



Backgrounder

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VIA'S RAIL DIESEL CAR FLEET

The «Vest-Pocket Streamliner»

About the trains:

When the Budd Company of Philadelphia unveiled its first rail diesel car (RDC) at the Chicago Railroad Fair in 1949, it was the hit of the show – and for good reason. For decades, railroaders had tried to develop a fast, light and sturdy self-propelled passenger car that could simultaneously reduce operating costs while improving performance and passenger appeal. The RDC proved to be the answer and – 61 years after it made its debut – no comparable North American passenger rail equipment has come along to match or exceed its unique capabilities. The RDC is still ideally suited to two of VIA's most diverse services.

The two key elements in the RDC's success were the stainless steel carbody construction and the compact diesel power plant. The Budd Company pioneered the manufacturing of stainless steel passenger rail equipment using its industry-leading, patented production techniques. The advantages of stainless steel in rail car construction include its strength (and consequent safety), its corrosion-free durability, its low maintenance cost and its crowd-pleasing good looks.

As employed in Budd locomotive-hauled passenger cars, stainless steel played a large part in “the streamliner era” of North American railroading from the 1930s into the 1950s. The RDCs were directly related to these stylish stainless steel trains, including VIA's world famous transcontinental streamliner, the *Canadian*. As a result, the RDCs are often referred to as “vest-pocket streamliners.”

Just as important as their stainless steel carbody construction was the RDC's use of lightweight diesel engines and a hydraulic drive system. Using components that had been proven in the automotive and military fields, this propulsion package offered low first cost, low operating costs and reliability. Completely contained underneath the RDC's carbody, this diesel power system was designed for easy and quick maintenance, making it possible to operate them in quick turnaround service and enabling them to rack up many more miles of service daily than conventional, locomotive-hauled trains.

In combination, the RDC's rugged stainless steel construction and economical power plant produced a car that was ideally suited to a wide range of services. The Budd designers – who engineered and built the first RDC from scratch in the remarkably short span of just nine months – had all along

visualized it as a passenger rail car that could fulfill a number of market segments not being adequately addressed by other carbuilders at the time. They aimed for a maximum of market-driven service flexibility by designing the RDC to operation as single units or in multi-car trains offering a wide range of capacity and accommodations. To do this, Budd produced five variations on the basic design:

- RDC-1: 90 passengers, without a baggage or mail compartment;
- RDC-2: 70 passengers, plus a baggage compartment;
- RDC-3: 48 passengers, with an enlarged baggage and mail compartment;
- RDC-4: No passengers, with baggage and mail compartments only; and
- RDC-9 (also known as RDC-5): 94 passengers, but with no control cabs and only one engine, requiring operation with a cab-equipped model.

The success of the five versions of the RDC can be measured by the breadth of the services in which they were employed. These ranged from frequent-stop commuter runs in Montreal and Boston to fast intercity services in Southwestern Ontario to remote services in the Canadian North and Alaska. With the wide variety of services provided all across the country by Canadian Pacific and Canadian National, the RDC was well suited to Canadian passenger rail service and more than one-quarter of the 398 produced between 1949 and 1962 ultimately served here. When VIA took over the CP and CN passenger services in 1978, its RDC fleet of 97 cars was the largest in the world.

RDCs also saw extensive service throughout the U.S., as well as in Australia, Brazil, Cuba and Saudi Arabia.

In addition to the six RDCs that IRSI is rebuilding for VIA, another 13 former VIA cars were refurbished in Canada in 1996-1997 for the Trinity Rail Express commuter system that links Dallas and Fort Worth, Texas. Another two RDCs were recently acquired by the TriMet transit system in Portland, Oregon, which plans to use them on its Westside Express commuter rail service.

When the RDC was first operated in revenue service in Canada by CP back in 1953, the Budd Company celebrated the occasion with advertisements that proclaimed it to be the “car with a future for Canada’s future.” That pronouncement is just as valid today. The proven durability and flexibility of the RDC’s design – combined with the new and advanced sub-systems being incorporated by VIA as part of the current rebuilding program – make it the ideal piece of passenger rolling stock for the demanding and diverse services to which VIA assigns it today.

ABOUT THE PROJECT:

Rebuilding VIA’s RDCs will cost about \$2 million per car and the first will be delivered within one year. There is currently no suitable North American self-propelled diesel rail car design that VIA could purchase “off the shelf” from any manufacturer. Developing such a car would take four years or more, require extensive testing and debugging, and cost \$5 million or more per car.

