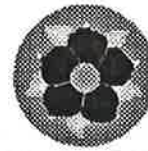




The CARIBOO

Published by the BC Rail Historical & Technical Society



Issue 11

January 1993

NEWS ITEMS

Compiled by Jim Moore

BC Rail's "Royal Hudson" operation steamed its way to its first ever operating profit in 1992. 2860 carried 91,000 passengers during the summer season, the greatest figure since Expo 86. By contrast, the 1991 summer season closed with 75,500 passengers. ("Carrier"/WCRA "News")

BC Rail's Intermodal Service recently won two contracts that will create seven jobs and bring in more than \$800,000. The Williams Lake hog fuel (chip) haul contract and the lumber haul contract for Canfor (out of Fort Saint John) were awarded to BC Rail in November. ("The Coupler")

The issue of BC Rail caboose usage has reach arbitration. Currently, freight trains on BC Rail lines operate with either reduced train crews (two trainmen) or full crews (three trainmen). BC Rail would like to have a conductor-only cabooseless train where there will be only one trainmen on each train. ("The Coupler")

BC Rail's fleet renewal continues, and the 1993 car orders have begun. Fifty new 100-ton pulp cars have been ordered from Nova Scotia's Trenton Works; and 100 new 73' centerbeam cars have been ordered from National Steel Car. (WCRA "News")

Late 1992 found the rock gang working on a \$300,000 project to upgrade the three Garibaldi-Cheakamus tunnels. It's all part of the multi-year tunnel stabilization plan under the strategic plan (see "Cariboo" #8 for further details).

The Tumbler tunnels were upgraded in 1991, and the gang will move on to Azouzetta this year.

Tasks include profiling the arches and

shotcreting. This work will strengthen the tunnels and protect BC Rail trains from falling rock. To prepare the tunnels for shotcreting, the current rock clearances must be increased. BC Rail is using a giant sanding machine known as a roadheader. Picture a backhoe with a special rock breaking cutter-head attached to the boom. The cutter-head is composed of tungsten-carbide tips that rotate to "shave" away excess rock.

BC Rail is using one of only three Canada-based roadheaders, the original of which cost more than \$250,000 to build.

Bill Steller, Supervisor Bridges and Buildings, says he's impressed by the work performed by the roadheader. "The alternative was to drill and blast the rock, but that would have been very dangerous with these tunnels because the integrity of the rock is poor. There's a possibility that if we blasted, the tunnels could collapse." ("The Coupler")

BC Rail's passenger service (Budd cars) had a record year in 1992. More than 107,000 passengers were carried. This figure represents an improvement over 1991, the first year (since 1958) that the operation carried more than 100,000 riders. BC Rail marketing officials credit the ridership upsurge to good weather and an aggressive marketing strategy. ("Carrier"/WCRA "News")

For the first time in BC Rail history, a program has begun to replace steel ties with hardwood ties. Work crews have replaced nearly 1600 steel ties with more than 2200 hardwood ones. This work was undertaken on four of the worst curves in the Williams Lake area. ("The Coupler")

The BC Rail Drafting Department recently reached a milestone. Since the days of the PGE, they have produced 30,000 drawings. Now that's a lot of pencils! The drawings include bridge structures, buildings, crossings, gradings, trackage,

gravel pits, rock quarries, etc.
("The Coupler")

June 11, 1992 was a rather remarkable day as far as passenger service is concerned on BC Rail. It marked the last day of the special spring fare (\$100: North Van-Prince George, and return). Due to the associated heavy passenger load, Train #2 arrived in North Vancouver one hour late--but with a fantastic consist: BC-33, BC-23, BC-12, BC-21, BC-30, BC-31, BC-10, BC-14, and BC-11. That's 9 of the 11 serviceable Budd fleet cars!

(Paul J. Crozier Smith)

Accepting dimensional load shipments on BC Rail is a well "measured" decision, particularly if the shipment has to go through the Squamish and Lillooet Subdivisions. The track in these areas goes through 14 tunnels and at least 10 rock cuts. That makes it difficult for a high and wide load shipment to pass without slow orders or restrictions. BC Rail engineering is working on some of these problems with the use of modern rock cutting equipment and tools. (See related story above.) These efforts will provide wider clearances, which will eliminate stops and load inspections. ("The Coupler")

The first month of utilizing the mobile yard repair concept (in the North Vancouver Yard) has been successful. With normal traffic flow, BC Rail crews were able to maintain an almost zero bad order count. Fewer bad order cars results in more track available for switching. ("The Coupler")

October saw the first Burlington Northern traffic via the CN interchange rather than via a cross-harbour barge. This development has also resulted in more (North Vancouver Yard) trackage available for switching. ("The Coupler")

The BC Rail Metal Fabrication Shop recently bought a new computerized Thermal Cutting System. This machine eliminates the need for manual template

making. That speeds up production and makes the Company more competitive in the contracting marketplace. ("The Coupler")

The Squamish Metal Fabricating Shop has also been busy turning out centerbeam conversion kits. These are used for converting bulkhead flat cars. CP Rail has ordered 100 kits, clear proof that BC Rail innovation can be sold to other companies. (Paul J. Crozier Smith)

"Bad order" cars formerly stored in the Lillooet south yard were recently cut up for scrap and hauled to the Hart Scrap Pit just outside Prince George. ("The Coupler")

THE TEAM

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CLOSING DATE FOR OUR NEXT ISSUE IS
FRIDAY, MARCH 26, 1993.

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MOTIVE POWER NOTES

EDITED BY PAUL CROZIER SMITH

A number of diesels are still operating in some form of the two-tone green colour scheme. These include RS-18s (601-605, 612-613, 619, 621-622, 626, 628, 630), C420 632, M420 644, SD40-2s (753-754, 756), and C425s (902, 811). The remainder of the motive power fleet is believed to be in the red/white/blue scheme.

CAR SHOP

The May 1990 issue of "Model Railroading" featured an article by Patrick Lawson on modeling the stake cars used by BC Rail. Patrick offered dimensional information for these cars in the magazine's October 1992 edition, which also included HO scale drawings.

The first run of Andy W. Scale Models' "Super Model Series" which features an HO scale BCR caboose is expected to be delivered in February to those customers who placed advance reservations. This first release was produced in two versions and three paint schemes. A PGE scheme will follow later this year.

The first run of the company's HO scale

combination door boxcar is now sold out. A second run is planned for later this year, and will include PGE and BCR dogwood colour schemes.

Andy W. is presently accepting "no money down" reservations for these future releases.

The models are complete and feature a professional quality paint job. Price of the caboose (in any available scheme) is \$190.00 Canadian. The next run of boxcars (in any scheme) is priced at \$110.00 Canadian.

Andy W. Scale Models may be contacted at 7706 Windsor Street, Vancouver V5X 4A5.

Many moons ago, an inquiry was made as to some of the "foreign" car reporting markings noted within BCR consists. Carter Cram reports that QC denotes Quebec Central and NOLK is for the Northwestern Oklahoma Railroad.

Andy W. Scale Models has a new HO scale multi-use decal sheet available for modellers interested in painting freight cars in the current BC Rail colour scheme.

By using this sheet, modelers can do FIVE different cars: a double-door box, a bulkhead flatcar, a TOFC, a centerbeam, and a 3-bay hopper. All data, numbers, logos, and lube plates are included. In addition, each package contains diagrams to assist with proper decal placement, painting data, and appropriate model kit applications.

Print appearance is sharp and overall quality is in keeping with Andy W's previous decal release.

A second sheet featuring additional freight car applications will follow in a few months. Andy W. plans to do decal sets featuring the BCR dogwood scheme and PGE schemes.

FOCUS:**FABRICATING BCR STAKE CARS**
by Laszlo Dora

British Columbia Railway uses a fleet of approximately 400 welded steel stake cars primarily for transporting logs, poles and pipe. There exist four numbering series consisting of the 10000 (one car only), 10001-10150, 10151-10300 and 16000-16105.

