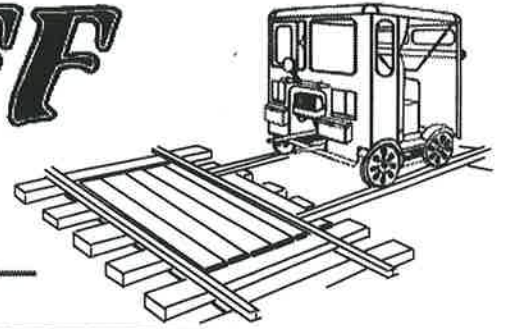


THE SETOFF

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

November/December 1999 Volume 13 - No. 5



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Views from the President's Car

As 1999 winds down I thought I would take this opportunity to reflect on our hobby. I am constantly amazed at what the members of this hobby have accomplished in the past 30 or so years it has been around. In the Nov./Dec. 1998 issue of **THE SET-OFF** Joel Williams chronicled a pretty good history of early days of his involvement with motorcars. In the early days those who had motor cars were very limited to the places they could operate their machines, legally. Today if one has the time and money to travel, a motorcar owner can find someplace to run his car almost every weekend of the year. We can run our cars on some of the most spectacular pieces of railroad real estate that North America has to offer. There are even week-long motorcar vacations.

When I came to this hobby I didn't even know how to adjust the coil in my car (some say I still can't). I found new friends who showed me how. Imagine owning a real piece of operating railroad equipment from my favorite railroad that could fit into my garage. I only knew of a couple of places where I could ride my new toy. Now I can't even list all the places. Should this hobby end tomorrow, those who have had the opportunity to ride the rails, in our own railcars, will have memories to last the rest of their lives.

The fact that we have been able to do this is more amazing than all the places we have seen. This activity is virtually unheard of in most of the rest of the world. In England and Europe there is a small group of railcar collectors who rarely get to run their cars more than short distance in a rail yard or railroad museum. Australia has a few collectors who get to run occasionally. In this country there have been trips organized in almost every state in the union, and now there is a lucky group of members who get to do it on narrow gauge rails. Our hobby has gained a reputation of safety to those in the railroad industry who are at all open to the thought of the recreational use of privately owned railroad property. We have railroads who invite us to come and run, and many who invite

us back after our members have convinced them to take a chance and let us visit in the first place. How many of your friends are amazed when you tell them what you did the last weekend you were on the rails?

Safe and responsible operation is the key to our success and future growth of our hobby. Our ability to secure and keep our insurance has opened doors that Joel and the early pioneers of our hobby could not have imagined. When one of our groups visits a railroad, the officials are in awe of the spectacle that came to visit that day and did so with safety and courtesy to all. Every motorcar owner, meet coordinator, local club and affiliate has a right to be proud of what we have accomplished.

The future of our hobby is bright. NARCOA has developed an excellent core of leadership and programs that keep us all on the right track and make this hobby grow. I would not hesitate to follow any of the board members who would ascend to the seat of leadership. They have honored me with their confidence for a while, and I will do my best not to screw it up during my watch. I have my own agenda, which I am currently bringing forward, to unite all the groups in the country under a more uniform set of safety rules and membership requirements. This process is moving forward with the cooperation of the members of the board and leaders of local groups. If this goal is accomplished our members will be able to go anywhere in the country and run their cars with a minimum of hassle—not that the present situation is bad, but it could be better. My vision of NARCOA is to keep it possible for the majority of our members who just want to run their

Cover Photo . . .

Come ride with me on my velocipede to Kyle, Idaho, on the Chicago, Milwaukee and Puget Sound. Pre-1914 as there is no overhead electrification.

PHOTOGRAPHER UNKNOWN

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

Thank you,
Jan

cars to do so. Yes, some bureaucracy is unavoidable. As we operate on more and larger railroads, rules, insurance and concerns about liability cannot be avoided. If we are successful, those who have to concern themselves with these details will be the only ones to notice them. The rest of us can enjoy the scenery as it goes by.

We all owe a debt of gratitude to those in this hobby, who came before us, now serve us and those who will come in the future. The next time you see any of the people who work in your local organization, those who serve on committees, or who you have elected to a national office, thank them for all they do and be assured they are doing their best to keep our hobby thriving.

Be careful out there. It makes our job easier. And have a Merry Christmas and an enjoyable new millennium.

Stan Conyer



Parade der Motorkleinwagen

*Parade
of
little
motorcars*



Obviously the hobby transcends international borders. These Harald Elsner photos appeared in the July 1999 Hamburger Nahverkehrs- Nachrichten and were sent by our German friend Uwe Glueker of the Friends of the Railroad E.V. Visit their Homepage at: <http://www.vvm-museumsbahn.de>



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. 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.
4. 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.
5. 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.
6. 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 5

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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 inquiries to Joel at the above address.

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

Insurance Premium Drops!

by Tom Norman
NARCOA Insurance Administrator

I'm happy to report that the premium for the policy year February 1, 2000–January 31, 2001, has dropped from \$160 to \$140. Member participation increased from 574 in 1998, to 610 in 1999. Based on General Accident's premium structure, we can offer a lower rate than \$160 when our membership increases. That adjustment, plus a credit from Reliance Insurance Company for their abrupt cancellation of our policy in 1998, allows the reduction to \$140.

I encourage all current participants to return their applications as soon as possible. Some members do not realize that the \$500,000 Personal Liability and the \$5,000 Physical Damage (\$250 deductible) policies cover the member all year long, not just at NARCOA approved insured excursions. Homeowner or Automobile policies do not cover third party physical injury or property damage related to railcar liability, nor physical damage to your motorcar. So return your applications before 2/1/00 so that you have no gaps in coverage. Hy-rail owners are covered under the Commercial General Liability, Personal Liability and Physical Damage Coverage, however only while the hy-rail is supported by and operating on the rail.

Hy-rail owners will again be required to show proof of automobile liability insurance to confirm coverage when the hy-rail is off the rail. All current NARCOA members will receive the insurance application information inserted in this issue of **THE SETOFF**. If you misplace this insert, you may download the forms from NARCOA's web site at <www.narcoa.org> or contact any one of the NARCOA Area Insurance Representatives listed below:

Hank Brown
622 Oak Street
Cottage Grove WI 53527
Ph. (608) 839-4939

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San Jose CA 95125
Ph. (408) 264-1048

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PO Box 209
Bearsville NY 12409
Ph. (914) 679-2870

10 REASONS TO PURCHASE YOUR MOTOR CAR INSURANCE NOW

by Kathryn Norman, Wife of the
NARCOA Insurance Administrator

1. The application, release, and all the pertinent information are included in this issue of The Setoff and you won't have to search for them six months from now.
2. It makes the insurance administrator's wife happy.
3. The insurance premium covers you from February 2000 until February 2001. Why only be covered from August to February? The cost is the same.
4. It makes the insurance administrator's wife happy.
5. Your motor car is covered for \$5,000 physical damage and you have \$500,000 personal liability under this policy. Your home owners and/or auto insurance does not cover rail car liability.
6. It makes the insurance administrator's wife happy.
7. When May comes along and you're ready to go on your first run, you don't have to fax, e-mail, Fed-Ex, or Priority mail everything to get it completed the day before the excursion.
8. It makes the insurance administrator's wife happy.
9. The excursion coordinator knows you have insurance well ahead of time and doesn't have to waste his time the night before verifying it.
10. It makes the volunteer insurance administrator's job less stressful and his wife happy.



Axle Failures Revisited

by Tom Norman

Many of you are aware of rear axle failures occurring in MT19 Series A and B motorcars. The first indication that I had of axle problems was in April 1995 when fellow NARCOA member Jim Britten sent me a copy of Fairmont Service Data Sheet #411. This Data Sheet advised inspection of the rear axle center bearing and bearing support for severe wear conditions that could cause rear axle deflection to such an extent, that after time, it fatigues and breaks.

Basically what Fairmont recommended was to start up the engine, put it in low gear with the brakes on, let out the clutch and observe the axle deflection at the center bearing. If the deflection exceeded 1/8" all worn components were to be replaced. Fairmont also recommended a Service Group (138583) be applied to all cars in service. The Service Group included a new center bearing bracket and a new shoulder bolt that hinges the center bearing to the center bearing bracket. The new center bearing bracket is mounted behind the axle (rotated 180 degrees around the axle to the rear) and the spring is discarded.

I followed the Data Sheet recommendations, and also installed the Service Group. Then on an excursion in August 1997, my axle broke. It had 12,200 miles on it. Why did it break? The Service Group went in at 8,170 miles and axle deflection was measured annually, and was within Fairmont's specifications. It could be that the old axle had been stressed too much and should have been replaced, however, I still felt that my axle was "safe" as the deflection before I installed the Service Group was within tolerances. Around the same time, other operators were experiencing broken axles, including one on an MT19-A that Mike Paul had just sold. Working with Mike, we submitted four failed axles to a metallurgist for analysis.

