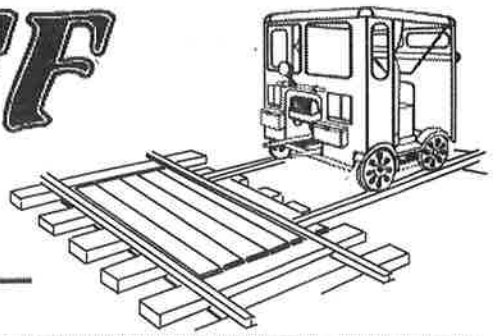
THE SETOFF



THE OFFICIAL PUBLICATION OF THE NORTH AMERICAN RAILCAR OPERATORS ASSOCIATION (NARCOA)

January/February 2000 Volume 13 - No. 6

Inside:

Views from the President's Car

by Stan Conyer

I hope all of you had a nice holiday and made it through the big Y2K nonevent with out problems. I welcomed in the New Year in an equipment building at the base of a microwave relay tower helping to see to it that the lights stayed on in Southern Indiana.

Now some random hobby news. I hope you all read the "10 Reasons to purchase your motor car insurance now" in the last issue. I thought the even numbered ones were especially good reasons. For new members, it is not necessary to get your rules certification card, by passing the rules test, before you get your insurance. This eliminates your insurance being delayed by Tom having to confirm you have taken the test. You must, however, have the card before you can operate at an insured event. (The list of those members who have passed the test is on our web page. Click on the headlight of the motor car pictured in the excursions section.) Al McCracken is the new administrator of the testing program. The expiration date of our cards has been extended by a vote of the board of directors until the end of next year. By then we hope to have a new rulebook, new test, and a program which can allow the local affiliates to administer the tests. This job is going smoothly under the guidance of Dick Ray and the cooperation of everyone involved.

For those in the upper mid west there will be no rides on the Wisconsin Central or Algoma Central this year. Under new management, the railroad is concentrating on their customers. We will remain in contact with them in the hopes they will welcome us back in the future. Also, we are sorry to hear the Trip of the Century across Canada was called off, as Canadian National railroad could not accommodate the group. Hank Brown worked on this trip for years, and all of us are disappointed. This will not keep Hank down, however; he has more trips planned for this year. As the railroads gain more business and mergers continually shuffle the deck in management, all our excursion coordinators continue to work hard to find us places to run our cars. Help them whenever you can.

It has occurred to me that many of the people who attend our events are not members of NARCOA; they are our guests. Whether a spouse, family member, neighbor or friend, these people are out for a good time and to enjoy the scenery. They may know little of the railroad environment, be employed by a railroad, or anything in between. They may know nothing about the machine in which they are riding other than it is noisy. Your guest should know how to stop your car if necessary. Show them the controls and how the car works. As operators we have a responsibility to our guests and are responsible for them, keeping them safe and comfortable. They may need to bring food and drink if there will be no place to get them along the route of the trip. Rest room facilities may be few and far between, so recommend they go easy on the morning coffee. They may know nothing about our safety rules, so inform them of what they need to know. Be sure they are properly dressed for the conditions and have proper foot wear. If they are asked to help with the flagging of crossings, teach them how to do it properly and safely. You are responsible for their behavior as well. They should know that alcohol, drugs, and weapons are not allowed at our events; violations in this area could affect your operating privileges. Be sure they understand and have signed the releases. Everyone is out for a good time, but your passengers need to know what to expect and what is expected of them.

Riding the rails in a motor car is unique. That is part of what makes our hobby so much fun.

Be careful out there.

Cover Photo . . .

This Asahel Curtis photo, back-dated 1911, is of the Chicago, Milwaukee & Puget Sound Railroad just east of Missoula, Montana.

STAN COHEN COLLECTION

Please submit materials for the February issue of ***THE SETOFF*** by January 15 as follows:

Classified Ads and Excursion Announcements .....Ernie Jeschke

All other Materials and photos.....Jan Taylor

New E-mail address for Jan . . .

jtaylor@montana.com

Letters to the Editor: a little perspective

by Jan Taylor

It is time to remind the membership of two items written into NARCOA's Policy Book.

Item 16 reads:

Letters to the Editor of THE SETOFF will be recorded as being received for publication two months after the date of actual receipt by THE SETOFF editor. This will permit one publication period to pass before the letter is printed, allowing review of the letter and possible response to it by a Board member to be printed simultaneously. (3-15-97)

Item 17 reads:

Letters to the Editor of the THE SETOFF will not be published unless they are signed, and a phone number is indicated. This is necessary to permit THE SETOFF Editor to authenticate that a letter is written by the person signing. However, the letter writer can request that his/her name not appear in THE SETOFF, and "Name withheld upon request" would appear in such instances. This policy is to be placed in the letter policy statement in each issue of THE SETOFF. (3-15-97)

Additionally, letters should be 300 words or fewer, and—in a continuing effort to put our best foot forward for all readers—should present ideas in a positive manner. All the usual courtesies apply.

speeders@lists.cirr.com—the speeder newsgroup—provides an excellent and timely forum for more detailed exchanges concerning all aspects of the hobby. You can subscribe free of charge through an E-mail account—also available free of charge. For those not "on line," a trip to the local library and a quick lesson from the librarian on their system will soon have you participating with no investment required, aside from your time.

Our hobby needs to be as enjoyable and safe as possible. Any ideas on how to guarantee that are always welcome.

Did I mention enjoyable?

Guidelines for Submitting Materials for Publication in *THE SETOFF*

1. Our editorial policy is to publish in ***THE SETOFF*** all materials received, although they may be subject to editing for space considerations.
2. Photos and materials submitted for publication in ***THE SETOFF*** cannot be returned because they are archived.
3. Letters to the Editor of the THE SETOFF will not be published unless they are signed, and a phone number is indicated. This is necessary to permit THE SETOFF Editor to authenticate that a letter is written by the person signing. However, the letter writer can request that his/her name not appear in ***THE SETOFF***, and "Name withheld upon request" would appear in such instances.
4. Submit either black and white or sharp, color prints for publication. Please label the back of the picture as to its subject matter and photographer. Do not send slides.
5. We cannot publish copyrighted materials such as photos, posters, cartoons or articles without written permission from the author or publisher. Sender must provide written permission at the time of submission.
6. Excursion stories, technical articles, and lengthy submissions should be typed or printed. Ads, meet notices and short articles may be handwritten. Please include your phone number with your submission-- **even with E-mail**--in case we need to clarify something we don't understand.
7. Send materials to ***THE SETOFF*** editor by the 15th of January, March, May, July, September or November for publication the following month's edition.

THE SETOFF

Volume 13 Number 6

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THE SETOFF is the official publication of the North American Railcar Operators Association (NARCOA) and is published bimonthly to promote safe operation of railroad motorcars and to encourage fellowship and exchange of information among motorcar enthusiasts. Membership in NARCOA, which includes a subscription to ***THE SETOFF***, is $20.00 per year and is available from Membership Secretary Joel Williams. Please address all membership inquires to Joel at the above address.

Visit NARCOA's Website at:
http://www.NARCOA.org

NARCOA Testing

In Order to Run Your Car at an Insured Meet You Need a NARCOA Rule Book Certification Card

Participation in the NARCOA operator certification program is simple. Operator certification is open to anyone, whether you want to purchase insurance or not. You may be certified now and buy insurance later.

Operators must participate in this program if they wish to buy insurance, regardless of whether or not the operator has taken a similar test with a local organization.

The Operator Certification program will operate in the following manner: To ensure that each operator is familiar with the contents of the NARCOA Rule Book, each operator must pass an open–book Rule Book test. A record will be kept of those operators who have successfully completed the rule book exam and a Rule Book Certification Card will be issued. This card will be accepted by any individual or group hosting a motorcar excursion utilizing the NARCOA–approved insurance as proof that the holder of the card is familiar with NARCOA's safety rules. Excursion Coordinators or local groups may impose additional restrictions or safety equipment requirements upon operators attending their excursions. It is up to the operator to contact the host of an excursion to learn the requirements of participation for an event.

Procedure:

1. Send a stamped, self-addressed, business size envelope to:

   Al McCracken
   Safety and Rules Committee
   2916 Taper Avenue
   Santa Clara CA 95051

2. Al will send you the test and an answer sheet.

3. Review Rule Book #4 and then mark your answers to the questions on the answer sheet. All new members receive a NARCOA Rule Book. If you do not have a rule book, send $5.00 (payable to NARCOA) to:

   Joel Williams
   NARCOA Secretary
   P.O. Box 82
   Greendell NJ 07839

4. Return the test and the answer sheet to Al McCracken with another stamped, self–addressed envelope.

Your test will be graded and, if you successfully answer 20 of the 25 questions, your Rule Book Certification Card will be returned to you and the NARCOA insurance administrator will be notified so you may buy your insurance. Rule Book Certification Cards issued during this program are valid through December 31, 2000.

If you fail to answer 20 of the 25 questions, you will receive another test and you can try again.

You may cut out and use the address below:

Al McCracken
Safety & Rules Committee
2916 Taper Avenue
Santa Clara CA 95051

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Santa Clara CA 95051

KALAMAZOO
The Resurrection and New Life of a Union Electric Company #01CF3 Model 56W Section Car

by Denny Ansbach

On January 2, 1963, the **Union Electric Company** of St. Louis, Missouri, a large utility company, issued their purchase order #64694 to the **Kalamazoo Manufacturing Company** of Kalamazoo, Michigan, for prompt shipment (23 January) of a "Railway motor car; model 56W . . . capacity eight men and tools . . . Wisconsin 4 cycle heavy duty air cooled engine 16.4 HP . . . automotive type transmission and clutch . . . final drive by roller chain . . . steps and horizontal member to protect workmen from wheels . . . ." The car was to be used to transport men and materials on a company–owned electrified railroad across the huge Mississippi power dam at Keokuk, Iowa. Although the connection is now broken, this industrial railroad formerly connected with the **Keokuk Junction Railroad**, ne. **Toledo, Peoria & Western Railroad**.

This giant dam served two important purposes: it was an early and major provider of electricity to the city of St. Louis; and, probably more importantly at the earlier time, the pool behind the dam drowned forever the notorious Des Moines Rapids, a persistent and serious obstruction to navigation on the upper Mississippi. William J. Peterson, in his authoritative book *Steamboating on the Upper Mississippi* (State Historical Society of Iowa, 1968) writes, "The gigantic dam at Keokuk ranks as one of the great power plants of the world." The lift lock, constructed at no cost as a condition of the franchise, and #19 on the river numbering system, had the highest lift of the major Mississippi dams—32 feet.

For the next 28 years, the motorcar transported operators and maintenance personnel from the Union Electric hydroelectric power plant, separated from the Iowa shore by the navigation lock, out to two traveling gantry cranes and to a maintenance yard on the opposite bank at Hamilton, Illinois, about a two–mile round trip. The cranes were used to open or close one or more of 119 vertical–lift spillway gates on the 3/4–mile–long dam. The need for spillway gate adjustments was determined by the constantly fluctuating, Mississippi river flow in an excess, or an insufficiency, of the flow–through requirements of the power plant. The pattern of gate closures/openings was determined by the need to minimize silting behind the dam upstream and to equalize the scouring of the river bed downstream. As a result of this unrelenting need, the car was constantly on call and was used day and night, summer and winter, rain or snow, the year round.

In 1965, probably in response to then–new Federal regulations, a Kalamazoo–supplied cab was installed on the as–delivered, otherwise completely open car. The only instructions for installation were contained in a letter from Kalamazoo—apparently in response to an inquiry from Union electric asking, "How do we install this thing?"—which stated simply , "Look at the photograph on the enclosed advertising brochure, and do accordingly."