Series 10001-10150 and 10151-10300 built by National Steel Car are the basis for this article. Series 16000-16105 are bulkhead flatcars with added stakes (as far as I am aware). Canadian Pacific Railway also uses similar stake cars which are numbered 305560-305609. (Editor's Note: The 16000-16105 series still exist, but have been renumbered to 11000 series. The date of renumbering is unknown. Cars 11011 and 11024 have been photographed.)

The Company Store at 25a Hamilton Road, Cambridge, New Zealand produces a white metal kit for a modern 55 foot steel skeleton car. This kit sells for about \$13.00US and is most easily obtained with a credit card mail order. With modifications, this kit can be altered to a car very similar to those of BC Rail and CP Rail.

The advantages of using the CS (Company Store) kit compared to scratchbuilding or using Model Die Casting logcar frames is the significant reduction in construction time, simplicity of construction and a fairly adequately weighted car that will remain on the track.

In this article, a review will be made of the various possible modifications to the CS kit so as to convert it to prototypical dimensions. Modellers should refer to the prototype or colour photographs. One source for photographs is Andy W. Scale Models at 7706 Windsor St., Vancouver, B.C. V5X 4A5, Canada. He offers photographs of BCOL 10047 and 10082, both painted in light green and CP 305605 painted black, at \$1.50 each. (Editor's Note: The Oct. '92 issue of Model Railroading has a dimensional drawing of BCOL 10048. The photo of 10048 is B&W, but the actual colour is red. Also, the May '90 issue of MR has a Patrick Lawson article on modelling these cars.)

Prior to starting the conversion, carefully straighten out any bent castings and remove flashings and marks from unaligned mold joints. These are mainly found on the sills of the spark arresting platforms, the stake assemblies including the portion that sits on the frame and the sides of the main frame beam. In the same process file off the flanges of the beam since new ones will be added. Press the platform ends against a hard surface to remove warpage should it be present. Fill the brake wheel, grab iron and ladder pin holes.

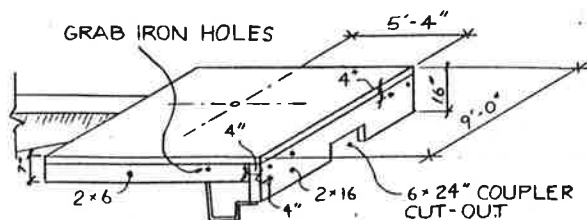
Outlined are a series of steps that were carried out in the conversion of two kits. On one of the conversions not all of the alterations were undertaken, thus feel free to add the amount of detail desired. For ease of construction it is the best to follow the outlined sequence.

STEP A - PLATFORM SILLS AND BRACES

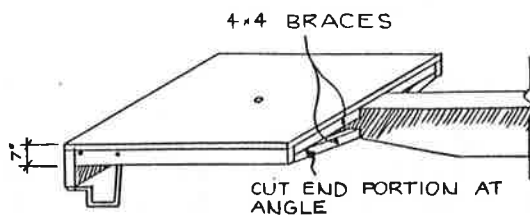
The dimensions of the CS platforms are fairly close to those of the prototype. The two items that require attention are the sills and the width of the platform since on the actual car the stakes protrude, thus making a distinctive feature. This feature is easily modelled by removing the sills and rebuilding the platform to the

correct width. If the width of the platform is not to be adjusted, the twelve inch deep sill maybe filed to seven inches and then the sill lengthened to 16" in depth, leaving a notched out area for the coupler. Refer to Sketch #1.

If the platform is to be adjusted, remove about eight inches of material (including the previously noted sills) from the platform sides and end, but not from the side where the beam intersects. On the side where the beam intersects break off the protuding sills, then carve and file so as to be flush with the underside of the platform. Laminate a larger than required piece of .015 styrene onto the top of the remaining platform and build new sills based on the information noted on Sketch #1. Sketch #2 shows the bracing that is added in front of the inner ends of the platform, where the sills were removed.

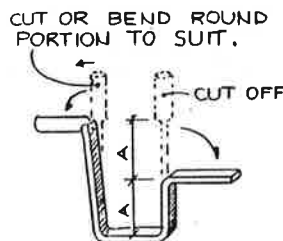


SKETCH 1
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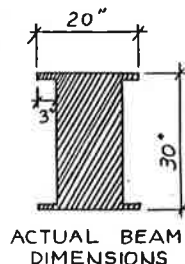


SKETCH 2
N.T.S.

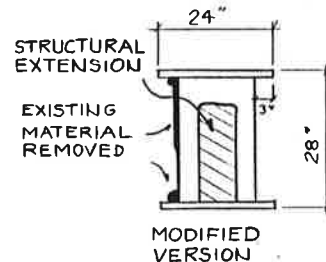
It should be pointed out that the platform will be about five inches longer than on the prototype but this is required in order to have the wheels clear the braces. On the prototype the platform is 9' 11" long. Grab irons should be located four inches away from the platform top and sill edges as noted on Sketch #1. For the stirrups, use "A-Line" #29000 and adjusted as illustrated on Sketch #3. Glue on with "Superglue" and then strengthen with epoxy.



SKETCH 3
N.T.S.



SKETCH 4
N.T.S.



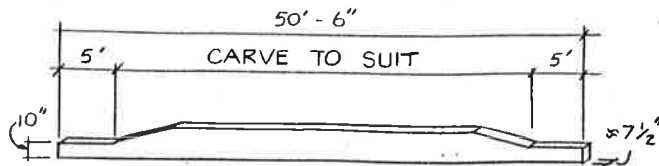
SKETCH 5
N.T.S.

STEP B - FRAME ELONGATION

The car frame/beam maybe extended using various techniques but the following method will produce prototypical flanges and greater beam depth, which is quite a visible element on the prototype. Sketch #4 illustrates the dimensions on the prototype and Sketch #5 shows the modified version.

For the extension, use a hard wood such as oak and cut to the dimensions as shown in Sketch #6 (a popsicle stick has the correct width but is not strong enough). Test fit the extension and mark the areas that have not been dimensioned and cut as required. Glue the two platform halves together using epoxy, making sure that everything is plumb level. The bolster centers should be 52' 1" apart. Once the epoxy has set, shave any protuding wood or epoxy that may interfere with the flange installation. Prior to

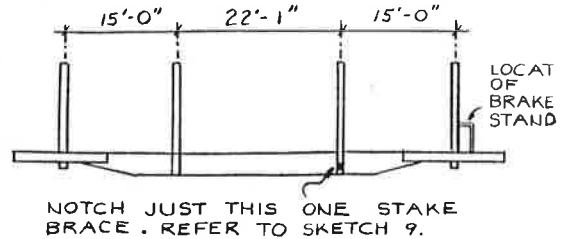
installing the flanges, build up the missing portion of the frame sides using styrene and filler putty. File all four sides of the frame beam so that the extension is an integral part of the assembly. The flanges may now be installed. Notch the top flange 15" from each bolster center and test fit the two mid-car stakes. Sketch #7 shows the spacing to the stakes. Sketch #7 shows the spacing to the stakes.



WOODEN FRAME EXTENSION

SKETCH 6

N.T.S.

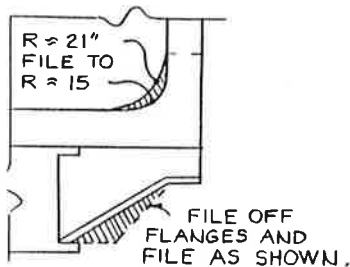


SKETCH 7

N.T.S.

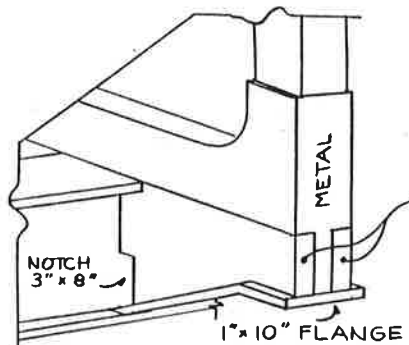
STEP C - STAKE ASSEMBLIES AND BRACES

Regarding the stake and brace assemblies, there are two areas that may be easily improved upon. Sketches #8 and #9 illustrate them. Once alterations have been carried out, all of the stake assemblies should then be glued to their respective positions on the car, ensuring that they are plumb. Minor adjustments may be made prior to painting. If the platforms have been rebuilt, then add the gussets and other items as shown on Sketch #10.