While waiting for the metallurgist's report, I searched for more information on axles. Motorcar Operators West had axle articles in their newsletter *Lineup* dating from 1993. The *Lineup* Volume 6, Number 5, October 1997, reprinted these articles along with a new one by Don Massy calculating stresses in the axles. NARCOA's **THE SETOFF** published Fairmont Service Data Sheet #411 in the May/June 1995 and July/Aug 1997 issues. (Back issues of **THE SETOFF** are available from Joel Williams, PO Box 82, Greendell, NJ 07839; back issues of the *Lineup* are available from Gene Volz, 1024 O Street, Rio Linda, CA 95673). The consensus of opinion in these articles was axle failure due to bending fatigue. The bending fatigue could be caused by play in the wheel bearings, bearing guides, and guide bushings; play in the center bearing and center bearing bracket; deflection at the drive sprocket

as the chain transfers power; and/or deflection of the axle by the center bearing. The deflection of the axle by the center bearing was assumed to be caused by three items. One, the center bearing could be out of alignment with the wheel bearings in a static situation. Two, the spring in the center bearing kept the axle restrained in the middle, as the axle ends moved vertically in the MT19's sprung wheel bearings. Three, the axle would be pulled of center with respect to the wheel bearings, as the center bearing pivots about a hinge point (rather than mimic the wheel bearings vertical axis movement). These problems, diagnosis, and corrections were addressed in the above articles. All of the above mentioned movements cause the axle to experience bending as it rotates. This is called rotational bending fatigue. Circumferential fatigue cracks start at the outer edge of the axle and progress inward, and as the axle flexes, these cracks open and close smoothing the fracture surface. The spread of the cracks looks like an extremely thin hacksaw has cut into the axle as it rotates. Eventually at overload the axle breaks in two, leaving a bright jagged crystalline surface. However when the metallurgist's report returned, two of the axles had exhibited unidirectional bending fatigue failure. The other two axles had the fracture surface marred too badly to determine the failure mode. Of the two axles that exhibited unidirectional bending fatigue, if the keyway is positioned at 12:00 o'clock, the initiation occurred at 3:00 o'clock on one axle and 6:00 o'clock on the other. According to the metallurgist "the crack initiates at one location on the surface and propagates through the cross section normal to the direction of applied maximum stress. Based on the spacing of striations and their orientations the failure mode is classified as low-stress, high-cycle unidirectional bending fatigue." It is a completely different fracture structure as compared to rotational bending fatigue failures. "With rotational bending fatigue...crack initiation occurs at a number of different locations around the circumference of the shaft. As the small individual cracks propagate toward the center of the shaft, overload ultimately occurs and the fracture surface has a star appearance.

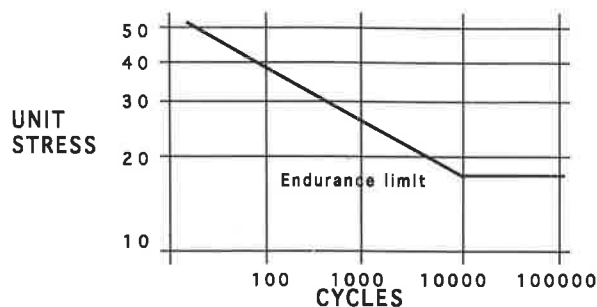
How can the axle experience one directional bending as it rotates? The only possibility that I can visualize is the axle is already bent, between the wheel bearings and the center bearing. Let's say the high spot is at 12:00 o'clock (looking at a cross section of the axle). The center bearing will adjust vertically so there is no stress in the axle. The center bearing moves in the vertical axis since the center bearing is hinged at the center bearing bracket. As the high spot on the

axle rotates to 3:00 o'clock the center bearing restrains the axle, deflecting it forward. The axle high spot rotates to 6:00 o'clock, the center bearing adjusts down for no stress. The axle high spot moves to 9:00 o'clock, the center bearing deflects the axle rearward. So two unidirectional stresses occur per revolution. The maximum stress is applied at the high spot of the axle inside the center bearing.

One other possibility that I did consider for unidirectional bending fatigue was when the spring is used with the center bearing, any deflection due to suspension movement would occur at one point on the axle. This assumes the spring restricts the center bearing movement in the vertical axis. However, when the stress is repeated it is not applied at the same specific point on the axle, but rather at a random location dependant on rotation of the axle when the shock occurs. Theoretically over time the axle would see the stress applied over the entire circumference, which I think would exhibit a rotational bending fatigue pattern.

Grabbing my *Machinery's Hand Book*, I found recommended allowable stresses for shafts with keyways. Shafts subject to simple bending should be limited to flexural stress of 12,000 psi, or if torsion only, the torsional stress should be limited to 6,000 psi. If a shaft experiences both, the limit should be 6,000 psi. I calculated torsional shearing stress based on the maximum torque available from the Onan B48G, assuming no transmission losses and perfect adhesion. The torsional stress was 4,716 psi, within design limits. Next I calculated flexural stress in the axle at the center bearing. The stress was calculated for an 1/8" deflection, Fairmont's maximum allowed deflection per Service Data Sheet #411. This flexural stress was 11,045 psi, over the design limits. I also measured axle deflections at the center bearing in two motorcars with the cars in gear but braked, while releasing the clutch. The deflection was measured vertically and horizontally both in forward and reverse gear. These measurements ranged from 0.020 to 0.177", resulting in a flexural stress of 1,744 to 15,622 psi. The maximum flexural stress possible, would be with axle end movement due to spring suspension action, assuming the center bearing remains stationary. This is hypothetical, but the 1/2" deflection does demonstrate that a maximum flexural stress of 44,177 psi could occur, but unlikely. A more realistic picture is to assume the axle on a normally loaded car is half way between the maximum spring deflection, so that the axle will deflect up or down 1/4". The flexural stress then would be 22,088 psi. I believe the high stresses from this suspension action is one reason for Fairmont's removal of the center bearing spring with the Service Group installation. If we look at stress from a bent axle (my definition of bent axle is a bend between the wheel bearing assemblies at the center bearing) a bend of 1/32" = 2,761 psi, 1/16" = 5,523 psi, and 1/8" = 11,045 psi.

Another consideration is the endurance limit of the shaft. The shaft material has an endurance limit, defined as the highest unit stress that can be sustained in a very large number of repetitions without failure. An example of a unit stress/cycles graph (called an S-N graph) showing unit stress and cycle would be:



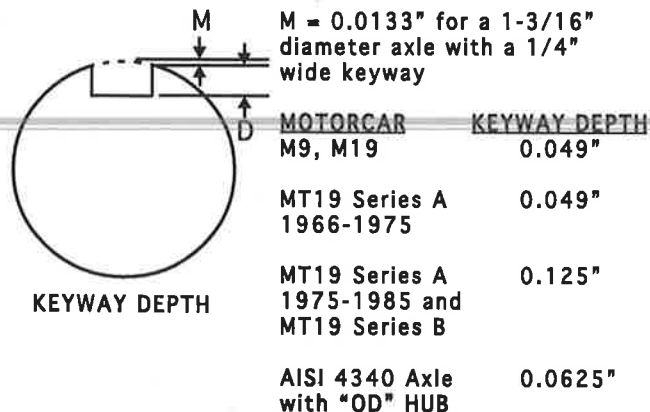
In the above graph, the unit stress and cycles are in units of 1,000. A stress of 38,000 psi predicts a failure at 100,000 cycles, while stresses under 18,000 psi (the endurance limit) should see unlimited cycles. This graph illustrates the endurance limit principle, but is an example only. It is not the S-N curve for the axle steel.

How many cycles are we looking at? Unidirectional bending, at the center bearing, caused by a bent axle would occur twice each revolution. Based on my motorcar's mileage of 12,000 miles that calculates to 30,244,000 cycles! If we assume an axle deflection at each rail joint staggered every 39 feet, we have 3,249,000 cycles, or if we assume good track with a bad joint every 100 feet we end up with 633,000 cycles. It appears that a bent axle will cause at least 10 times the cycles as caused by suspension action. But what about an axle deflected by worn bearings or distorted frame. We can assume the deflection would occur while the car is under power, and chain force is pulling the axle. Assuming the car is under load 75% of the car's mileage, then we can approach 11,351,000 cycles. That brings us back to the metallurgist's conclusion of low stress, high cycle unidirectional fatigue failure. My axle failure was unidirectional bending fatigue, but it is also possible to account for axle failure from rotational bending fatigue, because of the high cycles.

The metallurgist recommended: (1) eliminate the applied stress, (2) go to a larger diameter axle, eliminating the center bearing, or (3) use a higher strength steel, specifically AISI 4340, hardened to 38 to 40 Rc. There are problems with each solution. We can maintain our cars to lower the stress, but we can't eliminate it. I had inspected my rear axle and center bearing and maintained deflection as recommended but still had a failure. Going to a larger axle diameter would

require a new drive sprocket hub and possibly bearing modifications including new bearing housings and guides. The higher strength steel will improve endurance limits, but can still ultimately fail with the applied stress. The key is to keep the applied stress under the endurance limit of the new steel.

By this time I had observed 7 axle failures on MT19 Series A and B motorcars. All the axles broke in a plane perpendicular to the shaft center line at the keyway, usually in line with the sprocket. The shafts were AISI 1045 steel, with a tensile strength of 90,000 psi. These axles are 1-3/16" in diameter, same as on M9 and M19s. Why axle failures on MT19s only? Engine horsepower and torque at the rear axle is higher on MT19s, but still within design limits for the AISI 1045 steel. The other obvious difference is belt drive verses chain drive. The design change for the Onan engine and chain drive required a relocation of the center bearing to 6-1/4" to the right of the car centerline, as opposed to 1-1/4" on the belt cars. This put the sprocket and keyway much closer to the center bearing. On a belt car the centerline of the pulley and center bearing are 5-1/2" apart, while the distance between the sprocket and center bearing centerline is only 1-3/4". Unidirectional bending fatigue suggests the maximum stress is at the center bearing, but the weakest part of the axle is the keyway, and the keyway is substantially closer to the center bearing on the MT19 than on a belt car. The biggest change between the M9/M19 axle and the MT19 is in the keyway depth. The keyway depth (see drawing below) on M9/M19s is 0.049". Initially this depth was used on MT19's when the car was introduced in 1966. However around 1975 this depth was increased to 0.125". I believe this change was due to sprocket hub problems. The original sprocket hub was secured by set screws. If these set screws loosened, the hub rocked back and forth on the axle until the keyway was wallowed out. I believe Fairmont went to the deeper keyway to prevent this problem, but kept the old style hub. Apparently this did not cure the problem as they changed to the "QD" tapered hub by 1985. This solved the loose hub problem but I believe that retaining the deep keyway in the axle contributes to axle failures.



Consolidating this information, my solution for a new axle was to machine one using AISI 4340 steel hardened to 38 to 40 Rc. I also cut the keyway to a depth of 0.0625", half the depth of the old axle, and much closer to the M9/M19 axle at 0.049". The 0.0625" depth allowed me to utilize 3/16" by 1/4" keystone to make the new key, while retaining the QD hub originally machined for a 1/4" square key. I'm not worried about this keyway depth, especially with the QD taper lock type hub. M19AAs with the twin cylinder Fairmont engine use the shallower 0.049" keyway depth, same as other M19s. The maximum torque at the rear axle for the RKB twin is 106.8 ft-lbs, not that far from the Onan B48G of 128.9 ft-lbs.

