

The 805A Report

by
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In July of 1987, WP FP7 805A returned home to Portola. This locomotive, last survivor of WP's power for the California Zephyr, is a key addition to our museum. As this is the first in a series of hopefully regular status reports, I'll indulge in some background to bring everyone up to speed.

Some History

While writing the FRRS's Master Plan some 5 years ago, I had targetted the acquisition of the 805A as an important goal. At that time it was owned by and in service on the shortline Louisiana & North West, which had acquired it from GE via the WAG (Wellsville, Addison, & Galetton). GE had of course acquired it in 1972 when the WP traded in several tired F units on new U-23b's; the 805A was credited towards the 2260.

In February of 1987, Mountain Diesel and a number of other parties had contacted the L&NW regarding their small fleet of F units. (Dinner trains were just becoming an "in" thing). At an FRRS board meeting that month, it became clear that the time to act was at hand, and the money wasn't. The L&NW was asking several times scrap value for the locomotive, while MDT's superficial look at it indicated that it was one tired unit. It had been in the shop for almost 2 years, and 4 power assemblies were out of the engine. At least it had been in out of the rain, there was no serious body damage, the stainless steel side panels were intact, and there was a new main generator armature. John Ryczkowski talked with the L&NW's CMO, who claimed that "she was always one of our best engines....real reliable". So why was it in the shop so long? "Well, we set out to work on 'er, but then we got real busy. Then we got the Geeps, and we were still real busy. We never got back to her". (Sounds like too many of my home projects!)

After a great deal of serious thought and lining up of support from wives (you want to buy *WHAT?!!*), three FRRS members (Steve Habeck, John Ryczkowski, and myself), along with the Society, stretched their respective financial resources and shared equally in the purchase. We knew we were "paying too much", but there is only one WP 805A and the L&NW had it for sale. We decided to go for it.

As part of the deal, the L&NW agreed to reassemble the engine; apply the protective plywood sheets which we sent them for windows, portholes, and headlights;

deliver the locomotive to the UP at their interchange with the Midsouth; and get it to pass the UP's inspection. The UP graciously donated transportation from Louisiana. Despite getting "lost" because we forgot to specify new reporting marks, the 805A made it to Portola with only minor damage (broken rear door window and backup light glass, missing air horn, and, in the engine room, broken water tank sight glass and all of the alarm indicator lights and lenses).

It happened that my parents were out West on vacation and we were returning from Arches National Park just as the 805A arrived at Portola. Upon seeing it, my mother exclaimed, "You spent money for *that* dirty old thing?!!" Lynn (my wife) explained to her the historical significance of the locomotive, the CZ, etc. Overhearing all of this, I just couldn't help grinning.....

Since that time, it would be easy for a casual observer to conclude that nothing has been done to restore this locomotive. Indeed, until recently, very little had changed in the outward appearance. But there has in fact been progress.

Soon after arrival, Ski and Steve Habeck removed the plywood glass protectors and cleaned off the residual silicone glue. I had been in touch with EMD, and that link has proven to be crucial to our efforts. Glenn Monhart supplied very helpful mechanical advice and knowledge while Jack Wheelihan dug into the company files and sent along the original electrical schematic and a complete set of painting and lettering diagrams, including a full-size template for the nose wings and the lower side curve for the nose.

The next spring, Norm installed a set of batteries and I began to check out the electrical systems. Dave McClain tried filling the cooling system and discovered massive water leaks from several cylinder liners into the oil pan. (Because of their design, 567B engines were notorious for such leaks). It was obvious that we had a major engine repair job on our hands, and that the 805A wouldn't be running any time soon. Levin Metals in Richmond offered an attractive price on a 567C engine from an SP GP9 (a much more reliable design), and we started thinking about swapping out the entire engine. (As it turned out, there was to be one delay after another in Levin's cutting up of the SP Geep, and it was not until late this past summer that the C engine made it to Portola).

