

# The CARIBOO



A PUBLICATION OF THE PGE/BCR SPECIAL INTEREST GROUP SOCIETY

Issue 46

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*Inside This Issue:*  
**Working the Six Axle MLWs  
PGE Spurs & Industrial Sidings  
A History of Locotrol on BCR**



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## Cover Photos

Front Cover: A trio of six axle MLWs led by C-630M No. 703 powers a southbound freight train past Gates Lake at Birken on July 20, 1974.

*Photograph by Ray Warren*

Rear Cover: BCOL 1879 carries the markers for Extra 751 North at Mount Currie on March 10, 1985. The caboose was one of only twenty locomotives and several vans to receive the interim red, white and blue scheme.

*Photograph by Brian Elchlepp*

## THE CARIBOO

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## PRESIDENT'S MESSAGE

It is sad to say that this will be the last issue of the Cariboo. We have been struggling over the last two years to curtail the bleeding of membership and the financial costs of putting out the Cariboo. Then there is the problem of no more material in the editor's supply chest to use for another issue, even if we could afford to put it out.

Our group has slowly been shrinking over a number of years. Maybe an indication of the trouble to come was that we could not get enough people to sign up for a planned convention to make it viable a year or so ago. Our membership has shrunk to approximately 125 members that received Issue #45 and there were good number of member's subscriptions that ran out with that issue. In addition, the commercial accounts have been shrinking with the dealers complaining that we were charging too much for the Cariboo and that was with us making nothing on them. A further problem is that the smaller print run results in increased printing costs. It cost us close to \$2000.00 CAD to produce and mail out the last issue. Our intake is not meeting our outgoing!

I have communicated with the Directors, Editor and Treasurer and it was thought best to finish with one more issue rather than to severely cut the quality and try to limp on. One Director suggested that we merge with the CN SIG like the railroad did with CN, but that choice is better left to you, the members.

For those who have internet access there are still the YahooGroups: PGEBCRSig (which I will keep going), BCRailwayModeller, BCR\_Locos, BC\_Rail\_Locos, and BCREquipment where information can still swapped between members.

Paul Crozier Smith

## FROM THE EDITOR'S DESK

This is the end of the line. After a total of 46 issues, our publication has come to an end in print. This decision was not taken lightly; the Directors and the Editorial Team looked very carefully at the options.

For some time we have been experiencing declining membership and a lack of submissions for publication. The reasons most often given for this were the erratic publication schedule and varying print quality. As a result, our goal during 2004 was to establish a regular publication schedule and an improved uniform print quality which would encourage members to renew their memberships and provide submissions to the newsletter. Sadly, our efforts have had no effect.

With memberships expiring and not being renewed, the print run shrank to the point where it is not economically feasible to produce a newsletter on a regular basis and mail it out. Add to that the lack of material supplied for publication, and the writing was on the wall.

The newsletter will change to an electronic format which will be posted to the SIG's website for downloading by members. This will eliminate printing and postage costs entirely. All future submissions should be directed to [pjcrozier-smith@shaw.ca](mailto:pjcrozier-smith@shaw.ca).

As the last Editor of our print newsletter, it is appropriate for me at this time to thank the many people who have made this newsletter possible over the years. This includes past Editors Jim Moore, Paul Crozier-Smith, Brad Dunlop, and Dave Barone. In my brief term as Editor, I wish to acknowledge the efforts of Trevor Mills who has produced the layout for the last several issues, and Manhattan Graphics who have been our printers for the last two years.

Finally, a warm thank you goes out to all of the wonderful people who supplied articles and photographs for each issue. You have encouraged many others to model this unique and wonderful railway.

Timothy J. Horton  
Editor-In-Chief

## SUBMISSIONS

The Cariboo is a publication of the PGE/BCR Special Interest Group, and is designed to provide a forum for the exchange of information relating to BC Rail and its predecessors. The publication relies heavily on material contributed by the membership. There is a constant need for articles and photographs featuring prototypes and models of the Pacific Great Eastern and British Columbia Railway.

All future publications will be available for download from the SIG's website at [www.pge-bcr-sig.bc.ca](http://www.pge-bcr-sig.bc.ca). Submissions should be sent to [pjcrozier-smith@shaw.ca](mailto:pjcrozier-smith@shaw.ca).



# MOTIVE POWER AND NEWS

by Paul J. Crozier Smith

## Motive Power Department News

A seven car Rocky Mountaineer Train with two RMR units arrived at the BC Rail North Vancouver the night of Saturday, February 19th. This was a test train to check running times. The northbound train departed North Vancouver at 0430 and arrived at Prince George at 2320, a run of 18 hours and 50 minutes. The southbound train departed Prince George at 1025 and arrived at North Vancouver at 0500, a run of 18 hours and 35 minutes. The cars on the train were RMR 9270, 5707, 5702, 5704, 3202, 9506 and 9509.

A piece of interesting power has been wandering around BC Rail for the last couple of weeks working off horse-power hours for CN. D&RGW EMD SD40T-2 5401 has been as far south as Mons before going north again and has been as far north as Fort St. John.

C30-7u 3625 was retired in December 2004 leaving only the 3624 left of the ex-BC Rail C30-7u's on the roster. That makes four RS-18u's, four B36-7's and five C30-7u's retired (a total of 13 units) since CN took over BC Rail operations.

Units stored as of February 22 at Prince George are slugs 403, 409 and SD40-2 762, with SD40-2 752 stored at CN Taschereau. BC Rail units on CN are SD40-2's 743, 747, 750, 759, C30-7u 3624, Dash 8-40CMu's 4603-4606, 4609-4612, 4616, 4618, 4622-4624, Dash 9-44CWL 4641, 4644, Dash 9-44CW 4649, 4651 and 4652. CN units on BC Rail are slug 205, SD40-2W 5292, SD40-2 5366, GP9Ru's 7045 and 7244.

With the takeover by CN, BC Rail territory has been seeing some very interesting power. D&RGW (UP) SD40T-2 5401 still resplendent in D&RGW paint roamed over the line for a number of weeks in late February and early

March. Also the March 21st Mackenzie Switcher had BCR RS-18u 628 leading IC GP40u 3137 and B&LE SD45T-2m 909. Another foreign unit wandering over ex-BC Rail territory is NS Dash 9-40C 9309.

April 1, 2005 marked the cutover from the BC Rail computer system to the CN computers. This also marked the end of the car department in North Vancouver.

Rocky Mountaineer Railway sent three units and eleven coaches to North Vancouver on April 5th. This is for a familiarization trip, to be held on April 7th and 8th, organized to include key stakeholders from communities between Whistler and Prince George. The trip will allow 250 invited guests an opportunity to view sections of this spectacular route, operational testing and timing of the Rocky Mountaineer equipment on the route and for further discussions with the communities to identify and develop tourism opportunities that could warrant additional stops along the route. The invited guests as they board the train in Whistler at 0730 from the Whistler train station. The trip will depart from Whistler and arrive in Williams Lake at the end of day one. On the second day, the train will travel north to Prince George. The train will be making brief stops along the way in Lillooet, Exeter and Quesnel. Rocky Mountaineer Vacations (formerly known as Rocky Mountaineer Railtours) offers unique year-round vacation packages. The Rocky Mountaineer will officially begin service on the Fraser Discovery Route in May 2006

There is a rumour that CN will return traffic for BNSF over former BCR track and put robots back in service due to increased tonnage.

Units on CN at the beginning of April were: RS-18u 604, SD40-2's 743, 746, 750, 751, 761, 763, 764, B39-8 3908, Dash 8-40CMu's 4603 to 4606, 4608, 4610 to 4612, 4616, 4618, 4619, 4622, 4624, Dash 9-44CWL 4644, Dash 9-44CW's 4647, 4649 and 4654. CN units assigned to BC Rail territory are: slug 205, SD40-2W 5292, SD40-2 5366, GP9Ru 7045 and 7244.



Stored serviceable at Prince George is slug 401; stored unserviceable are at Prince George are slugs 403, 409, at Edmonton RS-18u's 619, 627 and at Markham SD40-2 762. Other CN units passing through on ex-BCR territory are: Dash 9-44CW 2513, 2517, 2520, 2665, SD40-2W 5263, SD50F 5400, 5421, 5426, SD60F 5501, SD70I 5603, SD75I 5641, 5651, 5705 and 5733.

The Kettle Valley Steam Railway in Summerland, BC saw the day that railfans have been looking forward to since the restoration of ex-BC Rail 2-8-0 3716 began two years ago. On Sunday, May 22nd the 3716 was back in steam, fully restored and ready to steam its way over the historic Kettle Valley Railway line to Trout Creek and return. They backed the train right onto the Trout Creek bridge so that everybody got a good look down. The Trout Creek bridge looked good too. All the work last year getting it fixed up for train and pedestrian traffic has really paid off.

