



TRIMET'S RAIL VEHICLE FLEET

Type 1 light rail vehicles

Several classes of light rail vehicles (LRV) operate on the TriMet system. The first class is referred to as Type 1. Between 1984 and 1986, 26 LRVs were purchased for the original Eastside MAX line and manufactured by Bombardier. Each car has run reliably for more than one million miles since their first arrival.

- The low-floor design is 14 inches above top of rail (empty) for use with a 10-inch platform
- An ADA ramp provides access for riders in mobility devices
- The low-floor center section makes up 70 percent of the floor area, with interior steps to the high-floor section that rests atop the power trucks



Type 1 specifications

- Six-axle, single-articulated vehicles, 89-foot long
- Vehicles have high floors and interior steps for use with low platforms

Type 2 low-floor cars

In 1992 TriMet conducted a “Level Boarding Study” on low-floor vehicles and concluded that they were the least costly way to provide universal, level boarding on the entire light rail system. This feature eases boarding for people using mobility devices.

TriMet first ordered 35 Type 2 low-floor LRVs for the Westside Light Rail Project, supplied by Siemens and assembled in Sacramento. With subsequent add-on orders for system ridership growth and an extension to the airport Red Line, the total grew to 52 LRVs by 2000.

Type 2 specifications

- Six-axle, double-articulated vehicles, 92-foot long

Type 3 LRVs

TriMet ordered 17 Type 3 LRVs from Siemens for the Interstate MAX Yellow Line, and 10 more for ridership growth. These LRVs are essentially the same as the Type 2 vehicles, except they have automatic passenger counters and improved air conditioning systems.



Type 4 LRVs

A new low-floor vehicle was built for the light rail project that became the MAX Green Line. These Type 4 LRVs are three feet longer than Type 2 or Type 3 LRVs and have eight more seats per two-car consist. Yet a lighter weight and advanced electronic systems allow the Type 4 cars to slow down and stop at stations even more smoothly than their predecessors. TriMet received 22 of the new cars, bringing the total light rail vehicle fleet to 127.



Type 5 LRVs

Eighteen Type 5 LRVs were added to TriMet's MAX fleet as part of the Portland-Milwaukie Light Rail Transit Project, raising the total number of LRVs to 145. This next generation of MAX LRVs offers improvements over the Type 4s, including reconfigured seats to improve legroom and sight lines, improved air conditioning system and better ergonomic cabs for operators.

Light rail train configurations

Two-vehicle trains, called "consists," provide most of TriMet's service. Type 2 and 3 vehicles are designed to run singularly, in pairs or coupled to another Type 1, 2 or 3 vehicle. These configurations ensure that at least one car in a train is fully accessible, which made it possible to remove the obsolete Eastside MAX platform lifts. Type 4 and 5 vehicles can only be coupled to another Type 4 or 5.

WES Commuter Rail vehicles

The WES (Westside Express Service) Commuter Rail line in Washington County began operation in February 2009 with diesel multiple unit (DMU) self-propelled individual rail cars.

Four cars were purchased from Colorado Railcar for the project: three single powered cars and one trailer car. Powered DMU cars accommodate 74 seated passengers and trailer cars have 80 seats. With the ability to move along the track in either direction, the single-powered cars have cabs at both ends of the vehicle, and the trailer car has a cab at one end only. Both types of cars have room for two mobility devices and up to six bicycles.

The DMU's average speed is 37 mph, with a maximum speed of 60 mph. Each DMU is equipped with two, 600 horsepower Detroit Diesel engines.

In January 2011, TriMet added two vintage rail diesel cars (RDCs) to the WES fleet to serve as replacement cars when a DMU needs maintenance or repair. Built in 1953 by Budd Company, the cars received these repairs and modifications from WES mechanics with the assistance of TriMet vehicle engineering:

- Air brake system overhaul
- Cab signal system installation
- Event recorder modification
- Door thresholds for level boarding
- Cosmetics on interior and exterior

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Rail Vehicle Tour Fact Sheet / July 2016