The car was always referred to in the records as "the putt-putt," or more commonly "the yellow car." When not in use the car was kept inside the power plant itself, commonly nestled against the coupler–face of the company's electric platform "motor"—a rarely used 660–volt DC trolley locomotive that operated on the company's standard 300–volt overhead wire.

A generous parts inventory was always stocked, and detailed maintenance records bore ample witness to continued hard use. In about 1991, virtually worn out in all respects, the car—with all spare parts and records—was retired and then traded *en bloc* to an Iowa used equipment dealer in return of a "newer" car, reportedly a **Fairmont** "A" Car. An Iowa friend tipped me off as to the car's availability, and after a telephone negotiation, it was trucked to Sacramento. Boxes of new spare parts, including two axles, were shipped separately.

Unfortunately, no one had thought either to block the wheels or to set the car brakes after loading it into a brand new, **Overland** truck–trailer. As a result, when set out onto the ground in California, the motorcar looked as if it had been party to a battle, and the truck–trailer appeared even worse.

Despite the unexpected disorder, the car was virtually "as delivered"—pure Kalamazoo—highly unusual. As thoroughly utilitarian objects, motorcars were usually unsentimentally maintained with whatever parts were on hand. It had a distinct "railroad" look to it. The utilitarian flat ends and arched roof reminded one of countless gas–electric doodlebugs, while the long side step skirts gave it a disconcert

Remember This . . .

ing, slightly rakish look, not unlike the Depression–era "streamstyling" that Otto Kuhler applied to ancient **Lehigh Valley and New York, Ontario & Western** teakettles.

The car was heavily worn, certainly not unexpected after almost three decades of steady, hard, stop/start, rough weather use. Its retirement had been honorable.

The car was steel throughout except the cast instrument panel and the finned engine head. It was painted entirely in yellow, wheels and all, the surfaces covered with a translucent brown glue–like coating—apparently a mixture of rust, grease and silt—that resisted all cleansing or removal.

Rust was everywhere, reflecting the watery environment in which the car had lived. The distinctive Kalamazoo–pattern wheels were worn to 1/8–inch of tread. The brake shoes, hidden under the unusual, skirted side steps, were worn through to the wood insulating blocks. Prominent, wheel scoring marks on the interior sides of the sidesteps and the outside frame sides testified to recurring problems of loose axle bearing keepers which had allowed the loosened axle assemblies to slide from side to side.

Scoring on the axles, and the local application of additional braces on the wheel bearing journal supports testified that overloading had been common. In this regard, it was obvious that the bearing blocks had, at times, actually been "cocked" inward along the axis of the axles to the point of direct contact. The rear axle—one and 9/16–inches—did not have the center bearing support commonly present on Fairmonts, but had instead a much thicker center section—two inches. The axle had once been fractured seriously many years earlier but had been elegantly fixed by Union Electric shop forces; in hand were the relevant shop drawings.

The chassis frame was cracked in several locations, and only the fastenings of overlying sheet metal kept things in a semblance of structural order. Key frame members were bent.

Although the cab looked square initially (but needing sheet metal work), closer inspection showed that it was severely wracked structurally in several different planes. The mystery of the large, rusty dents on the outside ends of the car was solved by inspection of some photographs that Mark Mayfield had taken of the car a number of years previous. The car was parked routinely inside the Keokuk power house, directly against the coupler of the plant's rarely used locomotive. With this coupler consistently a little off–center, it seemed to me that the car must have been "bounced" off that coupler face occasionly when it was not stopped in time. Not unreasonably, this was probably the root of the distorted cab structure, also.

The riveted roof had a few dents and was rusty in places, but it was otherwise OK. The ceiling was covered with a thick, tar–like substance—possibly soundproofing— which had dried over the years to a "cracked–earth" appearance. The cab ends were held together with welded, sheet metal patches and fixes, some on top of other patches and fixes. Both the front and rear cab ends were identical with very large windows, three of with were broken.

The engine casing framing, integral with the cab structure, was also seriously deformed. The removable, formed sheet metal, casing sides were heavily worn and looked like beaten silver. The large and distinctive, Kalamazoo, cast aluminum instrument panel on which the car's model and serial number were imprinted was intact. Noted also were the handsome, brass throttle and choke assemblies. The diamond–plate tool tray floors were rusty but otherwise OK.

The engine was a **Wisconsin** THD, a very heavy in–line, two–cylinder, four–cycle, cast–iron, air-cooled machine whose direct lineal descendants are still available today, albeit at a very high price. It looked good, started immediately and seemed to run smoothly—a good sign. Oil and grease were everywhere, however, the source of which was not immediately obvious.

The standard gas tank under the instrument panel was in excellent condition but held only two gallons. Gas feed was by gravity. Ignition was by **Fairbanks Morse** magneto. Voltage was six with a 15–amp generator and an electric starter. The wiring was "terminal" in its condition.

The cast–iron two–speed transmission with Kalamazoo casting marks seemed almost identical to the cast aluminum unit common on modern Onan–powered Fairmont motorcars. In hand was a 1946 Kalamazoo engineering drawing of a transmission part, certainly raising the question as to whether or not Fairmont in later years might have purchased the design from Kalamazoo.

An original six–inch, sealed–beam headlight was mounted high on the front. There was in inconsequential horn, also identical to that supplied by Fairmont. A generic automotive tail light was mounted below the rear frame member.

When faced with a project such as this car, there can be a paralysis of conflicting feelings: there is so much to be done, and/or there is so much one can do! A situation soon presented itself which drove me off of this dead center: a motorcar excursion on the Yolo Short Line, only a slow six or seven miles long and something different and only 20 minutes from the house.

I borrowed a six–volt battery from my other motorcar, a 1937 former **Rock Island Railroad** Fairmont S2E section car, and did a quick and dirty rewiring job. The fuel system was cleaned out. I tightened the chair and adjusted the brakes so that they

would at least work safely on this short trip. I crossed my fingers about the wheels.

The car completed this excursion "on its own wheels." The shift lever first had to be bent so that it would go into high gear. Although the engine seemed to operate well, there was a vexing lack of power. The rattles of loose metalwork, however, and the reverberations of jointed rail created a new definition of "deafening" for the riders inside the metal cab, devoid of any soundproofing.

Restoration.

The purpose and goal of this restoration was twofold: firstly, the restoration to use and good appearance of an unusual and attractive piece of old railroad equipment; and secondly, the creation for the owner's personal use of a comfortable, reliable motorcar for organized recreational touring with his wife—a use, of course, never anticipated by the car's designers or manufacturer.

The general principles of the restoration were to be: firstly to maintain architectural integrity; secondly to maintain original fabric insofar as safety, operational integrity and appearance allowed; and thirdly to use substitute parts only when necessary and satisfactory original equipment (OE) parts were unavailable. All work was to be performed so that the car could always to returned to its original, "as delivered" or "as used" appearance with minimum work. Existing drilled holes and fasteners were to be used whenever possible for any modifications or accessory additions.

Fabric, structural or design failures were to be studied critically, and their causes taken into account in the planning and execution of any repair. To restore an object in such a way that the fundamental causes of original failure are left unaddressed and/or even recreated violates a basic trust of preservation. Why preordain that any future owner or user will have to revisit these issues?

All work was to be craftsman–like, and where relevant, consistent with standard railroad practices. Because in regular use, anything and everything can and will vibrate loose, all large fastenings were to have lock washers, while all of the smaller ones were to have "shakeproof" ones.

The new/old car rolled into the barn back of my old trusty Fairmont, placed high on jacks, and with the heavy steel cab roof affixed by slings to the rafters, was then lowered, the roof left hanging until it, too, could be lowered and stored away. The cab ends were similarly removed and set aside—all easier said than done.

The engine casing structure was dismantled so that the engine could be removed. The heavy side steps were set aside so that the running gear was accessible.

The running gear itself was then dismantled into components, leaving only the bare chassis frame which, with paint remover, abrasive tools and scrapers of all varieties, was stripped to clear bare steel throughout. The frame was then leveled with wedges and squared. Where cracks and breaks could not be effectively welded, new braces and supports were fabricated and bolted into place, taking into account original architecture and appearance. All fastenings, mostly 3/8–inch, were new, alloy grade 5 with 13/16–inch (over the flats) "heavy duty" nuts, a Kalamazoo standard. The chassis was primed with "clean metal" **Rust–Oleum** and then finished with a flat silver lacquer by **Duplicolor**.

All brake gear was dismantled, stripped and refinished. The least worn brake shoe was built up with mahogany and epoxy putty as a casting pattern for new iron shoes which were subsequently cast. The wood insulating/mounting brake blocks were repaired and the enlarged hanger holes were restored to size with brass bushing inserts. The heavily worn, notched, "parking brake" keeper–plate was refiled.

All wheel bearings were removed, cleaned and inspected. Minor discoloration was found on some rollers. Some of the used wheel bearings out of the large supply which came with the car were in better condition. Inasmuch as new bearings were going to cost about $330, the local bearing supply house felt that the current bearings were safe to reuse, given the speed and use expected.

Additional transverse braces already tied the bottoms of the rear axle bearing journal box supports to the nearest engine rail. I fabricated and installed similar braces on the front supports as well.

The split front axle halves were connected with a differential—necessary to ease manual handling of the car off and on the rails— similar to, but not identical to, that common to Fairmont cars. I noted some run–out on the front right wheel, subsequently discovered to be caused by a bent half axle. As I had an entirely new front axle assembly, both halves and differential, I simply replaced the entire axle. I did straighten the old axle, however, and then cleaned, oiled, wrapped and tagged all pieces as usable spares.

The rear axle was more complex. It had several "bends" in it, in addition to the prominent repair mentioned before. No new replacement was available, either by **Tamper**, Kalamazoo's successor. Neither was there a Fairmont substitute. Success was purchased for $220 at a local machine shop, which was able to successfully straightened it to plus or minus .003-inch.

If You'd Be Spared . . .

While this part of the car was still apart, a new, rear, 36–tooth axle drive sprocket from the spares pile was installed. The old 37–tooth sprocket was in usable shape, however, and was wrapped, marked and also kept for a spare.

For a brief period of time, I was ecstatic when I came into possession of virtually "new," old stock, Kalamazoo 5/16–inch (tread thickness)·16–inch by 4.5–inch wheels from the scrap piles of a recently closed, local locomotive works. The ecstasy was short lived, however, by the discovery of serious runout of up to plus or minus .125–inch. It turned out that although these wheels had indeed never been on the rails, they had been mounted on crude, home–built, heavy duty and commonly overloaded shop carts, pulled and pushed abut the works on their flanges.

Because the car wheels were almost completely hidden from view behind the side steps, it didn't bother me too much to have to use Fairmont substitutes where the maximum runout was a much more acceptable plus or minus .008–inch. They, too, were refinished in silver, and then remounted. All nuts and bolts were replaced with new or were carefully rechased.

The records indicated that the engine had been overhauled in 1983, but the details were incomplete. Present bore measurements, however, showed .007–inch wear, indicating it was time for reboring. Fortunately, this particular Wisconsin industrial engine line was still in production, and hundreds of thousands were still working around the world. Even more fortunate, **Capital Lawn Equipment Company** in Sacramento had been an old–line Wisconsin dealer for years, and the owners seemed to know more about these engines than most people might know about themselves. They considered this model to be of a "bulletproof" variety, representing one of the most reliable such engines available. Although I had the opportunity to use as a replacement a more modern engine in the same series, a Model TJD purchased, I was persuaded that the older original engine was fundamentally of a better design, and that overhaul was cost–effective.

