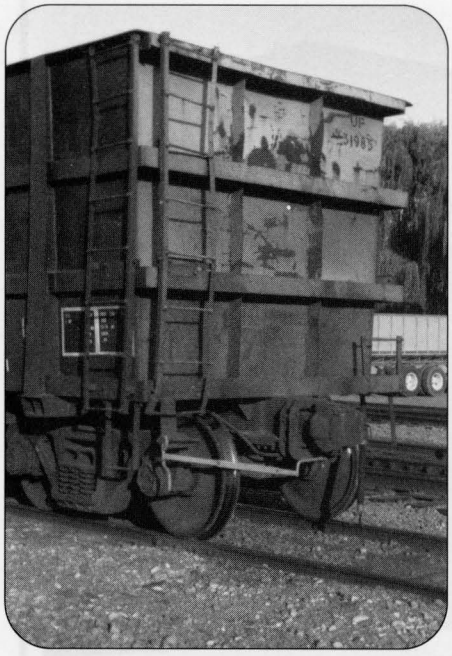
The Union Pacific "Coal Liner" has distinctive vertical and horizontal ribs and high sides. The ends of the car are painted yellow, indicating it's equipped with rotary couplers. Notice the large lettering between each of the ribs.

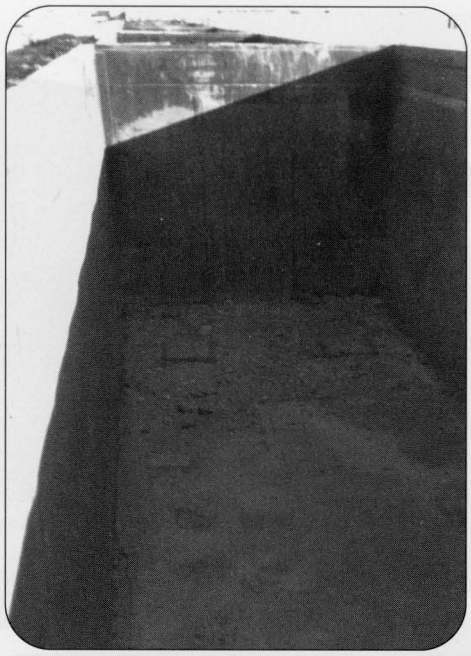
UP "COAL LINER"

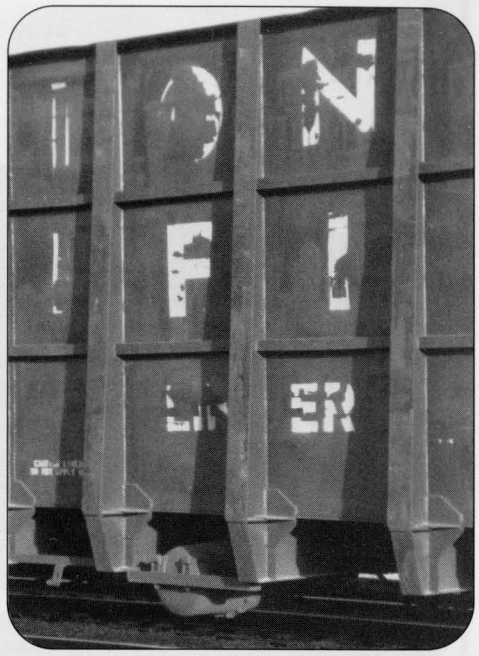
by Thornton Waite

Unit trains have been one of the railroad's modern successes, capturing large volume freight traffic. This concept dates back to the 1960s when the railroads realized that if they dedicated solid sets of cars to a specific type of service, car utilization and train speed could be significantly improved. Unit trains are able to bypass yards and eliminate time lost in

The cars see heavy use and are typically dented on the sides and ends. Note the tapered vertical ribbing, which is wider at the bottom for additional strength. The sides have "Coal Liner" stenciling is yellow, while the other lettering on the sides is white.







