



## *...the final report in the series.*

"WOW! Fantastic! Can't believe it looks so good! After all that work...."

"She sure looks good, doesn't she?" Norm Holmes had quietly walked over to where I was standing, soaking up the impact of the mostly-painted 805A for the first time. The late afternoon sun only added to the spectacular effect. About a week earlier, Steve Habeck had called up: "Dave Dewey's just finished the nose and sides. Red nose wings and all, just like God and the WP intended. You won't believe how good she looks!"

And indeed, even though I had peeked under the blue tarp and had seen orange paint on the nose a few weeks earlier, it still took a while for the realization to sink in that the moment we had been working towards for seven years was now at hand. By now, you've all seen photos of Dave's paint job, and hopefully many of you have had an opportunity to hear the units running together. It took a lot of effort to make it happen, but it was absolutely worth it.

### ***"Recent" Results***

Because of schedule conflicts, it took until May 7 to get back to Portola. After discussions with Dave Dewey about work to be done on the B unit and 805, I checked the batteries, which were fine, then filled the cooling system and checked for leaks. There was the "usual" small trickle of water from the lower seal on #13 cylinder after sitting idle over the winter, but no other indication of trouble. The airboxes were dry; a good sign. After prelubing and a small spritz of starting fluid in each airbox, she started right up. Again, thanks to Gordy and his battery chargers! Once running, the control air and brakestand problems were evident, along with a host of control circuit difficulties (e.g. no throttle response). The electrical problems appeared to be a result of body filler dust accumulating on relay contacts, since everything had worked fine in the fall.

On the 8th, Dave McClain and John Ryczkowski were both able to help. We spread sand on a small oil spill instigated by the trickle of water from #13 cylinder, then addressed the brake stand air leak. I for one was not looking forward to wrestling that beast out and swapping in our spare. In diagnosing the problem, I suddenly realized that the independent was behaving erratically also, showing a lot of blowby. Since that was, easy to change, Dave headed for the parts boxcar and returned with a spare. Before I knew it, he had replaced the bad independent valve, and the problem was fixed. Ski, meanwhile, was cleaning accumulated corrosion from the battery terminals and applying a protectant to all of them. Next, we requisitioned a pair of engine air intake filters from 708 after discovering we were out of replacement filter elements. We examined the control air regulator, which had a small leak, and investigated borrowing the one from 708. That looked impractical (as well as being undesirable). When Dave Dewey commented that he knew of a source of diaphragm material, we decided to repair it, but it would have to wait until after the Circle the Wagons event.

Dave Dewey had been methodically addressing the large amount of prep work to be done before painting, and this

kicked into high gear in May. Among other things, this included filling and smoothing the rust pits on the cab sides under the ladder kick plates, repairing the rusted out section under the engineer's window where the cab meets the floor, repairing the rusted out edge of the side panel near the lead porthole, grinding smooth the crude weld repairs on the rear end sheets, and polishing out the gouges from the stainless lower side panels. Bob Blanch also made another trip down from Seattle and helped with polishing and pulling up rotted cab floor boards, among other things. Late in May, Lynn Hanlon made full size copies of the EMD painting diagrams I had obtained through Jack Wheelihan, and forwarded them to Dave to use as stencils. By carefully referencing photos, Dave had already done the lower orange curve before the package arrived. When the package was opened, the patterns overlaid Dave's curve almost exactly -- good show!!

I returned on June 19 to adjust the brake cylinder travel. After conferring with Dave Dewey on painting issues and helping to remove some of the masking paper from the recently-painted orange side panels, I started her up (no water leaks this time). The first brake cylinder I looked at needed the largest adjustment and required the lower end of the brake shoe hanger to be moved to the next positioning hole in the rigging. This proved to be a major fight that consumed the next 2 or 3 hours, but I won. By contrast, the rest of the adjustments needed only a tweak of the slack adjuster nut, and took less than an hour. All of the brake cylinders are now set to between 4 1/4" and 4 1/2" travel. And I couldn't keep from looking under the tarp to see the new paint on the nose -- wow!