The engine was dismantled, each part cleaned and stripped, and when appropriate, beadblasted. The cylinders were rebored 0.010–inch over. The crank shaft was built up and returned to original specs. New rod bearings (old rods), and new pistons and rings were installed. The crankshaft main ball bearings were in excellent shape and were not replaced. The zinc alloy, oil pump body had contracted "expansive zinc–rot" and had begun to seize the pump piston, as a result of which the pump push rod had seriously gouged the camshaft. A new camshaft was then installed with new valves, seats, springs and guides.

My Original Equipment cache contained new gears, so new gears were installed on the governor, the magneto and the camshaft. Again, all old parts were saved for spares. Other parts from the same source replaced the inner workings of the governor and the magneto. The governor had been set and sprung for a maximum of 2400 rpm—probably the cause for the seeming "lack of power" on the test run. The governor was reset with new springing to take full advantage of the engine's maximum 3600 rpm.

The **Rockford** clutch was worn but serviceable. Because I had enough new parts for about three or four replacements, still in wraps, a completely new clutch assembly was installed.

The transmission was a sleeper. It seemed to function OK, but in fact needed total bearing replacement! Several bronze bushings had play exceeding 1/16–inch and had to be machined to order. Most other bearings again came from the spares pile.

The shifting fork had once been fractured and had a brazed repair. I had the relevant Kalamazoo shop drawing and a letter from Tamper to Union Electric explaining that the part "was no longer available, and would have to be fabricated." I purchased a new, similar looking Fairmont fork, a dead fit short of several thousandths of an inch—solved with judicious file work. The head–end, drive train overhaul was finished with installation of a new drive sprocket and fabrication of a new chain–oil splash shield.

A continuing mystery was the presence of sticky oil everywhere. Only after several months was its source identified; the transmission cover plate bolts were discovered to be too long by about half a thread. As a result, the bolts "bottomed out" with the cover never actually being tightened down, allowing the 90–weight gear oil to seep out through the gasket constantly—easily solved.

Having valiantly contended in the past with the obsolete and cantankerous, positive–ground, six–volt systems common to old motorcars, I decided to enter modern times and install a 12– volt, negative–ground system. The six–volt starter was rebuilt in kind, but was then operated on 12 volts, a very satisfactory fix if the starter is not turned over too long. My local auto electric shop found a small 12–volt, 35–amp. **Hitatchi**, new "old stock" alternator, manufactured for the old **Chevrolet** *LUV* trucks to replace the generator. Voltage control was managed by a **Ford** regulator.

Because the car was to be used almost exclusively for western motorcar excursions, it was to be refitted and configured for that use. New wiring was planned for headlights, marker and brake lights—for both forward and reverse movements—for front and rear windshield wipers, for an industrial, railroad frequency radio and for adequate horns.

The engine was reinstalled—necessary before reinstalling the cab—and a new drive chain was

wrapped around the new sprockets. A local, custom muffler shop fabricated a new exhaust system and muffler, attached to which was a motorcycle–type spark arrestor. California, Bureau of Land Management/US Forest Service law requires spark arrestors on all participating cars because of the fire dangers inherent along the western railroads commonly toured).

The handsome Kalamazoo control panel was beadblasted and refinished. Everything was prewired, if at all possible. An ATC–type fuse panel was installed.

The sidesteps were sandblasted, straightened and repaired by a truck body repair shop. The cab ends were determined to be beyond repair, and so reluctantly, a decision was made to use the ends as patterns for the fabrication of virtual mirror–image replacements with identical structural details and riveting. The same shop did some minor body work on the roof, then sandblasted and primed it.

To minimize sheeting rain water, inconspicuous gutters were fabricated and installed along the roof edges. The engine casing framing was rebuilt with some new steel. The cab was then reassembled—again, easier said than done!

The exposed, engine casing sheet metal sides looked like they had been in a war from being hammered by tools and other cargo carried in the adjacent tool trays. They were deemed "**Bondo**–proof;" one original side had already been replaced in the past. They, too, were replaced in kind but with heavier gauge metal and were also faced with new, protective, oak rub strips to buffer the untoward effects of any adjacent, tool tray contents.

The removable plywood engine casing seattop pieces were also replaced with new 3/4–inch solid mahogany plywood for stability, strength and the ability to maintain a smooth finish. To avoid loss—these also had apparently been replaced more than once——these seattop pieces were fastened down with new, hidden piano hinges, latches and keepers. For passenger use, a comfortable, wood grab handle—actually a reinforced **Marshalltown** concrete float handle—was fastened in place. Being thoroughly tired of yellow (or orange), I chose to paint the car inside and out a Hunter Green, same as the **Krylon** color of the same name, with flat silver–lacquered roof and underbody. Lifting and collision rails were painted black, as were most of the exterior safety accessories. The original engine "grille" on the front of the car was long gone. A simple replacement grille was fabricated of burnished, expanded stainless steel. Windows were reglazed with new rubber moulding.

Two marine–type, heavy duty, windshield wiper motors were installed at the top in the front, and an old **Bosch** unit was installed on the operator's side in back of the car.

Unlike Fairmont cars, Kalamazoo provided no "pushrails" or other irons necessary to pull or push the car manually with any ease. Grab iron copied, but in reduced scale from those common to **Southern Pacific** wood cabooses, were fabricated of 5/8–inch iron, painted white and mounted on all four side posts.

A heavy duty nickel–plated, brass, fire engine focusing headlight (c.1917) served as the new main headlight, while a smaller reverse move headlight of automotive origin (c.1935) was mounted on the rear.

The original red marker light was now reinstalled as the reverse move marker on the front. Red lights actuated by each brake application were installed for both forward and reverse moves. Both were additionally activated by an electronic flashing unit. These and other lights were all of various automotive or truck origins found at antique automobile flea markets.

Because of the unsprung nature of the car, all lights and most other electric/electronic gear were rubber/resilient "shockmounted" to minimize the effects of vibration on the notoriously fragile, hotlight bulb filaments. Fairmont circumvented the problem partially by only using "Military Specification" bulbs, not a bad solution if the correct bulbs can indeed be located.

A multi–horn ensemble was mounted on the roof to be actuated with a relay. One horn points in the reverse direction. The unit was put together from a group of horns originally designed to play a tune from a small "keyboard." The horns are blown in time–honored fashion by pulling a wood whistle handle, made from a common file handle and suspended from above on cotton sash cord. A permanent antenna was installed through the roof, with the radio itself shock–suspended from the ceiling just below. A nice, stainless steel dome light, purchased on closeout at a marine supply store, was installed.

The limited fuel tank capacity was partially ameliorated by the installation of a 3.5–gallon auxiliary tank in the empty space in the rear of the engine casing. I continue to think of replacing this with a Fairmont five–gallon tank. To access the new tank, a standard, **Tedeco** gasoline fill port, common on some Fairmont MT19 and MT14 cars, was installed through the rear cab end. An electric fuel valve was installed so that I would have remote control as to which fuel tank to use.

A new, Wisconsin, mechanical fuel pump was now required, because the bottom of the new tank was lower than the carburetor. An adjustable, high speed carburetor needle valve with a smaller jet replaced

Trains Don't Whistle . . .

ing covered with standard rubber matting. The sheet metal sidewalls of the engine casing were lined with one–inch automotive fiberglass. A ceiling headliner made of fuzzy gray carpeting was professionally installed. The interior surfaces of the car's end panels were fitted with 3/4–inch–thick, perforated, black, vinyl–upholstered foam inserts, secured with hidden **Velcro** fastenings.

The engine casing seattops were covered with fitted and tailored removable mats made from rubber–backed, very close–weave cloth material, usually furnished to cover automotive dashboards. This not only damped additional noise, it also allowed luggage and other objects to be carried without sliding off, destroying the finish while doing so.

Considerable effort was—and continues to be—expended tracking down all sorts of rattles, buzzes and vibrations, then damping them with a variety of extra fastenings, rubber wedges, or similar.

New side curtains were made from a light green, **Sunbrella,** synthetic canvas material. For safety reasons, the pattern of the original windows was enlarged and extended; otherwise the curtains were cut "in kind." To prevent rust bleeding onto the curtains, all metal fittings, including the rods, are stainless steel.

This car was designated a "section car" and designed to carry eight men and their tools. In time–honored fashion, all eight were expected to ride "side-saddle" on top of the engine casing, four on a side facing out, feet on their tools. This method of seating can get very old very fast on a long trip, and given current planned use, better seating was required. This was solved by the purchase of some old Fairmont seat frames which were then beadblasted and repainted. New, black vinyl cushions were made from patterns already in my possession. For safety reasons new, outside, upholstered, steel arm rests, fabricated to a **Santa Fe** design, were fastened to the seat frames. (In my opinion, Fairmont's industrial seats are the very best and most comfortable, made to Fairmont's order by **Seatmaster**.)

The seat mountings were fabricated of white oak, left over from an ongoing antique boat project. They were mounted transversely to bridge the tool trays and were so designed that the engine casing side panels could still be removed easily. Retractable seat belts were installed—probably the most important safety accessories on the car.

Tool box and spare parts storage were carefully built into redundant space over the engine battery and also just under the hinged, rear, engine casing seattop. Storage cargo nets were stretched flat across the ceiling for casual storage of jackets, etc. A standard **Prime** locomotive rear view mirror was fitted on the operator's side. A fire extinguisher was fastened under one of the seats and an emergency flashlight under the other. Space for an additional five gallons of gas, in cans, was provided within the rear engine casing. Signal flag holders were fitted along the edges of the ceiling, within easy reach of occupants.

The car was never lettered or numbered in any way while in Union Electric's possession. Since a railroad car looks naked to me without lettering, I decided to letter the car as if Union Electric had elected to do so "in railroad fashion." *UNION ELECTRIC COMPANY* was spelled out on both front and back in gold foil, black–lined lettering in a font style copied from their stationery. The front and back frame members were stenciled in "Railroad Roman" with the car's model and serial numbers. The front frame member was also stenciled "Keokuk Plant," while the back frame member was stenciled with both the "built" and "rebuilt" dates. The sidesteps were stenciled "Watch Your Step."

A 12–volt, commercial, outdoor fire bell with the mechanical repeater replaced by an electronic repeater that "tolls" about once or twice per second was shockproof mounted, inconspicuously, flat on the roof. This sounds great, but the electronic mechanism continues to be upgraded to increase reliability.

Comment.

Kalamazoo was one of the oldest and most venerable of the handcar/motorcar manufacturers. It started business in 1883, some years before Fairmont, a company that would eventually grow to dominate the field. Historically, they were particularly noted for some elegant, steam–powered, late 19th century inspection cars which attempted to bridge the gap between muscle and internal combustion power. There were also a prolific manufacturer of hand pump cars right up into modern times. John L. White Jr. writes in his delightful *History of the Railroad Hand Car* (Railroad History 127, October 1972) that Kalamazoo produced the first known, commercially available, internal combustion–powered motorcar in 1893.

By the mid–19th century, Kalamazoo was perhaps Fairmont's main competitor, but it faded fast. When one surveys railroad motorcar rosters of the 1950s, for instance, the impression is that a lot of railroads bought "a few" Kalamazoo cars to supplement their ubiquitous Fairmonts, much the same as they did with **General Motors'** hapless locomotive competitors **Alco**, **Fairbanks Morse**, **Baldwin** and for a period in later years, **GE**. This was done simply to maintain some semblance of competition in the marketplace. One of the larger users of Kalamazoo cars during this period was **The Milwaukee Road**, somewhat of a peculiarity because Fairmont was on their line and a major customer while Kalamazoo was not.