Left: This view shows the yellow end, rotary coupler and 38" wheelsets. Middle: The interior of the car is nothing more than a large "bathtub" with tapered sides. Right: Here's a closeup of the ribbing. Notice how the smaller horizontal ribs intersect the tapered vertical ribs. Channels extend under the car to support the bottom.

switching. To meet the growing demand for unit trains, many railroads ordered special rolling stock dedicated specifically to serve mines and power plants. Some had special markings on the sides and designations in the *Official Railway Equipment Register*, indicating their dedicated service. Although a number of these cars are over 20 years old, they are still in use, although not necessarily still dedicated to a specific trainset.

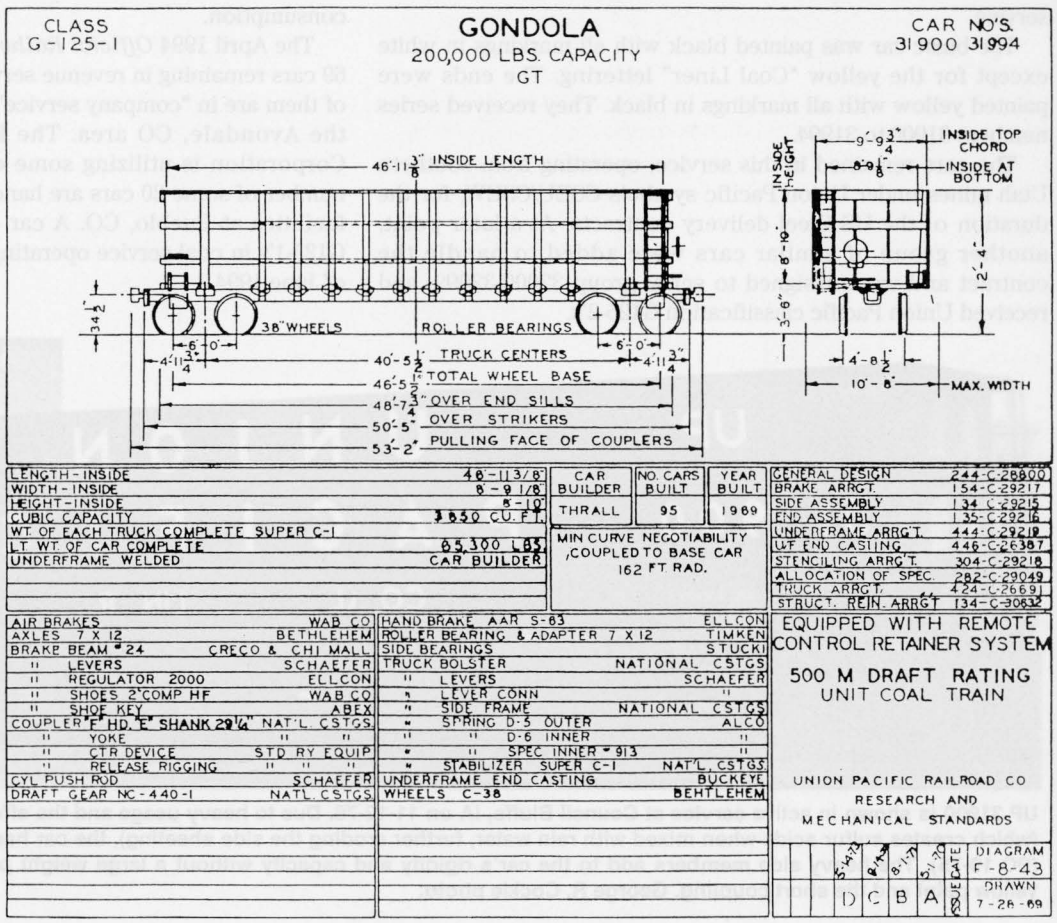
When you watch a unit train of coal roll by, the cars are often identical. The Union Pacific "Coal Liner" is typical of these cars. It's actually a gondola used to transport coal from the mine to the power plant.