After the usual fussing with dirty contacts and switches, I brought everything in the low-voltage control and lighting systems back to life. I also installed a prelube pump, and Dave pumped a barrel of lube oil into the engine. By June 1988 we were ready to check out the

starting circuit. After running the prelube pump until oil could be seen dripping out of the crankshaft, rod, and camshaft bearings, I opened the flashcocks and punched the start button. With a great *WHOOSH!* the 805A cranked over more rapidly than any of our other EMDs. Progress!!

Over the rest of the summer Ken Roller wirebrushed years' worth of accumulated paint and crud from the pilot, steps, and fuel tank skirts. (The Zephyr running gear was painted on every trip, and in some places Ken found paint 1/2" thick!). Steve checked out the air system and had the automatic brakes both controlling and responding when MU'd with 921. The independent would not respond to the 921.....hopefully it will be only a minor problem to resolve. Scott Sims and his buddy Dan, who had worked on WP 918's cab for Howard Wise and PLA, removed the cab interior roof panels as part of the preparation for the eventual priming and painting of the cab interior.

In November 1988, I was able to acquire EMD engine maintenance manuals for both B and C engines while attending the TRAIN convention in Sacramento. After studying them and talking several times with Glenn Monhart (who, in addition to being a key figure in EMD's service department also happens to own an E6 and 3 F7s), I concluded that we should be capable of handling the cylinder liner resealing job. Not only would the 805A remain historically correct, but we would also gain valuable experience in working on B engines. We have several locomotives so equipped, and B engine knowledge is mostly lost from the current railroad industry. All of the right reasons for a museum to undertake the job. Others that I spoke with agreed, and we ordered the necessary parts.

Last spring and summer I became extremely busy at work, with many more business trips than usual, and was unable to spend much time at the Museum. By October things had settled down, and Dave, Ski, and I began a concerted effort.

The goal is to have the fully restored 805A on display at the 1991 Railfair at Sacramento, and operating on the way there and back.

Recent Results

Using mineral oil and fine grit sandpaper, I sanded down through the paint in several spots on the nose in order to determine the true colors and the order in which they were applied. It turned out that there were two layers, each comprised of a white/red/orange sequence. In addition, Ski collected a number of

orange paint chips from relatively un-weathered sections of the carbody.

Since fall we have made a number of pleasant discoveries. In inspecting the engine we found that:

- * all rings and pistons are good, and many look new. Rings on only 2 pistons show any wear at all.
- * interior finish of all cylinder liners looks good. A few liners look unused.
- * 4 liners show obvious signs of water leaks, and one is suspect. We plan to pull and reseal all 5.
- * internal rod bearings, etc., look good

In addition, the traction motor cables are so clean as to perhaps be new, and the motors themselves may have been recently reconditioned. The air compressor contains new oil. In other words, except for the trucks (which are *really* bad), this locomotive appears to be in pretty good shape mechanically. I can understand why the L&NW was firm on their price.

In the past 3 months, Dave, Ski, and I have removed the "gingerbread" from the top deck of #4 and #5 cylinders. And since Glenn Monhart is one of the few people in the country who is really familiar with the tricks of working on B engines, I've been talking with him a lot in order to ensure that we do things right. I designed and Dave built a puller for the heads and the liners; it worked like a champ the first time and #4 head and liner are now out of the engine. The bad spot on the liner seal which resulted in the water leak was obvious. The most important result, however, is the realization that we have the ability to handle this job with available tools.

Additional help has been forthcoming from Ken Roller (who has wirebrushed the flaked and rusted paint from the nose), Pete Solyom, Hap, Hank, Norm, Gordy Wolleson, and Chris (a new member whose last name I didn't catch).

Next Steps

- * Work on the cylinder liner seals will continue over the winter.
- * In spring when the weather warms up, we can use help on the many tasks which make up the cosmetic aspects of the restoration. I have made a list of these tasks and taped it to the side of the locomotive as a sign-up sheet.
- * Next issue, I won't talk as much and will instead share the list of tasks and a schedule for 805A work weekends throughout the summer.

See you next time.....