March 27, 2006

Hello, Steam Team:

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 ‘40’s and ‘50’s.

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 ‘40’s, 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 1960’s 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 8 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 1920's, 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.

Last week, the work sessions were very productive. The burner was almost finished for the 735 under the leadership of Walter Higgins, Emil Christofano and Dan Nichols, and is ready to be installed once the boiler is in the car. Rob Robison, Dale Simpkins and others are perfecting the appearance of the firewall and the brackets under the boiler before the boiler is set in place. The boiler was changed in the 725 under the guidance of Jerry Lucas, Jim Personti and Steve Jensen. Like that on the 735's boiler, the bottom ring on the old boiler was loose and wanted to stay behind when the boiler was lifted out. I had never seen a loose ring before, and now twice in a row! Bill Schwoebel and Anne Cleary went over the Model 71 after its return from Florida, and changed out the front water pump. The water tank will soon be taken out for repair. Like Chuck Erikson with his faithful shop organization, Willard Robinson is rebuilding Stanley needle valves. Ted Simpkins installed 4 beautiful new safety valves on our two steam locomotives. Jim Personti had donated to us a nice bench sander, and Bill Rule has given a bearing press. Many thanks!

There will be an Events Committee meeting at Anne Cleary's tomorrow night, March 28, at 7:30. Mike May expects to be visiting from Michigan the end of this week, and one or two Board committee meetings are planned while he is here. He will probably attend our work session on Thursday night, and plans to go on the B & O Museum bus trip on Saturday. And, by the way, there are still a few seats available on our bus, so if you can go at the last minute, give Rob Robison a call at (302) 239-4096. Remember, the bus leaves Auburn Heights at 9:00 A.M. on Saturday, April 1st. Have a good week as we head for Daylight Savings Time! Tom