*Union Pacific "*BIG BOY*"*

The twenty-five UP 4000 Class 4-8-8-4s were the biggest steam locomotives ever built. They could develop 7,000 horsepower and easily ran at their designed maximum speed of 79 mph (110 kmh), consuming 100,000 pounds of water and 22,000 pounds of coal per hour as they did so. Although they were designed as freight locomotives, during World War II they were often employed hauling troop and passenger trains.

In the late 1930's and early 1940's, with the gearing up for national

defense and the rapid expansion of industry and population on America's west coast, freight traffic boomed, and the Union Pacific Railroad Company was determined to haul its share of this traffic. To do it as economically as possible, they needed to cut out double-heading on Wahsatch and Sherman Hill grades, to boost speed and increase tonnage. And so, from the partnership of locomotive engineers Jableman and Jeffers, the 'Big Boy' was born.

The 'Biggest of the Big' locomotives were built by ALCO (American Locomotive Company) for the Union Pacific Railroad between 1941 and 1942. The Big Boys used high-pressure steam in all four cylinders, and incorporated state-of-the-art and innovative methods of articulation and running gear design, giving stable and smooth tracking on straight and curved trackage alike. They were the ultimate expression of single expansion articulated locomotives.

The 'Big Boys' were used on the Overland Route on long continuous climbs from 1,933 feet (595.7 m) to 8,013 feet (2,444 m) at the summit of Sherman on a ruling grade of 1 in 64 1/2 feet and west of Green River through the Wasatch range with a ruling grade of 1 in 88 feet. One of their most important duties was hauling 3,200 tons - 70 cars' full - of refrigerated fast fruit-trains over the mountains from Ogden in Utah and Green River in Wyoming.

Specifications

Scale/Gauge: 1/32, 45 mm (No. 1 gauge)
Dimensions: Length 1,224 mm. Width 105 mm. Height 156 mm
Net Weight: 19 kg (Engine 14.5 kg. + Tender 4.5 kg).

Wheels:
Drivers: 52.5 mm diameter drivers made of stainless steel, the axle boxes have coil spring action.
Trucks: Pilot Truck Wheels C27 mm diameter
Tender and Trailing Truck Wheels. C32 mm diameter

Cylinders: 4 Cylinders (Bore 13 mm x Stroke 20 mm)
Valve Gear: Walschaert's with a screw reverser.

Boiler Type: Fire Tube Boiler with 2 Super Heaters. (2 x large fire tubes with 8 x small fire tubes
Capacity: 800 ml of water at 80% capacity
Pressure: 4 kg/cm (normal working pressure)
Fittings: 2 x Safety Valves, Regulator Valve, Blower Valve, Pressure Gauge (Dial Type from 1 to 5 kg/cm), Water Gauge, Water Check Valve, Blow down Valve, Whistle Valve and Working with Whistle under the barrel.

Fire grate: 180 mm x 64 mm
Fuel: Butane Gas, Charcoal or Coal
The boiler is a convertible type

Tender Water Tank 1,000 ml of water in the tank with a feed water hand pump installed (Pump Cylinder bore 10 mm x Ram Stroke 16 mm) and on the locomotive an Axle driven Automatic Feed Water Pump with a By-Pass Valve (Axle driven pump cylinder bore 7 mm x Stroke 8 mm).

Gas Container Capacity 220 g. (Diameter 70 mm x Length 136 mm

Lubricator: Axle Drive Mechanical Lubricator