## Tom Marshall's Weekly News, March 27, 2006

**Stanley Pilots (Pilot Lights in Stanley Burners) over the Years:** While Stanley engines are relatively simple and in the "old days" seldom gave trouble, the car's operation was very unsatisfactory without a good-working burner. There is no way a burner can work well without a strong, blue pilot light. Keeping a good pilot has always been a challenge, even when the cars were built, but it was a serious problem in the early collecting days of the '40s and '50s.

The greatest challenge then and now is obtaining the same white gasoline for pilots that was available when the Stanleys were built. We know the gasoline then had no lead and very few if any additives— it was pure, "white gas." With the proper length pilot vaporizer developed for Stanley burners, this white gasoline worked very well, but even so, it was not uncommon for a pilot to go out; sometimes it was sucked out by the engine exhaust when the main burner was not on; other times the cool air at higher speeds would cause the fuel to "come raw" and allow the pilot to flood.

Substituting for a suitable pilot fuel in the late '40s, some of the products used with limited success were blue Sunoco gasoline (no lead), Amoco high test (also no lead), various naphthas, mineral spirits, and all sorts of rubber solvents. Usually the pilot vaporizer had to be adjusted (usually shortened) to accommodate a different fuel. In the mid-1960s a product called Atlantic Solvent 36 became known to us, and it was perhaps the best pilot fuel I ever experienced. This was the product shipped to eight places along our 8,300-mile tour in 1972, and the pilot on the Model 87 went out only once in 58 days, during lunch on a rainy day. When Atlantic became Arco, Arco Solvent 36 was made for a short time before it wasn't available any more. The search for pilot fuel resumed.

Today, most Stanley operators use either Coleman fuel or Hexane, and I know of nothing better. I've found great variations in Coleman fuel; some is excellent, some gives choking and carbon problems. We have found Hexane more uniform and very good but not perfect. On some of our cars, the pilot vaporizer (usually a small U-tube) will eventually choke, or the banjo bolt on the vaporizer's hot end will become clogged. It's relatively easy to clean out these restrictions. The pilot nozzle must be at the proper distance and location from the tiny mixing tube to assure the proper mixture of vaporized fuel and air.

In most cases, the pilot vaporizer is very short compared to the original at the time the cars were built. Hexane and Coleman fuel require very little heat to achieve vaporization. John Packard manufactures an excellent adjustable pilot; that is, by turning an external screw the strength of the pilot can be increased or decreased. This idea is not new—I have some 50-year-old pilots here that are made that way. The Cruban Empire people in New York also made improvements to Stanley pilots in the 1920s, and some of these are quite good. In any event, to be certain of a good-working Stanley car, it is first necessary to make sure you have a strong, blue pilot under both standing and driving conditions.