In the next week, Dave did the left side of the unit and the nose wings, and Odie Lorimer delivered a beautifully finished nose medallion. Several years ago, Odie had volunteered to paint a nose herald, and I made a full-size template for him from the EMD drawings. At Winterail, I mentioned to him that this was the year we would need it, and he made a nice one! Odie Lorimer did the excellent lettering jobs on both the 805 and the B unit.

I also tracked down the last hard-to-find part and finished restoring the Mars light, cleaned up a replacement porthole casting and obtained a piece of laminated safety glass for it. Don't ask what that cost!

Returning to Portola from the UP Operation Lifesaver special on June 28, I saw the painted 805A for the first time. We also learned about a "minor" difficulty: no operable F units for the "Wagons" pageant. The B unit kept shutting down from low oil pressure, 921 had a serious water pump leak, and 805 had no throttle response. I had known about the 805 and expected to fix it in time, but the others were a surprise! Vacation plans were quickly changed, and Dave McClain, John Ryczkowski and I returned the next day. Ski brought along the 805 bell and a 5-chime horn he had been storing, while I brought the Mars light and porthole. Ski reassembled the horn with all bells facing forward, then he and Dave Dewey installed it and the bell and got them working.

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Continuation of Larry Hanlon's 805A Report.

Meanwhile, Dave McClain and I started on the B unit. A reasonable amount of oil showed on the dipstick, but upon starting it there was an excessive amount of noise from the valve train and no circulating oil visible. Just before we shut it down, Bruce Cooper pulled the dipstick and discovered the real problem -- no oil!! We added the remaining 2 barrels of oil on hand, and it now ran normally, although it was still a barrel low. Bruce placed a rush order for more oil, which was delivered and added on July 1. The B unit had been vandalized over the winter, and we obviously lost more lube oil than it initially appeared. 921 was next, where we replaced the left side water pump using a spare from the parts boxcar. Finally, 805. After checking the governor cable and cleaning a number of relay contacts, we got normal operation back. Next, we reinstalled the Mars light and checked it out. We moved her outside for a few quick photos, then Dave Dewey started painting the trucks silver. Three units-- F units--returned to service in one day! We celebrated the hat trick all the way back to Colfax.

By July 1, Dave Dewey had painted the remaining porthole and assorted grabirons and installed them. I coupled 805 to the B and set up the MU connections; to my great surprise, all worked well, although the control air regulator leak had gotten worse. Two new members (sorry, guys -- I lost your names!) washed all 4 F units and installed the nose medallion on 805. Dave and I also installed the number board frames, then it was time for pageant practice. After the practice run, we installed the remaining porthole glass.

I had intended to park our A-B-A set of Fs at Malfunction Junction for a meet with the UP Es on the excursion train. We learned that the Es were making much better time up the Canyon than expected, and therefore gulped down a few bites of "dinner" and scrambled to make up the set. The 913 (thanks, CSRM!) was facing the right way and matched the orange color better than 921, so we used it in the consist. Gordy Wollesen and the new guys helped with the switch move, and we made it to Malfunction with about 30 seconds to spare. Gordy laid on the horn while we scrambled down for some pictures, and poof, that was it! I've seen one video taken from the train, and it looked pretty good!!

By Sunday, the control air regulator leak had gotten to be pretty bad. This, plus people turning valves without our knowledge, caused a problem that almost delayed the pageant. However, we were able to scramble and work around it. After the pageant, it was back to work all too quickly.

Since then, Hank Stiles has changed out the old oil and filters and cleaned out the bottom of the crankcase as well. By Railfan Day, as you know, Dave had finished painting the roof and rear end and gotten the windshields reinstalled, and he also replaced the leaking diaphragm on the control air regulator. I've been tied up with work and business trips, and haven't actually seen the completed paint job yet. We'll fix that by the end of the year.