When Kalamazoo was sold to Tamper, Inc. of Columbia, South Carolina, in 1968, the plant was apparently closed, and no further products seem to have been manufactured under the Kalamazoo name. Tamper, of course, did manufacture motorcars, apparently of its own design and under its own name. Except for similar wheel patterns, they seem to share no Kalamazoo relationship. Kalamazoo parts continued to be available from Tamper for some time until stocks evaporated. Of course in the end, Fairmont triumphed over all, when they purchased Tamper in 1991 to become the well known **Fairmont Tamper.**

The appeal to me of this particular Union Electric motorcar, both at the time of purchase and now, is that it was relatively "as delivered." So many of the other Kalamazoo cars still in existence continued to live only because railroad shop forces kept them alive over the years by means of wholesale substitution of parts, either of their own make or from other manufacturers, principally Fairmont. Judging from the maintenance correspondence and the packaging on many spare parts in my possession, Tamper continued as Union Electric's sole parts supplier. Yet while some sealed plastic bags in my possession are labeled "Tamper" on the outside, they contain new, axle insulating cones labeled "Fairmont."

What sore of motorcar was this Kalamazoo? The model 56W was defined as a section car, and although it is slightly larger in size, closer to a small gang car, it's common competition in the marketplace would have been Fairmont's S2, A3 and later, MT14 series.

The 56W could be purchased with either 16–inch or 14–inch wheels, an unusual option. A cab was an aftermarket option with several apparent design permutations. While the 56W was still in the catalog in the mid–1960s, Kalamazoo also began to offer an **Onan**–powered option—the 56O. Speculation is that this new option was offered on the basis of the cheaper cost and the lower weight of the aluminum Onan engine with the addition of nominally more horsepower.

The car is significantly heavy, given the weight of the engine and transmission, and the all–steel cab. It takes three adults to turn the car comfortably. The telescoping lifting lever on the back seems to have been designed for three. My heavily equipped S2E can be turned by two people. The heaviness of the engine and drive train in the front can make the rear wheel drive slippery at times.

How does it run? The first, brief, post–restoration test run on the Yolo Short Line was disastrous: no power, fouled plugs and lastly, a severe oil leak into the engine's cooling shroud. The day was capped by an ignominious tow by Joe Nemmer's rare Buda gang car. The power problem was fixed by readjusting the carburetor. The oil leak occurred when an untightened—and inaccessible—bolt dropped out of the gear train cover behind the flywheel, allowing a free–flowing stream of crankcase/gear train oil to flow directly into the flywheel/fan. The fix required the removal of the entire front of the chassis to access the flywheel, when then also had to be removed. I won't describe the oily mess.

Since then the car has toured successfully over thousands of miles of track, touching on both Canadian and Mexican frontiers and everywhere in between.

The engine is remarkable smooth and quite powerful. The car responds relatively quick and is fast. The clutch and drive train operate like silk but do suffer the same operational limitations experienced by Fairmont cars fitted with the same transmission: for moderate speed the low gear is too low, and the high gearing is too high. Up and down hill at low to moderate speeds, my antique, belt–driven, single–cylinder, slow–turning, Fairmont QB–engined S2E car out performs them all. Nevertheless, the Wisconsin engine's steady, lower idling speed and relatively very good, low speed torque tends to give fewer operational problems at gearbox extremes than the Onans.

The engine is extremely strong, and we have successfully towed other heavy cars great distances at full track speeds over heavy grades—once an MT14 for about 110 miles.

Reliability has been considerably above average. Two failures have occurred because of dirt in the needle valve, despite straining all gasoline and using fairly sophisticated filters.

The car is quite "supple," as one would expect of a successful car without a suspension. It tracks very well as it "self–equalizes" over track irregularities.

Gasoline milage is relatively poor with an average of 21-23 mpg being experienced on relatively flat runs. The carburetor is very sensitive to altitude, but I have found the "company notch" in this regard. I keep a log of different adjustments for future reference.

The car is very quiet.

Engine heat is prodigious despite the insulation. This has been ameliorated somewhat by added insulation along the engine casing lining and the fabrication of a simple "firewall" of 3/16–inch **Masonite** back of the engine to deflect heat down. The heat can be an advantage in winter; the car is truly "cozy" when the curtains are closed and the firewall has been temporarily removed.

I was initially very wary of the reduced side clearances caused by the steps. This has not been a problem. They are otherwise very nice to use and cer-

and wheels cannot be changed out without removing the steps—a major job.

The reaction to the car's finished appearance has been quite positive, the most common comment referring to its "railroad look." Charges of "over– restoration" are minimized by leaving the fundamental architecture intact. If re–restoration to its as delivered and as used appearance is desired, perhaps for museum display, it can still be done with the removal of accessories, the filling in of relatively few, newly drilled holes and the reapplication of several microns' thickness of new yellow paint.

Postscript.

The original Union Electric purchase order indicates that the car was to be delivered to "The Keokuk Plant, to the attention of A.R. Sykes." Robert Sykes, Chief Engineer of the dam, was my first cousin, a serendipitous association first discovered only following the car's delivery in California. Before his untimely death, he shared with me many anecdotes of the car's continuous hard use over the years, and the common personal use he made of the car in his daily work. When notified that his old "yellow car" was now sitting in my Sacramento driveway, his amazed first comment was "but . . .it must be worn out!"

No longer.

Adapted and reedited from an article in the *Speeder,* 1995 newsletter of the **Motor Car Collectors of America.** This version was originally prepared for publication on *Locomotive & Railroad Preservation,* which ceased publication prior to printing.

Fairmont M19 owned by John Uher of Coshocton, Ohio, runs the Coshocton, Otsego & Eastern. Abandoned for 40 years, this turn of the century short line is the brainchild of Richard L. Hoover of Wexford, Pennsylvania, and John L. Uher of coshocton, Ohio. Restoration is ongoing. Line serviced the Warwick mine complex in Coshocton County, Ohio.

This Northern Pacific track inspector's 1939 Ford is parked down the track from the rebuilt East Grand Forks depot during the summer of 1950.

Explaining the Alternator

By Jerry Van Loo

An alternator generates electricity by controlling current to a rotating magnet that is surrounded by many loops of wire. As current is supplied to the rotating magnet, its field becomes stronger and induces voltage within the surrounding wire. When the voltage reaches a predetermined level set within a voltage regulator, the regulator cuts back or adds current to the rotating magnet to maintain the level.

Electricity isn't really made by any device. It is simply the forced movement of existing electrons within a wire and connected load. When it flows, these electrons travel from the alternator by jumping from atom to atom down the wire, to the load and back to the alternator. The number of electrons traveling, or current, is measured in amperage. How much force they have, or potential energy, is measured in voltage. Every single electron that leaves the alternator has to get back to it, but not the voltage. It is taken off at the load and transformed into usable energy, with a small amount being used to force the electrons down the wire (resistance).

To force the electrons to travel requires two things: magnetism and movement. Magnets have north and south poles that represent how the attracting force lies within the magnet. Opposite poles attract each other, but like poles repel. When a north and south pole are within close proximity of each other, like the ends of a horseshoe magnet, the attraction creates invisible lines of force between the poles called a magnetic field. If a piece of wire connected to a voltmeter at each end was moved quickly into the center of the horseshoe, the meter would jump slightly as it passed between the poles. When a conductor (wire) crosses magnetic lines of force, a voltage will be induced in the conductor. If the wire was then taken quickly out of the horseshoe, the meter would jump again but in the opposite direction it did going in. The direction electricity flows in a conductor, or polarity, is determined by the direction the conductor crosses the field.

In an alternator, the wire is stationary in the housing and the magnet rotates with the drive shaft. This is opposite of the horseshoe magnet explanation (stationary magnet, moving conductor) but the end result is the same—magnetic field crossing conductors. However, as the drive shaft turns, both poles of the magnet cross the same conductor, causing the polarity of the produced voltage to switch, or alternate, every time a pole passes it. Even though output power is rectified to D.C., the unit is called an alternator (representing the primary A.C. produced).

A generator is commonly thought to be a D.C. producing device, but actually operates much like an alternator. The magnets are stationary in the housing with the conductors wound on the drive shaft (armature), but power produced in the conductors is still A.C. The dictionary defines the generator as "a machine that converts one form of energy to another, especially mechanical energy to electrical energy," and an alternator is "a generator of alternating current." Both devices fit the generator definition but neither can produce usable A.C. as the second definition implies, even though the initial power is A.C. The real distinctive difference in the two devices is how the A.C. power is converted, or rectified, to D.C.

The conductors in the armature of a generator are actually tied together to make one long endless wire. One segment is attached lengthwise onto the armature, then crosses and returns on a spot 180° from the first, then crosses again and travels down beside the first, and so on until the armature is full. Each segment that is tied to another segment 180° apart creates a loop, with each segment passing an opposite magnetic pole during rotation. Voltage produced in the segments travels to the next loop, then to the next, and so forth. At one end of the armature, a loop will attach to two narrow copper bars. The next loop will share one of these bars, travel down the armature and back, and attach to a new copper bar, and so on. These bars are all bound tightly together in a small cylinder, each bar being fully insulated from adjacent bars and the armature. This cylinder is called a commutator and is the heart of a generator as D.C. power is drawn from it by a positive and negative brush.

As each loop completes its travel across the field, there is a brief instant that the loop moves parallel with the field. This is called the neutral point and is where this particular loop contacts the brushes. It is important to note that as this loop slides under the brushes, it is traveling parallel to the field and is not producing voltage but carrying voltage being produced by all other loops in the armature. As the brushes contact the bars they actually short the loop, providing a lower resistance path for the voltage to leave the armature, leaving the loop dead for an instant. As soon as the loop leaves the brushes, current immediately flows again but in the opposite direction as now the loop is crossing the field the opposite direction. Voltage will be nearly zero though, as it will build while crossing the field until it reaches the brushes again, providing constant D.C.

An alternator rectifies its A.C. by the use of diodes instead of a commutator. A diode is a device that only allows current to flow through it in one direction, like a check valve. It operates by using the same property of "opposites attracting" and "likes repelling" within the diode. To oversimplify, when electrons attempt to cross a diode, the negatively charged electrons repel negatively charged ions within the diode, driving them to the center, called a junction. When this happens, current will flow across the diode. But when current is reversed to the diode, the negatively charged electrons now on the other side attract positively charged ions away from the junction (and the now positive side attracts the negative ions) which stops flow.

These diodes are placed on the ends of the conductors (like commutator bars) in a certain order to control the flow. The conductors are actually three separate small wires instead of one, which are wound around the center of the housing called the stator. The three windings, or phases, are all connected to each other on one end, and are therefore called a "Y" connected stator. (If the windings were all connected end–to–end in a triangle, it would be called a "Delta" wound stator.) The three remaining loose ends of the windings are each connected to two diodes, which are all mounted in the rectifier bridge. As the rotor turns, produced voltage from two of the windings (connected in series at the "Y" connection) will pass through the rectifier bridge, which blocks the third as it will be a lower voltage. As the rotor turns further, voltage in the third winding will rise and conduct through one of the first pair, the second now blocked as it is losing voltage. When voltage rises again in this winding, it will be of opposite polarity, but will conduct through one of the other windings and through the rectifier bridge as D.C. Although the diodes in the bridge sort out the incoming A.C., it is the position of the magnetic poles on the rotor in relation to the stator windings that time the events of a cycle in the phases. And they cycle often as the rotor actually has six pairs of magnetic poles instead of one.