The April 8th Vancouver Sun announced that the Western Canadian Coal Corp.'s Perry Creek mine near Tumbler Ridge was starting to ship its coal.

At 2215 CN Train M35351 of April 10th advised the RTC that their second unit ex-BCR B39-8E 3910 was on fire and that the crew were unable to extinguish the fire. The fire apparently burnt itself out in about an hour. Extent of damage is unknown as is status of the unit.

Effective at 0600 May 1st, the BC Rail RTC office in North Vancouver closed and all of its functions were transferred to the CN Western Operations Centre at Walker Yard. CN OCS was be put into service at the same time the BC Rail OCS was withdrawn from service. Existing BC Rail radio frequencies are to remain the service at this time. The CN RTC Desk breakdown for ex-BC Rail territory is as follows: the S Desk will cover the Fort St. John, Dawson Creek and Fort Nelson Subdivisions 0600-2200 Monday-Friday, the W Desk the Lillooet, Prince George, Stuart, Takla, Tumbler, Mackenzie, Chetwynd Subdivisions and the Fort St. John, Dawson Creek, Fort Nelson Subdivisions 2200-0600 Monday-Friday and all weekend, and the Z Desk-Squamish Subdivision.

Due to the CN derailment east of Kamloops, the Rocky Mountaineer Jasper section ended up going north on the

McBride Subdivision to Prince George then down the ex-BC Rail to North Vancouver, then over to Vancouver. Equipment was RMR GP40-2W 8013 and 10 coaches. The train departed Jasper 0714 on May 3rd, arrived Prince George at 2134. The train then went south May 4th entering Lillooet at 1217 and arriving North Vancouver at 2031.

The track patrols that BC Rail and CN is currently operating will be replaced with Lok-Blok concrete walls and slide detector fences.

Interestingly enough West Fraser Timber, one of the most vocal of the critics of BC Rail and who lobbied for the change, is now complaining of the same thing with CN. Canfor and West Fraser Timber are complaining that they cannot get enough cars to move their products. These two companies are the second and third largest shippers respectively of lumber products.

CN's Alberta link to BC Rail was scheduled to re-open May 31st after years of disuse. CN plans to move grain from northern Alberta to this connection and thus to Prince George and then Prince Rupert.

The June 3rd National Post quotes the president of Fording Canadian Coal Trust as saying that the re-opening of the Quintette mines near Tumbler Ridge is on the front burner. Quintette is now owned 60/40 by Fording and Teck-Cominco. Factors in the decision will include rail capacity, and here Quintette has an advantage because the line to Prince Rupert has plenty of excess capacity. On the downside is the possibility that China might invest in some mega-project mines and rush them into production within a couple of years, thus driving down prices. The world price of steelmaking coal is about triple what it was in 2003, which has sparked the renewed interest in the business after two decades in the doldrums. The Fording president said that much of the infrastructure and plant at Quintette is still in place and could be reactivated quickly.

Work is now underway at the West Coast Railway Heritage Park to reactivate Royal Hudson 2860 for occasional service. You can follow the progress of 2860 at [www.wcra.org](http://www.wcra.org).



# WORKING THE PGE/BCR SIX AXLE MLWs

by

Bradley O. C. Dunlop and Brian A. Elchlepp



C-630M No. 701, the first of the six axle MLWs, leads a southbound freight train past the station at Pemberton on August 7, 1976.

*Photograph by Ray Warren*



## The Arrival of the C-630

In the summer of 1969, the Pacific Great Eastern embarked on a major horsepower upgrade to their locomotive fleet. As had been the case in the past, the order for the new power was placed with Montreal Locomotive Works. The first of the 12-cylinder units delivered were numbered 701-704 and came designated as the C-630M. The C stood for Century (the early-sixties based Century line of Alco designed locomotives), the 6 stood for six-axle units (each axle with its own traction motor), the 30 stood for 3,000 horsepower and, the M stood for built in Montreal.

Wow, 3,000 HP, it seemed like such a big deal at the time. I recall waiting at the Lillooet Station for a trip to North Vancouver on the Budd Cars with some friends and the newly minted 701-702-703 pulled up on an afternoon northbound. Sitting out on the platform looking up at these behemoths was an impressive sight. "We are looking at 9,000 horsepower right here," I proudly told my pals. I continued, "These three engines will do the same job it takes five or six of the old ones to do". It was definitely one of those "Man and His Magnificent Machines" types of moments.

From a mechanical and exterior point of view, the major differences between the Schenectady and Montreal built locomotives were the trucks and air intakes. The High Adhesion trucks on the American built locomotives had a different traction motor arrangement that offset the centre axle.

The traction motors on the Canadian built units were all mounted from the same side negating the need for offsetting the centre axle. Aside from evenly spaced axles, the side frames were also distinctly different on the Dofasco trucks. The air intakes changed over time not only with manufacturer design upgrades but also during various in house rebuilds and therefore many variations existed.

A subtle difference that retired engineman Gordy MacDonald recalls is the fact that the first four big MLW's, C-630M #701 - 704, had air starters that would take your ears off when you started them. The M-630 fleet came equipped with the much quieter electric starters.

## Working the Big MLW Kitchen

From a personal point of view, the only thing I did not like about the first four units was the fact that there was not a "shelf" below the two centre windows in the cab. The interior of the cab followed the same angled lines of the windows. While this made for a little more room in the cab, there was nowhere handy to put the dinner preparations when whipping up a gourmet meal on the cab hot-plate while en route!

The later conventional cab M-630 units, numbered 705-722 all had the short hood coming right into the cab. This created the above-mentioned, triangle-shaped shelf. Aside from the culinary aspect, the other convenient feature of the shelf was that it created a handy spot to lean on when standing.

Sometimes it would be just nice to get out of the chair and stretch a bit, especially after being on board for many hours. It helped a guy stay alert. It was also nice whenever there was a third person riding in the cab. A "chair" consisting of an overturned five-gallon oil pail recycled into a garbage can gets you right where it hurts after a while! I learned about this right away while doing my "student trips" upon entering the train service.

Before we get too far away from the topic of onboard food preparation, it was a very important aspect of the job. With the distances covered and the relatively slow track speeds the train crews would usually be on duty for most if not all of the mandatory 10-hour period.



Sometimes the entire crew would "tie-up on hours" after ten and sometimes they would continue to their destination while receiving more pay. The hogger was independent from the conductor and trainman so there was occasionally a mixture of those tying-up and those remaining active. Other times crews would "double back". This would put you onboard a train for 14 to 20 hours and always put the crew to an endurance test.

Given these time frames and the fact that you were usually travelling through isolated areas you always had to be sure to have enough food to see you home. Most everyone carried a well-stocked cooler with them. If there was a long enough layover at the away terminal the crews would usually take advantage of the proper kitchen facilities available. However, a short or no layover would have one preparing their meals on the train.

Depending on the individual's skills mealtime could be as basic as a can of beans (always an interesting choice in a confined space such as the cab of a locomotive) or as extravagant as a T-bone steak with all the trimmings. All cooked on the single hot plate in the cab. (The tail end crew had better facilities for this sort of thing but we are talking about locomotives here.)

When I first started I used a rather large Styrofoam cooler that had an undocumented feature of a flyaway lid. Aside from the lid, it was as sturdy as one would expect a large Styrofoam cooler to be. The price was right though so I used it anyway. It was always a bit of a struggle getting the thing up and down the stairs on those big units and that ultimately led to its demise.

We were going southbound into Lillooet and, for a change, did not have to bring our power "back to the barn" (shop). The Lillooet operator was to drive down to the clay bluffs and pick up the head end crew. For some reason the hogger was in a hurry to tie-up and told me to go ahead and get off at the station. He thought it would save some time if I could drop off both of our coolers

while I was at it.

Being in hurry he did not slow down as much as I would have liked but not wanting to look like a wuss, I was not about to object. He had one of those well-constructed steel Coleman coolers and I dropped that one off first. It was not mine so I ignored the sparks. I had to quickly climb back up and grab my cooler and of course, the lid flew off and under the train.

Once I dropped it on the platform it immediately ripped open, spilling the contents all over. At least there were no sparks. By the time I had disembarked, most of the platforms real estate had been used and one could see where I had been. The mess was cleaned up before the tail end arrived and I thought the worst was over.

When the conductor saw me, already signing the Register, I then realized the worst was not yet over. You did what! He asked. Shut up and nod your head, I said to myself, it would be over soon. At least I was not written up but that was something I would never do again. No matter what, stay with your train boy, stay with your train.

### **Working the M-630 – Workhorse of the Railway**

By the sheer numbers, the eighteen M-630 locomotives delivered between 1970 and 1973 supplied the majority of mainline horsepower for the railway for the next ten years. Popular with the crews, they were a good fit for the railway.