The selection of AISI 4340 steel gives a material much better suited for our axle. AISI 1045 steel provides medium strength and toughness at a low cost. With ever increasing weights, poor railroad maintenance, and increased mileage (and thus cycles) on MT-19's, it appears that we should use a material with better endurance strength. AISI 4340 is a tough, shock resisting steel, that when heat treated offers the highest combination of tensile and endurance strength along with ductility. In fact AISI 4340 is recommended for diesel engine crankshafts. By heat treating the steel to 38 to 40 Rc, the tensile strength is improved, yet the material is still machinable. The tensile strength of AISI 4340 is 170,000 psi as compared to 90,000 psi for the AISI 1045 steel.

The endurance limit for the AISI 1045 and 4340 steel can be estimated at 40% to 60% of the ultimate tensile strength. Using the lower percentage we arrive at an endurance limit of 56,666 psi for the AISI 4340, 1.89 times the endurance limit of 36,000 psi for the AISI 1045 steel. Using a safety factor of 3 to account for notch sensitivity and stress concentrations in the keyway, we don't want to exceed an applied stress of 22,667 psi for the AISI 4340, compared to 12,000 psi for the AISI 1045. The AISI 4340 material provides a substantial increase in endurance limit.

I was able to find AISI 4340 cold finished steel bars, but in an annealed condition. This required sending the material to be heat treated to 38 to 40 Rc. When returned, the bars are warped because of heat treating and need to be straightened. Because of this, I used 1-1/4" diameter bars, and after straightening, I had the material centerless ground to the correct diameter. The final step was machining the axle tapers, threads and keyway. Options to further reduce keyway stresses are to radius the fillets to 0.010" and/or shot peening.

So the bottom line is, I felt that for my new axle, using heat treated AISI 4340 steel, and a 0.0625" keyway would give the best performance. Unidirectional bending fatigue is just one mode of failure. If we have sloppy bearings, bushings, improperly adjusted chains, and/or overloaded cars, rotational bending (cont. on pg. 8)

(**Axle** cont. from pg. 7)

fatigue will occur. Every MT19 owner must carefully and routinely inspect his/her axle. The question is not if your old axle will break but when!

Other things I look for:

1. Eliminate as much play as possible in the center bearing bracket, by re-bushing the bracket or using a new bolt.

2. Be sure there is minimal play in the wheel bearings, bushings and bushing guides.

3. Be sure the axle is straight. I remove the axle and mount in spare wheel bearings (or v-blocks) on a lathe bed, then measure with a dial indicator at each end and at 12" spacings as I rotate the axle. If it isn't straight, I put it in a hydraulic press and correct it. I try for a total indicator reading at the axle center of no more than 0.007".

To check your axle on the motorcar, raise the car and place on jack stands, disconnect the chain and unbolt the center bearing bracket, so nothing restricts the axle center. Now rotate the axle and observe the movement at the center bearing location. You want this to be zero, and I look for 0.007" on a new axle, but I think you can live with 1/32" on an old axle. This is the static deflection. Measure the dynamic deflection as per #5 below.

4. Remove the center bearing spring and throw it away. Use the center bearing unsprung. Fairmont recommends mounting the center bearing bracket to the rear of the axle. Definitely remount the center bearing if you change the axle. Mike Paul points out that putting the center bearing pivot ahead of the axle makes the axle unstable with respect to a pulling force on the axle in the direction of the pivot. To use his analogy "it's like trying to put a marble on top of a sphere and make it stay there. With the pivot rearward of the axle, it's like putting the marble inside the sphere and trying to make it stay on the bottom of the sphere. The former is very unstable, the latter very stable."

5. Check for play at the center bearing per Fairmont's Service Data Sheet #411. Fairmont isn't concerned until axle deflection is 1/8", but try to keep under this.

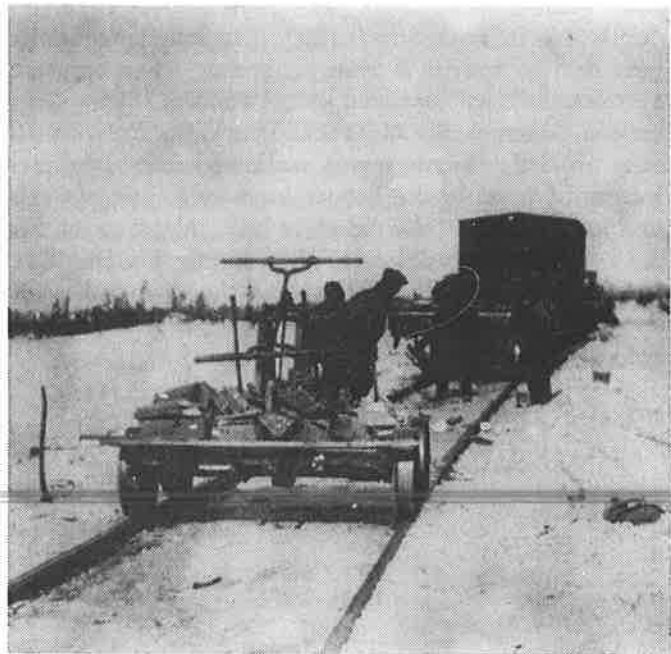
6. If you don't have the QD tapered hub on your old axle, change to it with the new AISI 4340 axle.

7. When bolting up the center bearing bracket, do it without the chain on the sprocket. Be sure that the center bearing bracket does not deflect the axle. Usually the car is on jack stands, in order to access the center bearing. To be really accurate, pry up the rear axle wheel bearings and place a 1/4" shim between the wheel bearing and the lower frame. This places the axle in a neutral position, with the springs compressed half way simulating a normally loaded car. In this position the axle centerline and the center bearing pivot centerline are in the same horizontal plane, and the

center bearing will pivot equally upward and downward with suspension movement. I have even used a dial indicator to minimize actual deflection. Ideally the indicator should not read a change after mounting the center bearing, and then again after connecting the chain.

8. Make sure the chain tension is adjusted correctly. It should not deflect the axle to a great degree. The chain is tightest when the wheels are lifted off the rail, so check it then. Rick Tinsley has forwarded information from a Diamond Chain catalog that recommends slack span tension be adjusted to allow 4% to 6% mid-span movement for horizontal drives.

A note to MT14 motorcar owners. I have also observed four rear axle failures on MT14s. All failures occurred at the sprocket location. These failures appear to be rotational bending fatigue. Since the MT14 is not sprung like the MT19s, I can't see that unidirectional bending fatigue is a problem. However, the three rear axle bearing assemblies must be aligned to eliminate axle deflection. I would recommend checking the axle for straightness by unbolting the center bearing and unhooking the chain similar to #3 above. If the axle is straight, proceed by mounting the center bearing so that no deflection occurs on your dial indicator. It might require shimming and/or elongating the bearing housing mounting holes in the frame. Other sources for flexing stress can occur from excessive play in worn bearings or frame flexure from an overloaded motorcar.



An early real—photo of a handcar, tools, crew and worktrain, somewhere in Montana in the winter. TAYLOR COLLECTION

AN IOWA NORTHERN EXPERIENCE

By Carl Schneider

The Sunday morning started out like many motor car rides in the past, cloudy and rainy! I found a dry "office" in Hunk Anderson's Canadian MT-14 to do my paperwork. As our members showed up, they brought their waivers—many of them wet but most of them signed ahead of time—and their ride money to me while others put their cars on the Iowa Northern tracks for the northbound run to Manly and return. The light rain made the set on process a little less pleasant but we're railroaders, and we can handle a little wet inconvenience.

Our group left Greene, Iowa, at 8:05 AM under the leadership of hirail operator Francis Edeker of the Iowa Northern Railroad. Francis has escorted us many times in the past and has never gotten us lost! Our group consisted of 36 motorcars and one Hy-rail truck following the Iowa Northern Ford Explorer.

As we headed north through the beautiful cornfields and soybean fields, the rain would let up and then come down heavier. There were many tree-lined cuts that had just enough room for a freight car to pass through. Francis told me that he personally goes out and trims those trees to look that way every week! It was still raining when we stopped at the restored Rock Island (ex-BCR&N) depot in Rockford where some of the members of the depot group were on hand to show us the nice job of restoration of the depot. Even the living quarters in the upstairs of the depot had been restored to its original condition.

At 10:00 AM Francis reminded us that, if we wanted to get to Manly and back to Greene by noon, we had better get moving, so he headed us on towards Manly where we turned the cars for a quick return trip to Greene. The weatherman didn't cooperate with us at Manly because the rain seemed to get heavier as we turned the cars. The people in the enclosed cars fared pretty well, even though they, too, had to get out in the rain to turn around. I think the person we felt most sorry for was Mike McClurg of Bloomfield, Iowa; he had brought his open MT19 for the ride. His wife Kathy had found drier accommodations in another car, so Mike enjoyed his open car in the rain all by himself. Some of us felt just as wet after helping turn the cars.

As soon as we were all turned around, Francis headed south, hopeful of being at Greene by 12:00 noon. This ride also had a two-part option for the members: 1) ride to Manly and return to Greene and then ride the paddleboat up the river for dinner, or 2) ride to Manly and return to Greene and then continue on to Cedar Falls by rail. The return trip was slow going due to some breakdowns ahead of us, so even though the lead Hy-rail arrived at Greene at 12:15 PM, our rear car didn't get there until 1:00 PM. Since we

were running late, Mark Kirkpatrick called ahead to notify the people at the Paddle Inn that we were off schedule. They held the paddleboat for our group even though we were over an hour late. By the time we did arrive back in Greene, the sky had cleared and the sun had come out making for a most beautiful afternoon.