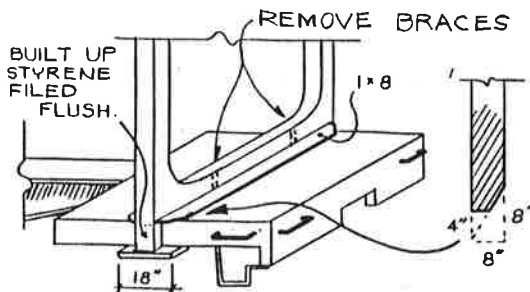
SKETCH 8

N.T.S.



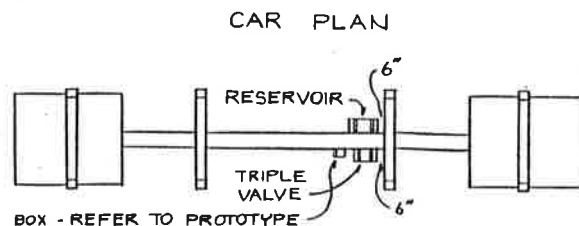
SKETCH 9

ADD OVERSIZE BITS OF STYRENE AND CARVE/FILE TO CORRECT SHAPE FOLLOWING THE SANDWICHED METAL PORTION AS THE TEMPLATE.



SKETCH 10

N.T.S.



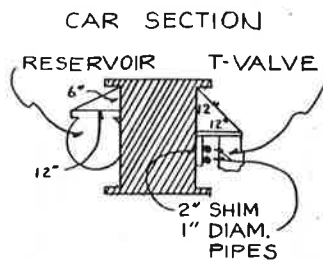
SKETCH 11

N.T.S.

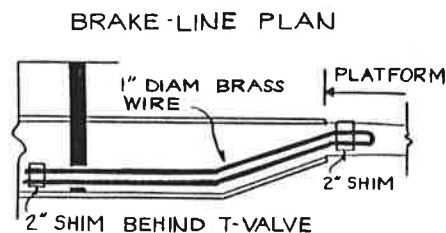
STEP D - BRAKE EQUIPMENT

This type of car has exposed brake equipment and thus it is strongly recommended that it be modelled. It should be noted that variations exist and if possible refer to photographs or an actual car.

From one of the supplied brake sets, cut off the reservoir along with the ledge that it is attached to. Trim the ledge portion so that it is the length of the reservoir and file the top of the ledge since it has casting blemishes on it. Cut two triangles the width of the ledge and assemble onto the car as illustrated on Sketches #11 and #12.



SKETCH 12



SKETCH 13

For the triple valve use one of the provided units and remove its pin. Glue it onto the underside of a plate 12"x24" keeping it towards the front since some plumbing will be installed behind it. Glue two triangular braces 12"x12" on top of the plate spaced 16" from each other. Refer to Sketches #11 and #12. Install plumbing using one inch dier brass wire as noted on Sketch #13. The wire should pass through the notched out opening and terminate behind the triple valve.

The brake stand was fabricated from 1"x2" and 1"x3" styrene strip and should be 3' 9" high from the platform and its width should match that of the brake housing. Use a surplus brake housing from another model or a reasonably accurate one is included as part of "Grandt Line" AB Brake set 5232. The hand lever and crank maybe cut from strip styrene. Add the chain last and it should extend past the crank and terminate by the front sill just behind the stirrup step.

Some cars have a small box located a few inches from the triple valve and this maybe fabricated from the centre portion of an "Athearn" Impac triple valve assembly. From this triple valve cut off the two ends keeping the centre portion along with the support bracket. Some cars also have a protective plate in front of the triple valve.

STEP E - PAINTING AND DECALS

If the car is to be painted BCR light green, following formula will produce the correct colour:

12 parts Floquil RR 44	Depot Olive
5 parts Floquil Primer or RR30	SP Gray
3 parts Floquil RR 87	Depot Buff
2 parts Floquil RR 51	Light Blue(quite dark)

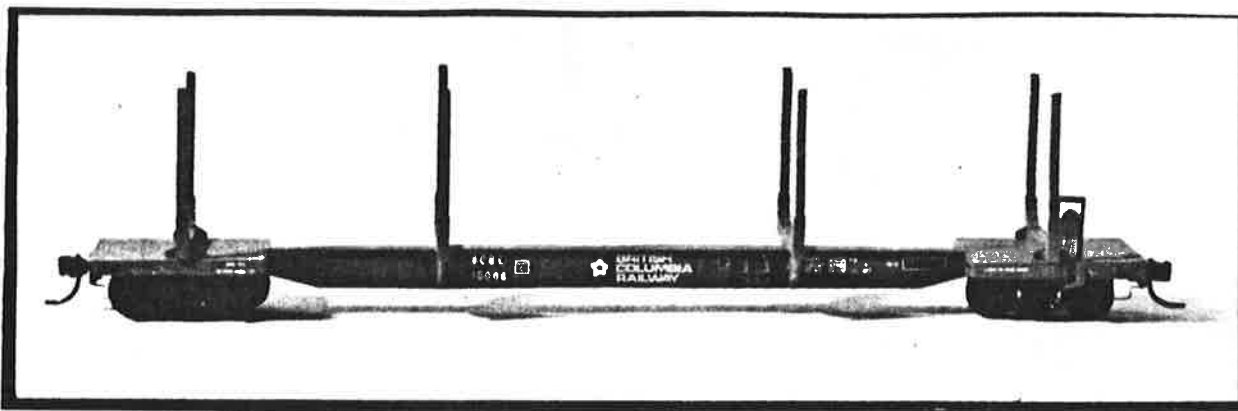
For PGE Floquil RR 74 Boxcar Red is recommended, though colour photographs should be studied in order to determine the exact version used on a specific car.

For the light green paint scheme the following decals are required:

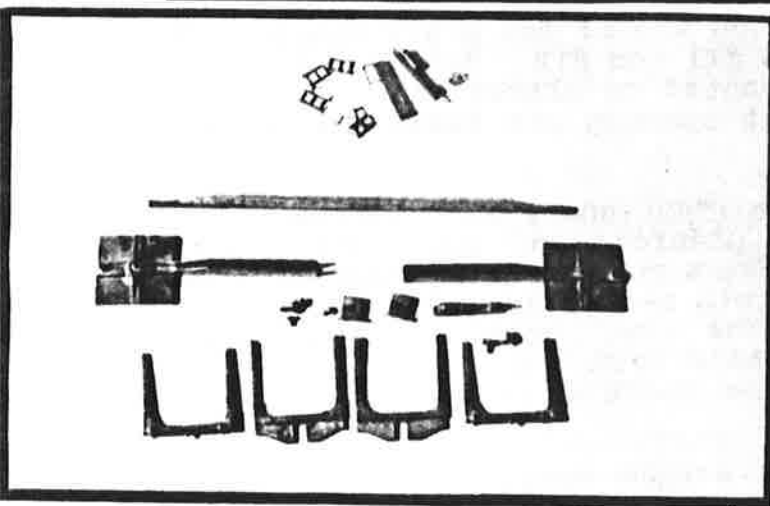
Herald King C-230 BCR Caboose (dogwood & BCR herald)
CDS 238 Woodchip Car (numbers, brake & loading info)
CDS 256 BCR Bulkhead Flat (plate C & lube chart)

For PGE, CDS 13 will provide the lettering and use CDS 238 for loading information.

For the writing of this article, I converted two Company Store kits each taking the duration of a few evenings and the end result was well worth it. In fact I have ordered additional kits so as to build a few more.