Due to the track conditions north of Prince George they were limited to operating on the Squamish, Lillooet and Prince George Subdivisions during their earlier years of service. Since less than half of the 3,000 hp fleet was equipped for lead remote control service the power sets would typically be serviced and turned at both North Vancouver and Prince George.



If you have ever wondered why an M-630 such as the 719 had her photograph published so often it was because she was one of the Locotrol equipped lead units.

Given that the big MLWs came equipped with the same GE electric governor as the preceding four-axle units, they also had the same prompt throttle response and associated black smoke emissions. The good throttle response combined with an equally good tractive effort allowed a hogger to get up to track speed in relative short order. With 100 car northbound trains that consisted mostly of empties it would only take about ten car lengths to get up to track speed when departing Lillooet. Occasionally, after one of these sprint type starts, a less talented hogger would not get their train slowed down enough for the tail end crew to board the caboose at the station and the train order operator would have to scramble and drive them up town and catch up to their train at one of the level crossings!

During a discussion at the 1997 BCRH&TS convention in Squamish, author and Canadian Pacific locomotive engineman, John Garden mentioned that part of the reason the BCR crews liked them so much was due to the slower track speeds.

When the CPR tried running the big MLWs out west with the associated higher track speeds one often had the sensation that you were not going to make the curve. With the short nose and cab centered with the trucks the occupants were further forward than in the cab of a RS-18 for example.

Apparently at CPR's track speeds this was the root cause of the feeling that you were going straight over the bank until the front truck completed the follow through into the curve. Given the amount of tight curvature on the PGE/BCR it is just as well the track speed was slower or these big units may not have lasted as long as they did.



Extra 721 South is seen at Hart on the Chetwynd Subdivision on June 7, 1985. M-630s Nos. Nos. 721 and 716 are wearing the railway's initial red, white and blue paint scheme for diesel locomotives.

*Photograph by Brian Elchlepp*





The sound of screaming Alco 251 fills the air as Train No. 14 slugs its way up the 2.2% grade through Tisdall on 11 March, 1985. Over 22,000 hp is needed on this day to push and pull the loads over the grades south of Darcy. Up front are M630 #719, M630W #726, M420B #RCL681 and C425 #807. Interestingly, #726 was the first unit to receive the final version of the two tone green paint scheme and #719 was the last of the 630s to receive it.

*Photograph by Brian Elchlepp*



56 cars back from the head end consist were four more 630s working that week on the "Pemberton Push". C630#702, M630W 730, M630 706 and M630 709 are shoving hard on the grade. The pushers were cut into the train at Darcy and will be cut out at Mons. Interestingly, this crew would swap out some of the pusher power at Mons, as #14 traded the 726 for 702 and 730 from the pusher set.

*Photograph by Brian Elchlepp*



## Working the Pavilion Relief

In 1973, I was part of a Lillooet based crew called on to relieve the "on hours" crew of a Southbound at Pavilion. I cannot recall who the rest of the relieving train crew were but the engineer was Earl Swart.

We took a taxicab from Lillooet to Pavilion and the plan was for southbound hogger to stop the train just north of the road crossing in order for the head-end crew change. This would be a routine easy-money trip that would have us home and tied-up in a few short hours.

We watched as the train cruised past the crossing. It did not come to a complete stop until the three M-630's and the first several cars were blocking the crossing. We knew the engineman was an ex-CN hogger who had spent his entire career on the Prairies before coming to the railway after retiring from the CN.

He did not have a great deal of experience with the type of grades found on the railway and, as Earl pointed out when I called him about this story, did not really have adequate training either. When it became clear he was not going to stop as planned, I can recall Earl saying, "I hope he's still in First Service". Unfortunately, the engineman made too heavy of a reduction on the air brake system and that caused us some problems.

The minimum reduction, also known as first service, is 7 pounds. Depending on the tonnage usually up to an additional 3 pounds is needed. Therefore, the total braking force would usually see a reduction total of about 10 pounds plus the locomotive dynamic braking for control of a train on the 2.2% grade.

Earl tried to get us under way but he dynamited the brakes immediately. This was followed by a sudden lurch forward before we again came to a complete stop roughly opposite the old Pavilion General Store. The good news? We did not have a runaway on our hands. The bad news? We would not be going anywhere anytime soon.

I felt comfort in knowing that I was working with a man with much experience with these mountainous grades and knew I was in good hands. I acted immediately when Earl barked out the orders to set the hand brakes on the first 20 cars of the train. This took me by the mixture of crews that was now sitting in the taxi waiting for the tail end to arrive. Of course they wanted to know what was going on so I gave a brief explanation on my way to getting all of the handbrakes set. The "on hours" tail end crew were at least able to get updates on the railway's local radio channel one.

Between the engine brakes and the handbrakes the train was now stable and Earl was able to begin recharging the air system. It took about 20-minutes for the train airline to be fully recharged to 90 PSI. Once this was done, a 60-second air leakage test was successfully completed and the air brakes once again set to the first service reduction.

We would have to pull the train downgrade into Lillooet but it certainly beat the other option. I heard the whistle telling me it was okay to commence releasing the handbrakes. As I worked my way back to the locomotives I realized that we had been blocking the crossing for well in excess of our allowed five minutes. Vehicle traffic was being backed up.

As Earl pointed out when talking with him recently about this incident John Q Public had no idea what was involved with running a train. They think you just get in and start driving! For the folks held up at the crossing this was just another inexcusable delay caused by the railway. For the train crew it was just another narrow escape on the hill.



## Working the Seton Relief

When the crew dispatcher placed the then standard two-hour call in the early evening I just assumed one of the regular night trip crew to Williams Lake had booked off. Working the spare board was like that so I did not even ask. After reporting in I was surprised to find all of the regular crew for the northbound had also signed in. It was then I found out that a train crew on a northbound out of North Vancouver were on hours and tying-up in Seton. The engineman had decided to take the extra pay that came with him staying behind the throttle on to Lillooet.

I had time to run home and place the perishables from my ill-fated Styrofoam cooler into the fridge and get back to the Station before dead heading to Seton on the evening southbound. Since it was a short trip on a warm night I did not bother with a jacket and only grabbed my gloves and lantern on the way out the door.

Although somewhat crowded with five people on board instead of the usual two it was nice riding in the caboose for a change. The southbound held the main but was much shorter than the siding so I was dropped off at the north switch with a flare to stick into one of the long switch stand ties while the train continued on to just clear the south end of the passing track.

There was no moon that night and once the caboose rounded the corner and its rear track inspection light disappeared from sight it was very dark indeed. Having worked as a track patrolman along this whole area I knew that wild animals were very commonplace and this gave me an uneasy feeling. The battery in my lantern probably should have already been replaced so I could not use it for long, so what does one do? I reasoned that since the northbound was already nearing Seton when I got off the caboose he would be along soon so I went ahead and lit the flare. They burn for several minutes and give out plenty of light so feeling reassured I relaxed and waited for "my" train.

I finally saw the headlight approaching and this pretty much coincided with the final bit of light the prematurely lit flare produced. As he approached and while I was climbing the steep ladder up the M-630 I could hear orders being barked at me without being able to clearly hear what was being said. The northbound engineman was none other than the legendary "Lefty" Morgan and I got a bit of a lesson that night. "Lefty" was a pretty cool customer but I soon found why he was so respected/fearred by many employees and management alike. In a calm manner, but with a tone that had the ability to cut through just about anything he gave me a come-uppance I have never forgotten.

First, of course it was about the flare and how I had placed my fellow crewmembers safety in jeopardy, as they could not easily see just where the north switch stand was along with any tripping hazards that may be around it. To this end he slowed the train down to five miles per hour in order to give the tail-end man a good chance to complete his task safely.

Much to my chagrin this also gave him a chance to concentrate on me. He knew who I was as I had patrolled for him many times when he was on the Budds and I believe that was the only reason he did not stop the train right then and there. Once he finished about the flare he asked, "Where are your tools?" I motioned to my gloves and lantern sitting on the floor beside my chair. "Where is your employee Time Table?" I knew what he was getting at and fear struck my heart. On this night my Time Table was tucked away in my cooler, which of course was at home.

He knew the rules like few others and he knew he could refuse to work with an improperly equipped member of the train crew. I am sure he quite enjoyed seeing me squirm and by the time the conductor had given him the "highball" he pulled the throttle instead of the brake lever. Even though it was a warm summer night I have never felt so cold as I did in the cab of that M-630 for the return trip to Lillooet. Never again would I report to work without all of my tools.



## Working the M-630W

The delivery of the M-630W followed the M-420W and soon everyone had plenty of opportunity to experience them. History would show this was the last major design change of the big MLW locomotives. It did not take that long for the opinions on them to start rolling in, however.