In the late 1960s and early 1970s, the Union Pacific ordered high-side gondolas for this use. They had special markings, and their high capacity of 200,000 pounds made it possible for the railroad to offer efficient unit train service. The construction is basically a large enclosure with the sides and ends reinforced. Other features of the car, such as the air brakes, ladders and brake wheel are standard freight car equipment.

The "Coal Liner" has several unique design features that distinguish it from other cars. They're designated as AAR type GT, with high, fixed sides and ends, and open top with no bottom doors. They have rotary couplers allowing them to be tipped over for quick unloading. In addition, the high sides and ends are heavily braced with formed metal shapes, as can be seen in the photos.

Model Die Casting and Ye Olde Huff-N-Puff both have "Coal Liners" available. The MDC cars come in a variety of roadnames, while Ye Olde Huff-N-Puff's cars come in a set of three unmarked cars so they can be custom painted.

All Photos by the Author



UP 31901 is shown at Council Bluffs, IA on January 26, 1973. The ends of these cars are painted yellow to denote that they're equipped with rotary couplers. This car was shopped at Albina Shop in Portland, OR in September 1971 (AT 9-71). It was also repainted and lettered at that time. The cars measure 53'1" overall. Rated at 100 tons (200,000 pounds), they have a load capacity of approximately 3900 cubic feet. The ACI (Automatic Car Identification) panels were still in vogue during the 1970s and do appear quite clean for the "readers" that scan them. George R. Cockle photo.

UP G125-1 by George R. Cockle

Union Pacific originally ordered the G125-1 series gondolas to handle coal shipments from southern Utah to US Steel facilities in Fontana, CA. Manufactured by Thrall Car of Chicago Heights, IL in April 1969, they were painted and lettered with the distinctive "Coal Liner" markings denoting this service.

The basic car was painted black with all markings in white except for the yellow "Coal Liner" lettering. The ends were painted yellow with all markings in black. They received series numbers 31900 to 31994.

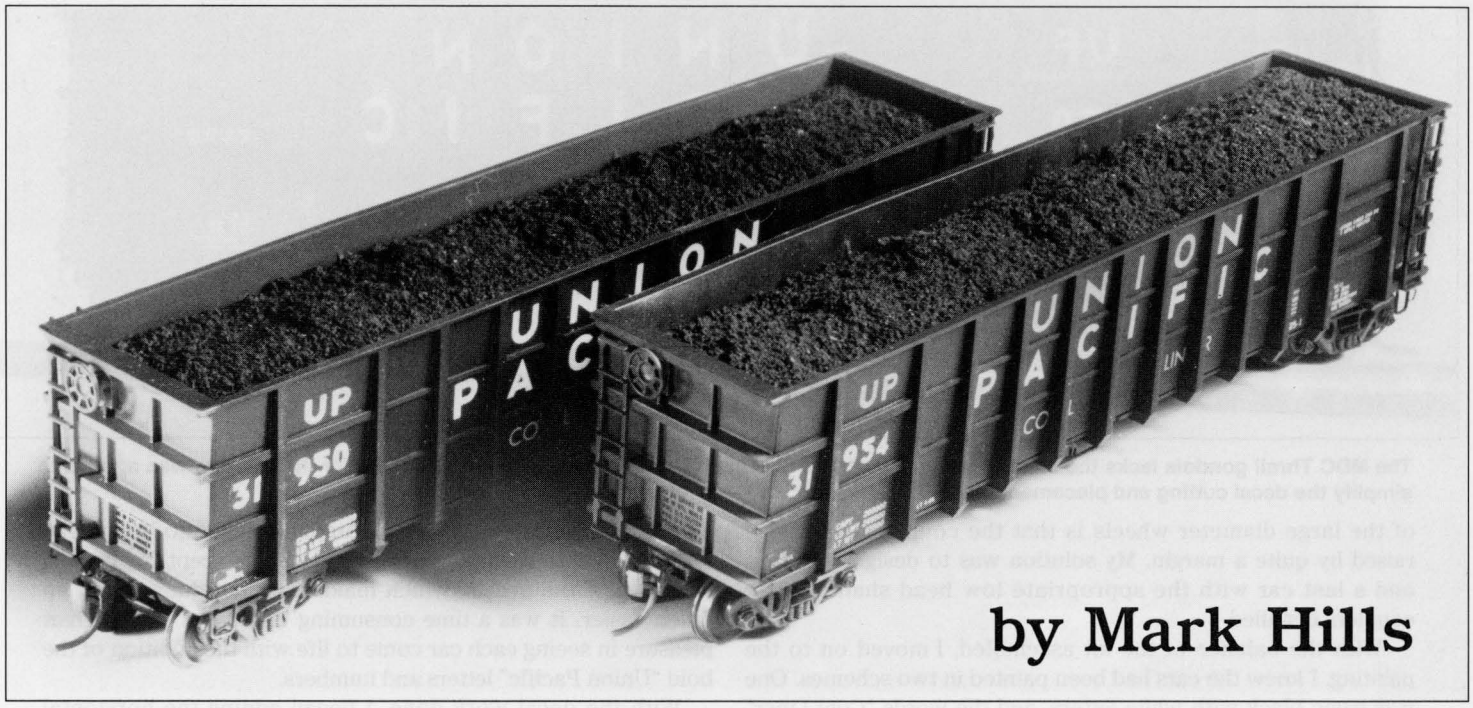
The cars remained in this service, operating from southern Utah mines under Union Pacific symbols CSEU/CSEW, for the duration of the US Steel delivery contracts. At a later point, another group of similar cars were added to handle the contract and were assigned to serial group 32000-32099, and received Union Pacific classification G125-2's.