There were about 30 of us who took the short ride and then went on the paddleboat ride up the Shell Rock River to the Paddle Inn where we were served a wonderful "Thresher's dinner" family style. The *Spirit of Greene* paddleboat was built and donated to the city of Greene by Hunk Anderson many years ago before he "discovered" that motor cars are more fun. Hunk first found out about our club years ago when we were on one of our rides on the Iowa Northern and had stopped in Greene for a short break. He tells me that I'm the one he remembers most of that fateful day, and he now "blames" me for his passion for motor car riding!

After the rear 11 motor cars stopped in Greene for the boat trip, the rest continued on south to Clarksville to the little ice cream shop along the tracks where they stopped for lunch. Then it was on to the turnaround point along the Cedar River just north of Cedar Falls. The cars were turned, and the group headed back to Clarksville to check out the ice cream shop again. Since the sun had come out, the heat and humidity had come up, so ice cream was a great way to keep cool.

I was there when the group returned from the Cedar Falls leg of the ride, and I spoke with Francis about the trip in general. The one thing he did mention to me was that last year nobody took any pictures of his old yellow Ford Bronco; this year everyone was getting pictures of his "new" Ford Explorer with the nice Iowa Northern shield on the side. He also said he really enjoys our group and is looking forward to running with us again in the future.

The sad twist to this story comes, not from anything that happened during our ride but with what happened later that evening. North central Iowa was treated to heavy rainfall that left the Manly area with up to nine inches of rain in a short period of time. This caused widespread flooding in the areas we had just ridden through—our trip had pretty much followed the Shell Rock River. The rain continued on and off for several days while other parts of the state remained very dry. The river rose about six feet, and the towns of Manly, Rockford, Rock Falls, and Marble Rock suffered severe flood damage. It's hard to picture the devastation in these towns that we had gone through on our motor cars hours before. In Rock Falls, about 30 mobile homes even floated away in the Shell Rock River and smashed apart against bridges downstream. I don't know how much damage the railroad

SECOND ANNUAL MICHIGAN "TWO-FER" WEEKEND

by Dave Stroebe
with photos by Jeremy Winkworth

The second annual Michigan "Two-Fer" weekend was held Saturday October 2-3 on the Southern Michigan Railroad and the Tuscola & Saginaw Bay. The weekend began with a meet on the Southern Michigan Railroad Society (the birth place of our hobby) on October 2, 1999, with a run from Clinton, Michigan, to Raisin Center. I arrived at the set on location on Bartlett Street in Clinton at 8:30 AM after spending the night at Eric Schwandt's house for a good night's sleep.

There were three cars already on who had managed to run the day before. I set on my C&O M-19 and an ex-CP M19 which I was going to test out for Ted Klemp after completing its restoration the day before. Soon the cars began arriving, and I handed out the meet fliers which contained a contest to guess which Chicago-area railroad had certain types of signals. The prize was a year's membership to the SMRS.

We soon had 19 motorcars and one hy-railer pickup. Since the train was running, it was important that I get our departure as close to 10:00 AM as possible. At 9:45 I called the safety meeting, and SMRS Motorcar Supervisor Eric Schwandt added to the instructions. We then started our engines and headed south to Tecumseh where we turned the cars, proceeded back to the yard and waited for the train to leave for Raisin Center. Upon arrival we headed for the restrooms while the rest of us checked out Les King's mobile motorcar parts emporium.

Checking with Eric, I found out that there was time for a run to Tecumseh, so we once again headed south where we waited at MP 50 for the train to arrive. When the train arrived, I bummed a ride in Dennis Kroft's CP M19 to the head end of the train where engineer Dennis Ludwig told me that we could turn and run back to Clinton where we had hot dogs, chips and salsa, etc. waiting inside the museum building.

I once again announced the contest and looked for a winner. The prize was won by Ken Annett from Windsor, Ontario, Canada, who correctly guessed the B&OCT—Baltimore & Ohio Chicago Terminal, a switching road out of Barr Yard and a railroad that did the switching out of Chicago's Grand Central Station at the corner of Harrison & Wells. Ken was a very lucky man, as he won the drawing at last year's Tissbee meet and received a NARCOA Flag kit. I asked him if he also knew what the upcoming lottery numbers were!

At three o'clock we once again headed south with nine motorcars. We waited at the yard in Tecumseh for the train to arrive late with only one coach. Engi-

neer Dennis Ludwig told me that their 44-ton GE had developed engine trouble and the sanders—which were a must on this cold rainy day—had quit working. I decided to abandoned our efforts to reach Raisin Center as there was a gondola and a coach left on the main. I informed the rest of us "diehards" of the situation, and we headed back to Clinton where we loaded up our cars and headed home or to motels in Cadillac in preparation for Sunday's Tissbee run.

Everyone seemed to have a good time, and Ted Klemp's CP M-19 was tested by my friend Kevin Smith from Port Sheldon. The meet generated \$42.00 for the SMRS copy machine fund.

Sunday October 3 dawned with unseasonably cold temperatures of around 34-38 degrees F. though the sun made a vain attempt to stay out all day. Joe Batchelder and I headed to Cadillac. We arrived at the 10th Street location at 8:50 AM to find several cars all ready on the tracks. After unloading my C&O M19, I parked my truck and trailer while Joe handled the set on. At about 9:50 AM, meet coordinator Jeremy Winkworth called the safety meeting and introduced us to our two Tissbee escorts. We started our engines and were off on schedule as advertised.

We headed south to the old Ann Arbor yard and



then west. This was our third time on the Tuscola & Saginaw Bay, and like the previous times I was impressed with the way the Tissbee upgraded and maintained this track. The roadbed was freshly laid limestone ballast, and the jointed rail was smooth with tight joints and was tightly in gauge causing my flanges to squeal every now and then. For a fact, the gauge was so tight, it was like running a car retarder in a hump yard for three miles at a time! This made for a hard pull for my ROC-M engine on my M19.

Like I remembered from the previous year, the line is hilly with numerous long grades and plenty of curves.

We darted in and out of the forest, enjoying the scenery under partly sunny skies. We stopped at MP 238.1 at the thriving metropolis of Boon—population 100. We



entered the shopping mall—a gas station and general store—for candy bars and pop. The locals were curious about those strange things coming into town, asking if we got tired pumping our cars. We told



Ex-Ann Arbor motor car shed at Boon.

them that the cars had motors—which lead to the two most frequently asked questions, “What does it burn?” and, “How fast do the cars go?”

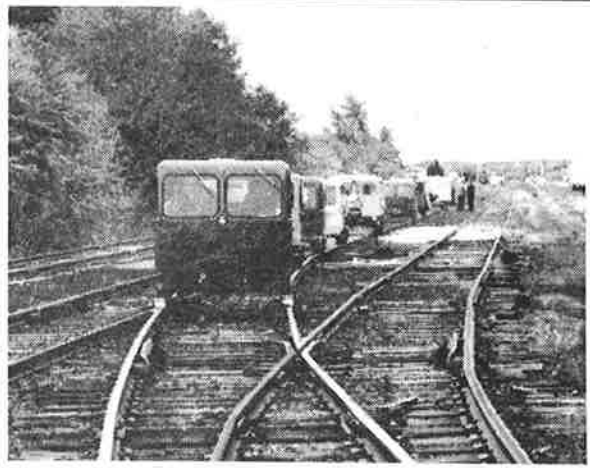
We then headed to our consist of 18 cars and our two hy-rail escorts. We continued west once again, darting in and out of forests, farms and fields, up and around steep grades. Then we came to the big city of Harrieta—population around 500—at MP 244.7.

After more grades and curves, we were at the beginning of a very long down grade to Yuma. As we began to descend, I wondered how my ROC-M was going to handle this grade on the way back. We soon were at the bottom of the grade and went through a large sand mining operation. This is the road’s source of revenue and the reason for the line continuing in operation. At one time this line headed west to the Ann Arbor carferry operation at Alberta/Frankfort where cross-lake (Michigan) service was provided to Kewaunee and Manitowoc, Wis. Today the line from Frankfort, Alberta, and Beulah is torn up, its road bed now a segment of “Rails to Trails,” even though the tracks are still in at Cases Siding, Copermish, Pomona, Harlan and Mesick. The Tissbee only operates a little west of Yuma.

We traveled a mile or so west and turned our cars near Yuma, MP 249.2. We had come a distance of 21.9 miles. Once turned we traveled back through the sand company and started up the long grade. My ROC-M was laboring hard, and just when I got a full head of steam, I had to slow for a grade crossing. Our Tissbee escort told me that this grade is steep enough to require doubling the grade in the winter time—taking half the train up the grade at a time—with two EMD GP35s! While making a laborious start upgrade, my engine stalled and made me do what I believe is the world record for the fastest spark plug change!

Soon I had the plug changed and was on my way. My engine was torquing its way up the long grade hindered from gaining speed by grade crossings. Finally with grade cresting, I picked up speed and soon had the rear of the consist eating my dust!

This time we went nonstop all the way back to Cadillac. We threw some switches and soon were back in the ex-Grand Rapids & Indiana/Pennsylvania/Penn Central, Michigan Interstate yard where we stopped



just north of the yard for people to go for lunch. We had an hour for lunch, and now the weather had turned cloudy with a cold wind. I decided to put up the side curtains.

After lunch we headed north out of Cadillac at MP 98.6 (from Grand Rapids). The track was in as good of condition as it was three years ago when we first ran this line. At one time this line went all the way to Mackinaw City at MP 224.6, a distance of 126 miles. Long cut back and abandoned, the track now ends at Petoskey. We crossed two very busy roads and soon were heading north passing forests of green and blue spruce pine trees, ponds, swamps and wilderness that looks like Canada. We passed “Missaukee Jct.” two miles north of Cadillac where the long gone Cadillac & Lake City Railroad interchanged with the PRR. Long torn up and overgrown with weeds, the road bed is barely visible. This four and a half-mile long railroad was steam-powered and hauled mainly Christmas trees and excursion passengers. When its steam locomotive’s flue time expired, the C&LC bought a

Baldwin Lima Hamilton diesel switcher which now serves on the White Water Valley Railroad from Connersville to Metamora, Indiana.