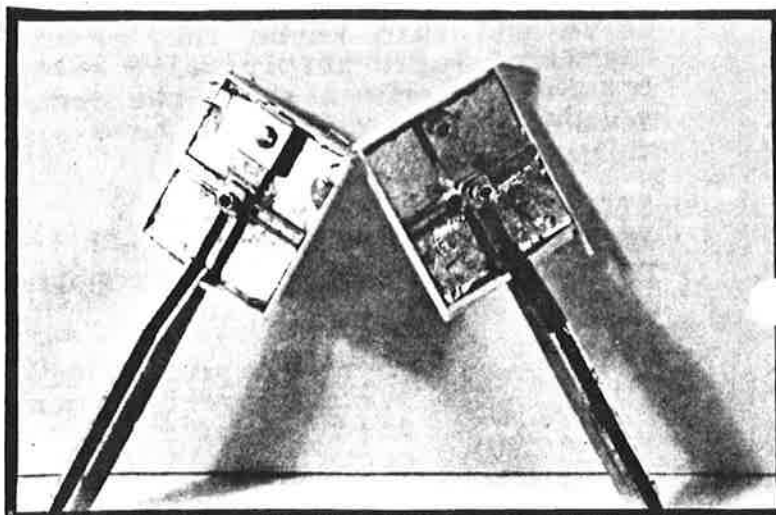


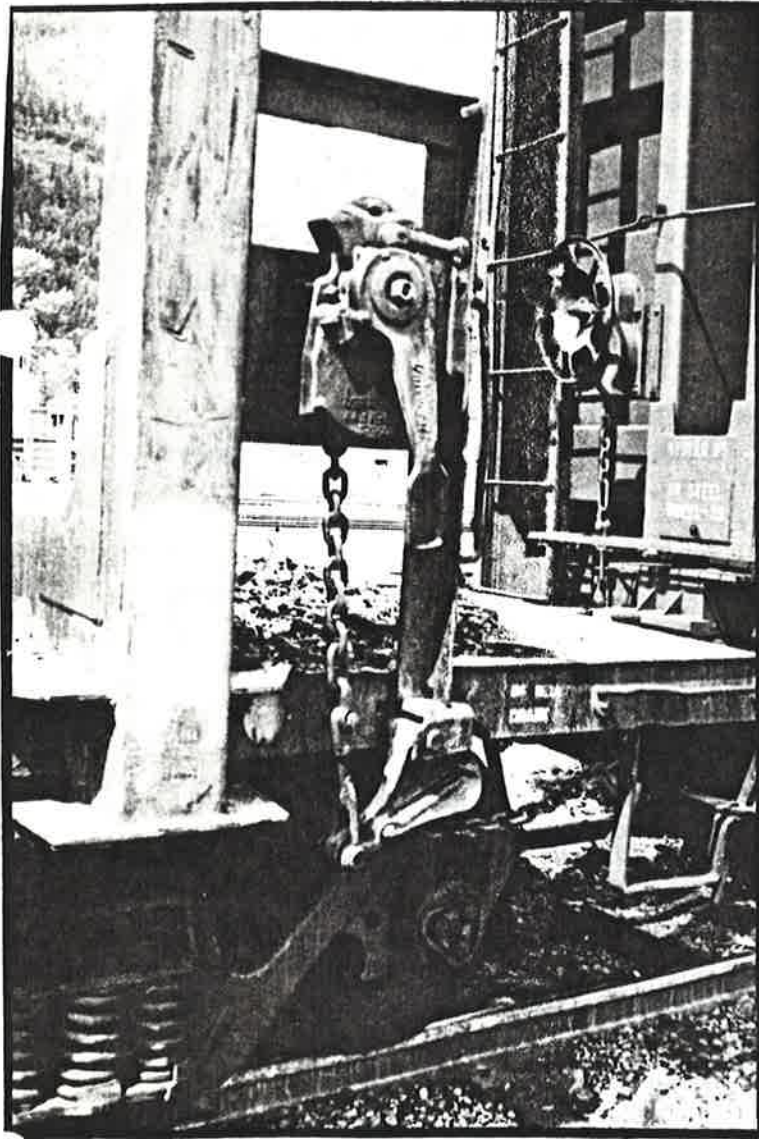
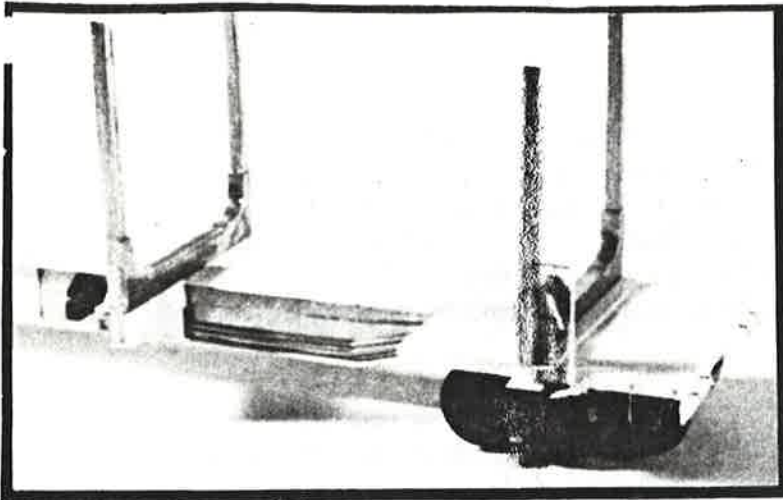
Above: Photo shows completed model. Platforms were left with 12" sills. All photos and artwork by the author.



Left: Here's the kit's parts. Sills have been removed from platform ends, and the wooden extension is next to them. The pile with the ladders is surplus material.

Right: Sill on the left has been rebuilt. The sloped braces are partially visible. On the right sill, the styrene is in place, though not trimmed or filed.





Top: Rebuilt platform and the new sloped stake brace. The sandwiched metal at the brace has been filed super smooth, and will not be visible once painted.

Bottom: Brakestand with the housing, chain, and crank. Also visible is the detailing at the stake assembly overhead. Andy Barber photo.

WHAT'S AHEAD....

The editors have several interesting and informative features planned for upcoming "Cariboo" issues. These include detailed drawings of the station at Squamish, data for producing a prototypically accurate bulkhead flat car model, and modeling BCR's dry vans and flat beds.

It is our goal to continue to offer the best combination of historical, current day, and modeling features relating to the PGE and BCR available.

As always, we welcome your participation.

BACK ISSUES

As our circulation grows, so does demand for "Cariboo" past issues. A limit supply of original copies remain. (Others are available only as reprints.)

For the benefit of new subscribers, we are offering a selection (your choice) of any four back issues for the special price of \$12.00US.

This offer will be honored through February 1993. Please make all checks/money orders payable to "Jim Moore".

MODELING MLW M-420W BCR #643

Model & Photo by John Bauer

Reported by Carter Cram

For this kitbash, John turned to an undecorated Atlas HO scale model. He felt the radiator on his Alco C-424 shell appeared close enough to "prototype" to remain as-is. The diesel's air intakes were removed by gentle scrapping, and the resulting areas sanded until smooth. Next, holes were cut forward of the radiators to allow for the installation of "taller" air intake grills. John was fortunate to have both left and right views of these areas on the prototype, which helped greatly.

The roof on the long hood was removed (by careful cutting) and replaced with Evergreen .040" sheet styrene. Careful filing, cutting, and sanding were used to obtain a forty-five degree bevel edge to the "new" roof.

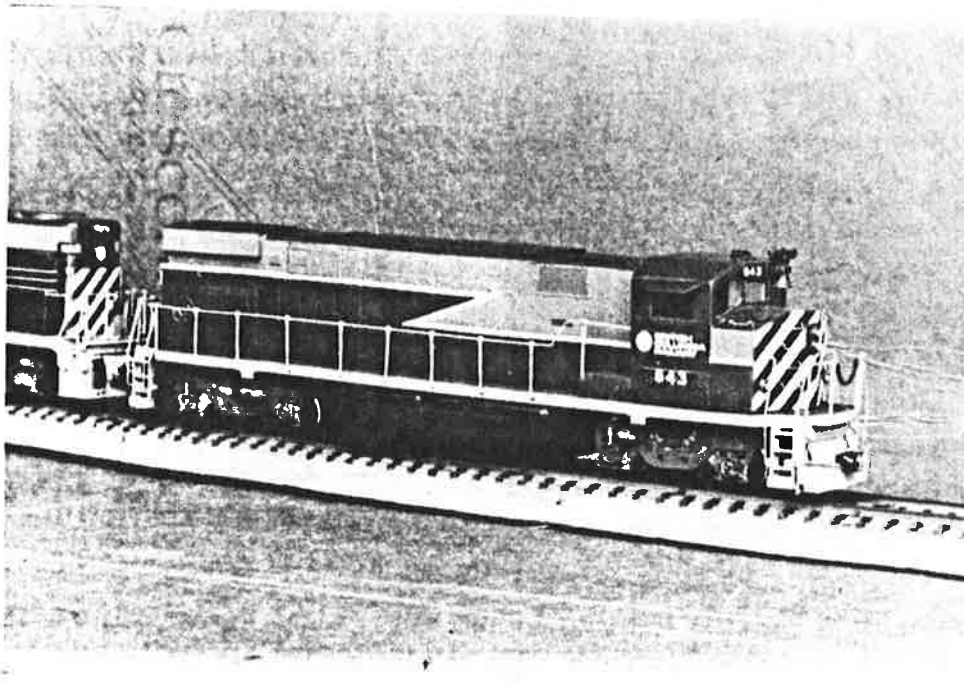
The engine's wide cab is a modified Smokey Valley kit. The cab side casting was shortened by cutting material from both the short end and rear of the cab. John made equal-sized, vertical cuts, approximately one-quarter inch length.

