

CANADIAN RAILROAD HISTORICAL ASSOCIATION INCORPORATED

NOTICE OF MEETING:

The February meeting of the Association will be held in room 153, Queens Hotel, on Wednesday, February 11th, 1953 at 8:00 PM. Members will be asked at this meeting to consider the subject of the annual banquet, and a decision should be made as to whether it should be held in the spring, as in 1952, or in June, the practice followed until 1951.

MEMBERS VISIT CANADIAN PACIFIC RAILWAY INSTRUCTION CAR

On Saturday, January 17th, 1953, twenty members and friends of the Association met at Westmount station for the purpose of inspecting Canadian Pacific Railway Company's newest instruction unit, car 57.

The visit had been arranged with the kind cooperation of Mr. Percy Raines, the CPR's system Rules Supervisor. Mr. Raines conducted the visit personally, and showed the members the various facilities of the car, which is one of the most up-to-date of its kind. Instruction cars are used, as their name implies, to serve as travelling schools for employees engaged in running service and its ancillary operations. The Company has a number of these cars, used for mechanical, rules and safety instruction.

Car 57 was recently converted from the compartment-observation-lounge car "Mount Baker". It is equipped with a 60-seat "auditorium" equipped with specially-developed seats of simple, though comfortable, construction, designed to fit into a comparatively small floor space. Spacing is sufficient to enable tables to be fitted into the seats, and the most corpulent railwaymen can seat themselves with little difficulty. The classroom is situated at one end of the 82-foot car, and on one side of the admitting passageway, there is a tiny projection room in which a Bell & Howell projector is installed. Classroom facilities include a blackboard with folds into the ceiling; a projection screen which rolls up into the ceiling, and a translucent screen upon which slides can be projected from the side opposite the audience. The slide projector can be installed in the eating compartment of the car, for this purpose.

The speaker's desk is equipped with a microphone which is wired to the projector sound system. Thus, the voice of the instructor is heard from the same source as the motion picture sound track and the loudspeaker for the system is located in the roof of the car, at the center of the room. There is an acoustic ceiling and the sound is carried effectively to all corners of the classroom. Feature of the car is the illuminated panel of automatic block and interlocking signals, upon which every signal indication given in the Uniform Code of Operating Rules can be given, including those aspects incorporating flashing lights. This, as might well be imagined, simplifies instruction in signal aspects by providing a faithful replica of an actual signal, rather than by the use of illustrations in rulebooks or on the blackboard.

While fitted for a normal crew of one, the car can accommodate three persons and it is fitted with a single room used as a kitchen, dining room and office, and a comfortable bedroom, two rooms in all. The customary lavatory facilities include a shower, and the kitchen is provided with a refrigerator, as well as with a Pintsch gas stove. Pintsch gas is also used in the hot water heater. Heating of the car is provided by a steam furnace, though the car can be coupled to steam lines when running in a passenger train, or at a terminal.

Lighting is provided by an eight horsepower diesel engine driving a 5 kilowatt generator. This generator supplies current at 110 volts for the lighting, sound and projector systems, while there is an auxiliary 32-volt battery circuit, to dispense with the use of the diesel engine for lighting the night lights or private rooms alone.

After the members inspected the car, Mr. Raines gave a short lecture on the use of signals and their indications, in which the participants took a great deal of interest. He was thanked on behalf of those present by the Vice President, Mr. Kenneth Chivers.

ITEMS OF INTEREST

Canadian National Railways has received the following diesel-electric locomotive units:

Eight road switchers built by Canadian Locomotive Company, 1600 hp numbered 7622-7629 inclusive. They do not have steam generators. No. 8462, first of a class of 660 hp switchers, built by Montreal Locomotive Company.

Canadian Locomotive Company 1600 hp road "A" units numbered even numbers between 8706 and 8724 inclusive.

During the month of January, Canadian Pacific Railway started construction on another addition to the Montreal Windsor Station, to house the accounting staff of the railway. This building is to be located on St. Antoine Street, in a space hitherto used as an automobile parking lot.

Supplementing the report of Canadian National Railways taking over the assets of the Vancouver National Harbours Board Railway, it is learned that motive power includes two steam locomotives and a 500 hp diesel switch engine.

It is reported that Central Vermont Railway is to dispose of its 2-10-4 type locomotives in favour of diesel-electric engines. Apart from the 35 engines of this wheel arrangement on Canadian Pacific Railway, and used on the CPR Prairie and Pacific Regions, these are the only 2-10-4 type engines running in Canada.