We went through Manton, MP 109.6 and crossed the high bridge over the Manistee River. At MP 119.1 we arrived within sight of Walton Jct. where the PRR



turned our cars at the crossing prior to Walton Jct. at MP 119 having come 20.5 miles. We headed back to Cadillac arriving there around 5:30 PM.

The rain held off until our cars were loaded up. We shook hands and thanked our Tissbee escorts. We met the other participants at the local "Big Boy"—sorry, not named after the 4-8-8-4 of the UPRR—restaurant where a back room was reserved for us. After a good supper and good fellowship, we departed for our homes. We had a very full and satisfying weekend of motorcars, and we hope to be able to repeat this each year. I wish to thank Jeremy Winkworth, our Tissbee escorts and the Southern Michigan Railroad Society for making this possible. So you all come up to the "Wolverine State" and ride with us. You'll be glad you did.

(*Iowa Northern* cont. from pg. 9)

suffered as a result of the flooding, but it was damage they didn't need. They had just finished cleaning up some washouts on the south end the week before our ride, and the evidence was there for our people to see as they enjoyed the trip to Cedar Falls.

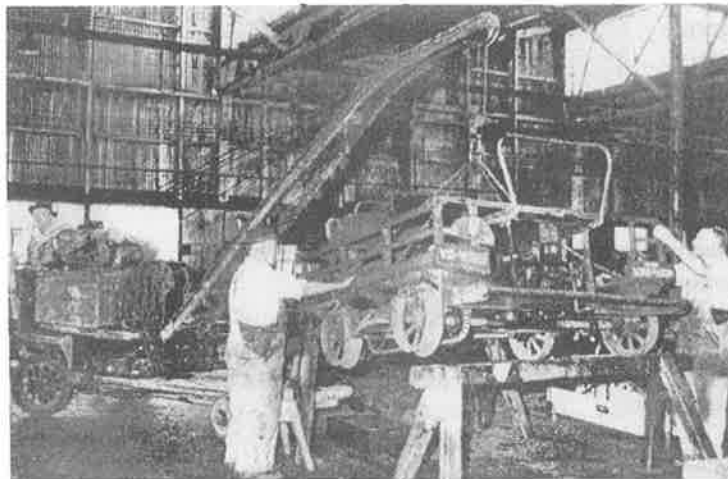
The railroad will survive the flooding and we will sometime in the future hopefully enjoy another ride on this piece of the Rock Island Railroad.

branches off and goes to Traverse City, Mich. Besides regular freight service, this branch hosts an independent dinner train hauled by an EMD F-unit. I was hoping that we would turn on the wye, but instead we

from the pages of *The Victorian Railways News Letter*
(See Article on Page 15)

IN THE SHOPS :

(above) One of the Sheffield motors used for towing weed poisoning plants comes into the shops for overhaul. These vehicles have a friction disc and chain drive.



ON THE TRACK :

(Below) A country track gang wheels out its motorized vehicles in readiness for the day's work.



A Great Bash

Nic Doncaster

There is nothing like putting in a heap of work on a beat up heap of rubbish to have it run like a charm.

My beat up heap of rubbish was a standard gauge M19 which I managed to obtain way back in 1994 after first getting two M15 242's from a contact in Port



Lincoln. The deal went

that the guy who had the M19 wanted another car to run. Seeing as though he was located near a 3'6" line, it was only logical that he should want to part with his car in exchange for the narrow gauge car that I now had. The hard part of the deal was that the car I was getting was not even turning over, and the car he was getting was, on the day of delivery, still warm

from a run that day! Anyway, it was in 1994, that the saga of my restoration began. The easy bit—pulling the thing apart. I ended up knocking the piston out of the bore after extensive derusting and sending the block off to be repaired. It took me until December last year to get started on the rebuild, which included replacing the water hopper cock and plate (after removing the old broken studs), renewing the crank seals, replacing the rings, fitting a reconditioned carburetor, a reconditioned head, new coil, new center, front and rear rails, new tool tray floors, a full rewiring and a new belt—and in the process, throwing away the poxy cab that the last rail owners had fitted years before.

When completing this work, I found out that this car, prior to its retirement, had been allocated to the gang at Alice Springs, that the electric start was original, and that the car was of a group that was built by Fairmonts' Australian Licensee Tutts. Indeed, this car is only seven weeks younger than me, being delivered June 30, 1967. Ironically, a few of its close sisters—also Tutts cars with serial Numbers in the 102# series—are owned by a couple of my good friends! Anyway, we are losing track.

One of the reasons I wanted to get my standard

gauge car back on track was to run a section of tramway that left Port Lincoln and headed west northwest to Coffins Bay, a distance of 39km (26 miles) where a Lime sand mine had been established in the early 1960s. For years I had promised my mates a bash on this track, if I could organise it. Rumors had started to circulate that this operation was to be sold off as it had not carted sand by rail since 1993, when the last locomotive was returned to the owners main tramway at Whyalla. Indeed, by the time I had got my car complete, and had given it a "settling in" run at St. Kilda tramway (trolley/streetcar) museum, the operation was under contract. If you are confused, in South Australia only the government could run a "railway," so private lines, even ones for heavier traffic than the "railways" had to be called a "tramway."

Luckily, access was granted, and so the Great Trolley Bash was on. I contacted my mates Russel and Mark, but only Mark put his hand up for the run. Russel was just not able to make it. I have known Mark for about seven or eight years (and Russel for 13) and had not known him to miss a chance for a run. He would be there.

Details were finalised, and eventually we met. Port Lincoln is about eight hours by road from Adelaide and about 20 hours by road for Mark, as he had to come from Melbourne. Luckily he went through Peterborough and picked up Don, another friend who had been a roadmaster for Australian National before he retired and who wanted to come.

Sadly, our first weekend on this long since used tramway was taken up clearing back the bushes so that we could just get through. It was with much jubilation that we managed to get to within 400m of the outloader silos at Coffins, just as the sun was setting



on the Sunday. It took two days to get to Coffins and about an hour and a half to get back.

I managed to get over again a few weeks later, and took my wife and best mate Steve for the run. I am very lucky to have a great wife who enjoys “trolley bash-



ing” and has often come on runs and meets with me. Indeed, she is a bloody good section car driver. Steve has the bug too, but isn’t too hot on getting too involved. I think he has seen the effect of getting a few good runs out of a clapped-out old car on me, and thus stays a little to the side. And finally, my Irish Setter Rhani



is also a trolley freak. She gets really excited if a car is started or a video is played of a section car run!

I managed to get the OK to bring a few more people to the third weekend we did. This was done with the permission of the new owners who, as I write, are pulling up the line. This time, Russel was again unable to make it, but Mark trudged all the way to Melbourne for the trip. We also welcomed Ivan Wood and Robert Sherwood along for the weekend. Ivan bought along a former South Australian Railways M-19 AA, that is now just an M-19 (the SAR pulled out the RK-B as these cars flew along the more level track that was installed after standardisation of the section of line from Crystal Brook to Broken Hill). We allow for Ivan’s car as he is a bit of a mechanical cripple. His cars always fart, snort, crunch, creak, are hard to start, hard to stop, exploding or overheating (but they are nicely painted) or just plain breaking downing. And he didn’t let us down!

Mark bought along his former New South Wales linesman’s car, also an M-19, and Robert bought along a “Comeng car.” These were built in Adelaide and are very big, powerful and fast cars.

So it was as we set out on the first run in the early evening of the Friday, July 30, to savor the cool winter evening and the stillness of the bush. With the line clear, the run took an hour and a bit to get there, about the same to get back, and then it was off to the pub!

The real beauty of this railway could only be savored during the day, though. As well as its fantastic construction—110-pound rail on plated sleepers, laid on a deep bed of ballast, with near perfect alignment—the line ran over some very high banks and through some deep cuttings over an area known as the Uley Basin. This area serves as part of the water catchment area for the town of Port Lincoln, and other than the railway line and a few dirt roads, is nearly pristine scrub. I have always enjoyed this line, having traveled over it on the train as well as by section car numerous times. It was hard to believe that so much had been put into this operation, run full time for a few years and now it was to be pulled out.

Over the next few days we traveled the line about four times, as we were slowed a little as one of the group decided to trim trees further. It was nice of them, though, to trim back the “culvert from hell,” a stretch of track about 500m long, densely covered in brambles!



A beauty of a group of operators is the chance to have a chat about things and to see what others cars are doing. Mine had been hunting, as I had to repair a fault in an axle and bearing; despite my best efforts, I could not pick up the problem. Mark traveled behind me for a while and noted my axle did not appear to be stable. A few minutes with the spanners, and my M-19 was as good as new!

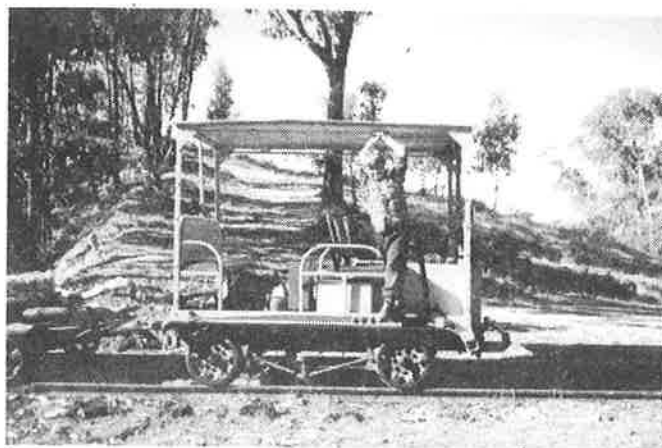
A final run saw us back into Lincoln on sunset with enough light to allow us to load and head on back to Adelaide.

Farewell, Coffin Bay Tramway.