The roof and top of nose castings were then shortened to match. The nose front and cab windshield pieces are new styrene fabrications, which were cut to fit.

Handrail stanchions are "stock" Athearn, with brass wire bent to form appropriate railings. Commercial detail parts were used for the horn, bell, pilot plow, cab sunshades, air hoses, and grab irons.

Trucks and underframes: Since the GE side frames from Smokey Valley were designed to fit Athearn diesels. A dummy Athearn underframe and trucks were used. It was necessary to file the corners of the GE side frames to obtain the prototypical "angular" appearance of a MLW type truck.

After painting was finished, Herald Kind L-230 decals were used to complete this "dogwood" era BCR locomotive.



MODELING BCR CABOOSE #1863

Model & Photo by John Bauer

Reported by Carter Gram

John started this project with two Athearn HO scale 34' steel cupola type cabooses. Using several BCR photos for reference, work began. All roof and side rivets were removed. Same for the side rib lines. The caboose sides were then sanded until smooth. Next, the long body sections were carefully scribed in preparation for vertical cuts. These cuts were made just ahead of the cupola area. The two long body sections were glued together to form the required BCR length caboose body. All windows were "blanked out" using Evergreen sheet styrene. New windows were located, scribed, and cut out.

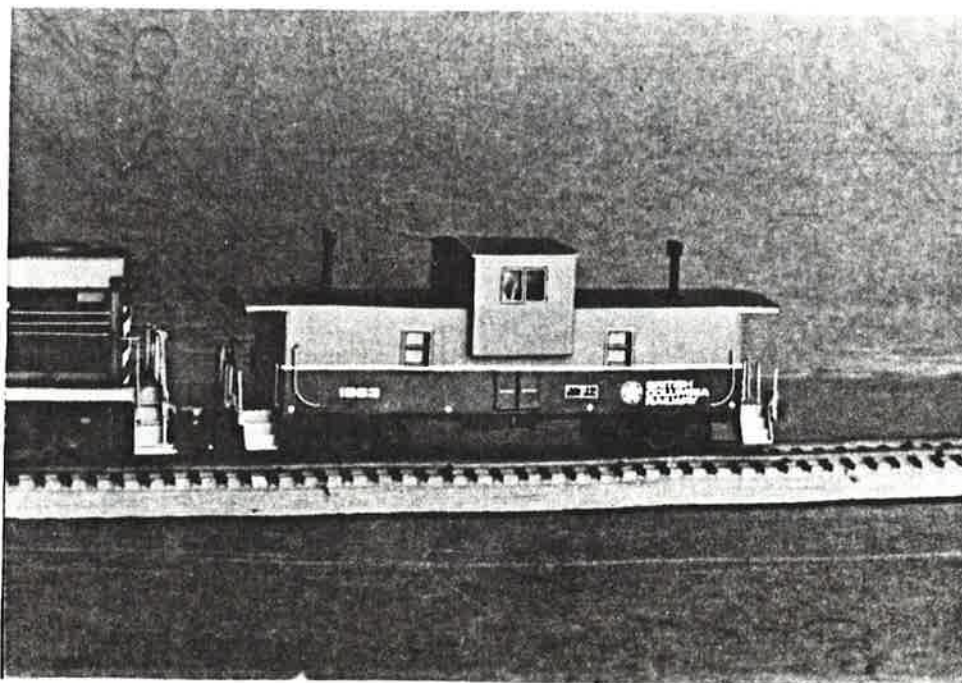
The two cupolas were scribed in such a manner so as to create two off-center vertical halves. Once cut apart, the cupolas were then reassembled to obtain the "prototypical" size required. Evergreen .030" sheet styrene was used to fabricate new cupola sides and ends. The window openings were scribed and cut out, using prototype photos as a guide. Thin sheet styrene (Evergreen .015") was used so as to achieve BCR's roof overhang overlay appearance.

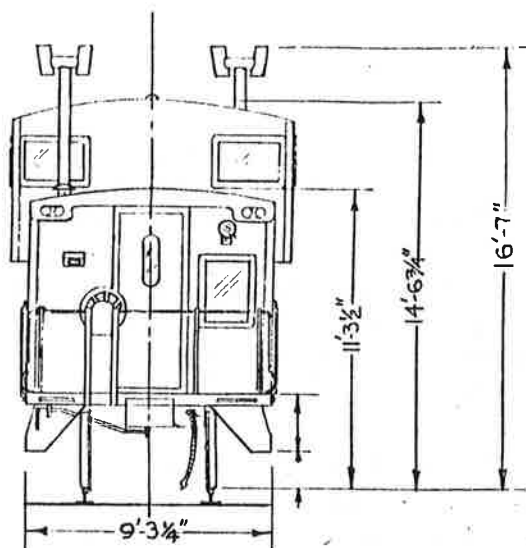
Appropriate grab irons and platform end railings were made from brass wire. The two smoke stacks were built using K&S 1/16" brass tubing stock.

After applying the two-tone green paint scheme of the "dogwood" era, Herald King C-250 decals were applied. Window glazing followed, as did the installation of trucks, couplers, and assorted MV Products markers and lenses.

Inspired by John Bauer, I believe that I would choose to scratchbuild a BCR caboose using sheet styrene and the prototypically correct Athearn #90397 roller bearing (caboose) trucks.

Thanks to Andy Barber, John C. Benson, and Andy W. Scale Models, I was able to produce the accompanying HO scale caboose drawing.