There is a sizable number of people that directly contributed to the rebirth of the 805, and whom I'd like to thank for their help. Dave McClain, Dan Ogle, Bill Evans, David Dewey, Ken Roller, and John Ryczkowski were part of the core group that contributed sizable, in some cases massive, amounts of time. It wouldn't have happened without their talents. When you look at the pristine nose contours, think of Bill; when you see the paint, think of Ken and Dave D., and when you hear the throaty exhaust, think of Dave M., Dan, Ski, and me. In addition, Bob Blanch, Brian Challenger, Bruce Cooper, Steve Habeck, Lynn Hanlon, Norm Holmes, Mardi & Pete Langdon, Odie Lorimer, Hap Manitt, Gayle McClain, Glen Monhardt, Jack Palmer, Mary Ryczkowski, Hank Stiles, Jack Wheelihan, and Gordy Wollesen all contributed directly to the project. We also give special thanks to the Union Pacific. If I've overlooked someone, it is truly unintentional and I apologize. You all have been part of a special event in railroad history.

And Hap, I know she's not a steamer, but, this one's for you.

## *The B Unit, 925C*

In my mind, the B unit was a part of the larger 805 project. At my own expense, I shoehorned a trip to Montreal onto an east coast business trip, overcame immigration problems (that was the week Canada required passports for US citizens because of the Indian unrest!), chose our unit from several because of the excellent body condition, did an air-box and crankcase inspection and found a good C engine inside along with new wiring, got a commitment for D77 traction motors and interchange-legal wheels in the reassembled trucks, and secured an agreement for a price that was half the going rate for a running unit, and lower than the value of the engine and trucks alone. And then there was the mad dash to the airport, and making the plane with only a few minutes to spare. I then presented the information to the Board. If memory serves, this was the first significant purchase the FRRS made, and there was some significant discussion before the decision was made to go ahead. In fact, one of the Board members accosted me afterwards for threatening the acquisition of "his Baldwins."

In any event, many of the people mentioned above were also involved in restoring the 925C. In particular, Dave McClain and Pete Solyom traveled to Montreal to work in sub-zero weather to retruck the unit, get it running, and prepare it for shipment; Pete provided the airline tickets. Norm worked tirelessly with the CN, GT, C&NW, and UP to obtain free transportation. Dan Ogle quickly tracked down the minor electrical problem that had kept the unit from loading, and Dave Dewey handled the body work and the painting. And thanks are also due to Gilly Schwager for agreeing to the deal because he wanted to see a B unit saved.

## *Summary*

I have written this series in order to provide people with more insight into the process of a restoration, so that there might be a broader appreciation of the challenges to be overcome along the way. The vast majority of the restoration literature I'd seen concentrated on verification of historical authenticity or the proper finishing techniques, etc., but skipped lightly over what it actually took to accomplish the job. Hopefully these articles have helped to fill a gap, and provide some additional measure of understanding for why Group A is taking so long to finish Project B. So what did it take? Counting travel time, I have well in excess of 1000 hours in this project, and have spent easily a thousand dollars beyond the original share of the purchase price. Dave McClain has to be over 1000 hours also, as we did much of the mechanical work together. Counting the rest of the folks, I'd estimate there are 5000 - 6000 hours in the 805 and the 925C. Whew!

There is work yet to be done to finish the job completely. The cab interior, cab seats, and cab floor have to be finished, the engine room still needs a final cleaning and painting, and there are a few small mechanical and electrical tasks to complete. We still need to find cab side windows and windshield wipers, the 5-chime needs to be tuned, and we need a permanent solution for the Mars light power. If any of you come across a 72 volt, 3/4 KW dynamotor or DC motor generator set that puts out 50A at 12V, that is what we need for the Mars light. Failing that, I plan to install a 12V battery and automotive alternator driven off of the auxiliary generator drive belts. Dave Dewey is going to take over reporting on the 805 as part of the larger set of restoration projects, so I turn the word processor over to him.

See ya.....