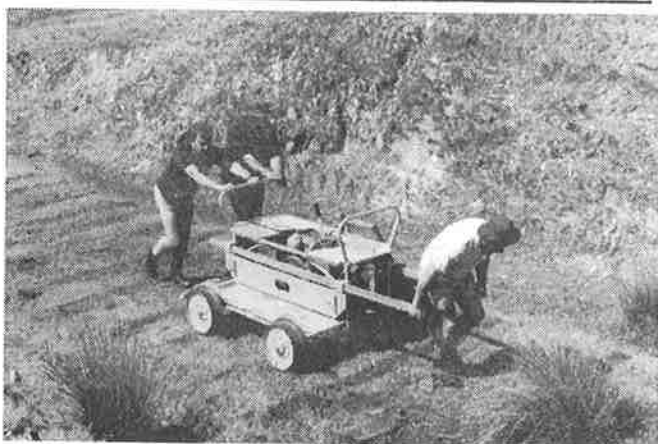


Motorcars from Down Under

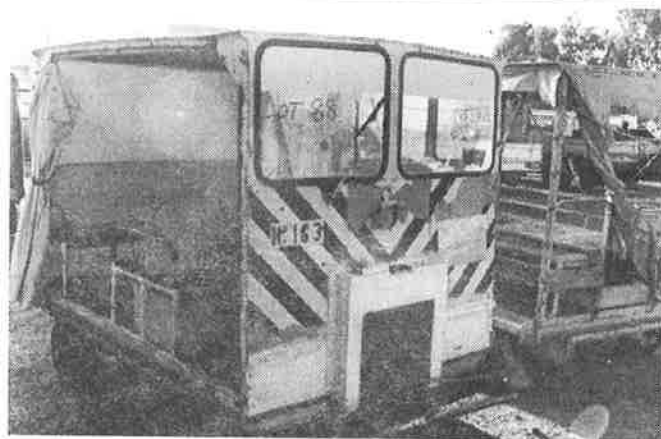
Rich Stivers submits these photos from Mark Swaby of Victoria, Australia, as well as an historical perspective from the pages of The Victorian Railways News Letter on the following three pages.



The small box behind the driver's seat is a custom-fitted manual sander to combat the real problem of wheel slippage. Sanding under one wheel seems to be sufficient.



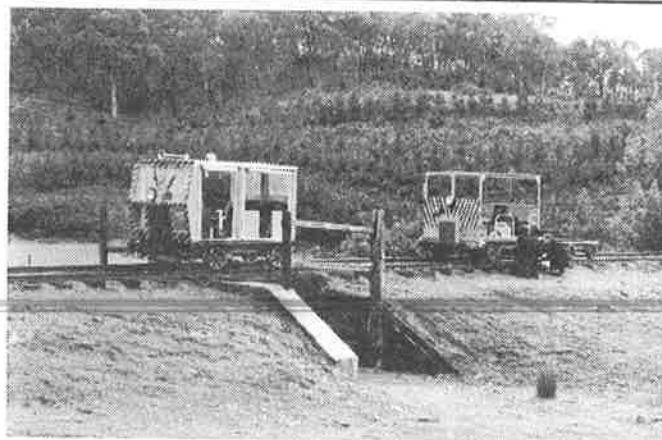
Pushing/pulling a Casey Jones Model-531 across a gap in the rails. This is a plagiarized copy of the original C-J model—63" gauge, in service for over 50 years—built by Victorian Railways.



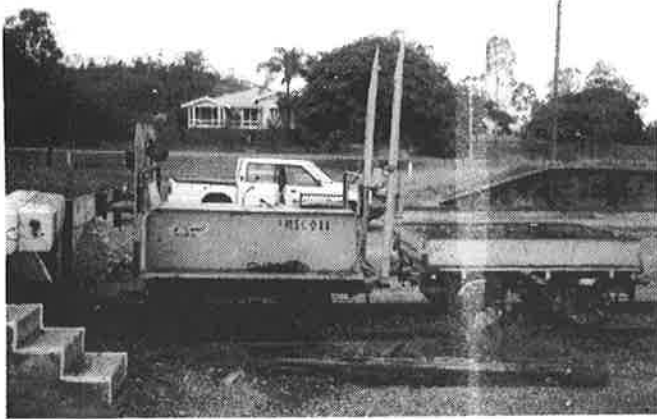
Most models were factory fitted with an open cab, side and rear curtains and an extra large radiator, required for Commonwealth Railways in South Australia where maintenance gangs often worked in 40° C temperatures.



Mark's A5 Gang car. A5s were built by Pacific ACE Equipment Co. and fitted with 4-cylinder 2850cc Ford engines and 4-speed manual transmissions. Rear seats were mounted, facing one another. Fuel tank is under driver's seat.



Time to adjust the brakes... hope the speeder police don't see. Most A5s have been scrapped, their motors and transmissions prized by auto restorers. Only ten are presently known to survive.



This 42" Briggs converted ST2 has a raised deck, wheels underneath, and no step plate. , Tutt-Bryant Equipment Co. built 346 ST2s between the late 1950 and 1981 in three gauges—42", standard, and 63."



Speeders lined up for sale at the last public auction held by New South Wales Railway, October 1993. Average price—\$250.



An M19 FZ63 on display at Brinkworth. Tutt-Bryant built 105 units in the three gauges. South Australian railways maintained their cars in relative good order, manufacturing most of their own spare parts.



Cars at a speeder meet at Mount Gambier in South Australia. All cars here are broad gauge—63"—and are in order: A5, ST2H, M19F, ST2H, M19F, ST2H.



M19 FZ63s here await disposal at Islington workshops in Australia in 1992. Many have been rebuilt over the years, replacing aluminum frames with steel and failed motors with whatever was at hand.



Removing the A5's cow catcher in readiness to turn.

from the pages of The Victorian Railways News Letter

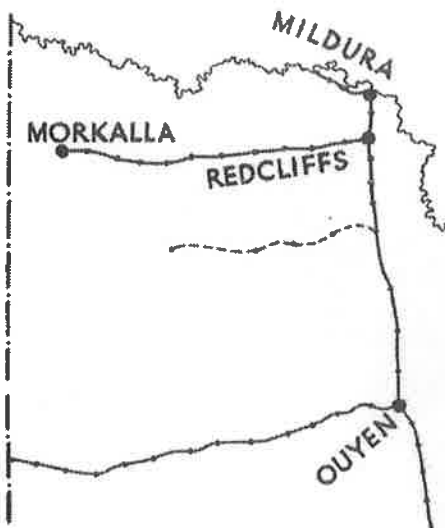


The last one.



Morkalla station, showing rest huts for train crews.

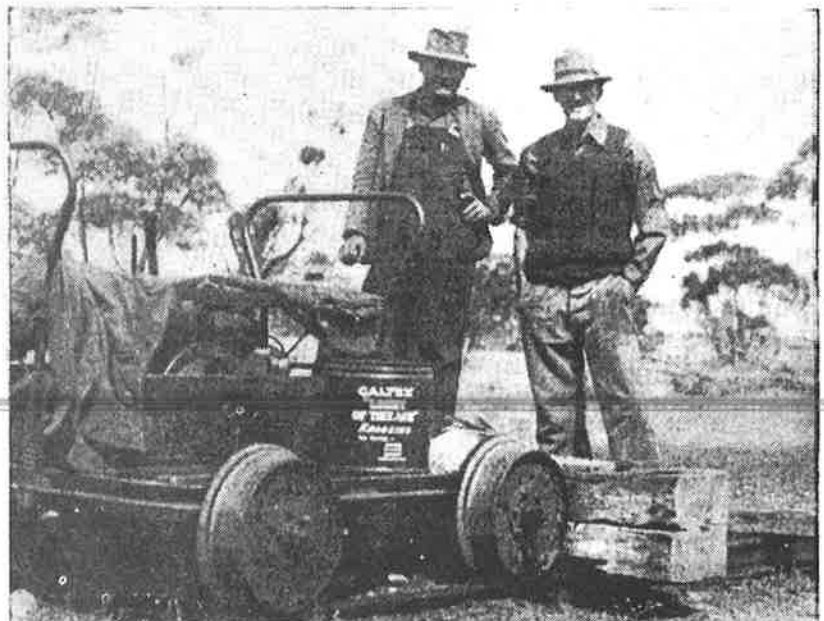
LAST MILEPOST ON THE SYSTEM



THIS is a railway station that few have ever seen. Although similar to other small Mallee stations, Morkalla has one distinguishing feature: it is the furthest point from Melbourne to which Victorian lines extend, irrespective of whether the distance is measured as the wheel turns or as the indefatigable crow flies. To be exact, it is 402½ miles by rail from the capital. The branch line, of which Morkalla is the terminus, was built in three stages. The first, from Redcliffs to Werrimull, was opened in 1924; the second, to Meringur, in the following year; and the last in 1931. Highest point on the line is 303 feet above sea level, lowest is 111 feet. Morkalla, a no-one-in-charge station, is supervised by Redcliffs. Train service consists of a weekly goods. Last financial year, goods revenue was about £2,600 and outwards goods tonnage 1,490. Morkalla, it is reliably reported, has no traffic problems or housing worries. These pictures were taken by Assistant Engineer J. Charnock, of the Way and Works branch.



Stock yard and loading platform.



Ouyen railwaymen, H. Hateley and F. Cummins, at the end of the line, 403 miles 6 chains.

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

New - - Kosciusko & Southwestern Railway - Kosciusko, Mississippi offers owners of motorcars and Hy-rail vehicles the opportunity to operate on their railroad. To arrange permission, contact Dave Delatte at (601) 372-2275. 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 the proper authorization. Persons operating on the line illegally (bootlegging) will not be tolerated and will be reported to all nationally recognized motorcar groups. For those who do not have a motorcar, the railway is offering motorcar rides consisting of a 36 mile round trip from Kosciusko to the Big Black River area taking about 3 1/2 hours for the trip. Fares: \$15 Adults and \$7.50 Children.

PACIFIC RAILCAR OPERATORS (PRO)

January 1, 2000 New Year's Day Niles Canyon RWY, Niles CA. First excursion of the New Millennium. \$35 per car, set-on at 9:00 a.m. Contact Steve Paluso, 9:30 a.m. to 2:00 p.m. days at (408) 956-8090 or sbpaluso@aol.com

February 18 - 19 Washington's Birthday Weekend - Sierra Railroad on Saturday February 18th - Sonora/Standard-Oakdale - 90 miles. Stops on the antique turntable at Jamestown. "Money back if tracks are blocked at Chinses" Gala dinner in Jamestown. 20 cars maximum. Prospective plans for a special Sunday, November 19th, motorcar excursion are underway and will be announced ASAP. Details and pricing for these trips will be published soon. NARCOA Insurance and Operators License, and PRO membership required. Chris Ogilvie, Coordinator.