The deal with the wide cabs was the head end brakie generally liked them but the hoppers generally ranged from dislike to downright hate. It seems they were designed with input from CN hoppers and were built for comfort...as long as you were going forward. The controls were further away from the window and particularly when performing many forward/reverse switching operations were hard on the guy running the thing, as they had to reach further while looking backward.

Another thing about them, when compared to a conventional cab, was the head crew losing visual contact with each other when the brakie left the cab via the front door. Usually the hopper would go light on the whistle when the brakie was riding on the front porch but I was almost deafened during a meet in Quesnel (by another piglet, there were lots of them then). I got the south switch then rode into town on the front end and (at least the story was) by the time the actual meet occurred both the hopper and piglet had forgotten I was out there (they could not see me) and let go the whistle full blast. I went back into the cab and said gosh, golly, gee-wiz (or something to that effect), that whistle sure is loud. Of course, this was long before all crewmembers were routinely radio equipped and most head end, out of cab communication, was accomplished via hand signals, whistles and visual contact.

In addition to this the speedometer was located smack dab in the middle of the cab, right above the front windows. Anytime the hopper would take some liberty with exceeding

the track speed the evidence was right there in front of the brakie. Of course the brakie could always use the mile boards, his watch and the employee time table to

calculate what the average speed was in miles per hour but having the speedo right there kind of left some of the hoppers feeling somewhat naked. We all wanted to get over the road as quickly and efficiently as possible but there were some enginemen who seemed to feel that train speed was entirely their domain.

So not unlike when the low nose RS-18s first showed up with the lights trucks that rode hard, the hoppers comfort prevailed. After enough complaints had been lodged, the wide cabs were routinely marshalled into the middle of the (usually three M/C-630 units) lead power consist or cut in as one of the remotes. Nor were they equipped with the Locotrol technology. I recall a couple of times when the hopper concocted some reason why the wide cab had to be switched to the middle of the pack en route just because he hated them so much! On another occasion with a wide cab leading southbound we picked up another unit at Lime and rather than place it in the rear of the power consist the engineman choose to place it as the leading unit. This was all permissible so long as the number boards and any class lights/flags were still displayed on the unit listed as the lead unit in the Train Orders.

## Working the Big MLWs Some Loved Them, Some Hated Them

Just like the four axle MLW units before them, the six axle Schenectady-originated, Montreal Locomotive Works-built locomotives had an indomitable effect on those who worked with them. For some that was an unpleasant experience and their departure was considered as "good riddance".

Of course there were always some folk who did not really care one way or another. For them a locomotive is a locomotive and as such, merely a means to an end. However for so many others it was pure adulation from the day they were delivered to when the big MLWs passed into folklore in the early 1990s. Just like the thick black smoke rolling out of the exhaust stack when the throttle was cracked, notch eight, the edict of "beauty is in the eye of the beholder" could never hold truer.





# PACIFIC GREAT EASTERN RAILWAY

(Squamish Subdivision)

## Spurs and Industrial Sidings (1938 - 1952)

Compiled from Employee Timetables

by

Greg M. Kennelly

Mileage	Timetable Date	54 June 20/38	57 Oct. 1/39	60 Sept. 30/46	62 Sept. 1/47	65 May 30/49	67 June 11/51	70 Apr. 14/52
7.0	Name Connected No. cars	Brackendale South end 3	Brackendale South end 3	Brackendale South end 3	Brackendale South end 3	Brackendale South end 3	Brackendale South end 3	Brackendale South end 3
7.5	Name Connected No. cars			Gravel Pit South end 45	Gravel Pit South end 45	Gravel Pit South end 45	Gravel Pit South end 45	Gravel Pit South end 45
9.3	Name Connected No. cars	South end 2						
22.0	Name Connected No. cars			North Shore Log'g Both ends 44	Nascou Mills Both ends 44	Rubble Creek Lbr. Both ends 26	Rubble Creek Lbr. Both ends 26	Rubble Creek Lbr. Both ends 26
23.1	Name Connected No. Cars			J. Harper North end 2	J. Harper North end 2			
23.2	Name Connected No. cars		Dickey South end 1					

Mileage	Timetable Date	54 June 20/38	57 Oct. 1/39	60 Sept. 30/46	62 Sept. 1/47	65 May 30/49	67 June 11/51	70 Apr. 14/52
29.8	Name Connected No. cars				Barak Sawmills South end	Barak Sawmills South end 19		
30.8	Name Connected No. cars	Thompson North end 1						
33.4	Name Connected No. cars					Brandywine Log. North end 15	Brandywine Log. North end 15	
33.8	Name Connected No. cars	Thomas (mill) South end 12						
34.1	Name Connected No. cars					Brandywine Log. Both ends 14	Brandywine Log. Both ends 14	
34.3	Name Connected No. cars			Clarke Lbr. South end 6	Pickard Lbr. South end 6	Neiland Lumber South end 6	Clarke & McClure South end 6	Clarke & McClure South end 6
36.9	Name Connected No. cars			Keeley Lumber South end * 7	Keeley Lumber South end* 7	Keeley Lumber South end * 7	Keeley Lumber South end* 7	Keeley Lumber South end* 7
38.3	Name Connected No. cars	Iron Ore South end 56				Iron Ore South end 56		
39.8	Name Connected No. cars	C. Lundstrum South end 3	Lundstrum South end 3	C. Nygard South end 2	C. Nygard South end 2	C. Nygard South end 2	Alta Lake Lbr. South end 2	Alta Lake Lbr. South end 2



Mileage	Timetable Date	54 June 20/38	57 Oct. 1/39	60 Sept. 30/46	62 Sept. 1/47	65 May 30/49	67 June 11/51	70 Apr. 14/52
40.7	Name Connected No. cars	Sowerby North end 2	Lundstrum North end 2	C. Lundstrum North end 11	C. Lundstrum North end 11	J. Smith North end 10	Alta Lake Lbr. South end 10	Alta Lake Lbr. South end 10
42.2	Name Connected No. cars			Keeley Lumber <sup>1</sup> South end 19	Keeley Lumber <sup>1</sup> South end 19	Keeley Lumber <sup>1</sup> South end 15	Alta Lake Lbr. <sup>1</sup> South end* 13	Alta Lake Lbr. <sup>1</sup> South end* 13
42.7	Name Connected No. cars	Hume & Rumble South end 2	Hume & Rumble South end 5			Soo Valley Lbr South end 5	Soo Valley Lbr. South end 5	Soo Valley Lbr. South end 5
44.8	Name Connected No. cars			Robert Green South end 3	Robert Green South end 3	Robert Green South end 5	Robert Green South end 5	Robert Green South end 5
47.6	Name Connected No. cars					Jamieson Const. North end 2		
48.5	Name Connected No. cars					Western Plywood North end 6		
59.7	Name Connected No. cars	South end 4	South end 4	Churchills South end 7				
64.4	Name Connected No. cars	Owl Creek South end 9	Owl Creek South end 9	Owl Creek South end 9	Owl Creek South end 9	Owl Creek South end 9	Owl Creek South end 9	Owl Creek South end 9
72.6	Name Connected No. cars	Poole Creek South end 8		Poole Creek Lbr. South end 6	Poole Creek Lbr. South end 6			

Mileage	Timetable Date	54 June 20/38	57 Oct. 1/39	60 Sept. 30/46	62 Sept. 1/47	65 May 30/49	67 June 11/51	70 Apr. 14/52
75.1	Name Connected No. cars			Thos. Greer South end 3	Thos. Greer South end 3	Thos. Greer South end 3	Thos. Greer South end 3	Thos. Greer South end 3
79.4	Name Connected No. cars			W.C. McMurray South end 2	G. Gimse South end 2	G. Gimse South end 2	Blackwater Tbr. South end 2	Blackwater Tbr. South end 2
83.2	Name Connected No. cars		Dickey North end 3	A.C. Devine Lbr. North end 12	Blackwater Tbr. North end 12	Blackwater Tbr. North end 12	Blackwater Tbr. North end 12	Blackwater Tbr. North end 12
83.3	Name Connected No. cars						Blackwater Tbr. Both ends 4	Blackwater Tbr. Both ends 4
90.5	Name Connected No. cars						Timber Preservers South end 1	Timber Preservers South end 1
101.0	Name Connected No. cars			Seton South end 8	Seton South end 8	Seton South end 7	Seton South end 7	Seton South end 7
101.4	Name Connected No. cars	Seton South end 11	Seton South end 15					
102.7	Name Connected No. cars					Gravel Spur South end 7		

Notes: \* Connected off siding  
1 Parkhurst Mill





The railway began its Locotrol operations in 1970 with the use of robot cars coupled to the mid-train locomotives. **RCC 2** is seen mid-train at Porteau in June 1973.