Both units perform well in operation, but alternators are known for better low speed output. This is true, but a little misleading. A generator could be re spun faster at low engine speeds to compensate for this, but the heavy construction of the armature would be at risk of throwing a winding at high rpm's. The field rotor of an alternator is very light and compact, being practically immune to such problems. And so, on an idling engine, alternators spin faster.

Generators are built heavier than alternators, and if properly maintained will perform longer than lightly constructed alternators before a major failure occurs. But the key here is "properly maintained." Probably 90% of failures on generators involve a neglected maintenance item which can usually be quickly repaired. Alternators require practically no maintenance, but 90% of failures do require a component replacement. They do have brushes that supply power to the field rotor (often mistaken for output brushes like those of a generator), but amperage draw is only about eight amps at full load, allowing a long life. In fact, when the brushes need replacing, it is a good idea to change the regulator and bridge also to assure a long running period.

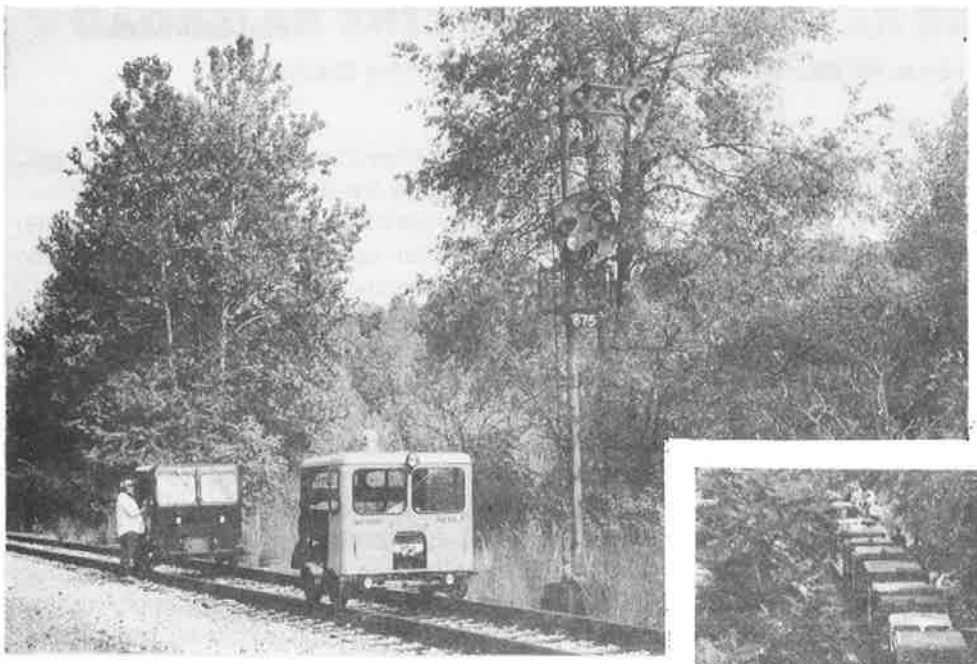
From Yesteryear . . .

FATAL ACCIDENT

Singular Presentiment of the Unfortunate Victim.

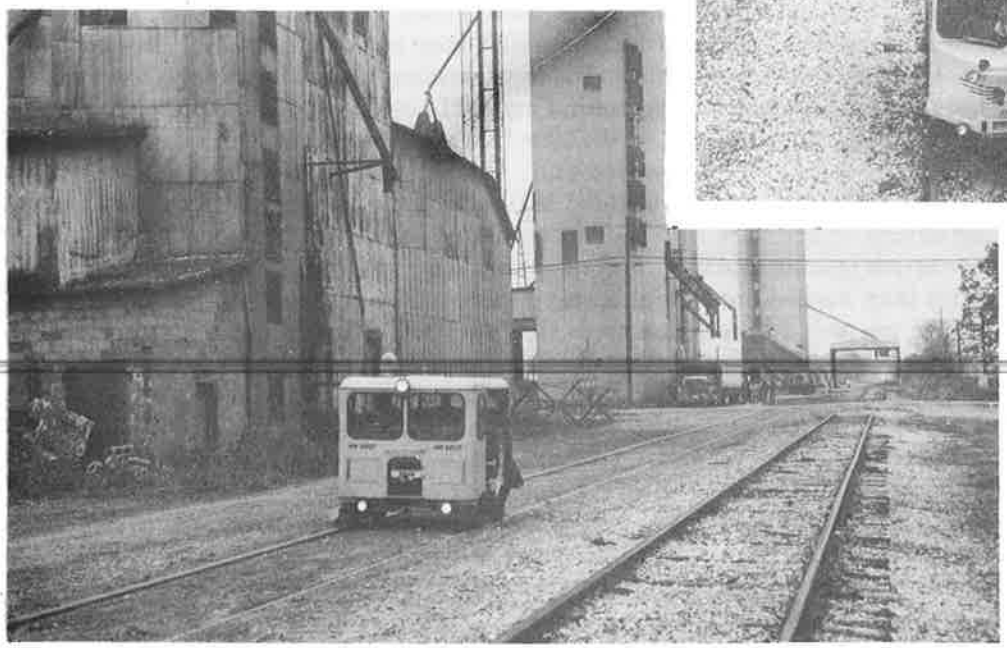
Thursday's Butte ***Miner*** says: Coroner Sarschet returned yesterday from the Divide, where he held an inquest on the body of Thomas Jackson, who was run over and killed by a hand car on Monday. Jackson was a section boss on the Utah & Northern railroad. He had been working with his men on the track about three miles from Silver Bow. Returning to the section house at Buxton, Jackson sat upon the side of the hand car near the front, with his feet hanging over and dragging upon the ties. When about two miles from Buxton he was thrown off from the car, either by the handles, by which the car is propelled, striking him, or by his feet catching in the ties. His head struck the rail in front of the car, which came upon him with such force as to throw it from the track. His head was terribly crushed and death ensued almost immediately. A singular case of presentiment is related in connection with this case. At midnight, the night before his death, Jackson was so forcibly seized with the idea that he was going to die, that he arose from his bed and going to a neighbor's house woke him up and had him write a will which he signed. The deceased was about 50 years of age and leaves a wife and two small children.

Helena Independent August 4, 1883



Motorcars pause near Bowest Jct. on the Southwest Pennsylvania Railroad, formerly B&O "Sheepskin Route." October 3, 1999.
DAVE VERSI PHOTO

Motorcars pause on former B&O, now the Southwest Pennsylvania RR., Bowest Jct., Pennsylvania. Photos taken from Western Maryland Ry. bridge, now a bike trail. October 3, 1999.
DAVE VERSI PHOTO



Camp Chase Industrial RR., Lilly Chapel, Ohio. Formerly CCC&St.L RR, now a grain hauling railroad which interchanges with the Norfolk Southern in Columbus, Ohio. October 3, 1999.
DAVE VERSI PHOTO

MOTORCARS RETURN TO SWEET LINE RAILROAD

The Return of the Motorcars Working on the Railroad

By Dave Stroebe

Last August I made an inquiry to our escorts on the TS&BY trip concerning the possibility of running from Middleton to Ashley and also if the "Tissbee" still owned the track or if the development corporation did. I was informed that as far as he knew, the Tissbee still owned the track. Keeping this in mind I decided to give the Sweet Line a call. After some negotiations I was given the go ahead for two meets—one May 29th and the other Sunday August 15th. Sweet Line releases were mailed out to me, and we were underway.

I was informed by Dennis that the crossings were in need of being dug out, so I enlisted the help of my friend Norm Batchelder to assist me in the task. On Friday morning, May 28th we set on at the Sweet Line's Division Street HQ's and headed east. A hint of what lay ahead was when we had to dig out the Division Street crossing! We approached County Line Road and started to dig out the crossing with a vengeance! I manned the pickax and garden hoe while Norm used his shovel. After about 20 minutes of hard labor, we finally cleared the flangeway, brushed off the rail head and departed to the next crossing a mile away. After the second crossing, our hopes of this project getting easier quickly evaporated as our sweat did in the hot afternoon sun! In addition to this there were quite a few trees that had to be cleared and brush cut back and trimmed. The track was also considerably overgrown with weeds which were crushed into a juicy pulp by our wheels, making traction extremely difficult!

We finally arrived at Middleton after 2.00 PM, and after a trip to the lavatory to wash the grime off our faces and arms, set down to enjoy a buffet of fried chicken, mashed potatoes, three kinds of fish, and salad bar at the Middleton Diner. I washed this down with a huge chocolate shake made the old fashioned way—by a blender—complete with lumps of chocolate ice cream.

After lunch we headed back west to Carson City with our spinning wheels getting shinny on the juice covered rails. We did some more brush cutting and dug out a few more crossings and then turned our cars at County Line Road and tied up next to the elevator.

Upon arrival we were greeted by Chuck Pearson who had brought his M9 along and parked it overnight while he headed up to his cabin up north. We said our good byes and headed back to Muskegon, Norm to his house and I over to my friend Joe Batchelder's to load up his ex–CN MT114L with a one of a kind, boxy fiberglass cab. I then finally got home, tired but happy the hard work was done!

The next day dawned bright and clear. Joe dropped by to pick me up, and we headed to Carson City where Eric Schwandt was waiting for instructions and paperwork. While Eric put his newly bought ex–Southern Railway M9 on, my guests Pastor & Mrs Hawkins drove up as well as several others. I decided on an 11:00 AM departure for Middleton. Tom Byle, VP of the Coopersville & Marne, arrived and volunteered to warn the Middleton diner that they'd be swamped with 20 people within 30-40 minutes.

At 11:00 I called the safety meeting explaining that the wet weed–covered rails were slippery and to stay at least 100 feet behind the car ahead, that people weren't expecting traffic on the line and to be careful. I had instructed Norm Batchelder to become my "Fred Furminger" and bring up the rear. With the Pastor and his wife aboard, I put the MT14 in gear, and eased out of the siding. I stopped at the switch, aligned it with the main and went to Middleton.

Along the way we spotted five deer who had run out in front of us a short distance away along with a huge bird. Even though the line had been traveled the day before, the squashed weeds made for slippery going, so caution was in order.

We arrived in Middleton around noon and soon descended on the Middleton Diner like a bunch of hungry vultures. While there, we had another couple drive up with motorcar in tow, asking about set on instructions. I invited them to join us for dinner.

We turned our cars around at the next two city crossings, then beaded back to Carson City. One M19 which wouldn't stay running, and so I pushed the car to the next crossing where it was set off, set back on behind my MT14 and towed back to Carson City.

We now had about six of the ten cars make the second run. On the way back we met up with the disabled M19 which the owner had fixed the carb. The float was in upside down!

For the third run, two more cars had been taken out of service for various reasons, and so only four of us made the third trip. Rich Dunton, his wife and I ate at the Diner and then headed back to Carson City. We loaded up our cars and went home. All together the run went well with only a few minor problems.

I want to thank Dennis Kellogg for the use of their line. I plan on having a couple runs there each year. So come on up and ride the last segment of the Toledo, Saginaw & Muskegon.

On the following 2 pages you will find the new NARCOA & AFFILIATE General Release for motor car excursions. Copies of this form are also on the NARCOA web page. This is the form which must be read and signed by all participants at all NARCOA insured motor car excursions. This form protects the railroad, NARCOA, the affiliate, and others from liability. This document also includes the Policy on Alcohol and Drugs, and a place for adults to sign for minor children. If the railroad wishes for the participants to sign their own release the NARCOA form must be signed also. Using this liability form is a requirement for excursions to use NARCOA Insurance. The affiliate must keep these forms on file.