March 21 - 27 - Arizona tour - Copper Basin, San Pedro & Southwestern and Apache Railroads. Coordinators: Ron Zammit and Doug Stivers. Keep this week open and watch for details in the next issue of the newsletter.

May 27 - 28 - Memorial Day Weekend - Spring Green in the Intermountain High Country. Memorial Day weekend - McCloud River Railroad, Saturday, May 27th - Burney - Lookout - RT 190 miles (The very best of McCloud Trips!) Gala dinner at famous Pit River Lodge. 20 car maximum. Dave McClain Coordinator. Sunday, May 28th - Lake Country Railroad (the famous N-C-O). Late morning set on. Lakeview - Alturas. 100 miles. Gorgeous bucolic scenery. 20 maximum.

September 18-19 OR 25-26 - High Desert Adventure. either September 18-19 or 25-26. 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.

Running on the "Banker's Cutoff, an abundant NYC line in Hillsdale County, Michigan about 1959, the group was under contract to grow popcorn along the line. The group would fence the line off at the road intersections so the farmer's cows would keep the right of way clean of grass.

(Dallas McDowell Collection)



WILDERNESS TOURS

Middle of May - Sudbury to Perry Sound, ONT - CP Rail

July 3 - North Vancouver to Dawson Creek and other subdivisions with a possible extension to Edmonton.

September 4 - Sault Ste. Marie to Ottawa or Montreal on the Huron Central, CP Rail, Ottawa Valley, Genesee Rail One.

Contact Wilderness Tours after January 5th for details.



Wilderness Tours presents **Polar Bears 2000**

"Imagine waking up to two bears frolicking outside your bunk window!"

Join us in Polar Bear country - 50 miles from Churchill, Manitoba, and civilization. Enjoy days exploring the vast wilderness in a most intimate and unique way - by Tundra Buggy. In the evening, retire to the comfort of the Polar Bear Lodge to "sleep with the bears". Enjoy hot and hearty meals in the diner, relax in the lounge while watching bears by spotlight - or have a drink or a dance in the "Muktuk" Lounge.

The **Polar Bear Lodge** consists of a group of specialty trailers that are pulled out to Cape Churchill where they are connected like a train. Each bunkhouse sleeps up to 38 people in private single berths, has electric lights, propane heat, two restrooms, and a shower. The Lodge is used as a daytime base from which to explore surrounding Polar Bear territory by **Tundra Buggy** - a heated, roomy bus mounted on six-foot all-terrain tires.

INCLUDED: DATES: Oct 12-16, 2000

- Air fare - Winnipeg to Churchill
- 2 nights on VIA Rail - Churchill to Winnipeg
- 2 nights at the Polar Bear Lodge
- 2 full days exploring Polar Bear territory in a heated Tundra Buggy
- 6 hearty meals at the Lodge (including hot lunches aboard the Tundra Buggy)
- Dog sled ride in Churchill, plus time to shop and have dinner before 10 pm train departure

16 spaces available

Price of tour - \$1,950 per person

Register first for best VIA Rail accommodations

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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

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

2 Hour VCR Tape Of The 1999 Speeder Tour sponsored by Southwest Railcar, LTD. Dick Ray photographed and edited the tape, Al McCracken made duplicates with Dick's permission. Tape includes rail shots from the towns of Squamish, Lilloet, Williams Lake, Prince George, and Tumbler Ridge. Train shots include 100 car freights, Budd Cars, Electric engines, and cab shots. Track shots include canyon, waterfalls, lakes, power stations, electrified catenary, and coal silos. Send \$6 (shipping included) to Al McCracken, 2916 Taper Avenue, Santa Clara, CA 95051.
nd99

FOR SALE

Fairmont MT-19 in excellent condition. Body and motor completely rebuilt. Always kept in building when not on runs. Electric turn table. Canvas side and back curtains. 25 watt radio with head phones for driver and passenger. Luggage rack with metal container for over-night trips. Complete package \$3,900. Motorcar trailer - Tandem trailer with hydraulic surge brakes on front axle. Large enough for two motor cars, also has ramps for loading a vehicle. \$1,900 Both items located in Leesburg, Florida. Contact Wade Myers (352) 326-3191 or (352) 408-0439. nd99

Fairmont Motor Car Symbol 76187, Oran Engine CCKB-MF/145, Chain Drive, partial restoration, new brake system, stainless steel exhaust system, side curtains, extra parts, manuals. \$1,750. Dick Diehm, Kutztown, PA (610) 683-5277. nd99

The Northern Pacific's "Rails To Gold And Silver" Lines to Montana's Mining Camps - Vol.1: 1883-1887. It covers seven of the early branch lines built in Montana under the auspices of the NP. 150 pages, photos, maps, profiles, timetables, branchline reports - \$22.95 plus \$3 shipping. Bill and Jan Taylor, 917 Park View Way, Missoula, MT 59803. nd99

MT-19 Motorcar 1982 CN Railroad 18-hp Onan CCKB twin cylinder, body could use some work, engine and transmission run good, 30+ mpg. We used it on several trips with no breakdowns. \$2,600. Call for details (920) 465-0897. nd99

A-3 Motorcar - Ex-Pennsylvania #95473. Engine completely rebuilt with new parts. All glass is good with windows on both ends. Metal Plate on deck said it was last inspected by the Pennsy on 12-27-66. Pictures available. For sale by bid. Grand Rapids Electric Railway Museum. P O Box 40, Grand Rapids OH 43522-0040. Call (419) 666-4114 for more information. 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

MT-14 Denver and Rio Grande. Excellent condition, no body dents or holes. Open sides. Curtains there, but need to be replaced. Front windshield glass good. New battery. Runs good. All wheels in good shape, over 5/16" on wheel and flanges. Has been cleaned and degreased. \$2,150 obo. It may be possible to deliver to points west of Chicago or in the Chicago area. If interested or if there are questions, please call Warren Chiesa, (630) 258-3877, or write Warren Chiesa, PO Box 0436, Naperville IL 50566-0436, nc99

FOR SALE

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

M-9 All Steel Cab for sale. No window glass. Good condition. Make bid over \$250. E-mail M1308M1@aol.com ro call (606) 325-8035. nd99

Motorcar Curtains - Any size, any color! Beat any advertised price. Stand orders can be done in one week - canvas - vinyl. Dave McClain (530) 346-6949 or mctrain@jps.net nd99

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

MT-19 Milwaukee Road/Fairmont Motorcar #8159. This is a "Tomah" cab car with the red reflective stripes and Hiawatha logo. Two boat seats installed, new brakes, tuneup, and brake lights. Car is ready to run. \$3,500 obo. Contact Rex Roberts (612) 434-9618 or RexR@Nonin.com. nd99

2 Motorcars - Canadian National M-19 motorcar with aluminum cab. Car is in fair condition needing overhaul. Have not tried to even get running. Great Northern M-19 motorcar with classic 2/3 wood cab. This car is reportedly the last motor car run in the Twin Ports under Burlington Northern (non section car). Its motor was run about a year ago but was not operated on tracks. Spare engine for the above two cars (RQB?). Want to sell as a complete lot for \$2,250. Items are located in near Duluth, Minnestoa. Mark Arnold. (218) 384-4463. controlfab@aol.com so99

ST-2 Two Speed Transmission. This has the pressed (not cast) belt pulley. For more information and price call Tom Fisher, Livonia, MI between 6:00 and 10:00 p.m. (local time) (734) 462-9414 so99

FOR SALE

Fairmont M9-G open car, ex-CN. Mechanically and cosmetically refurbished about two years ago. Diamond plate aluminum floor decks. Good healthy ROC engine, new 12-volt system with Delco alternator and 12-Volt Pontiac Coil. Car was operated four times this year with little or no trouble at all. Many new parts and repairs; call or email for complete details. Don't want to sell, however an emergency situation forces the liquidation of a few of my assets. Asking price is \$1,500 FIRM. Pictures available to serious buyers. Car is located in Central Michigan area. Buyer must pick it up or make shipping arrangements. Contact Don Kasbohm at (517) 851-7565 or email MILW8170@dmci.net so99.

Fairmont Curtains - 2 side curtains and 1 rear curtain to be sold as a set. Curtains are new in need of a washing because they were stored. \$300. Contact Don Elliot at A-14, 709 Fitzgerald St., Durand, MI 48429. so99

Small Rail - 18 pieces of 25-lb. per yard rail. They are 18 feet long each and like new. New steel is \$.60 cents per pound. Will sell for \$750. MUST TAKE ALL. Also a pile of miscellaneous rail including 40-lb., 25-lb., and 15-lb., etc., odd lengths - \$500. Large metal lathe for those special motorcar jobs - \$400. John L. Uher, P O /Box 383, Coshocton, OH 43812 (740) 622-4000. *so99

MT-19A Enclosed Cab and an S-2E for sale if anyone is interested. Cars located in Texas. Mark Edwards, Huston, TX (281) 537-1600. so99

Air and Bug Foil For Trailer. Mounts in front of railcar - Custom built in May, 1998. Cost \$563 - Please make an offer - 80 1/2" wide - 22" in depth - 39 1/2" high in front and slopes to 62 1/2" at rear (highest point) Doug Hladek, Cedar Rapids IA (319) 396-6191 hladekb@juno.com so99

Limited Number Of Brand New Fairmont original equipment manufacturer seats. Not a cheap imitation. Walnut vinyl, black hinged tube frame. Back support \$48; seat cushion \$47; frame \$39; or complete seat \$129.95 plus shipping. Clinton Andrews, 892 Beaconsfield, Grosse Pointe Park MI 48230 (313) 822-2000. nd99

Used wheels for M-9. Have four (4). Passes NARCOA Safety Inspections. \$50 each. Complete roof assembly, Fairmont M-19. All aluminum flat style, no holes, good condition. \$200. Left door for MT-19. 31 5/8" wide X 44 3/8" high. Very good condition. Hinge, window gasket and outside handle included. Fiberglass style. \$150. Contact Walter Powell (717) 428-1827. *ja99