*Photograph by Greg M. Kennelly*

## THE HISTORY OF LOCOTROL ON PGE/BCR

by  
Urs Hitz

### Acknowledgement

Many thanks to Bob Deno, retired BC Rail employee, who through many interviews and e-mails, supplied most of the information for this article.

### Different Ways To Move Tonnage Over Mountains

In addition to the locomotives operating at the head end of the train, BC Rail utilized unmanned mid-train locomotives to move the heavy southbound trains up the steep grades across the various mountain ranges.

The alternatives to helper engines are shorter or reduced

tonnage trains or to run the trains up the hill in sections. All these solutions are economically unattractive. They will increase operating costs and cause line congestion.

During the steam era double-heading was commonly used on steeper grades. The locomotives were usually in sight of each other and whistle signals were used for communication between the lead and the second engine. A few cars were sometimes placed between the engines in order to prevent bridge overload conditions.

Placing all the engines up front caused a new problem: with heavier trains the couplers became over-stressed, breaking the train in half. There was also the chance that some of the cars could be pulled off the rail on sharp curves.



## **The early days of Locotrol**

Using a pusher at the rear of the train or a mid-train helper was more complicated prior to radio communication, since the only way to communicate was by whistle signals. Often the engines were not in sight of each other and the helper crew had to have a detailed knowledge of the line to anticipate the moves by the head-end engineer.

When diesel-electric locomotives came into use helper operations needed to change.

The diesels have a much higher starting tractive effort than steam locomotives but steam locomotives were able to sit stalled without ill effects. When stalled, the high current in the DC traction motors of the diesels caused burns on the commutators in a very short time.

Fortunately reliable radio communication came into use about the time diesel locomotives were introduced. This form of communication replaced the whistle signals and the engineers were now able to co-ordinate the engines by voice radio communication. This still required a crew in each locomotive.

## **Locotrol**

In the mid sixties a remote engine control system known as Locotrol appeared on the scene. Locotrol gave the lead locomotive engineer the ability, via radio commands, to control unmanned locomotives. The helper engine could now be placed in the most effective location in the train.

This is known as distributed power (DP) and offers several advantages. The extra compressor capacity reduces brake line charging time. Since the remote engine repeats the automatic brake setting the brake application and release is faster, reducing the stopping distance. Low speed train handling is improved through the ability to make faster brake applications and running releases. The draft forces at the front of the train were significantly reduced and there is less coupler run in/out. Power is used more efficiently and overall tonnage capability is improved.

Locotrol was developed from a SCADA (supervisory control and data acquisition) system designed by NEC to remotely control electrical power distribution and pipelines. Radiation Inc, with the help of Southern Railway, modified the system to control railway locomotives. This company later merged with Harris Intertype Corp., a provider of printing and teletype equipment which is now a part of GE.

The Locotrol 105 system started road tests in 1963. In 1965 Southern Railway was the first commercial user of Locotrol equipped engines.

In Canada, Canadian Pacific Railway began testing of Locotrol in the fall of 1967. Their objective was to use Robot Cars and mid-train helpers on their coal train operation between the Kootenays and the Lower Mainland.

## **Locotrol comes to the PGE/BCR**

PGE/BCR introduced Locotrol to its operations in 1969 when 3000 hp MLW C630, 703 and 704 were delivered with lead-unit Locotrol 105-SS equipment. SS denotes "Solid State"; this was an upgrade version that did away with the relay logic used earlier.

Rather than building new cars to house the receiver equipment, remote control cars were converted from surplus engines. Remote Control Car 1 (RCC 1) was converted from Spokane, Portland & Seattle (SP&S) 210, an Alco FB-2 1600hp B-unit. Often first generation B-units were converted although CP Rail used box-baggage cars formerly used in head end passenger service. By this time the B-units started to be phased out of service and became readily available. By using locomotives the required air brake piping and MU connectors were already in place and only the engines and generators had to be removed.

In the winter of 1969/70, under the direction of Bob Deno, the Squamish shop undertook the RCC 1 conversion. Bob had recently been promoted to the position of Junior Diesel Inspector to assist in the construction of the car and oversee the implementation of the Locotrol Program. Radiation Inc. personnel assisted with the installation of the Locotrol equipment and the subsequent qualification of the system.



## Diesel Inspector

In the days before integrated circuits and microprocessors, the 105-SS equipment required a lot of space. The discrete components were mounted on printed circuit boards and the boards were plugged into card frames housed inside the large steel cabinets.

The logic cabinets contained the "brains" of the system. They performed similar functions on both the lead and remote units, transferring commands and information between the two, as well as controlling the radio programmer logic at each station. On the remote unit, the components in the interface cabinet reproduced the 74 VDC control signals (engine controls) to the locomotive trainlines. The brake rack took care of the pneumatic signals on the remote.

On the lead unit's control console, the system displayed the status of the remote.

RCC 1 was also equipped with a bunk bed, oil stove and a chemical toilet. This enabled the Diesel Inspectors to travel with the car in order to familiarize themselves with the operation of the equipment, and also inform the enginemen and their trainers of conditions and events in the remote unit.

When the car was not required for Locotrol service the railway had planned to utilize it by Mechanical Forces to accompany locomotives out on the road but this never happened.

Power for the remote Locotrol equipment was initially supplied through an additional DC power receptacle from the helper engine. There were no batteries installed. However, this proved too much trouble and batteries were retrofitted on RCC 1 and also on all future RCC cars.

RCC 1 left the shop painted in PGE's two-tone green livery. With SP&S210 PGE also acquired SP&S868, an Alco FA-2 1600hp A-unit. To the amazement of the Squamish shop forces, the locomotive was still in serviceable condition. It was renumbered ALX868 and put to use assisting a northbound freight out of Squamish. However, the help was short lived. The engine blew before the train reached Cheakamus, less than an hour out of Squamish. The intent was to convert the FA-2 to RCC 2 but this never happened. The Alco was later scrapped.

By 1957/58 the installation of reliable radio voice-communications on the PGE was completed. From that date on all the dispatching between stations, locomotives and cabooses was done by radio. Diesel Inspectors were brought on duty to offer assistance, via radio, to the enginemen when locomotive problems occurred out on the road. Their duties also included following up on repairs. If the faults were intermittent they were required to ride along and try to pin-point the problem. A Diesel Inspector also was present on the first trip of a freshly overhauled locomotive to ensure that all the equipment was in proper working order.

When Locotrol equipment was introduced, the Diesel Inspectors were given the added responsibility of maintaining the new equipment up to and including the modems. The Communications Department was given the job of maintaining the radio equipment.

Most Inspectors had an electrical background, yet they had trouble understanding the Locotrol logic circuitry. They were used to tracing out a circuit but had difficulty with the multiple paths of logic circuitry. The electronic digital logic used to make Locotrol work was a completely new concept to most of them.

The Locotrol maintenance manual comprised of a section called "Introduction to Digital Logic". This explained the workings of the gates, flip-flops and other components that made up the circuits. For fail-safe reasons, Locotrol utilized 12 volt "negative true logic". This means 0 volts represents "true" or a logic "1" and +12 volts represents "not true" or logic "0".

The Inspectors had to become very familiar with this section before they were able to do any meaningful troubleshooting. In the beginning they had to struggle through this on their own, because PGE's management approach was to first expose the maintenance personnel to Locotrol for more than a year before they were sent away for training.

Initially, Bob Deno was sent to the CPR in Revelstoke to sit in on one of the in-house training courses. He recalls that the CPR used a different approach. They had appointed about ten Diesel Inspectors and all had been sent to school in Florida twice before they were expected



to work on the equipment.

After Locotrol had been in operation on the PGE for a year, the first Diesel Inspector was finally sent to Harris in Florida for a two-week factory-training course. Bob remembers that he was the second Inspector PGE sent to Harris. By that time he had worked with Locotrol for about 2 years.

## **RCC 1 – Initial Testing**

By February 1970, RCC 1 was ready to be road tested. The initial operation on the Squamish Subdivision was used as a training exercise both for operating crews, supervisors and maintenance personnel. The shop forces had to learn how to qualify the equipment for a trip and how to disable it on arrival.

For the first six months Diesel Inspectors essentially lived on RCC 1, riding it between North Vancouver and Lillooet to ensure the equipment was working properly. A logbook was used to keep a record of all occurrences on RCC 1. This also helped to keep the fellow inspectors up to date.

RCC 1 (and remote helpers) were of little help on the northbound trip as the cars were virtually all empties. RCC 1 was often cut in right behind the head-end power from North Vancouver to Squamish. In Squamish it was sometimes placed behind the picked up cars, or left on the head end all the way to Lillooet.