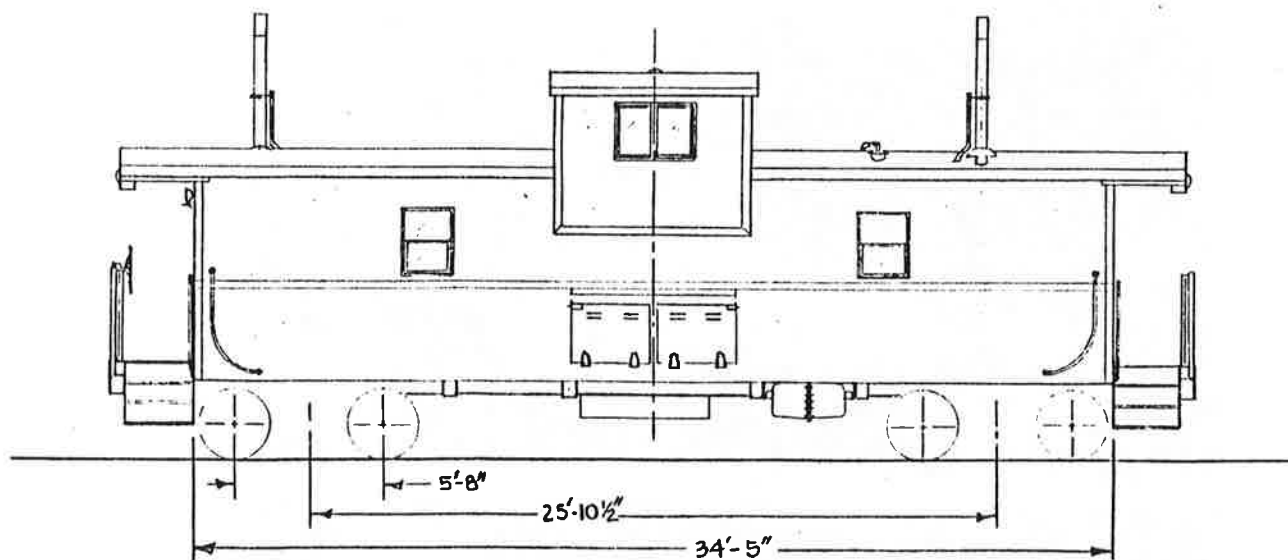
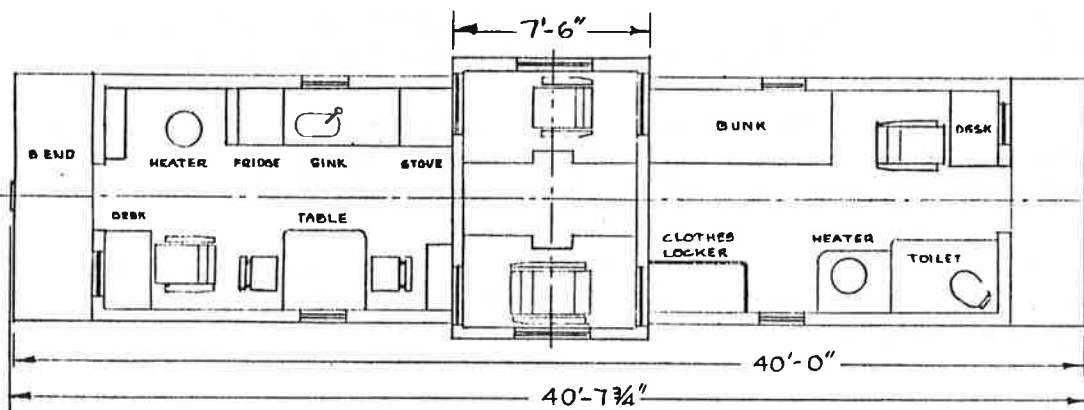


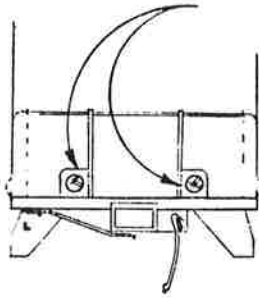
BRITISH COLUMBIA RAILWAY

Extended Vision Caboose
Redrawn to HO Scale
3.5mm = 1 ft

Carter D. Cram, September 1992

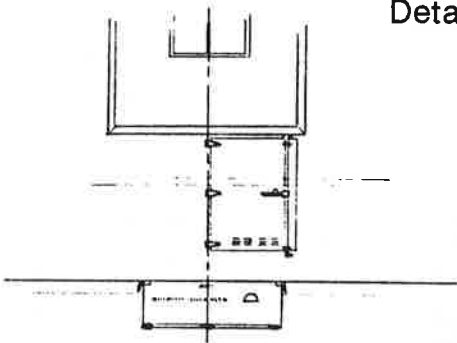
Courtesy of BC Rail and drawing
M 910-K-009 A, as supplied by
Andy Barber.





Detail Note: Based on my research, BCR two-tone green "dogwood" era cabooses 1851, 1852, 1864, 1866, 1868, and 1873 had these "ditch lights".

SO DO 1855



Detail Note: Drawings for the right side of the caboose show an access door located "under" the extended vision cupola assy. Lettering on the underframe accessory box reads EMERGENCY EQUIPMENT.

WCRA CORNER

Grant Ferguson (WCRA veep) reports on this year's WCRA excursions:

BC Rail System Tour (9 days)

This is the trip of a lifetime as we spend nine days travelling spectacular British Columbia. This all inclusive tour package draws rave reviews every time we go. Enjoy the wildlife and long days of spring, or the brilliant fall colours. Tour includes rail transportation, all transfers, hotels every night, meals, special entertainment, and more. Options include one way air travel, and Peace River dam side trip. Price for the full tour is \$1899 (Canadian) based on double occupancy (includes GST).

Dates: Spring--Saturday May 29 to Sunday, June 6
Fall -- Saturday, September 12 to Sunday, September 20

Williams Lake Stampede

A new trip, but not a new route. Travel to Williams Lake on BC Rail for a true Wild West weekend in the Cariboo. Travel north on Thursday, and arrive in time for the dance, evening meal and entertainment. Enjoy the Stampede on Friday, return home on Saturday. Prices: \$319 adult/\$299 senior/\$249 child. Includes transportation, hotel in Williams Lake, meals on the train.

Dates: Thursday, July 1 to Saturday, July 3

Cariboo Overnighter

Our popular Williams Lake fall trip is on again. Private car on BC Rail to Williams Lake and return. Includes rail transportation, meals on train, hotel and town tour of Williams Lake. Prices: \$219 adult/\$209 senior, based on double occupancy.

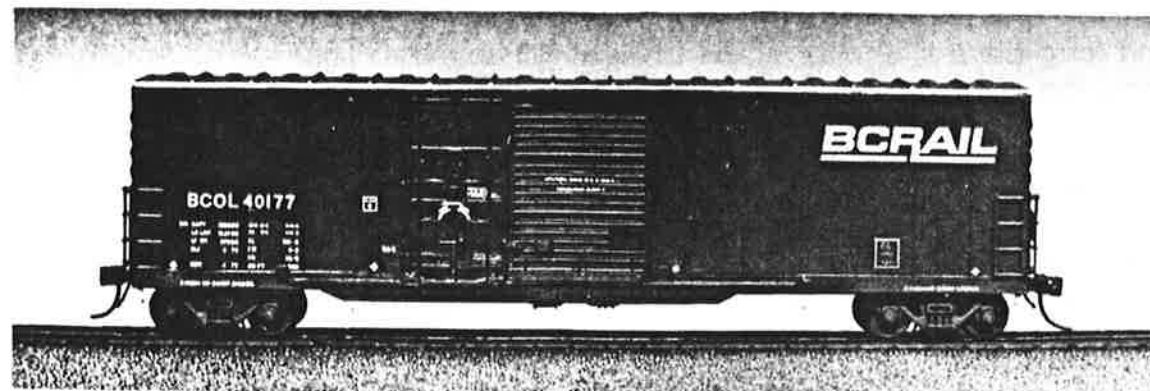
Dates: Friday, October 15 to Saturday, October 16.

To book your place on these very popular tours, call the WCRA reservation line at (604) 524-1011. Remember that 1993 tour prices include GST. Visa and Mastercard are accepted. Make your 1993 travel plans now.



Unfinished prototype model of Andy W.'s just released BC Rail caboose.

Both photos courtesy of Andy Wegmuller.



Production model of Andy W.'s HO scale combination door boxcar.

The CARIBOO is published quarterly for enthusiasts and modelers of the Pacific Great Eastern Railway and its successor lines. Sample issues may be obtained for \$3.00 U.S. funds (posted to North American addresses). All editorial contributions are welcome. Send all correspondence to: Jim Moore, 25729 Floral Court, Valencia, California 91355-2139, U.S.A.

Build a Ventilated Spray Painting Booth

By Ron Tuff

Why a Spray Booth?

One of the greatest pleasures in model railroading is creating accurately finished models of our favourite prototype. However very few models are available painted to our exacting specifications, so an air brush is an important modelling tool. But like any tool, it can be dangerous if you don't know the hazards or fail to heed the warnings.

Spray painting with the common brands of model railroad paints which contain organic solvents, can create numerous hazards. Short term health effects include breathing difficulties, dizziness or lightheadedness, fatigue, nausea or headaches. Prolonged exposure can cause long term health effects such as disorders of the circulatory and nervous systems. The possibility of fire or explosions exist due to the heavier than air flammable vapours from these organic solvents. Finally paint overspray can ruin your project and settle throughout the room.

The simple solution to these problems is ventilation, and not just opening a couple of windows or a door, as that only provides dilution ventilation of the hazards. Effective ventilation must begin at the source to provide adequate protection.

