

Hello everyone! The rate of progress has tapered off these past two months with the arrival of colder weather. However, at the FRRS Southern Region Meet in La Habra on Nov. 10, Hank Stiles, Wayne Monger, Bill Evans, John Ryczkowski, Pete Solyom, and myself were discussing the scheduling of restoration activities. One of our conclusions was that it would be easier for people to remember the work weekend dates if it were always the same weekend of the month.

Accordingly, the 1991 weekends for 805 work, and possibly for all scheduled restoration work, will be the second weekend of the month. This also coincides with the Board meetings, so members can not only help out on projects but also drop in on the meeting on Sunday and see the Board at work. The 805A weekends will start in March and continue on through the summer.

Please write to me c/o the Museum if you'd like to help out; there are plenty of things to do as you can see from the list below.

## B Unit

On the subject of the CN F7B unit that I mentioned last time, there is also some news to report. The Board decided to arrange a loan and proceed with the purchase of the unit. It is being obtained from Century Locomotive Parts in suburban Montreal, and we have asked for assistance from the UP in shipping it to Portola.

Upon further investigation, it turns out to be identical, except for the absence of roof end overhang (easily added) to the appearance of WP's last order of F7s which was delivered in June 1951. Those units were numbered 922-924

ABCD. Since this unit has no steam generator, a characteristic of WP's "C" B units, a logical number to apply to it is 925C. We have paid a deposit on it, and Dave McClain and Pete Solyom are planning to go to Montreal for a week at the end of January to fire it up, check it out, and prepare it for shipping. Not exactly like a week in Cancun, but this effort will save us about \$6000. Thanks, guys!! This is expected to be a good unit which is

# The 805A Report

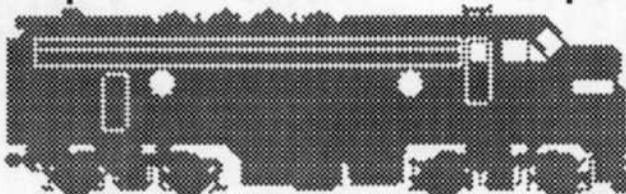
by Larry Hanlon

working well. If all is indeed OK, we will complete the purchase and hopefully have it shipped during February.

## Recent Results

During October, Dan Ogle spent almost every weekend tending to electrical matters. We now have fully-charged batteries and bright engine-room lights as a result of his efforts. He also tracked down and repaired a strange short in the circuit which was helping to dim the lights. Dan did insulation tests on the battery cables and determined that they were fine, and has also been checking out the contactors and other high-voltage equipment inside the electrical cabinet. In addition to his 805 efforts, Dan also helped track down some electrical problems with 921 which were intermittently preventing it from loading properly.

On November 3, Dave McClain and I installed the cylinder head on #12, torqued it down, and towed the 805 outside for another leak test. Once again, the bad news came quickly as all 3 liners still leaked. And they leaked worse than on the previous attempt! GRRR!, or something like that. We both felt that the liners were being prevented from seating properly against their lower seal surfaces, and Dave came up with an idea to test that. We loosened the head nuts on #4 while leaving the crabs fully torqued. This kept the head clamped fully in the bore, but allowed



the liner to move downward. He rigged up a clamp that would apply force to 4 of the liner studs, allowing us to selectively press down on it.

While I watched the leak from below (and got a shower), Dave clamped down on the liner. The problem was immediately evident as I watched the source of the leak move around the liner as Dave's clamping moved it slightly from side to side. So the problem appears to be this: the lower liner seal seats have been worn down over the years, most likely from sanding them

clean for seal replacements, and the cylinder head bottoms out on its seat ring before the lower seals get a chance to work. The leaks were worse than before because we had cleaned more crud out of the way of the water trying to get past the seals.

We set the locomotive back in the shop and spent Sunday at the Board meeting, where the F7 B unit and other significant issues were being discussed.

On Nov. 24, I brought along a dial indicator and some formed lead wire for doing a lead test. The dial indicator showed that it was easy to move the liner downward by .005" before significant resistance was encountered. This is more than enough to allow a leak; also it gives us a calibration on how far down we need to move the 3 power assemblies to stop the leaks. The lead test gave readings which were within the range allowed by EMD, although 3 were near the high limit and one was fairly low. There is enough clearance to consider dropping the power assemblies by .010" or so by using a thinner (but still within spec) cylinder head seat ring. We are checking with knowledgeable people on the advisability of this approach.

## Next Steps

- Finish preparation of nose for painting
- Repair dent in pilot
- Clean out dirt, rust, etc. from interior of nose and spot prime
- Repair, prep middle side panels for painting
- Complete sanding and polishing of stainless lower side panels
- Grind smooth the rough weld repairs on rear of locomotive
- Obtain and install original cab windows
- Measure piston carrier snap ring clearances
- Define and implement a solution for the leaking liners
- Fill cooling system, identify, and repair any leaks
- Check injector and valve timing
- Tighten crankcase-oil pan bolts
- Inspect fuel tank interior and clean if necessary
- Add lube oil and start engine
- Perform insulation resistance tests on traction motor, generator, and other high voltage cables
- Inspect traction motor oil wick assemblies; replace damaged filler caps.

Happy Holidays, Happy New Year, and see you next time.....