On the trip back to the coast RCC 1 and remote helpers assisted the heavy southbound trains over the steep grades. North of Lillooet the grades for southbound trains are not so severe and not until after more Locotrol equipment (leads and remotes) were acquired in 1971 did Locotrol operation extend north to Prince George.

## **Problems Encountered**

As with all new systems a few bugs had to be worked out. There were problems caused by a loss of radio signals due to the terrain. Other problems were caused by glitches in the logic circuitry.

The interface cards (train line sensing) proved very prone to failure. A test box with indicator lights was carried on

the train as a diagnostic tool. Test leads were plugged into the card's test jack and the test box light pattern gave a good indication about the card's health.

At first, faulty cards were sent to Harris in Florida. The turn around time was very long, which meant a large stock of spare cards was required. Later on, the railway purchased a simulator for the Squamish shop. It consisted of a complete Locotrol set, including the lead unit, remote unit and a sequencer. The sequencer acted as the artificial engineer, stepping the Locotrol system through the operation cycles (starting, stopping, brake application etc).

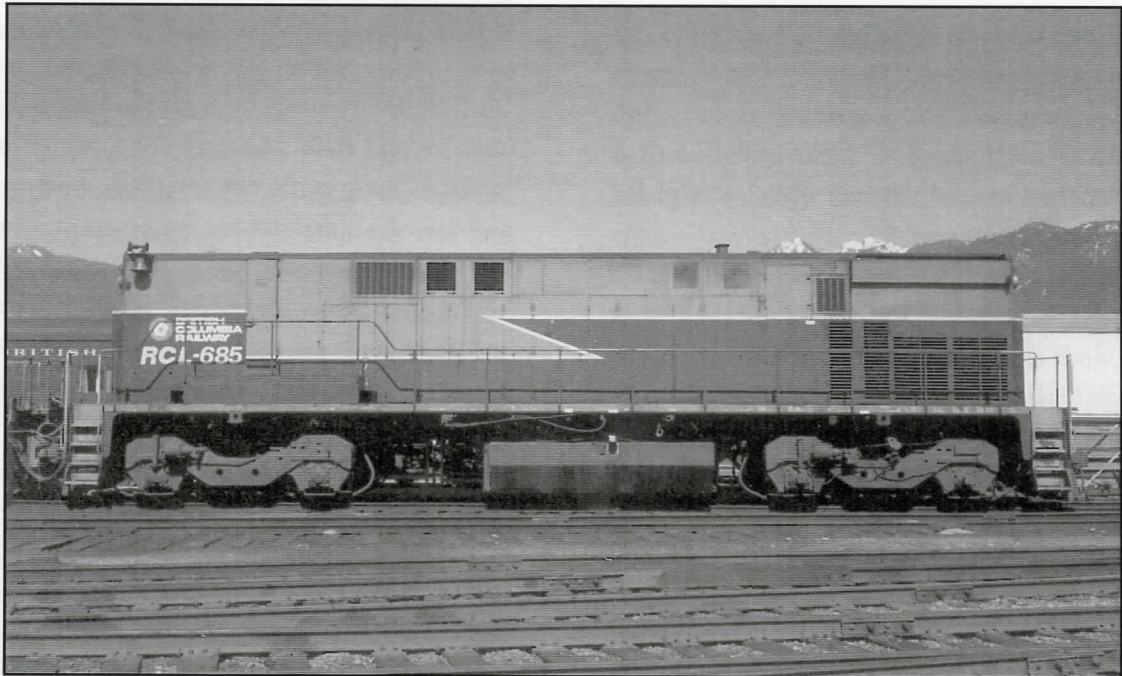
The complete suspect cabinet was removed from the locomotive or RCC, connected to the simulator and tested. Replacing the whole cabinet kept road equipment down time to a minimum. After time maintenance personnel became more familiar with the electronic circuits, and with the acquisition of an oscilloscope, the simulator and other troubleshooting tools, repairs were done in house. Bob Deno recalls that the first time they were able to diagnose and repair a faulty card everybody was very pleased.

Sometimes a fault caused the mid-train helper to shut down on a grade and stall the train. This meant that the train had to back down and double the hill.

At the outset of Locotrol service lower horsepower locomotives (1600-1800 hp) were used as remotes and the 3000 hp units were MU'ed at the head end. Because of the different tractive effort curves of the two types of locomotives, maximum effort was reached at different speeds. This could possibly lead to a train separation. To overcome this problem these lower horsepower units were moved up front and MU'ed with the lead 3000 hp locomotive. A second 3000 hp locomotive was used as a remote helper.

Spare knuckles are carried on all the locomotives to facilitate quick repair. When a separation occurred, a knuckle was dropped off the lead locomotive. The train then pulled ahead until the trailing car reached the spare knuckle. If the broken knuckle was on the car behind the separation, the knuckle was put on the trailing car, to be carried back. The trainman did the change out and rode the train back to couple the tail section. It was bad enough to have to walk back along the train and isolate the brake line, without having to carry the spare knuckle





In 1975 the railway acquired eight cabless M-420B locomotives equipped with Locotrol remote stations, which eliminated the need for a robot car on the train. RCL-685 is seen at North Vancouver on April 5, 1985.

*Photograph by Timothy J. Horton*



Later, the railway removed remote stations from the robot cars and installed them in second-hand SD40-2 locomotives. RCL 741 is seen at Squamish on September 5, 1987.

*Photograph by Timothy J. Horton*



on his shoulder.

There was an incident in the North Vancouver yard involving a remote locomotive runaway. With the Locotrol 105-SS system it was possible, through a series of circumstances, to power up the remote consist when it was physically separated from the lead consist. As a result of this incident circuit modifications were made to the remote units, and the operating procedure for handling remote units was made more stringent.

### **More RCCs and RCLs**

In the spring of 1972 RCC 2 was converted from CN6854 (MLW 1600RPB). RCC 3 and RCC 4 were converted from former CP4455 and CP4456 (CLC 1600RFB's) and were out-shopped. The first four RCC's were originally painted in the two-tone green scheme with the PGE map herald.

Compared to RCC 1, minimal living facilities were installed. The Diesel Inspectors would use these facilities when they were commissioning the new Locotrol equipment or running specific tests on the equipment. The chemical toilet on RCC 1 never worked properly, and was left off subsequent cars.

In 1975 RCL 681-688, the 2000hp cab-less M420B from MLW, appeared on the BCR. They were the first remote units that came with factory installed Locotrol 105-SS receivers.

During the first few years of operation the use of the equipment became very sporadic. The dispatchers did not like to use Locotrol because of the extra time required to switch the equipment in and out of the train. The enginemen shied away from it due to a lack of familiarity. This made the implementation of every day operation difficult. Because of the complexity, it was difficult for the Diesel Inspectors to become familiar with the control system and keep the knowledge current.

Bob Deno recalls that the Mechanical Department had to harp on it, that if Operations did not start using it, nobody would ever become comfortable with Locotrol.. On the other hand, CP Rail was using Locotrol on the new coal train operation. Management was very dedicated to the system and operations had to make it work.

For BCR there also were obvious operational advantages to using Locotrol, but management's dedication was not behind it. BCR's dedication to Locotrol equipment finally changed for the better in 1980 when the BN remote units and the SD40-2s entered service.

### **SD40-2**

Burlington Northern (BN) and its predecessors got involved with Locotrol at an early date. BN used it mainly on coal trains out of the Powder River Basin. However, a serious accident occurred and Locotrol equipment was implicated as a cause. As a result of the accident BN made the decision not to utilize Locotrol any longer. The remote control cars were sidelined and offered for sale.

In 1980 BCR ordered twelve SD40-2's from GM in London, Ontario. The specification called for 6 lead units and the other 6 remotes.

Around the same time, BCR management learned about the sidelined BN equipment. Bob Deno was sent to Missoula, Montana to inspect the remote control cars. BN installed the Locotrol receivers in converted EMD F series B-units, which were in very good condition. Bob recommended that the Locotrol receivers and the cars should be purchased. He also inspected the lead unit equipment in the engines operating out of Alliance, Nebraska. These were also in very good condition and BCR was able to purchase this equipment at a very good price. To prevent the remote control cars from being vandalized on their transfer to Squamish Bob Deno and Al Groinus, another Diesel Inspector, rode the cars on their way back.

The lead unit equipment was sent to GM for installation in the new SD40-2s. The BN remote control cars were renumbered and repainted in BCR colours. BN RCU106 to 109 became RCC 5 to 8 and BN RCU111 and 112 were renumbered RCC 9 and 10. In December 1986 RCC 5, 7 and 8 were sold to CP Rail.

The computer system used by the Accounting Department was only able to handle a 4-digit locomotive number. For this reason road number RCC 10 was discontinued in February 1987 and the retired RCC 1 number substituted in its place.