I read a number of articles before building my spray booth and although Model Railroader recommended sheet metal construction in their 1987 two part article, I elected to use wood as I already had the necessary construction tools. As one of the other authors suggested, "... your not going to use it as an exhaust for an oven. If the booth catches fire, you were in deep trouble long before that".

The dimensions for the finished booth were determined by the largest model I was likely to paint, and that I wanted it to fit on top of a prefab kitchen microwave stand. This provides a good working height (48") with ample space to store model paints, thinners and miscellaneous painting equipment underneath.

For an exhaust fan, I used a twin squirrel cage blower unit salvaged from a main frame computer. It's actually too powerful, so I added a dimmer switch on the outside of the booth to control the speed of the fan so it doesn't draw all the paint directly from the air brush before it covers the model. You probably won't have one of these fans available, so substitute it with a Dayton Electric Manufacturing Co. fan as suggested in the Model Railroader January 1988 article.

A standard 10" x 20" x 1" furnace filter, filters out the paint particles (but not the toxic vapours) and pipes it outdoors through 4" diameter aluminum dryer venting. Don't use the plastic flex dryer pipe as the solvent will attack it. The closer the booth is to the outdoor dryer vent, with a minimum number of 90 degree elbows, will determine the booth's efficiency.

Construction

The basic booth is constructed of 1/2" thick white melamine coated particle board to provide a smooth and easy to clean surface. It will reflect the light provided by the fluorescent undercabinet fixture mounted up inside behind the valance.

All wood screw joints should be predrilled and countersunk. After assembly of the entire unit, dismantle the wood pieces and glue & screw all joints to ensure a seal. Screw the booth to the top of the microwave stand for stability.

Materials Required

two 1" x 6" x 10" long to support the filter
10' long, 16" wide, 1/2" thick melamine coated particle board
1/2" wide melamine trim to cover exposed sawn edges (optional)
White plastic buttons to cover screw heads (optional)
10" x 20" furnace filter (replace often)
20" fluorescent under the cabinet light with a bulb consistent with the type used where your models will be viewed
Fan with sparkless (synchronous) motor located outside airstream
15' of 14 gauge 3 conductor wire (extension cord)
Electrical utility box and switch cover
Dimmer switch to control fan speed not fluorescent light
Galvanized sheet metal to fabricate the duct adapter
4" aluminium ducting and elbows (do not use plastic flex pipe)
Outdoor dryer vent
Miscellaneous wood screws and sheet metal screws
Silver duct tape to seal all sheet metal joints and to secure the top of the filter in place

Particle Board sizes

Sides	(2) 16" x 16"
Base	(1) 21 1/4" x 16"
Back	(1) 21 1/4" x 16"
Top	(1) 21 1/4" x 16"
Valance	(1) 20 1/4" x 2"
Inside	(1) 20 1/4" x 8 3/4" with angled cuts to fit
Plenum	(1) 20 1/4" x 5 1/4"

Conclusion

A ventilated spray booth will prevent the problems discussed at the beginning of this article, but there are other precautions which should be taken.

Keep the spray booth away from all sources of high heat or open flame. Do not install the booth in the same room as gas or oil-fired heating, cooking or water heating equipment. The further away from these sources of ignition the better.

A chemical cartridge respirator will also prevent health

problems, but remember it only protects the wearer, not the other members of your family.

Nitrile rubber gloves (not surgical latex) will prevent absorption of the solvents into your hands. If gloves are too bulky, develop a method of holding your model which will keep your hands away from the paint spray (tweezers for small parts, paper towel tubes up inside plastic body shells, a rotating turntable/lazy susan etc).

Good personal hygiene after the job is complete to remove any paint on your hands before you eat and finally no smoking until the paint thinner is put away and the spray booth fan has run for at least five minutes after cleaning the air brush to help clear the air of any lingering vapours.

Fold a piece of newspaper to fit along the bottom and sides inside the booth. This can be disposed of after painting and helps to keep the booth clean.

Take a couple of photos of your next project and share them with the other Cariboo readers.

Further Reading

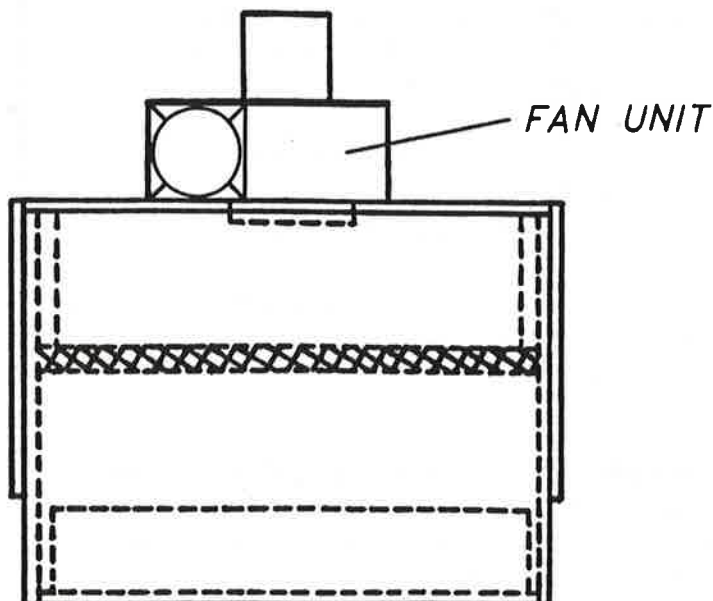
"A Deluxe Spray Painting Booth" By Ken Breher
August 1983 Model Railroader Kalmbach Publishing, Waukesha Wisc

"Safety in Painting" By Andy Sperandio
November 1987 Model Railroader Kalmbach Publishing, Waukesha Wisc

"The Paint Shop Spray Booth" By Andy Sperandio
January 1988 Model Railroader Kalmbach Publishing, Waukesha Wisc

"Safety with Glues, Paints, and Thinners" By Ross Martinek
May 1990 Fine Scale Modeller

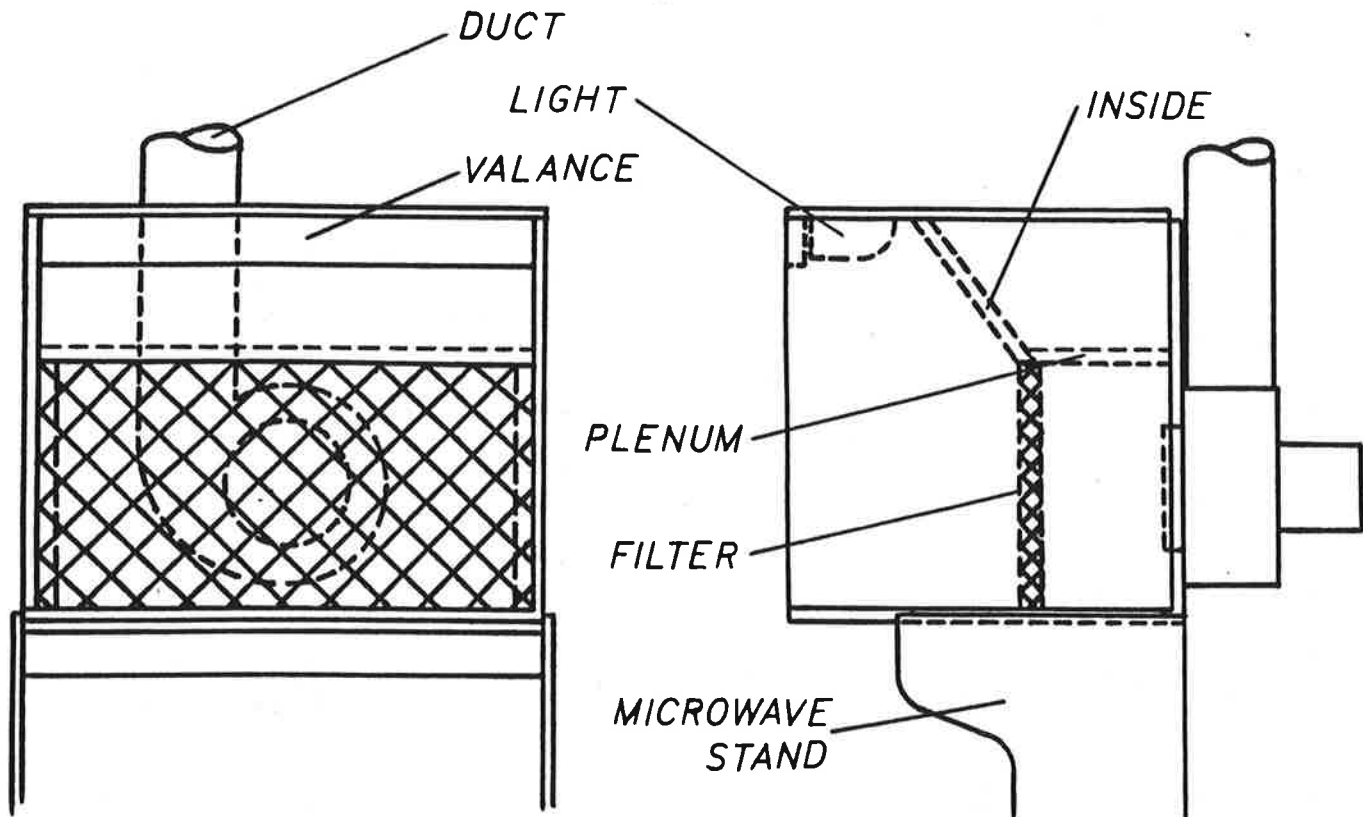
ABCs of Building Model Railroad Cars By Wayne & Mary C Weslowski
Published by Tab Books Inc. Blue Ridge Summit Pennsylvannia



