

THE BUDD RAIL DIESEL CAR

With the recent special events celebrating 50 years of British first generation DMUs, **Bevis King** takes a look at the DMUs of North America and the models of them.



Alaska Railroad Budd RDC2 No.712 and RDC3 No.701 at Hurricane, Alaska, on May 20, 2004.

The North American DMU story begins a little earlier than in Britain in 1949 with the introduction of the Budd Rail Diesel Car, a self-powered vehicle designed and built by the Edward G Budd Company of Philadelphia, Pennsylvania. The Budd company already had a successful line of corrugated stainless steel passenger coaches, and had gained experience in the use of compact diesel engines building tanks during the second world war. Although there had been various pre-war attempts to build a self-propelled passenger vehicle, their performance had been lacklustre and none had sold in any great numbers.

Designed and developed behind closed doors at Budd's Red Lion Works, the prototype Rail Diesel Car (RDC for short) was officially unveiled at the Chicago Union Station on Monday September 19, 1949. For the next few years, the prototype RDC No.2960 toured North America performing demonstration runs for prospective customers. As originally

delivered the Budd RDC had a top speed of 83 mph and an acceleration rate on level track of 1.4mph/sec allowing it to reach 80mph from a standing start in under four minutes; 50mph in just 90 seconds. In July 1966, the New York Central railroad established a North American speed record for a self-powered rail vehicle which stands to this day of 183.7 miles per hour with a modified Budd RDC No.M-497.

The Budd RDC was manufactured between 1949 and 1962 and a total of 398 units were produced in five different configurations. The initial four designs consisted of three 85' long types and one shorter 73' variant; a fifth design for intensive commuter operations was added towards the end of their production. The three 85' designs consisted of the all-passenger RDC-1 with a capacity of 90, baggage/passenger combination RDC-2 with seats for 70, and the Rail Post Office/Baggage/Passenger combination RDC-3 with just 49 seats. The 73' RDC-4 contained only

Rail Post Office and Baggage space and did not normally carry passengers. The Budd RDC design has a vestibule at each end of the coach, with a driving position, a connecting door forwards for when they are used in multiple, and fold down floor plate over descending staircases on both sides. These allowed the RDC to be used at both the high level platforms found in the busy cities of the East Coast, and the low level platforms found in rural areas and to the West. The RDC was also sold to Canada, Australia, Brazil, Cuba and Saudi Arabia.

The RDC rides on two twin-axle bogies (or trucks to use the American term) with the inner axle of each bogie driven by a drive shaft from a separate 275hp Detroit 6-110 diesel engine mounted underneath the body of the coach via a torque converter transmission. One of these engines also drives a small generator producing electrical power for light and heat or air conditioning depending on the season. Although the Detroit 6-110