

## Tom Marshall's Weekly News, January 3, 2011

**Converting a Packard to Steam** (*This story was requested by FAHP member Brent Beeson of Fairfax, Virginia*): In the spring of 1940, my father bought a new Packard Super Eight 180 sedan with 138-inch wheelbase, dual sidemounts, a reverse light, and all the trimmings of a top-of-the-line Packard. Later that year, he bought the first Stanley he had owned in 20 years, our 1913 Model 76; he soon got it running and decided he wanted to develop a modern steam car. In the fall of 1941, the engine, transmission, drive shaft, and differential from his beautiful Packard were removed in our shop, with 13,003 miles on the odometer.

My dad had renewed his acquaintance with Fred Marriott, who still operated a repair service for Stanleys in his garage in Watertown, Massachusetts. Two or three miles from Marriott's garage, Thomas S. Derr was building water-tube boilers for Stanley cars and had sold a number of them to "old timers" still operating condensing Stanleys, mostly the Models 740 and 750 (1922–24). My father ordered a new boiler of the Derr design for his Packard, to be placed under the hood, the standard location in all Stanleys after 1905. He bought a new-old-stock 20-horsepower Stanley engine from Marriott and modified the rear axle to accommodate a Stanley-type differential while maintaining the Packard hydraulic brakes.

Although seemingly high today, the Packard was very low compared to a Stanley, and vertical clearance was a real problem in fitting everything in. The pumps were located on a platform under the front floor boards and were driven from the right wrist pin of the engine (like non-condensing Stanleys) but with some awkward linkage because they were mounted so low. I believe the pilot tank and the water tank were under the front seat, but, again, there was not much vertical distance. The fuel tank in the rear was still used for this purpose. A heavier brazed radiator replaced the Packard radiator, and an electric fan was installed behind it to improve condensing (later removed as ineffective). The Derr boiler was rectangular, not round like a fire-tubed Stanley boiler, so my father built a vaporizing burner of the Stanley type and fit it neatly into a fabricated burner pan. I think Marriott had told him the Stanley "Rocket" had a burner with four nozzles and mixing tubes, so the Packard burner was made that way for extra steaming capacity. It didn't work.

Home heating systems were being converted from coal to oil just before World War II, and there were several small atomizing oil burners on the market. Abner Doble, builder of the famous Doble steam cars, held many patents on early atomizing burners. My father was in touch with the Quiet May company, whose representatives helped him develop an atomizing burner that would fit under the Derr boiler, with about 6-inch clearance from the ground. The rear floor of the car had to be raised slightly near the front seat to accommodate the cylinders of the engine and the hanger strap.

My dad did a nice job on the driver's area, including the dash panel. The clutch pedal was replaced with a Model 740 Stanley pedal used for reverse and "hook-up." The brake was untouched. The gear shift lever on the steering column became the throttle, as on a Stanley.

The main gauges were not touched, with speedometer, ammeter, clock, and fuel tank gauge still useful. There was another panel, nicely fabricated from Phenolite (made in Kennett Square by an NVF affiliate), that hung underneath and contained a steam gauge, a fuel pressure duplex gauge (pilot and main), and a Bristol-Derr thermocouple-type water level indicator.

I was away at school and then in the Army when the Packard steamer was being finalized and tested. Whenever I came home, I would ask whether we could have a ride. Several times, my father said he was not quite ready. Finally, one day we went up the road and back. To me, the Packard seemed to glide along effortlessly, and it was very quiet. We went about 3 miles, but my dad said it wasn't right. He complained that he was getting wet steam and needed to modify the Derr boiler to get more superheat. As I recall the steam pressure during our brief trip was about 300#, but we didn't seem to need more. Unfortunately about 1944, my father became interested in other things, and I doubt that the Packard had run more than 50 miles following its conversion to steam. He built a 3/4-inch-scale steam locomotive (which runs on air in our museum), he collected and

mechanically restored many Stanleys, and he let moths eat up the cloth upholstery in the Packard steamer. After our ownership, it was exposed to the elements in the Chester, Pennsylvania, area for 20 years, before being bought by Bill Rule about 2000. Bill has made burner and other improvements and hopes to have it running again soon.