

2/24/2008

Track Cleaning APN Trial Approach

INTRODUCTION

We are all aware that there are hundreds of methods to track cleaning. Many MMRs and others have all have different opinions as to the best method, and are certain theirs is the only one to use. And, of course, for each method proposed, there are those that would shoot it down based on their opinions and experience. All that being said, we at APN need a cleaning method which best fits our current situation. That situation may change as the railroad progresses and our cleaning method may have to change with the railroad development.

Your Operations Committee has been assigned the task of developing a track cleaning procedure for APN. Rich Cutler has stupidly accepted the lead in this effort. The plan of this semi-scientific approach has been endorsed by the Committee and the membership at the 2/23/2008 monthly meeting. The program basically establishes control areas cleaned by different approaches. As in any study, data needs to be collected. A chart will be posted to record problem areas and note anytime cleaning occurs.

SOME HISTORY and BACKGROUND

Some literature states that oxidation of track is a major problem with conductivity. Elsewhere the literature states that nickel silver oxidation is conductive. I personally have not found either entirely true.

The other major track conductivity issue is the “dreaded dust”. Unused track oxidation impacts operation (with dust part of culprit). Oxidation of nickel-silver track occurs but at a rate slower than the old brass track. You may have noticed the covered tunnels are not an issue and these areas are protected somewhat from dust.

APN recently tried oil (endorsed by many) as a means to coat the rails and prevent oxidation. This was originally felt to be a failure at APN. However, upon review, it was observed that too much oil was applied. One half a bottle of Wahl Oil was used in a very short time, as many members were applying without any control. As expected, the excess oil compounded the problem when mixed with the dust. Oil must be applied very, very sparingly to be effective per the literature. That one bottle should have lasted many years! In Don Bozman’s 27 years, he has hardly dented his only bottle of Wahl Oil.

We have tried Bright Boys, and again, they should be used sparingly and lightly on small areas. They are abrasive and if used with too much force or excessively can scratch track accelerating future cleaning frequency by trapping dirt. Race is correct on this (although I don’t like to admit it). A Bright Boy has its limited application, for example during an operating session to keep things moving. In the same vain, never, never use steel wool,

sand paper or emery cloth to clean track, even if it is covered with dried paint. The abrasives in these are many times harsher than a bright boy and leave small grooves in the railheads, which accumulate dirt, dust, and oxidation. The net result is impaired electrical contact, not to mention the iron particles from the steel wool.

Don Bozman passed on some of his experience. The Children's Hospital layout is close to the entrance. Don warned the Hospital that the dust from the outside would create maintenance issues. He found he had to return to the Hospital daily to clean track and engines. The Hospital then installed a pressurized air filtration system at a cost of \$40,000. Don no longer cleans track. Also, Don has only cleaned his home layout once in 27 years. He does use a Masonite car to remove dust and occasionally applies oil to a 2' track section on which he holds an engine at full throttle over this section, then wipes the track and wheels with a cloth to remove the remaining oil.

I had a simple circle of which 75% was tunnel for 5 years. I never cleaned inside the tunnel. I did oil the track and before company tested all out. On occasion a quick rub then oil of the exposed track was in order. My G scale garden railroad was brass and only cleaned for visitors and grandkids with a broom stick with a cloth on a cross stick and oiled. It stayed running for three years.

PROGRAM GOALS

APN wants a track cleaning program which will require minimum effort between cleaning and to maximize the time between cleaning. Mark Herzog purchased a TrackVac which is pulled by an engine. It demonstrated clearly our main issue is dust as we were able to see the quantities of Homasote powder and dust collected over runs of around 100'. For those who saw the results, it was an eye-opener.

PROGRAM GUIDE

The following are RULES which define the test program and RULES for track cleaning during the program. Please accept these approaches and try to comply.

- 1) If rubbing alcohol is ever used, it should be 91%. There is unanimous agreement in the literature that 70% is less effective and the use of water should be avoided. Leakage onto the sides of the rails and into switches, etc, may cause corrosion. I do not know how, but it is in the literature. I purchased a new bottle of 91% and it is on the shelf with the track cleaning equipment (it has since disappeared). Previous 91% bottles were apparently diluted for scenery. Please avoid the temptation to use this alcohol for scenery as 91% is twice the cost of 70%.