Recently, Cornwall Street Railway Light & Power Co. purchased a Baldwin-Westinghouse type electric locomotive from the Niagara Junction Railway, an electric line in New York State.

CANADIAN PACIFIC RAILWAY COMPANY TESTS THE
BUDD RDC-1 RAIL CAR

Omer S.A. Lavallee

One of the most talked-about applications of diesel motive power in recent years has been that of the Budd Company of Philadelphia and their development of a diesel-mechanical rail car, in several designs for varying needs, known as the Budd RDC car.

In September 1949, the first all-stainless-steel, self-propelled RDC car was introduced and it was placed on a transcontinental tour of the United States lasting three months, during which time the car covered some 10,300 miles, having been inspected by officials of fifty-five railroads in thirty states. Subsequently, three variations were developed on the original all-passenger railcar, which had a capacity of 90 passengers. The 90-passenger design is designated RDC-1.

RDC-2 is a car of the same length as RDC-1, but the interior arrangement has been varied to provide 71 passengers only, but including a 17-foot baggage and express compartment. RDC-3, similarly, is of the same length as the first two types, that is, 85', but the space design is for 49 passengers, with a 17-foot baggage-express compartment, and a 15-foot railway mail section. The final design, RDC-4, of which no examples have been built to date, is shorter than the first three designs. It is but 73'10" long, and contains no passenger space, being taken up entirely by a 31-foot baggage-express compartment, and a railway mail section of 30 feet.

Weights of the various designs are given by the Budd company as follows:

UNIT	LIGHT WEIGHT	WEIGHT IN RUNNING ORDER	NORMAL MAXIMUM WEIGHT (With passengers, baggage and mail)
RDC-1	108,000 lbs.	112,800 lbs.	126,600 lbs.
RDC-2	109,000 "	113,800 "	134,800 "
RDC-3	113,100 "	118,100 "	139,500 "
RDC-4	105,200 "	109,800 "	142,100 "

The RDC car is powered by two 275-horsepower General Motors Detroit Diesel engines, each connected to a single axle, by a transmission incorporating a torque converter. Thus, if a motor becomes disabled, it can be cut out and the car operated at a suitable speed on the remaining motor. RDC cars are fitted with Budd disc brakes, rather than the conventional clasp brakes. Where the torque converter provides for smooth starts and swift acceleration, the disc brakes enable speed reductions and stops to be made almost imperceptibly. The cars are equipped with controls at either end, enabling immediate turnaround to be made at terminals. There are four speed positions on the controller, and after the car has reached 55 mph in accelerating, the torque converter locks automatically into direct drive.

All types, except the mail and baggage unit, RDC-4, are airconditioned and they are heated by employing the waste heat from the power plant.

Two years ago, the car was tested by Canadian National Railways and a report written by Mr. Clegg at that time, was published in the News Report.

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On Monday, January 26th, RDC-1 car 2960 arrived in Montreal from Boston to be loaned to Canadian Pacific Railway for test purposes. This is the same car which was loaned to the CNR on the previous occasion referred to above, and since it was first placed in service, it has operated many thousand miles demonstrating its many uses for the Budd Company. On Tuesday, January 27th, I was privileged to accompany a special party making a test trip in car 2960 between Montreal and Farnham, a distance of 43 miles, and some of the observations made under operating conditions may perhaps be of interest.

The car left Montreal at 2:46 PM and made the run to Farnham in 55 minutes arriving at 3:41 PM, at an average speed of 47 miles per hour. Speed was reduced practically to a stop at many of the stations, demonstrating the deceleration, so that the average speed of 47 miles per hour is a good representation of what the car would do if employed in a local service. Good speeds were shown between stations and the high average speed is attributable to the fact that the speed of acceleration and deceleration enables the car to attain track speed sooner, and remain at that speed longer, between stations, than a normal train hauled by a locomotive. Between Adirondack Junction and St. Constant, some fast running was in evidence and the car took exactly 60 seconds to run from milepost 40 to 39 (60 mph), and 55 seconds each from milepost 39 to 38, and from 38 to 37, or an average speed of nearly 66 miles per hour. During this period the actual speed was fluctuating. The car was brought practically to a dead stop before crossing the CNR level crossing at Delson but leaving that station, the speed was again resumed, and the car took 51 seconds between mileposts 24 and 23, or an average of 70 miles per hour. The car slowed through St. Johns and a curious effect noted at this point was the considerable reduction in the air pressure caused by frequent sounding of the air horn for the many public crossings in the vicinity of St. Johns station. This was probably caused by the fact that a standard Canadian five-tone air horn was used, whereas the car is usually fitted with the single-tone horn characteristic of US railway equipment.