In 1986 seven used SD40-2's from Kennecott Copper were purchased. Locotrol remote receivers, removed from several of BCR RCCs, were installed in the new locomotives. The units were renumbered RCL 736 to RCL 742. The following year more second hand SD40-2's were purchased from Oneida & Western. The first three of these units also received Locotrol remote receivers.

### **Dash 8, Dash 9**

When the first GE Dash-8s were purchased, BC Rail asked GE Harris if it would be feasible to enhance Locotrol so that each unit had lead and remote capability. GE Harris replied that this had never been done but they were willing to upgrade the system as long as BC Rail contributed part of the development cost. BC Rail agreed and this made BC Rail the first railroad using Locotrol II Universal.

In the fall of 2000 the last order of the Dash-9s were put into service on BC Rail. This batch used Locotrol EB (electronic brake). The older Locotrol II equipped locomotives received upgraded software to make them compatible with Locotrol EB.

The main difference is Locotrol EB's ability to control up to four remote locomotive consists distributed throughout the train. To access the various indications, menus and functions, a 2 display screen Operator Interface Module has replaced the separate Locotrol II Operator Control Console. The screens are part of the regular Dash-9 cab display.

With the introduction of Locotrol EB, the direct mechanical connection between the automatic brake control in the cab and the brake valve has been replaced by an electric interface.

### **Locotrol Operations Today (Early 2004)**

For mostly economic reasons explained below, the regular use of Locotrol equipped trains on the Fort St. John to North Vancouver corridor has been discontinued as of May 2001. I received various explanations from BC Rail employees why the system is not in use anymore.

The decision on whether to operate the train convention-

ally or use DP is determined by the amount of tonnage to be moved. DP is mandated when the tonnage exceeds the maximum haulage capacity of three Dash-8/9's or four SD40-2's (11000 tons). Placing additional power up front to handle heavier trains will exceed the maximum allowable draw bar force on the grades. This could trigger a train separation.

For southbound trains operating out of Prince George the extra tractive effort of DP is only called for on the southern portion of the journey, on the 2.2% grades between D'Arcy and

Birken and from Pemberton to Mons. During the rest of the journey and on the northbound trip mid-train power is not required. This decreases the locomotive utilization. The "Pemberton Pusher" is used to provide the additional horsepower needed to conquer the two grades.

To marshal DP into the train, the operating rules dictate that the Locotrol consist has to move as a unit. This means that the remote locomotive is coupled to and controlled from the lead locomotive by a qualified engineer.

When BC Rail started to equip yard engines with remote control (Beltpack\*), the Beltpack operator replaced the qualified locomotive engineer on the yard crew. At BC Rail, the Beltpack\* operator is only certified to operate dedicated yard engines and is not qualified to move road locomotives. When making up a train, in order to move the Locotrol consist, a regular locomotive engineer has to be called in.

It also requires additional time to marshal the remote engines in and out of the train.

Until the end of BC Rail, only southbound trains on the Fort Nelson Subdivision still regularly used distributed power. Six SD40-2 locomotives were required to climb the grades out of the river valleys. The controlling grade of 1.9% was encountered after the Elleh Creek crossing. On the lighter northbound trains, the distributed power was normally cut in behind the three lead locomotives.

*\* Beltpack technology is a computer based locomotive remote control system (LRC). It allows the operator to control a receiver equipped locomotive with a portable control unit. This is not to be confused with the Locotrol system.*



# ROSTER OF PGE/BCR LOCOMOTIVES EQUIPPED WITH LOCOTROL

Compiled by  
Urs Hitz & Timothy J. Horton

Number	Builder	Model	Built	Acq'd	Ret'd	Locotrol Stn.	Notes
703-704	MLW	C-630M	1969	1969	1990	105-SS Lead	
710-714	MLW	M-630	1971	1971	1990	105-SS Lead	1
717-722	MLW	M-630	1972	1972	1990	105-SS Lead	
681-688	MLW	M-420B	1975	1975	1998	105-SS Receiver	2, 3
751-756	GMD	SD40-2	1980	1980	2004	105-SS Lead	4, 5, 6
763-767	GMD	SD40-2	1985	1985	2004	105-SS Lead	7
736-742	EMD	SD40-2	1978	1986	1995	105-SS Receiver	8
743-745	EMD	SD40-2	1979	1987	2004	105-SS Receiver	8
4601-4622	GE	Dash 8-40CM	1990	1990	2004	Locotrol II Universal	
4623-4626	GE	Dash 8-40CM	1993	1993	2004	Locotrol II Universal	
4641-4644	GE	Dash 9-44CWL	1995	1995	2004	Locotrol II Universal	
4645-4654	GE	Dash 9-44CW	2000	2000	2004	Locotrol IV EB	

The retirement date given above refers to the last unit of the group withdrawn from service. Units listed as retired in 2004 were in service at the time of the CN takeover in July 2004 and were transferred to CN.

### Notes

1. 711 lost in Seton Lake 29 February 1980; salvaged in 1988 and scrapped in 1990.
2. 681-688 were assigned the RCL prefix and were numbered RCL-681 to RCL-688.
3. Receivers removed from 681-684 in 1987 and installed in SD40-2 locomotives.
4. 755 damaged in derailment at Mile 473 on 18 June 1984; retired and scrapped.
5. 751-754 upgraded to Locotrol II Universal in 1992-1993.
6. Lead Locotrol station removed from 756 in 1992-1993.
7. 763-767 upgraded to Locotrol II Universal in 1992-1993.
8. Used Locotrol Receivers removed from Nos. 681-684 and retired RCC Cars.



# PRODUCTS OF INTEREST

by Timothy J. Horton

In this issue we have a few new locomotives and freight cars to tell you about. Some of these are on the way, and others will be in hobby shops by the time you read this.

## N Scale

**Athearn Trains – A Division Of Horizon Hobby** (1550 Glen Curtiss Street, Carson, California U.S.A. 90746 Website: [www.athearn.com](http://www.athearn.com)) has announced the production of 50' combination door boxcars for BC Rail. These models will be finished in BCR Dark Green with the interim BC Rail logogram. They are not prototypical cars, but offer a ready-to-run option for modellers. Two road numbers will be offered. Item numbers are ATH11141 & ATH11142. List price is \$13.98 USD and they are due in September.

Athearn has also announced their NACC boxcar in schemes for Mountain Pine and Triangle Pacific. [Editor's Note: This is not a prototypical car for Mountain Pine, but is fairly close for Triangle Pacific.] The Mountain Pine cars are ATH10684 and ATH10685, and the Triangle Pacific cars are ATH10686 and ATH10687. MRSP is \$15.98 USD.

**Atlas Model Railroad Co.** (603 Florence Avenue, Hillside, New Jersey, U.S.A. 07205 Website: [www.atlas-rr.com](http://www.atlas-rr.com)) will re-release their popular 33,000 gallon tankcars in 2005. Of interest to BCR modellers are the black ACFX 17000 series cars. The new road numbers are ACFX 17435 (#37004) and ACFX 17440 (#37005). These are the fourth and fifth road numbers issued for this model. MSRP is \$16.95 USD and delivery is expected in August 2005.

The re-issues of the BCR 53' Evans double door boxcars and the BC Rail 50 foot piggyback flatcar with 40 foot trailer are now in hobby shops.

**Deluxe Innovations** (PO Box 4213, Burbank, California, U.S.A. 91504-4213

Website: [www.deluxeinnovations.com](http://www.deluxeinnovations.com)) has announced the release of their shallow rib woodchip gondolas for the Chattahoochie Industrial Railroad with CN reporting marks. These are the black cars with yellow panels at each end, a red and blue CIRR logo, and the slogan "Better By A Dam Site". The cars were sold to CN and for many years have been seen going in and out of the Fibreco facility in North Vancouver. Seven road numbers will be offered.

**Lifelike Canada** will release the second run of Canadian C-424 diesel locomotives in January 2006. Of interest to BCR modellers is the CN version, which will have a corrected rear end with notches and corrected battery boxes. Two versions will be offered: CN No. 3218 in the CN noodle scheme and CN No. 3208 in the stripes. Retail price will be approximately \$95.00 USD.

In early 2006 we will also finally see the N scale RS-18 from Lifelike Canada, which includes a version in PGE orange and green.

**Micro-Trains Line Co., Inc.** (351 Rogue River Parkway, P.O. Box 1200, Talent, Oregon U.S.A. 97540 Website: [www.micro-trains.com](http://www.micro-trains.com)) has released two British Columbia Railway cars to date this year. Item # is BCOL 990198, a 40 foot boxcar with sliding door decorated in a unique white and black scheme with dogwood logogram. This car was employed in company service between Squamish and Prince George. MSRP is \$22.50 USD.