This program will not use rubbing alcohol for the immediate future. Do not place rubbing alcohol in the track cleaning car. We are now using low odor mineral spirits which is currently in the car. Although mineral spirits evaporates quickly, it leaves a molecular film which is expected to help prevent track oxidation.

- The track cleaning car must be filled with the chemical dropper at the cleaning station. Mineral spirits will attack the syringe.
- 2) Since the facts suggest dust is our major problem, try the vacuum car, 2gal vacuum, or masonite dust car, without chemical cleaning. Report the results of effectiveness,
 - 3) Clean your or the club's engine wheels frequently.
 - 4) Do not use the solvent car in Flitz treated areas. Vacuum or dust car only.
 - 5) Clean the dust car pad frequently.
 - 6) Open and clean the vacuum car frequently.
 - 7) A quick rub with a Bright Boy in a trouble area should be limited to operating sessions to keep things running smoothly. It is not acceptable to use for general track cleaning.
 - 8) After ballasting, you must clean the rail heads. This is best done first pass with a wet towel around a finger before the glue dries. Cleaning is harder after the glue dries. Not much of a surprise here. Same holds true with track painting. After the glue dries, scrape the rail web to remove glued on ballast, and scrape the majority of ballast off the ties. Some ballast is found on ties in real life, but not much. None is found stuck to rails in real life and definitely can cause issues with our rolling stock. This must be followed with a vacuum of the track and surrounding track using the hand vacuum. The vacuum car is not powerful enough to pick up ballast.

PROPOSED CLEANING TEST PROGRAM

APN has seen the effect of IPA cleaning of the track. This is effective but not long lived. Could be dust, could be oxidation, what ever it is, repeated cleaning is necessary. Many times we miss areas, such as the Pulpwood, or Conroe Yard, then when we operate, these areas are very dirty and a single pass with the track cleaner will not do the job. The net result is issues with the operating session. The Operations Committee endorsed program is to test different materials and approaches and see how effective they are. The layout will be broken down into various test areas which will change over time. Please comply with the cleaning approach for each of these areas. Our current program is summarized below and on the track maintenance check list attached to the bulletin board.

- 1) One test area will be the Papermill trackage. This area will be cleaned with Flitz. Flitz is a polish and as with all polish should leave a molecular film. We do not want to remove this film with solvent. Therefore, after cleaning with Flitz, only follow up with a dusting using the pad car and/or vacuum. We hope to determine how long Flitz cleaning will last with intermediate dusting. It is time consuming to use Flitz, so is it time well spent?
- 2) The Port will be cleaned with solvent and oiled. Only one person will be permitted to apply oil. That currently will be Rich Cutler. Oil will be extremely thin. It is applied with a smudge on a finger. No cloth or other media will be used which would permit a thicker film. And it will not be applied to all the track. Cars and engine movement will help spread the very fine film. Again dusting

with the pad car and vacuuming is permitted and encouraged as is the case for the Papermill area.

- 3) APN will begin to test cleaning the main line and passing tracks using the track cleaning car and odor free mineral spirits. All other sidings and industries will be cleaned with the track cleaning car except the test tracks above. IPA will be shelved, literally for a period. Mineral spirits is used by many modelers. It appears to leave a molecular film on the rail heads from impurities in the distillation process. Instead of running the cleaning car as frequently, we should just run the pad car occasionally to see the effectiveness of mineral spirits. A track or two of the Conroe Yard will have an oil film applied. Only Rich will know which these will be and will apply the oil film.
- 4) The pad car gets covered with dirt. It needs to be cleaned frequently. If not cleaned, it only spreads the dirt around. I cleaned the pad effectively with a Dremel brush without applying any pressure. Pressure would score the pad. The pad contained so much dirt my hands were covered in dust and the felt as if I had powered them with graphite.
- 5) Try running only the pad and magnet car. Record the cleaning. We need to see if it alone is effective.

For this test program to be a success, please note on the chart posted on the bulletin board, any conductivity issues you encounter, and when and where you clean track including if you used solvent or just a dusting with the pad car or vacuum.

Note: we now have a 2 gal hand held vacuum which is easy to carry and use to dust the track.

Long term or even now we may want to consider an electrostatic precipitator. We also need to clean the layout floor frequently as part of the maintenance crew, this includes vacuum followed by mopping.