NARCOA & AFFILIATE
General Release

By signing this release, you acknowledge that railroading in general and riding on a railroad motor car in particular are dangerous and you agree to accept all risks associated with your voluntary participation in this excursion, and release NARCOA and the Railroad from all liability for your property damage and/or personal injury.

In consideration of the _____ (RR) (including its officers, agents, servants, employees and lessors) granting the undersigned permission to enter its property on the date(s) of _____ for the purpose of motor car excursions, of _____ a NARCOA Affiliate (AFFILIATE) and of North American Railcar Operators Association (NARCOA) (including its officers, directors, affiliates, members, volunteers, agents, servants, employees and lessors) hereinafter collectively and individually referred to as "AFFILIATE/NARCOA/RR", the undersigned agrees that:

1. **ASSUMPTION OF RISK:** I know and understand the scope, nature, and extent of the risks associated with motor car excursions, including (1) those attendant to riding in motor cars generally and specifically on track which may not be maintained to any particular level or standard; (2) related motor car activities such as set-on and set-off procedures, and (3) in general, the risks and dangers of the working railroad environment in which the motor car will be operated. I willingly and knowingly accept those risks, which I understand could result in destruction of my property and my injury or death.

2. **RULES COMPLIANCE:** ***As an operator,*** I have read and understand the NARCOA Rule Book, understand the content and purpose for each of the rules, and agree to abide by them. I further agree to take responsibility for informing those persons I bring to the excursion of all rules applicable to their conduct. ***As a passenger,*** I confirm that the rules applicable to my conduct have been explained to me, I understand them, and I agree to abide by them.

3. **RELEASE FROM LIABILITY:** I release AFFILIATE/NARCOA/RR from any liability for any claim, loss, damage, injury, or death, regardless of the cause, including the active or passive negligence of AFFILIATE/NARCOA/RR, sustained by me or my property while participating in the excursions covered by this Release. I agree and understand that AFFILIATE/NARCOA/RR accept no responsibility for my safety, nor for the acts or safety of other operators and guests during motor car excursions. By signing this Release, I understand that I am surrendering legal rights which I may otherwise have against AFFILIATE/NARCOA/RR.

4. **COVENANT NOT TO SUE NARCOA/RR FOR DAMAGES:** I will not make any claim or bring any legal action or voluntarily assist in any legal action against AFFILIATE/NARCOA/RR, nor permit anyone else to do so on my behalf, for any claim, loss, damage, or injury sustained by me or my property during excursions covered by this Release.

5. **COVENANT NOT TO SUE EXCURSION COORDINATORS AND/OR THEIR ASSISTANTS AND/OR PARTICIPANTS FOR DAMAGES:** I shall not make any claim or bring any legal action or voluntarily assist in any legal action against any other excursion participant, excursion coordinators, and/or their assistants for their actions or conduct (a) arising from their activities in managing or assisting with the managing of any excursion covered by this Release, or (b) as an official of AFFILIATE/NARCOA/RR.

6. **INDEMNIFICATION AGAINST CLAIMS:** I will indemnify and hold harmless AFFILIATE/NARCOA/RR, and persons covered by paragraph 5, from any liability including claims and any attorney's fees, costs, losses, or actions which may be presented or initiated by me or on my behalf in contravention of the covenants I have given in paragraphs 4 and 5.

7. **SURVIVAL OF OBLIGATIONS:** Any and all obligations assumed and promises made by me under this Release shall be binding on my heirs, and the executors and administrators of my estate. I further instruct my heirs, administrators, and executors to honor this Release and make no claim against AFFILIATE/NARCOA/RR for any claim, loss, damage, or injury which this Release purports to cover.

8. **VALIDITY OF WAIVER:** If I institute any suit or action or make any claim for any loss or damages to my person or property for causes covered by this Release, the releases, waivers and promises I have given in this Release shall be enforceable against me.

9. **POLICY ON ALCHOHOL/DRUG USE OR POSSESSION:** I will abide by NARCOA's policy to (1) prohibit the use of alcohol and drugs by participants in NARCOA excursions, (2) prohibit the possession of alcohol or drugs in open or unopened containers aboard any motor car or on railroad property, and (3) prohibit the use of alcohol and drugs by participants while on or off railroad property during the hours of any NARCOA excursion. I agree that NARCOA officers, excursion officials and officials of the host railroad retain the right to inspect motor cars and personal effects to enforce this policy. I acknowledge that excursion participants who are found to be in possession of, or under the influence of alcohol, or drugs during a NARCOA excursion will be requested to and required to immediately leave the excursion and railroad property, and forfeit all registration fees.

(over)

10. **POLICY ON WEAPONS:** I will abide by NARCOA's policy to prohibit participants from having firearms or other deadly weapons, including knives larger than 3 inch or other weapons. Persons may be authorized to have the above in performance of their duties by officials of the railroad. (Normal kitchen/ cooking/ picnic implements are exempt.)

11. **ARBITRATION:** Any disputes arising from the excursions covered by this Release will be decided under the laws of the State of Delaware and shall be submitted to arbitration in accordance with the rules and procedures of the American Arbitration Association, or such alternate arbitration forum as the parties to the dispute may mutually agree.

12. **SEVERABILITY OF INVALID PROVISIONS:** If any provision, or application thereof, in this Release is held invalid, that shall not affect any other provisions or applications of the Release which can be given effect without those held invalid.

READ THE ABOVE CAREFULLY BEFORE SIGNING.

I am 18 years of age or older and understand that I am assuming for myself and for all minor children accompanying me or riding on my motor car the provisions set forth above.

Date: _____ Signature: _____ Name (Printed): _____

Date: _____ Signature: _____ Name (Printed): _____

Date: _____ Signature: _____ Name (Printed): _____

Date: _____ Signature: _____ Name (Printed): _____

Date: _____ Signature: _____ Name (Printed): _____

Date: _____ Signature: _____ Name (Printed): _____

For Minor Child(ren) under 18 years of age, Adult assuming responsibility for Minor(s): (must also sign above)

Date: _____ Signature: _____ Name (Printed): _____

Minor Name(s) (Printed) Age

_____

_____

_____

_____

Excursions

Members who have organized excursions are encouraged to advertise those events here. We will publish all notices received. Include details of the trip such as time schedule, total mileage, costs, restrictions and conditions for attending. State whether or not NARCOA rules will be in effect and whether insurance is required. Send excursion notices to Ernie Jeschke, c/o SETOFF, - 4106 North Adrian Highway, Adrian, MI 49221 FAX (517) 265-6749 ejeske@tc3net.com (E-mail - Text only)

PLEASE NOTE - Advertisement of an excursion in THE SETOFF does not constitute responsibility by NARCOA and/or its officers, or THE SETOFF and/or its editorial staff for excursion conditions. Excursion attendees must exercise caution in the observance of safety conditions and rules, and must accept full responsibility for themselves, their guests and their equipment when attending any excursion.

THE FOLLOWING RAILROADS ARE HAVING MOTORCAR OPERATIONS THAT MIGHT BE OF INTEREST TO MOTORCAR OPERATORS

1ST & 3RD WEEKEND EACH MONTH - Red Springs Northern RR. The (RO-C) are sponsoring rides on these work/ride events. Ride privileges are granted in return for maintaining the grass. Tracks run 12.5 miles between Red Springs and Parkton NC. $50 annually per calendar year (no prorating) or $20 per day. Red Springs is located south of Fayetteville NC, 15 miles west of I-95 on NC-211 and NC-71. Motels at I-95 at Lumberton and Laurinburg. For more information contact:

Rick Tufts (910) 295-0987 rltufts@ac.net or
Tom Stallings (252) 827-4693
bestalli@eastnet.educ.ecu.edu

The Kosciusko & Southwestern Railway - Kosciusko, Mississippi, offers owners of motorcars and Hi-rail vehicles the opportunity to operate on their railroad. Runs are scheduled when as not to interfere with freight operations and may be in conjunction with scheduled motorcar excursion programs. All privately owned equipment must operate on the line under proper authorization. For those that do not have a motorcar, the railroad is offering motorcar rides each weekend consisting of a 37 mile round trip from downtown Kosciusko to the Big Black River area taking about 4 hours for the trip including a stop in Sallis, Mississippi. Fares: $20 Adults and $10 Children under 12. Family of 4 or more $15 adult and Children $7.50. Group rates available. For more information Contact:

Dave Delatte
(662) 290-0200
ddelatte@cruisenet.net

CENTRAL PENNSYLVANIA EXCURSION

May 20 Lycoming Valley Railroad

May 21 West Shore Railroad (Not comfirmed due to flood damage)

July 15 North Shore Railroad

July 16 Shamokin Valley Railroad

October 14 Wellsboro & Corning Railroad

Further information will be published as dates approach. Contact Larry Maynard (570) 538-9050 or e-mail at lmayn@jdweb.com

MOTORCAR OPERATORS WEST (MOW)

February 12 Eagle Mountain RR near Desert Center CA located off I-10 about 60 miles east of Palm Springs. Kaiser Iron Mine south to the Salton Sea. 100 miles round trip. Line crosses the California Aqueduct and passes through the area where Gen. George Patton's troops trained. $80 per car. Limited to 30 motor cars. Motorcar Operators West rules apply. MOW license, along with NARCOA rulebook certification and NARCOA insurance required. To register send LSASE with 55c postage with a check made payable to MOW to meet coordinator Wayne Parsons. 13380 Golden Valley Lane, Granada Hills CA 91344-1118. (818) 368-5942 wparsons@ix.netcom.com

February 13 Filmore & Western RR at Filmore CA located on Hwy. 126 about 50 miles northwest of Los Angeles. Filmore west to Ventura through the orange groves, 40 miles round trip. $55 per car. Limited to 30 motor cars. Motorcar Operators West rules apply. MOW license along with NARCOA rulebook certification and NARCOA insurance required. To register send LSASE with 55c postage with a check made payable to MOW to meet coordinator Bob Mahan, 235 Hoover Ave., Ventura, CA 93003 (805) 647-2285 fmahan@gateway.net

March 18 - 19 San Diego & Arizona Railroad (San Diego Railroad Museum) Set on Saturday at Ocotillo (near Centro) and operate west as far as possible. This track has high trestles in the Carriso Gorge accessible only by rail. Set on Sunday at Campo, CA (one hour east of San Diego) and operate east to Jacumba and the blocked tunnels. We will encounter rugged remote conditions; Ankle high boots and long pants are required. Motorcar Operators West rules apply. Cost per car is $130. Send LSASE with 55c postage, with a check made payable to Motorcar Operators West, along with type of car, MOW license number, NARCOA rulebook # and NARCOA insurance # and your phone number to: Al McCracken, 2916 Taper Ave. Santa Clara CA 95051. Questions? E-mail Wayne Parsons at wparsons@ix.netcom.com Deadline for sign-up is March 3. For more info on the museum see http://www.sdrm.org

PACIFIC RAILCAR OPERATORS (PRO)

February 19 *Washington's Birthday Weekend* - Saturday, February 19th. Jamestown - Oakdale - Standard (Fassler) - Jamestown. 98 miles. We will run the entire Sierra RR, in sections if need be. Gala dinner in Sonora/Standard on Saturday. $100/car (dinner not included). 20 car maximum. Watch for updates regarding a possible Sunday, February 20th excursion. Registration closes February 8. Information or questions - contact Chris Ogilvie (510) 339-1071 (home) cogilvie@wildman-morris.com

March 18 - 26 - Arizona Tour Summary -
March 18 - San Diego & Arizona-MOW-Parsons/McClain
March 19 - San Diego & Arizona - MOW
March 20 - Travel
March 21 - San Pedro - PRO - Stivers
March 22 - Copper Basin - PRO - Stivers
March 23 - Travel
March 24 - Arizona & California - SWRC - Parsons/McCracken
March 25 - Arizona & California - SWRC
March 26 - ~~Eagle Mountain~~ (Canceled)

March 21 - San Pedro and Southwestern RR. 120 miles round trip. $85 per car. Limited to 25 motor cars. Set-on in Benson AZ. Open to all NARCOA insured and NARCOA rule book certified operators. Spark arrestors and brake actuated taillights required. Smoking NOT PERMITTED in motor car or on RR property. To register, send LSASE with 55c postage with a check made payable to Pacific Railcar Operators to Doug Stivers, 1548 Fuchsia Drive, San Jose CA 95125-4833 (408) 264-1048.

