

# UP BIG BOY 4-8-8-4

The Union Pacific 4-8-8-4 "Big Boy" are considered to be the longest and heaviest locomotives built by Alco. They were designed in 1941 and 1944 to conquer the grade between Ogden and Evanston through the Wasatch Mountains.

This design utilized lateral motion devices, and were able to run as fast as 80 miles per hour, but their best horsepower was at 30 miles per hour. The engines had 23 3/4" x 32" cylinders, 68" drivers, used 300 pounds of boiler pressure and weighed 772,000 pounds. Twenty engines were originally ordered in 1941. These were engine numbers 4000 to 4019. Five more engines were eventually ordered in 1944. These were numbered 4020 to 4024.

Around September 10, 1941 the 4000 was tested on the grade that it had been built to beat. It was hauling a 3800 ton train and made the 65 mile plus trip into Wahsatch and on to Evanston ahead of the photographer.

Fittings were added, including twin stacks hidden behind a sheet-metal fence and equipped with side-folding smoke hoods. Feedwater was heated with an Elesco exhaust injector combined with a centrifugal pump. The engines were used as coal-burners. Big Boys first used air cooling piping supported lengthwise on each side of the pilot deck and later used Wilson after-cooled radiators as on the Challenger series.

The Big Boys were the King of steam for eighteen years, but they might not have ever been built, for while the 4000 series were in the design stage, deisels were being tested experimentally throughtout the nation.

### PROTOTYPE SPECIFICATIONS

|                         |                |
|-------------------------|----------------|
| Builder                 | Alco           |
| Tractive Force          | 135,375 pounds |
| Drivers                 | 68"            |
| Total Engine Weight     | 772,000 pounds |
| Total Engine wheel base | 72' 5-1/2"     |
| Steam Pressure          | 300 pounds     |
| Height                  | 16' 2-1/2"     |
| Length                  | 85' 9-1/2"     |

### MODEL SPECIFICATIONS

|                |                             |
|----------------|-----------------------------|
| Drivers        | 69" Box Pok                 |
| Gear Ratio     | 31 - 1                      |
| Power          | DC-71 motor                 |
| Boiler length  | 12-1/4"                     |
| Engine height  | 2-1/4"                      |
| Overall length | w/ centipede tender 18-5/8" |

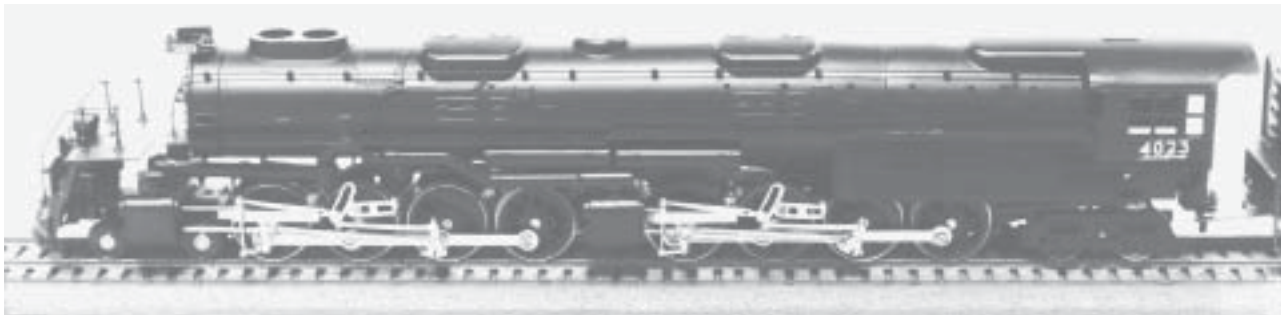
### ENGINE OVERHANG

|   |
|---|
| (From inside of Outside Rail)   |
| 18"Radius Curve 1.688"  |
| 20"Radius Curve 1.437"  |
| 22"Radius Curve 1.375"  |
| 24"Radius Curve 1.250"  |
| NOTE: If curves are given the clearance as outlined in NMRA standards, no difficulty with overhang will be encountered. |

## BOWSER UP BIG BOY - KITS AND ACCESSORIES

UP Big Boy, Kit  
**DISCONTINUED AT THIS TIME**

|         |   |         |  |
|---------|---|---------|--|
| #100375 | UP Big Boy Superdetail, Kit                                   | #500355 | Assembled Valve Gear   |
| #100321 | Painted Engineer and Fireman<br>(INCLUDED IN SUPERDETAIL KIT) | #3020   | Boiler Weight (FILE SOLDER JOINT TO FIT)                                   |
|         |   | #150681 | Electrical Pickup Kit for MONOGRAM or JMC Models Tender From Their Big Boy |



**UP BIG BOY 4-8-8-4, PHOTO OF BOWSER MODEL**