SPRAY PAINTING BOOTH TO
FIT ON MICROWAVE STAND

SCALE: 1 1/2" REP. 1'-0"

DRAWN BY: RON TUFF



RESEARCH RESOURCES

The following publications are now available from the Pacific Coast Division of the Canadian Railroad Historical Association:

"A Railroad Map of the Lower Mainland of B.C. Today", by Lorne Nicklason, 1991. Format: 36"x46". Full colour, laminated (\$80); colour line, laminated (\$50); unlined (unlaminated) (\$10 less). Add \$3.50 postage/handling.

"A Historical Railroad Map of the Lower Mainland of B.C. (1882-1992)", by Lorne Nicklason, 1992. Format: 36"x46". Colour line (\$60), laminated/heavy backing (\$10 less), or black and white/unlined (unlaminated) (\$12). Add \$3.50 postage/handling.

"The Britannia Copper Mine Railway", by David L. Davies, 1991. Card covers with cerlox binding. 48 pages of text; illustrated with rosters, maps, and black and white photographs. \$11.45, including postage/handling. See review below.

"Industrial Locomotives: A Catalogue of Industrial Locomotives and Short Lines of British Columbia and Yukon Territory", by Mervyn T. Green, 1992. An all-time listing, including museums. Card covers with cerlox binding. 226 pages of text and data. Illustrated with maps, and black and white photos. \$20, plus \$3.50 postage/handling.

To order contact: PCD/CRHA, POB 1006, Station A, Vancouver V6C 2P1.

"The Britannia Beach Copper Mine Railway"
REVIEWED BY RON TUFF

This book traces the history of the three foot gauge operation as it carried men, materials, and copper ore from the underground mine shafts to the huge concentrator mill visible along Howe Sound.

The mine opened in 1905 with an aerial tramway stretching 3 1/4 miles before it was replaced in 1915 by the railway. Until 1956, the only connection with the outside world was via a twice weekly steamer ship. Numerous black and white photographs illustrate the rolling stock and concentrator up until the time of the mine's closing in 1974. Although the book does not provide specific details of the concentrator, modelers will find the railway's history interesting, particularly since it was a PGE lineside industry.

SPOTLIGHT:

"ATTABOY" AWARD by Andy Barber

About two years ago, Andy Wegmuller and I were fortunate enough to be taken on a tour of the Squamish Paint Shop. We were near the conclusion of our visit, and saying our goodbyes to Juan Olson (General Car Foreman), when we noticed a small, neatly framed award hanging on the wall. The award was accompanied by a photograph of Juan standing on a trailer flatcar. Standing in front of the car was a group of employees - all of whom were wearing a grin a mile wide. This was obviously no ordinary gathering.

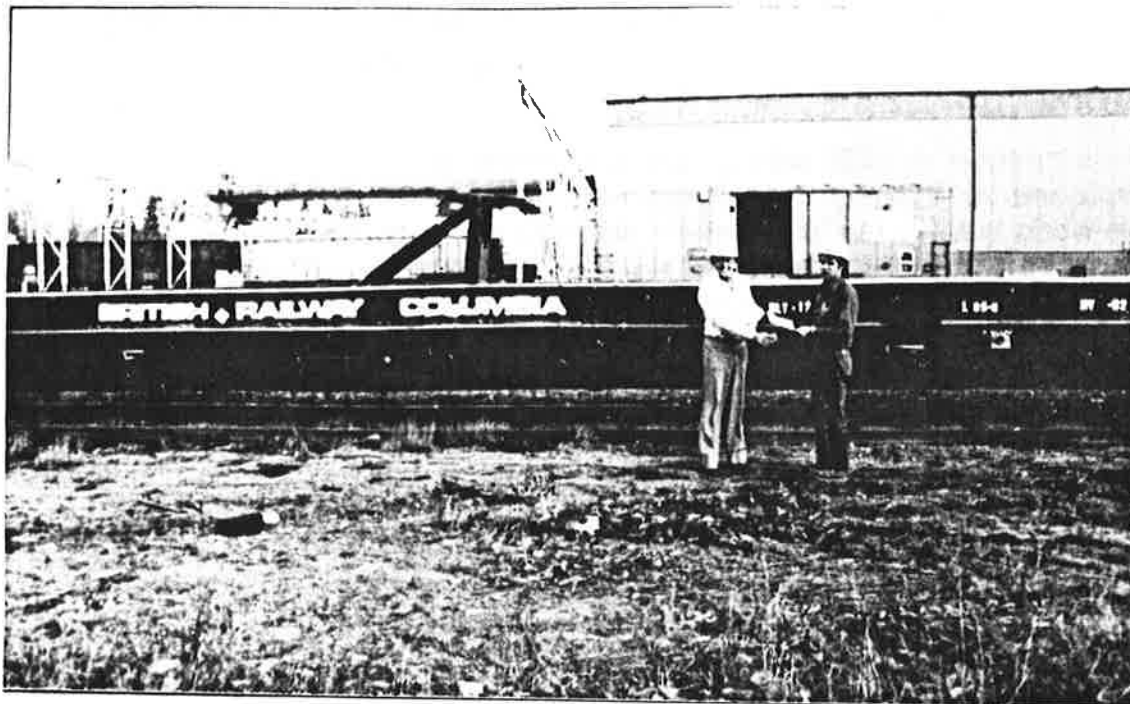
Upon reading the inscription, we learned that Juan was being awarded "one attaboy" for service to BC Rail. Nothing special, just a mildly humorous certificate.

A photograph was taken and given to Juan to display beside his framed award. It was only when Andy and I had the unusual feature in the photograph pointed out to us by Juan that we too could share in the humour and good natured celebration of Juan's "attaboy" award.

It seems that when trailer flatcar No. 7104 was rolled out of the paint shop some seven or eight years ago, Bob Demo (Supervisor of Special Equipment) just happened to be looking out his window. His laughter attracted the attention of several co-workers. It was from this incident that idea of awarding a certificate to Juan Olson grew.

I recently had the opportunity to visit Squamish again, and related this story to my host and guide. He not only recalled the incident, he arranged for me to chat again with Juan Olson. Further, he loaned me a negative of the trailer flatcar involved.

Juan Olson gave me his kind permission to relate this story. The photograph of 7104 is included. I leave it to you to find and enjoy the glory of 7104.



Who are these men, and why are they smiling? They're (L-R) Richard Yaremko, Andy Barber, and Greg Kennelly. And they're standing in front of the British Columbia Railway Historical & Technical Society's display booth. The display was recognized within the "Best of Show" category at last year's Western Rails confab.