East of Iberville, on the long straight stretch toward Farnham, the average speed for a mile reached the highest on the trip, as the car passed between mileposts 11 and 10 at an average speed of 75 miles per hour, consuming 48 seconds for the mile. At about this point, the actual high of 77 mph for the eastbound trip, was made.

Upon arrival at Farnham, the car remained only for 9 minutes, most of which was taken up to secure running orders for the return trip, and for the news photographers to take their pictures. Returning, car 2960 left Farnham at 3:51 PM and almost as soon as the speed of 75 mph was reached, the riders were given an unusual demonstration. The car was brought to a stop from 75 mph using the hand brake, in 35 seconds, during which period it travelled about a mile and a third. Between St. Philippe and Delson, the high for both trips was reached as the vestibule speedometer pointed to 78 miles per hour. Shortly after, with a brake application of considerable force, the car's speed was reduced from 75 to 35 miles per hour in a little over a quarter of a mile. West of Delson, the 75 mph speed was resumed until the outskirts of Montreal were reached, and arrival at Windsor Station was made at 4:44 PM

or 53 minutes for the 43.2 miles, an average speed of about 48 miles per hour. Particularly noticeable during the trip was the rapid acceleration and from observations it would appear that the Budd Company's claim that the car will do 5 miles in 5 minutes from a standing start, is well founded.

On Wednesday, January 28th, the car made a test run from Montreal to Mont Laurier, leaving Montreal at about 8:15 AM and arriving at Mont Laurier at 1:05 PM, or 4 hours and 50 minutes for the 163.6 miles, compared with 6 hours and 50 minutes for the weekday train, and 6 hours and 20 minutes for the Saturday and Sunday train. Thus RDC's average speed was 42 miles per hour over an exceptionally hilly and curved subdivision. Elevation on this route varies from 75 feet at Laval Rapids to nearly 1300 feet at Summit, about 6 miles west of Ste. Agathe. The return trip left Mont Laurier at 1:58 PM but followed the regular passenger train from Labelle, so no comparative figures are available. On Friday, the 30th, in a special trip from Windsor Station to Ste. Annes, the car attained 81 miles per hour.

Following public exhibition in Windsor Station on January 31st and February 1st, the car will run in revenue service daily between Montreal and Mont Laurier to secure revenue passenger reaction. It is planned to distribute questionnaires to the passengers. In this service, the car should show its capabilities, as the low (54") center of gravity allows it to take curves at higher speeds than conventional trains. On certain US railways using these cars, it is current practice to exceed curve restrictions by 20 mph with RDC cars.

Further observations on RDC-1's performance will be published as they become available.

STREET RAILWAYS OF EASTERN CANADA - II

Robert R. Brown

BELL ISLAND TRANSPORTATION COMPANY

Strictly speaking, the Bell Island Transportation Co.'s tramway is not a street railway, but it is the only surviving passenger line east of Montreal and consequently is worthy of notice.

Bell Island lies in Conception Bay about two miles offshore from the village of Portugal Cove, Newfoundland, and it is famous for the vast Wabana iron mines worked by the Dominion Steel & Coal Co. It is oval in shape, about two miles long and one mile wide, and except at one or two points, the shoreline is a high and almost perpendicular cliff.

From the ferry wharf to the plateau, there was a very steep, narrow and winding road, so in 1913, the ferry company built a cable operated incline railway. It is about 800 yards long, the maximum gradient is 26% and the cable is moved by a large steam-operated drum at the top. The line is double track, but the two lines are sheathed except midway where they permit the cars to pass. The two cars were built in England and although very plain and even crude-looking, they were very strongly built and resembled British brake vans. At each end there is a small compartment for passengers -- seats for four or five in each and room for about a dozen standees -- and the large center compartment is for passengers, freight and mail. It is said that about 90% of the freight handled consists of cases of beer, so one may suppose that iron mining is a very dry job. The company also operates two small steamboats.

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