealer would give him in trade. I really knew almost nothing about the car except that it was aluminum space frame and quattro, and my prior quattros were delicious. What a machine. I regularly surprise Niagara event instructors in 944s at the Glen with it, as it can stay with my 993. Delicious. And its options list includes a power rear shade and a solar panel sunroof which keeps the car cool even with its dark interior. Its pearl white exterior looks almost brand new still, thanks to the aluminum. Yes, when it has required repairs, they have been costly. But on balance it has been a great buy. And you could invade with its ability in snow. So when it came time to add another, I insisted it also have the solar panel and power shade, which led to my surprise A8L, the "nimble limo" my wife uses as her mobile office for her house call practice. Unfortunately, it has proven to have some Joe Lucas electrics.

Anyway, the Range Rover owner had mentioned that she had to put a shutoff blade switch on the battery because it discharged every night, but I quickly realized that was her own fault as she had jammed the gas filler door flap switch with a screw, as the door flap stuck. I removed two screws from the door and the one from the switch, and that problem went away for good. Recognizing that at the time was the trigger for me to buy it for the \$1000 I offered the owner. I have already described in prior articles the many other electrical delights (NOT) and the process I went through to diagnose and repair most as I discovered them. The freezing relay contactors was the wierdest, but the cruise control had been the most troublesome, because it SOMETIMES worked.

Some good news amongst the misery; After frustrations galore with Joseph Lucas, Prince of Darkness, I believe I have fixed some of the major issues the Range Rover was experiencing. The fuel pump check valve was failing, which resulted in vapor lock and real hard starting. The fuel gage was also unreliable, getting whacky readings. And, of course, the cruise control has never worked reliably despite the one time I thought I had found the problem. I was wrong.

Turns out there were actually two problems (that I have identified - one never knows with the Prince of Darkness ;-)- the on-off cruise switch is not reliable for adequate current, though it seems to measure correctly at a standstill. So the issue might actually be in a wire - I'll keep monitoring. But after fixing the real problem, my tests have seemed reliable (albeit limited - hold on "real" yet ;-)- since I discovered that the connector to the Cruise ECU had a weak ground terminal. It had measured 3-8 ohms, which led me to believe it was merely the meter interface. But since I screwed a known ground strap to the connector terminal during diagnoses, it has worked perfectly except one time, and that immediately fixed as soon as I cycled the on-off switch.

The gage and pump were related, and required me to get into the fuel tank, a not simple task. Since I found the sender in the tank to be the fuel gage problem (by external tests), I also bought a "universal" pump (new) on eBay before I pulled it all apart. There were a few issues; the fuel tube was larger than the fitting, and would not compress to seal, there was an extra small tube fitting on the new pump which had no equal in the original, and allowed backflow on shutoff until I plugged it (exactly what happens to allow vapor lock when a check valve goes bad), and the new pump had different terminals not really compatible with the spade terminals on the original. So I got creative, and it all works now. And the sender problem was a fraying ground lead. Why they made it so fragile is beyond me. Probably saved them at least a dime on every thousand vehicles so equipped. But I was able to solder in a wire loop in parallel with that and the problem has seemed fixed reliably since, with dead-nuts accurate readings of fuel level.

Oh, and by the way - I found the problem with the splash-back on filling, which prevented me from putting more than a gallon at a time from a gas pump before a huge amount of that would burp back out. All tanks are supposed to have a vent line from the top of the tank to the top of the filler spout to allow the air atop the gas in the tank to discharge harmlessly while filling. The vent hose was actually installed too long, so kinked to pinch off vent flow, and allowed the hose to crack and leak fuel as well. Not good on either. I found it by happenstance as I was looking for something else, cut out the cracked pinch area to make the hose length correct, spliced it, and it works like a charm. So I think the beast is really viable again, and except for MY time value, it is almost fully functional at a total cost since I bought it of under \$1500 all in, which includes the replacement main oil seal, which seems to have stopped it making the driveway look like a beach in The Gulf, and it has a book value as-is of \$2500. At least I won some things. I cannot be certain that any of these were original equipment problems, because I bought it well used with 184K miles on the clock. But I find it hard to believe the prior owner was not having some of the problems as well. She probably ignored the cruise, simply cranked until it fired when it vapor locked, and filled the fuel and oil frequently, and REAL slowly in the case of the gas. That works fine at full fill rate now that I fixed it, and the oil seal seems to be working well.

So, except for the way it wanders on the road, it's not a half bad tank ;-)- Even my wife has used it for mashing organic muck into the yard. We'll see if my relay bypass to overcome the freezing relays from last winter has done that trick as soon as the weather starts the typical Syracuse snow-melt-freeze cycles this winter, but I am optimistic.

Oh. And how is this Porsche related? Thank your lucky stars your Porsche electrics are made by Robert Bosch rather than the Prince of Darkness. So you hopefully will never have to figure any of this out ;-)-