Item #10500050 is a reprint of the 50 foot gondola in green with dogwood logogram. The road number is BCOL 9061. The list price is \$17.70 USD.



**Columbus Trainmaster** offers ready-to-run packaged lumber loads to fit your N scale Red Caboose centre-beam cars. The kit consists of two halves which simply pressure fit onto the car. Numerous lumber companies are represented, and the range is expanding. Of interest to BCR modellers are loads for Canfor, Finlay Premium, Riverside, Slocan, Tolko and Westfraser. The loads sell for \$8.35 USD and are available for sale through Pacific Western Rail Systems (Toll Free Number 1-866-840-7777 Website: [www.pacific-western-rail.com](http://www.pacific-western-rail.com)).

## HO Scale

**Athearn Trains** – A Division Of Horizon Hobby (1550 Glen Curtiss Street, Carson, California U.S.A. 90746 Website: [www.athearn.com](http://www.athearn.com)) will produce a ready-to-run GE C44-9W diesel locomotive in August 2005. Product number ATH80883 and ATH 80884 are BC Rail 4645-4654 series engines in the blue and silver paint scheme. [Editor's Note: These models do not have the correct cab configuration – the correct cab can be obtained from Kaslo Shops Distributing.] List price is \$94.98 USD.

Athearn will also release two BC Rail combination door boxcars in September for \$15.98 USD each. They are in Dark Green with the interim BC Rail logogram. Again, these are not prototypical cars, but offer a ready-to-run option for modellers. Item numbers are ATH92840 and ATH92841.

Athearn has also announced their NACC boxcar in schemes for Mountain Pine and Triangle Pacific. [Editor's Note: This is not a prototypical car for Mountain Pine, but is fairly close for Triangle Pacific.] The Mountain Pine cars are ATHG4464 and ATHG4465, and the Triangle Pacific cars are ATHG4466 and ATHG4467. MRSP is \$24.98 USD.

**Atlas Model Railroad Co.** (603 Florence Avenue, Hillside, New Jersey, U.S.A. 07205 Website: [www.atlasrr.com](http://www.atlasrr.com)) will produce a special run of Canadian prototype RS-3 locomotives for Canadian Hobbycraft. Included is BCR No. 576 in two tone green with dogwood logogram. The run is limited to 100 units.

The cost will be approximately CAD \$140.00 and the anticipated release date is August 2005.

The re-release of Atlas' popular 53' Evans double plug door decorated for the British Columbia Railway is now in hobby shops.

**Fraser Valley Models** (47 Taylor Drive, Toronto, Ontario M4C 3B4) has announced two new offerings in its line of resin kits:

FV-1b is a kit for the BCR/PGE Series 9591-9690 70 Ton Vancouver Iron Chip Car and will retail for CAD \$25.00 plus shipping. The kit comprises a set of highly detailed HO resin castings including the floor, sides and ends. Instructions with adequate detail illustrations are included.

FV-12a is a kit for a BC Rail M.O.W. International Welding Truck Utility Body & Detail Set which will retail for \$30.00 CAD plus shipping. The kit includes castings for the utility body and various detail parts including dual Hi-Rail wheelsets, front bumper with hydraulics, gasoline-powered compressor and diesel driven welding machine. The modeller must supply an HO scale Herpa truck. Instructions are included.

You can contact the manufacturer for a flyer with further information on these kits.

**Kaslo Shops Distributing** will release all variants of their long awaited HO scale M-420 kits in July. The fuel tanks will be available as separate items. These resin body shell kits come with etched parts and are designed to fit on the Atlas B23-7 chassis.

Proto 1000 will re-release their Thrall Door Boxcar for several Canadian roadnames. There will be four road numbers each for Canfor, Lignum and McMillan Blodel. The cars will be available individually or as a four-pack. MSRP is \$23.99 USD and delivery is expected in March 2006.



## O Scale

Atlas O has their Alco C-425 Phase I locomotives due to hit hobby shops soon. The BCR and Mountain Pine Evans 53' double door boxcars should already be there.

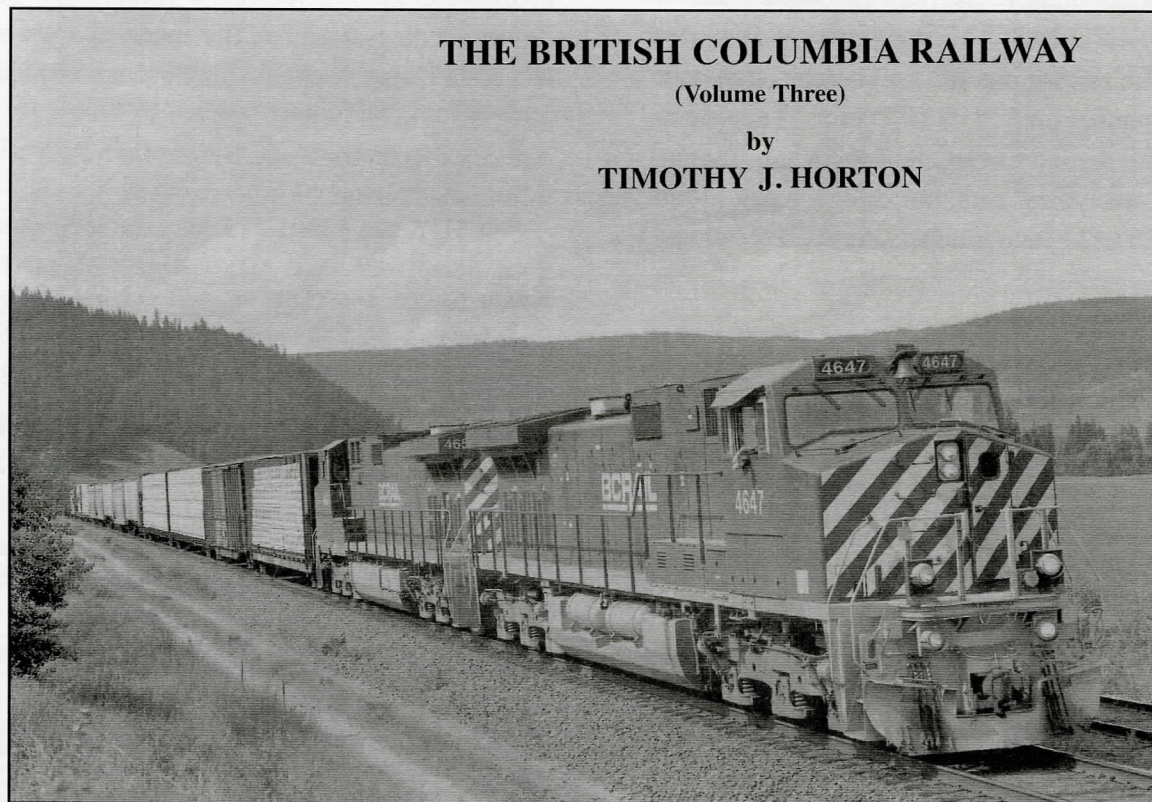
## Other Products

**B.R.M.N.A. Publications** (5124-33rd Street N.W., Calgary, Alberta, CANADA T2L 1V4 Website: [www.brmna.com](http://www.brmna.com)) has published The British Columbia Railway (Volume Three). This 30 page book is the final instalment of a six volume series and covers the railway's equipment and operations from 1990 to the end of independent operations in July 2004. The large format black

and white photographs cover all subdivisions and all motive power delivered since 1990. The book can be ordered online at [brmna@brmna.com](mailto:brmna@brmna.com) or by calling the publisher's hotline at 1-800-340-3108. Cost is \$16.00 CAD plus shipping and handling (plus GST/HST in Canada).

**Hundman Publishing, Inc.** (13110 Beverly Park Road, Mukilteo, Washington, U.S.A. 98275 Website: [www.hundman.com](http://www.hundman.com)) will release a hardcover book by Dale Sanders titled Northern Light: A Pictorial of BC Rail in 2005. MSRP for the all-colour book is likely to be approximately \$75.00 USD.

Available Now. . .



Published by the British Railway Modellers of North America, 5124 - 33rd Street N.W., Calgary, Alberta, Canada T2L 1V4. Additional copies can be obtained from the publishers for \$16.00 plus shipping and handling (plus GST/HST in Canada)





C-630M Nos. 703, 702 and 701 are seen at the North Vancouver diesel shop shortly after delivery on August 2, 1969. The horns have yet to be relocated above the bell.

*Photograph by Ray Warren*



M-630W No. 728 is at the head of a southbound freight train at Mons on August 18, 1974. The three M-630 pushers led by No. 713 have been cut out of the train and are coming down the siding to return the head-end brakeman to the front of the train.

*Photograph by Ray Warren*