March 22 - Copper Basin Rwy. - 80 miles round trip. $60 per car. Limited to 25 motorcars. Set-on in Kearny AZ. Open to all NARCOA insured and NARCOA rule book certified operators. Spark arrestors and brake actuated taillights required. Smoking NOT PERMITTED in motorcar or on RR property. To register, send LSASE with 55c postage with check payable to Pacific Railcar Operators to Doug Stivers, 1548 Fuchsia Drive, San Jose CA 95125-4833, (408) 264-1048.

March 26 ~~Eagle Mountain RR~~ (CANCELED)

May 27 - 28 *Memorial Day Weekend* - Spring Green in the intermountain high country - Memorial day weekend:
1) Saturday, May 27 - McCloud River Railroad - Burney - Lookout. Round trip 190 miles (the very best of McCloud trips!) Gala dinner at famous Pit River Lodge. 20 car maximum. Dave McClain Coordinator.
2) Sunday, May 28. (Late morning set on). Lakeview - Alturas. 100 miles. Gorgeous bucolic scenery. 20 car maximum.

August 26 - 27 - Montana Rail Link. Bill Taylor, Coordinator.

September 16 - 17 OR 23 - 24 High Desert Adventure - Nevada Northern Railroad. A reprise of this year's immensely popular excursion through the expanses of Eastern Nevada on a 1906 railroad. NARCOA Insurance and Operators License, and PRO membership required. Denny Anspach, Coordinator.

WILDERNESS TOURS

Wilderness Tours requires that all operators have NARCOA insurance and Rule Book Certification Cards. We have a 25-car limit on all tours. If you would like more information call (608) 839-4939, or FAX (608) 839-5595. E-mail wilderness@inxpress.net or write to Wilderness Tours, Box 25, Cottage Grove WI 53527.

May 15 - Sudbury to Perry Sound, ONT - CP Rail

July 2 - 12 - July 2: North Vancouver to Whistler, July 3: Whistler to Exeter (100 Mile House), July 4: Exeter to Prince George, July 5: Prince George to Dawson Creek, July 6: Dawson Creek to Mackenzie, July 7: Mackenzie to Tumbler Ridge, July 8: Tumbler Ridege to Prince George, July 9: Layover at Prince George, July 10: Prince George to Exeter, July 11: Exeter to Whistler, July 12: Whistler to North Vancouver. Total mileage is 1,543. Cost is about $1,800 (still working out the final cost).

September 5 - 12 Candian River Tour - Sept. 5: Sault Ste Marie to Sudbury, Sept. 6: Sudbury to North Bay, Sept. 7: North Bay to Pembroke, Sept. 8: Pembroke to Ottawa, Sept. 9: Ottawa to Pembroke, Sept. 10: Pembroke to North Bay, Sept 11: North Bay to Sudbury, Sept. 12: Sudbury to Saulit Ste Marie. total mileage is 1,015. Cost to be announced.

October 14 - Polar bear watching in Churchill by plane, train and tundra buggy.

MEXICO 2000

October 17 - Mexico 2000 - October 17 meet in El Paso, Texas for general meeting. Trailer to Chihuahua on the 18th, set on the rails the 19th. 750 miles spread out over 7 days through 87 tunnels, 35 bridges, a loop on welded rail. We will stay at first class hotels that cook with bottled water. Total of 8 nights and 9 days. Price includes all meals, hotels, and railroad fees. Two cyclinder speeders only. We cross the continental divide three times. Belt drives O.K., but chain drives preferred. Price is $2,850 for one speeder and two people. $2,700 for speeder and one person. $3,700 for speeder and three people. Mexican insurance not included. Accepting $100 deposits to be included on this year's list. Mail to Al McCracken, 2916 Taper Ave., Santa Clara CA 95051. Phone (408) 249-2953; Fax (408) 249-3120; e-mail alnethie@aol.com

OTHER MOTORCAR EXCURSIONS

April 1 - 2 - Port of Tillamook Bay Railroad, Wheeler to Banks and return on 1st of April. Wheeler to Tillamook and return on 2nd of April, we will be making stops at historic sites, the famous Tillamook Cheese Factory and the Tillamook Air Museum. Overnight will be in Wheeler OR Rockaway Beach. NARCOA rule book, license and insurance will apply. Contact Wally Burton, phone (503) 368-6496, Fax (503) 368-6856, address 43400 Carol Drive, Nehalem OR 97131. wallyburton@hotmail.com

GREAT LAKES RAILCARS (GLRC)

The following excursions are for the year 2000. All excursions and dates listed are tentative and subject to final approval by the railroad(s) track conditions, etc. All participants and operators are required to conduct themselves in a safe and professional manner and do so at their own risk! Operators are required to have a working knowledge of the current NARCOA Rule Book. Other rules may also apply.

April 29 Indiana Railway Museum, French Lick IN. 34 miles round trip, French Lick to Duboise IN. 2300 foot tunnel. Set on at French Lick 8:00 to 9:00, NARCOA Insurance required. Contact Stan Conyer (812) 342-0565 for details.

April 29 Southern Michigan Railroad Society, Clinton Michigan. Excursion and pig roast. Clinton to Raisin Center, 24 miles RT. Several runs planned. NARCOA insurance not required. Must be a member of SMRS by April 1, 2000. Cost of SMRS Membership $15. Excursion and pig roast is $30 per car payable on day of excursion. Preregistration mandatory 30 days prior to meet because of pig roast. SMRS rules in effect. Contact Dave Stroebe (231) 773-7980 for details.

May 21 Hoosier Southern RR. Lincoln City to Tell City IN. 44 miles round trip. Ride along the Ohio River, BBQ lunch at Troy, IN. Set on at Lincoln City 8:00 to 9:00, NARCOA Insurance required. Contact Stan Conyer (812) 342-0565 for details.

May 27 Sweet Line Railroad, Carson City, MI to Middleton, MI. Stuff yourself at the Middleton Diner. One of the oldest excursion. Cost $10 per car. Payable on day of meet. Meet contingent on whether track gets mowed. NARCOA Insurance not required. Contact Dave Stroebe (231) 773-7980 for details.

Want Ads

Editor's Note: *THE SETOFF* is happy to print all ads received from members. Send ads directly to : Ernie Jeschke, 4106 N. Adrian Hwy., Adrian, MI 49221. FAX (517) 265-6749 or e-mail: ejeske@tc3net.com There is no charge for placing an ad; please send us yours. If you want an ad to run for more than one issue, please indicate how many issues. No full-page ads are accepted. Use the present issue's ads as a guide. Thank You.

FOR SALE

Fairmont Transmissions (3) Rebuilt and have been machined for an input shaft seal, and include the following: new input shaft seal, out put shaft seal, shifter shaft seals, shifter forks, O-rings, input shaft bearing, and other bearings, etc. as needed. These transmissions should be leak free, like the prototype I have used in my MT-14 for the past 3 + years. $500 each. Smitty (520) 204-2337 smitty@kachina.net jf00

MOTORCARS - MP/UP MT-14, built in 1984. 100% NARCOA ready to go. This car was used by the railroad less then 5 years. It is complete with newer Onan motor, 4 seats, brake lights, fire extinguisher, tow bar, sound proofing on walls and roof, no holes in aluminum skin, fully enclosed with lockable doors. Doors and side panels have been modified for quick removal for that "open air car feel", $5,000. Will sell without newer 40 watt, 99 channel radio, antenna and Hunter heater for $4,200.

Soo Line A-4, was purchased from Wisconsin Central Railroad. Car has roof damage from forklift and no glass. Powered by a Ford industrial 4 cylinder, good wheels, front and rear panels. Wood doors good (but I would remove). Should be a straight forward restoration. Have not run motor, but it is free. Also included is a DM&IR A-8 frame and differential with 20-inch wheels. Combination would make a great museum pair for motor car rides. Sell only as a lot for $1,500.

GN Trailer has GN ID tag on frame. Frame is made out of aluminum and in very good condition. Wood decking has been removed. Wheels in good shape Serious offer.

(Due to buyer backing out, the following is again for sale) GN M-19 motorcar in near operating condition. Ran motor a year ago. Cab is classic GN 2/3's wood cab. Serious Offer.

CN M-19 aluminum cab car, have not run, but motor is free turning. Needs windows. Serious offer.

Shethfield, I won't kid you, this car is in ruff shape. The wood is completely rotted away. Aluminum seems good, friction clutch is all there. Similar in size to an M-19. Has a Fairmont front end. Offer.

I have some wood buzz coils, control panels, Fairmont carbs, 10-16" wheels, Fairmont transmission, Onan CCKB and 3 Fairmont single cylinder motors. I will not sell these items alone. If not sold in complete lot, I will list on Ebay.

I will sell everything for $8,000 firm or $9,000 with a 16' trailer with electric brakes, new wood treated deck. Contact Mark Arnold at controlfab@aol.com or call (218) 384-4463. (I will return calls collect if I'm not home). PLEASE, SERIOUS BUYERS ONLY! jf00

FOR SLAE

M-19 Motorcar - Many new parts. Runs good, front and top. $1,750. Tom Jenness, Cherokee, Iowa, (712) 225-2614. jennjeto@netins.net jf00

C5 -5 Aluminum Carb Seat Seals - For S-2 and ST-2 engines. Reliable, and are one piece with no hard rubber backing to separate. Once in, they're in. Install and forget about them. Order FW1353RO for the C-5 Carburetor - $5 per seat plus $1.50 S & H. C-8 Seats available soon. West Michigan Railcar, c/o Dave Stroebe, 1694 Broadmoor St., Muskegon, MI 49442-5302. (231) 773-7980 strobx@aol.com jf00

MT-14 Former Rio Grande Motorcar. Open sided and open rear. Curtains have seen better days, but are still in fairly good shape. No major or minor body damage. All glass is intact. New battery. Has been steamed and washed. Engine runs good and starts good. Needs paint and some TLC. $2,250 obo. Motor car trailer - tandem axle 5,000-lb. axles. Will carry two MT-14's with no problem. Has 4 wheel electric brakes. Includes two spare tires and rims, also 4 extra tires. 4,500-lb. winch and 850 amp battery (1 year old), large mounted weather gard tool box with sliding tray, tongue tool box. $2,500 obo. Call (630) 258-3877 or email jwchiesa@lucent.com jf00

Fairmont Engine - It could be a PHB engine with serial No. 47665 and has a model F-4 carburetor. Bought in 1939 and is in mint condition. It is mounted on a nice base. $500 Canadian Dollars. Alvin White Caledon, Ontario. (519) 942-4033. jf00

Creighton Trailer - Rated for 8,000-lbs., twin axle brakes on both with break away. Tires in good shape. About 40,000 miles on the trailer. 101" wide and is setup to haul a motorcar. It is in excellent condition. $2,000. Call Mike Travis (717) 792-9181 email MDTRAVISJDA@CS.COM jf00