FOR SALE

85 Foot, 160 Ton Former Army Hospital Car for sale or trade. It is a heavyweight version, made in 1944 by AC&F. Has good wheels, axles, UC brakes, has been asbestos abated and steam lines removed, couplings are still in car. Body only has minor surface rust, I'm preparing to scale the car and repaint it in a primer coat. Vestibule on one end, blind end on other, has two large wide opening doors on both sides (makes good handicap access), interior removed. Almost ready to start repairing concrete (several small holes where lines went/came through floor). My intentions are to convert into a 60-70 seat coach. External body and roof are good, no holes in roof and only two small (8" x 12") sized holes in outer skin. Can be seen on

www.geocities.com/heartland/fields/5920 Contact: Southeastern Rail Service (757) 588-6579 for more details. so99

MT-14/MT-19 Electric Turn Table Kit. It is manufactured with a 2,500 lb. lift with a 10 1/2" stroke. It has a cast aluminum base the same diameter as factory Fairmont. In up position it is 1/2" higher than Fairmont factory turn table. It rotates on 8 ball bearings. The kit includes all bolts to mount (Grade 8), switch and mounting bracket. Circuit breaker, wiring harness, cross members and brackets. You have to drill four 3/8" holes in existing frame to install. The complete unit weighs approximately 55 lbs. the price is \$450 plus shipping. An electrical warning device is available for \$30, plus shipping. If you have any questions please call: Les King (330) 833-2868 between the hours of 7:00 a.m. and 9:00 p.m. EST. so99

New Products -

F5537 Oilite steel bushings M9, M19, MT19	\$12.50
M20023 Guide Axle Bearing, M9, M19, MT19	\$10.00
H6334 Insulation set 1 1/3/16, M9, M19, MT19	\$25.00
M18931 Spring (hanger pin)	\$1.50
M32739 Brake Pivot stud (flange brakes)	\$12.50
M16379 Offset brake and linter	\$25.00
New S2 brake and linter	\$25.00
New cab fronts with insp-window	\$650.00
Folding seat frames	each \$40.00
Les King, P O Box 164, North Lawrence OH 44666	
Phone (330) 833-2868, Fax (330) 830-5213, Cell: (330) 554-9419. ja99	

Fairmont A-5 Motorcar in excellent shape and was completely rebuilt in 1997. New wood, rebuilt engine, steel top and back, etc. Looks excellent and rides well. Has an extended range gas tank, 17 gallon, and an air compressor system. A set of Nathan P3's are optional with the sale for a few dollars more. Also available is a custom built 16' trailer. Will sell these two together or separate. I am asking \$9,000 OBO for the A-5 and trailer. They are located in eastern Washington State. Matt Regan (509) 745-9010 mregan@nwi.net nd99

FOR SALE

MT-19A Flatop (SP car), car featured on PBS "California's Gold" series '97 McCloud segment. Ready for your summer/fall fun. MT19A-L (UP car), w/turntable. Excellent runner, used last on P&W 9/98. (4) 16" rubber-tired wheels in good condition. Both cars used numerous times in MOW/NARCOA excursions . . . Ready to use NOW!! Bill Evans, Palmdale CA (661) 285-8330. nd99

Railroad Motorcar Trailer \$600, in northern New Jersey. Converted tandem axle SnoBird snowmobile trailer modified for hauling motorcars. Includes two heavy steel "U" channel ramps and hand winch. Trailer handles up to two cars, one MT-14 and one MT-19. Serviced in late summer of 1998, had new wheel bearings and two new tires installed. Will deliver within 150 miles of Northeastern New Jersey. Cash, money order or certified funds only. For other information, Carl R. Ceragno. E-mail callcri@ix.netcom.com or call evenings at (201) 689-1074. ja99

Fairmont Padlocks, solid brass padlocks marked Fairmont. Keyed in pairs, 5/16" shank, made in the USA. Perfect for locking the toolboxes on the front of your Fairmont motor car. Others available. \$20 per pair plus \$3 shipping. Contact Stan Conyer, 9333 West St. Rd. 46, Columbus IN (812) 342-0565 sconyer@juno.com *ja99

Three (3) M-19 ex N&W Group 1, Series F motorcars in different stages. All have fronts and roofs, hand crank, motors turn freely. Pictures available. Cars are located in Jonesborough, TN. For information call The Watauga Valley Chapter of NRHS (423) 753-5797. ja99

M-19 Motorcar CN 142-11, Fairmont No. 243513, Onan CCKB-MF Twin Cylinder. Body needs some attention. Mechanical in excellent condition. Double Chain - Oiler. Serviced regularly. Starts first crank - extra points, condenser, plugs, used regularly to inspect 28 miles of OHIORAIL Track. Must be seen to appreciate, \$2,400. Smitty. (740) 937-2953 e-mail hsrail@eohio.com so99

Carb. Poppet Valves, #EZ-455. \$15.60 each plus \$3 shipping and handling. C-5 and C-8 carb repairs done, very competitive prices with quality work. Contact: Carey Boney, 1605 Powers Road, Wallace NC 28466. (910) 285-7489 ja99

Videos Of Trackcar Meets

New Orleans & Kosciusko RR '99; Apalachicola '99; Meridian & Bigbee with Arkansas Midland '99; Maine Coast 5/99; San Pedro Southwestern with Copper Basin 3/98; Santa Fe Southern with Texas & New Mexico 3/98;

FOR SALE

Lycoming Valley with Union City Industrial & Koppers Tie Plant 5/98;

Quebec City Tour with St. Anne DeBeaupre '98;

Beaupre to Clermont, St. Lawrence River '98

Matapedia to Gaspe, Quebec '98

Northern Vermont & Twin States, NH '98

Peace River to Coppermine, NWT '96

Central Montana with Alberta Prairie '96

CN RR Cabides, Peace R. to Roma Jct., Alberta '96

North Bay to Swastika with Ottawa Valley '97

Copper Canyon, Mexico 3/96

NYS&W Steam fan trip with engine #142, Rutland to

Whitehall and Ludlow, VT 8/98, with Milw steam #261

"Steamtown Plow Extra" 2/96

All videos are 2 hours Std. Play on VHS w/music and narration. \$16 each plus \$3 shipping on 1st tape, additional \$1 for 2nd tape. Buy 3 tapes and get free shipping. Credit card or check. Bill Kozel, 23 Lee Ave., Rexford NY 12148-1209 (518) 399-5836 *ja99

NOTICE

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

Brass Scale Model Fairmont Motorcars are being considered to be produced by a major manufacturer of brass scale model trains. They have chosen the Fairmont M-19 model as the first in a possible series of cars. The M-19 was chosen as the first model because of its popularity with the railroads and hobbyist, and it spans both the steam and diesel eras for modelers. The first model may be produced in two or three scales, 1/48 for Lionel collectors, 1/24 which is popular model car scale (so you could model your pick up truck and motor cars), and 1/32 scale for G scale modelers. The model would likely cost around \$200, and be a limited run by reservation only. They could make it operational (with an electric motor, not gasoline). This project is still in the planning stages and the manufacturer is testing the market to see if it is feasible. Please respond if you might be interested in this product via E-mail to sconyer@juno.com or by mail to Stan Conyer, 9333 W. St. Rd. 46, Columbus, IN 47201. I will give more details as they become available. nd99

WANTED

Fairbanks Morse 40 or 40B speeder wanted, any condition considered. Any lead will be appreciated. Marv Weber PatMarvW@AOL.com or (831) 425-5467. nd99

Generator Drive Pully For S2-T wanted. Part number believed to be M31040. Also belt for same part number F6574. Steve Jones, Lincoln NE (402) 476-3676. nd99

WANTED

Fairmont Motorcar Trailer wanted. Deck condition not important. Would like it to be in California if possible. Marv. Weber PatMarvW@AOL.com or (831) 425-5467. nd99

Wanted: Illinois Central M-9 with ROC engine, cab front and roof, or similar car with IC style cab from other road. Looking for car in fair to poor condition, for ground up restoration (\$750 - \$1,200 price range). Should be mostly complete however, with good wheels. Bruce Carpenter (419) 739-4368 daytime or e-mail bnstf89@bright.net nd99

Wanted - Fairmont RKB motor, all or part. (This is a two-cycle, two-cylinder, water cooled motor for a belt car). I will trade for an Onan CCKB twin and Fairmont transmission. (This motor will fit an MT-14 or 19). Thank You, Smitty, smitty@kachina.net or phone (520) 204-2337. nd99

Wiring Diagram for a M-19 with an alternator. I think there was one in an earlier Setoff. If there is a diagram around, I would like to obtain a copy. Let me know the cost and I will sent the same. Thank you. Bob Torbet, 322 South Kenilworth, Lima OH 45805. nd99

A speeder In Restorable Condition in the Southern California Area. John P. Smith (619) 222-2685 or email at jpsteam@earthlink.net so99

MT-19 Or MT-14 without engine or transmission, or possibly M-19 will do. Would possibly consider ex-Canadian car. Car frame and body should be in fair to good condition. Can pick up within 750 miles of Southeast IA. Jim or Andy Zemlicka, Fort Madison, IA (319) 372-6293. so99

Four 20" Brake Shoes or Liners. John L. Uher, P O Box 383, Coshocton, OH 43812 (740) 622-4000 so99

MT-19, Aluminum Front and Top "side curtain type" running or not or parts car What do you have? send picture if possible. Mert Williams, 1860 Nelson Lane SE, Rochester, Minnesota 55904 (507) 289-1594. so99

Piston, Rod and Bearing For OD-B Fairmont engine. New or new condition complete set. Piston Fairmont No. A1097K, Rod Fairmont No. 51943. Clinton Andrews, 892 Beaconsfield, Grosse Pointe Park, MI 48230 (313) 822-2000. so99

Water Hopper and Cylinder Head for a Fairmont QBA engine. Jarvis Arp, (402) 891-9641. so99

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