cta retires 2400-series 'L' cars from passenger service

The Chicago Transit Authority reached another milestone in its railcar modernization program in fall 2014 with the retirement from passenger service of the 2400-series cars, dating from the mid- to late-1970s.

The 2400-series cars were ordered as part of an ongoing program to update the 'L' car fleet, which in the mid-1970s had some cars as old as the 1940s, and the majority dating from the 1950s. Planned as another generation in the High Performance Family started by the 2000-series cars delivered in 1964, and continued by the 2200-series cars delivered in 1969-70, experience gained from the design and operation of those 330 cars made the 2400-series among the most modern rapid transit car of the time.

The 2400-series cars were built by a unit of the Boeing Company, best known as an airplane and aerospace manufacturer – the Vertol division whose primary product was helicopters and other rotorcraft. Boeing-Vertol made only three mass transit vehicle orders before exiting the market, but their 'L' cars became reliable performers for the CTA for ensuing decades, thanks in large part to the experience of CTA that influenced the design.

The 2400-series cars featured an interior and exterior aesthetic design by Sundberg-Ferar, an industrial design consultant that, in the late 1960s and 70s, specialized in the design of mass transit vehicles. Sundberg-Ferar was also retained by the San Francisco Bay Area Rapid Transit (BART), Metropolitan Atlanta Rapid Transit Authority (MARTA), and Washington Metropolitan Area Transit Authority (WMATA) to design their car aesthetics around the same time, resulting in similarities between the cars of these brand-new, then state-of-the-art systems and the CTA's cars – the 2400-series equipment was very contemporary looking for the time.

The 2400-series 'L' cars featured a return to the smooth, curved sides and contoured fiberglass front end (with new styling) used on the 2000s, but using the stainless steel body and large picture windows found on the 2200s. The interiors of these cars featured fiberglass seats with padded earth tone colored inserts, walnut grain-pattern wainscot panels with beige molded plastic upper walls, and chocolate colored rubber flooring. The cars were equipped with air conditioning as their immediate predecessors had been, at a time when the majority of the 'L' fleet still did not have air-cooling. These cars are notable as featuring a return to wide sliding side doors instead of bi-fold blinker-type doors, which had been featured on all 'L' cars built in the preceding 30 years. These sliding doors allowed for freer passenger flow and were more suitable for access by persons with disabilities.

A two-car train of 2400-series cars on a preview trip near Cermak-Chinatown on August 29, 1976.

The 2400-series' original livery, inspired by the Bicentennial, is seen as one of the first two prototype cars poses near the Chicago River on Lake Street on August 29, 1976.

The cars were delivered between 1976 and 1979 with a variation of the special Bicentennial scheme, which had been adopted on selected cars beginning in 1974 to celebrate the nation's 200th birthday. The red, white and blue scheme was simplified and streamlined for the 2400s, making it more appropriate for a long-term livery, and better adapting it to the cars' architecture.

The electrical equipment was updated and improved over that on the preceding 2200-series. A major change was the use of a motor-alternator to supply 230-volt 60-hertz AC power for all the auxiliary systems on the car. Use of 60-hertz AC allowed less expensive components to be employed in place of costly, high-maintenance DC equipment. These changes represented another step in the evolutionary path that eventually led to the modern 5000-series cars being delivered today, whose entire propulsion system is AC-powered, even though the third rail is still 600v DC.

After an initial assignment of prototype cars 2401-2404 around the system for testing, the first production cars were assigned to the Ravenswood, West-Northwest and North-South services (today's Brown, Blue, and the north Red and south Green lines). In 1982, with the start of the 2600-series cars' delivery, the 2400s began to be shifted to the West-South Route (today's west Green and south Red lines), where all 2400s were assigned by 1985. After a brief shift to the Red Line in 1993 for the two-year closure of the Green Line for rehabilitation, the cars were shifted back the Green Line when it reopened in 1996. By the early 2000's the cars were spread between the Green, Red and Purple lines, where they stayed. At the end of service some cars were assigned to the Orange Line, a service where they had never been assigned until late 2012.

Like most modern 'L' cars, the 2400s underwent a mid-life overhaul which rehabilitated the cars and extended their lives. The overhaul was done in-house by CTA forces between 1987 and 1995. In the mid-1990s, a group of lower-numbered 2400-series cars was retrofitted to haul flat cars and other work cars. Distinguishable by their red and white belt rail and candy-stripped ends, the cars could also be used in passenger service. Eventually 24 cars were converted, cars 2401-2424, and these cars are being retained for the time being to handle only work cars.

While a few 2400-series cars were retired due to damage only a few years into their service lives, 194 of the 200 cars built remained in service into the 21st century. With the delivery of production cars of the new 5000-series beginning in 2011, the CTA began retiring the 2400-series cars in 2013. Retirement of the 2400s went quickly, as manufacture of the 5000s was well underway by that time, and only 15 months after the last 2200-series cars were retired in summer 2013, the last 2400-series cars were removed from scheduled passenger service on October 31, 2014.