Kalamazoo 1952 ex-Army Speeder - 4 cylinder Hercules, 6 volt system, 8 man, seats 4 comfortably. Fully restored in Army gray, with black trim. Runs beautiful and looks fantastic. Restored about 4 years ago and needs a good place to run. No trailer available. $6,000 obo. Must sell. Contact Tony at (530) 669-7742 or email tcsturf@cs.com jf00

Hadley Air Train Horns - This is an excellent horn set for speeders. A mini-compressor with an air tank is required to operate. Picture will be available soon. Visit www.ameritech.net/users/oemrep/trainhorn.htm Website for more information or email or call Scott Grunewald, 25713 Hillview Court, Bldg, 4, Mundelein IL 60060. (847) 726-7900 oem1@usa.net Price is discounted to $375 USD plus S&H (Reg. Price $490) jf00

Wooding Springs - $35 each plus shipping. Mike Travis (717) 792-9181 or email mdtravisjda@cs.com jf00

S2H Ex-Nickel Plate Road Motorcar - Built in 1955 and shipped to Bellevue, Ohio. Car is nearly complete with the exception of the cab and roof. With the addition of a front safety rail it would make an excellent open car. It has the powerful RQ-D motor, C8 carb and a 6 volt generator. It has aluminum lift handles (one has broken end), starting crank and otherwise is in complete condition ready for an easy restoration. $950. Contact Dave Verzi (440) 236-3374 6-9 p.m. jf00

Fairmont M-19 F Series Motorcar - Excursion ready. Contact Bill Wilson, 22 Ramapo Valley Road, Mahwah NJ 07430 (201) 529-8279 Fax (201) 529-4953. jf00

Fairmont MT-19 - $3,500 obo. It was used on small industrial railroad. Ex-SF caboose - $10,000 obo. Ed Marakovits (610) 502-0577. Northhampton PA jf00

A-5 Motorcar - 99% restored, but mostly disassembled. Main deck has been rewooded, transmission has been rebuilt, canopy and windshield included. Operating manual and several other pieces of literature included. Located in Montana. Possible delivery to western states. $1,000 fob Belgrade MT. Dianne Baker, 30 Reinig St. Belgrade MT 59714 (406) 284-6981 (home) (406) 284-6399 (work) or email montbakers@aol.com jf00

Bulletin For Buda #919 motorcar with specification sheet from 1933, along with two full size blue prints. Top/side views of Kalamazoo motorcar. Great display items for your motorcar. $175 complete. Call Frank Butler, 66 Richard Terrace, Reo Bank NJ 07701 (732) 747-2546. jf00

Back Issues of *The Setoff* - 1987 to 1999 plus 1997 to 2000 calendars. Complete except Fall '94, Spring '88 and Winter '87. $150 plus postage takes them all. Call Rex at (612) 434-9618 or e-mail RexR@Nonin.com jf00

Engine Gasket Sets - Complete Gasket sets for ROC engines. Tested, superior high heat material lazer cut. Packaged ready for shipment $50 (Ship UPS/ppd) Also head gasket for OD engine $20 (Ship UPS/ppd) Other gaskets - inquire to make. Jeff Shelton, Roanoke VA Phone (540) 774-6027 - Fax (540) 563-2932 jf00

Fairmont Caps - Polyester wool blend quality caps with embroidered logo. Black, Red Dark Blue, Green - $16 each (ship UPS/ppd) Jeff Shelton, Roanoke VA Phone (540) 774-6027 - Fax (540) 563-2932. jf00

New 36" Narrow Gauge Axles made from 4340 steel shafting for M/MT-16 with 1 3/16" diameter axles and for the M/MT-14 with 1 7/16" diameter axles. This includes two short half front axles and the solid rear axle. I also have rebuilt FAIRMONT transmissions for MT-14s and 19s. They are machined and have the input shaft and shifter shaft seals installed, and are almost leak free. Call or e-mail Smitty at (520) 204-2337 smitty@kachina.net nd99

1986 GMC 3500 Hy-Rail Truck Ex. Chicago Northwestern in full original paint and decals. 350 engine, 400 automatic transmission. 4 door cab, utility box. 0307 Fairmont manual gear. Starts, runs, and drives good. Make an offer I can't refuse, no trades. Located in downtown Rudolph, Wis. Scott Janz (715) 435-3182. nd99

A Set Of Used Standard Gage M/MT-14 1 7/16" diameter axles cut and machined for a 36" Narrow Gage motorcar. This is two (2) axles, a front differential axle, and a solid rear axle, all freshly machined and ready for your narrow gauge motorcar conversion. $550 plus Shipping. Smitty, The Narrow Gauge Gang smitty@kachina.net or call (520) 204-2337. nd99

FOR SLAE

Motorcars For Sale - Fairmont M-9 #F8792 IC RR, partially restored with cab $1,200; Fairmont A-3-D-1 Washington and Old Dominion RR, mechanically sound, unrestored $750; Kalamazoo 27 B&O #1972 Hercules 4 cyl., mechanically sound, unrestored, with spare rebuilt block $750; Fairmont T-19 Motorcar trailer, new aluminum diamond plate deck $475. List of odd belts - kF5425 L46 - F5424 L13 - F3645 52 - Goodyear 3" wide by 71" long F7997 L22. Other parts possible, listing available by request including some older, hard to find parts, velocipede parts. For more information contact: Chelsea Valley Shortline Company c/o Ken Kurdt, Caroline Drive, Wappingers Falls NY (914) 831-1170 or e-mail kid_krud@yahoo.com nd99

Fairmont M-9 - excellent running condition. Body in good shape. I believe this is an ex-Rock Island car, asking $1,200. Located in Paducah KY Thomas McMurtrie (502) 534-1706 thomasm@apex.net nd99

Used Rear Axle from a M-19-AA car. Very good shape. Nice straight axle with good keyway. $75 plus actual mailing cost. Mike Paul (920) 235-2607 or M19SOORKB@prodigy.net nd99

Available Again - New M-9 Axle Pulleys, Part Number M21581K, professionally cast and machined, read to bolt on. $245 plus postage. Jim Dobbins, RR2, Box 105, Goff, KA 66428. (785) 868-2388 (4)*nd99

NOTICE

Custom Graphics or Lettering for your motorcar, signs, banners, vehicles, egtc. T-Shirt hats, pens also. Call Steve Kepner (570) 584-4117. *ja99

WANTED

Wanted - One axle bearing casing, 4 bolt for 1 11/16" axle. Fairmont Part #46240. Denneth W. Lee, 372 Route 9, Barrington, NH 03825 (603) 664-7762 *jf00

Will Buy Small Burro Crane in operating condition, also will accept any donations of unwanted old track machines, etc. Contact John L. Uher, General Manager, C.O.& E. R. R. Co. P O Box 383, Coshocton OH 43812 (740) 622-4000 (2)*jf00

Word's from WONIA . . .

The insurance administrator's wife is happy! Thanks to all 254 NARCOA members who have sent your insurance renewals in so promptly this year. It is only January 19, and we are almost half way there. Last year as of January 25 we had received only 141, so keep them coming. At this rate may be we can have everyone insured by March 1.

Kathryn Norman, WONIA
(Wife of NARCOA Insurance Adminstrator)

North American Railcar Operators Association (NARCOA)

OFFICERS

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Sec. - Joel Williams — Treas. - Tom Norman

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Elections
Carl Anderson
1330 Rosedale Ln.
Hoffman Estates IL 60195

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Certification Test
Al McCracken
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Santa Clara CA 95051

Legal Forms
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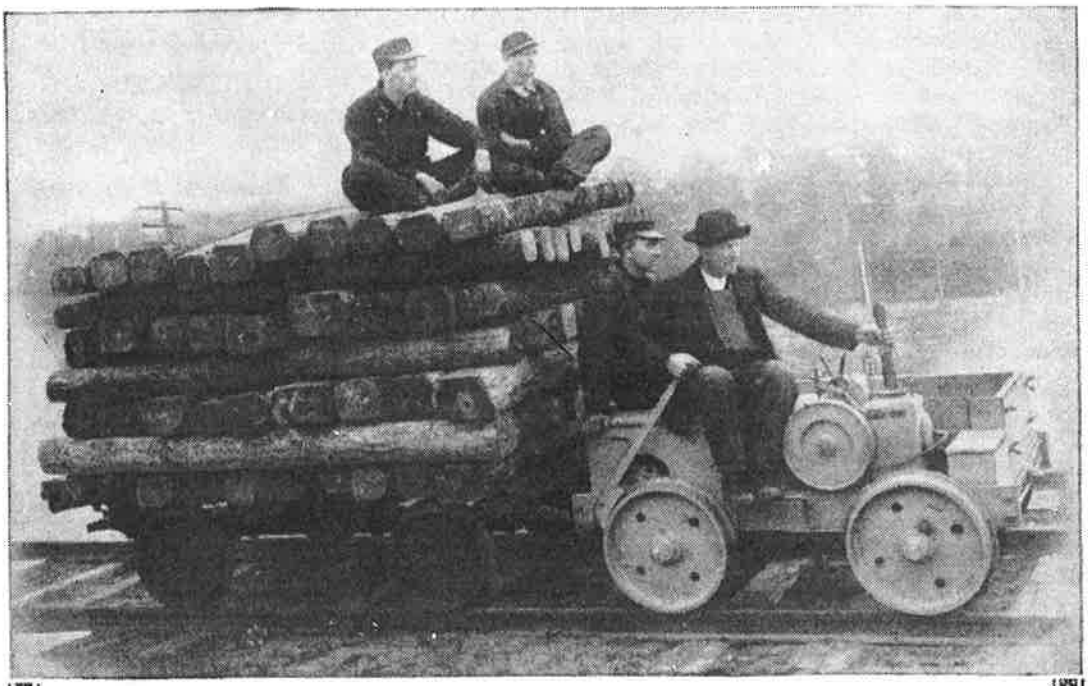
Wichita KS67212

NARCOA Licensed Radio Call Sign
WPHT745 - 151.625 mHz



CASEY JONES

A Midget in Size But a Giant in Power

Compare the size of "Casey Jones" with the man beside it. It hardly seems possible that this small, compact engine can do the work as shown in the picture above. No other engine of the same size could possibly do it. Still it is easy for "Casey Jones" because it is equipped with a two-speed gear transmission like an automobile, giving two speeds forward and two speeds reverse and neutral. High gear is the direct drive and develops 4 H. P. under actual brake test. In high gear car can be driven at any speed from six to twenty-five miles per hour. Low gear is a two to one gear that practically doubles the pulling power of the high, or gives advantage of nearly 8 H. P. in traction power. Back gearing is the only practical way to gain power because it is not adding weight or size.

In order to increase power other makers send along several sizes of pulleys and expect the owner to stop his car, jump off and change pulleys every time he gets to a grade or wants to haul a large load. With "Casey Jones" it takes but a second to change into either speed without stopping engine or car.

The two-speed gear with the sliding base belt tightener and convenient circuit breaker on the timing lever for reversing, makes "Casey Jones" the most practical hand car engine ever manufactured. We back this statement with a thirty-day free trial; customer to be judge and jury. Engine sells complete at $85.00, cash or terms: $10.00 cash with order and balance $5.00 per month.

Order now for the heavy spring work will soon be at hand

Northwestern Motor Company

525 Spring Street EAU CLAIRE, WIS.

***Northwestern Motor Co. advertisement which appeared in the March 1917 issue of* The Milwaukee Railway System Employees Magazine.**