Furthermore, like the Budd stainless steel, locomotive-hauled rolling stock that VIA employs on its transcontinental Canadian and other long-haul trains, the Budd RDCs have proved more durable than even their creators suspected. The earliest cars are now more than 50 years old, have reliably provided millions of kilometres of service and show no sign of wearing out structurally. The sturdy carshells remain corrosion-free after more than half-a-century of rugged use and many other sub-systems are equally sound. This rebuilding program will prepare them for up to 20 additional years of safe and productive service.

The RDCs will be completely disassembled and stripped of all reusable and recyclable components. Rather than being wastefully scrapped, the trucks, wheelsets, couplers, drawbars and seating will be completely reconditioned. Work on the trucks and wheelsets is being undertaken in-house at VIA's Montreal Maintenance Centre. Among the new and advanced systems being incorporated into VIA's RDCs by IRSI are:

- New interiors and fully-rebuilt seating incorporating new armrests that improve accessibility for passengers with special mobility needs;
- New, fully-accessible washrooms and Microphor full-retention toilets
- New LED interior lighting;
- New cabs at one end of each RDC with new operator controls;
- New electrical wiring, heating, ventilating and air conditioning systems;
- Fully-rebuilt Cummins N14E-R diesel engines that meet Euro II emission standards;
- New Stradco 150 kW auxiliary power units on each car to provide an increased electrical supply for all on-board systems; and
- Fully-rebuilt air brakes.

The first of the six rebuilt cars – RDC-4 #9251 – will be delivered by IRSI in April 2011 and the last car will be completed by the end of the year. As each car is completed, it will be assigned to one of the two VIA RDC services to replace an un-rebuilt car currently in service, thus assuring no service disruption or diminishment of capacity during the program. When completed, VIA's active RDC fleet will consist of:

6208	RDC-2
6105	RDC-1
6217	RDC-2
6219	RDC-2
6250	RDC-4
9251	RDC-4.

ABOUT THE PROJECT'S ECONOMIC BENEFITS:

VIA's \$12 million contract for the rebuilding of its RDC fleet is part of an unprecedented \$923 million in passenger rail modernization and expansion by the Government of Canada. The project will support 31 to 40 positions at IRSI and generate 22.5 person-years of direct employment, as well as foster economic activity for numerous suppliers. It will also strengthen IRSI's position as the preeminent rebuilder of passenger rail rolling stock in North America and a specialist in the renewal of Budd RDC equipment.

ABOUT INDUSTRIAL RAIL SERVICES, INC:

Industrial Rail Services, Inc. (IRSI) of Moncton, New Brunswick, is a full-service locomotive and passenger rail car facility specializing in equipment repairs, remanufacturing, modifications and refurbishment. Since its founding in 1999, IRSI has become North America's premier rebuilder of rail passenger equipment, strengthening Moncton's reputation as a global rail centre of excellence for more than a century.

IRSI's modern and well-equipped facility is located in the CN Gordon Yard on the eastern transcontinental main line. Its 125,000-square-foot facility is equipped with 18 exhausted service bays, overhead cranes, drop tables, tool cribs, designated stores and document control areas, a metal fabrication shop, training facilities, a wash bay and a new 100-foot, state-of-the-art paint shop.

The strength of IRSI is its highly skilled and dedicated workforce, whose craftsmanship is recognized throughout the rail industry and has earned the company certification by the Association of American Railroads.

IRSI has extensive experience in the refurbishment of Budd RDCs. In 2001, the company overhauled the five RDCs currently employed on VIA's Sudbury-White River and Victoria-Courtenay routes. These cars have provided reliable service over the past nine years. Thanks to the advanced sub-systems that IRSI will apply under this program, VIA's RDC fleet will deliver an enhanced level of service that will be more comfortable, accessible and cost-effective, as well as enhancing their already-low environmental footprint.

ABOUT VIA RAIL CANADA:

As Canada's national rail passenger service, VIA Rail Canada's mandate is to provide efficient, environmentally sustainable and cost-effective passenger transportation services, both in Canada's business corridor and in remote and rural regions of the country. Every week, VIA operates 503 intercity, transcontinental and regional trains that link 450 communities across its 12,500-kilometre route network. The demand for VIA services is growing as travellers increasingly turn to train travel as a safe, hassle-free and environmentally responsible alternative to congested roads and airports.