It should be mentioned that the D&RGW ordered similar gondolas later and operated in a partnership with Union Pacific from mines in the Carbondale, CO area to the Pacific Coast for export shipments. Much of this was handled by Metropolitan Stevedores at the Long Beach, CA port for Far East consumption.

The April 1994 *Official Railway Equipment Register* shows 69 cars remaining in revenue service. A survey shows that most of them are in "company service" handling contaminated dirt in the Avondale, CO area. The Environmental Management Corporation is utilizing some of these cars, while an equal number of some 20 cars are handling soil from the AAR testing facilities at Pueblo, CO. A car check shows about 15 of the G125-1's in coal service operating out of Murray, UT at the end of June 1994.

UP 31900 is shown in active service at Council Bluffs, IA on 11-12-76. Due to heavy usage and the effects of the coal's sulfur content (which creates sulfur acids when mixed with rain water, further eroding the side sheeting), the car had been shopped at Pocatello, ID (PO 10-75). The heavy side members add to the car's rigidity and capacity without a large weight penalty. The "A" end shows the yellow paint and the short coupling. George R. Cockle photo.

"COAL LINER" MODELING



by Mark Hills

Using The MDC Thrall Gondola

In 1967, the Union Pacific and the Denver and Rio Grande Western railroads began a new service involving a dedicated set of new equipment and motive power. The service was planned to bring high quality coal from the Carbondale Company mines at Sunnyside, Utah to the Kaiser Steel mill in Fontana, California. Before the operation of true unit trains, coal had been moved west in D&RGW and Carbon County Railway hoppers, with each railroad supplying its own locomotives and cabooses. During the first months of unit train operation, the train ran with leased red M-K-T 100 ton hoppers until the Union Pacific received the first of two orders of "Coal Liners." In actual practice, the coal was moved in two separate trains, one originating in Colorado and the other in Utah. Both trains were handed over to the Union Pacific at Provo, Utah. Motive power was run through all the way to the unloading point in California. In fact, during the twelve hour unloading period, the Santa Fe often made use of the locomotives for a freight run to Barstow.

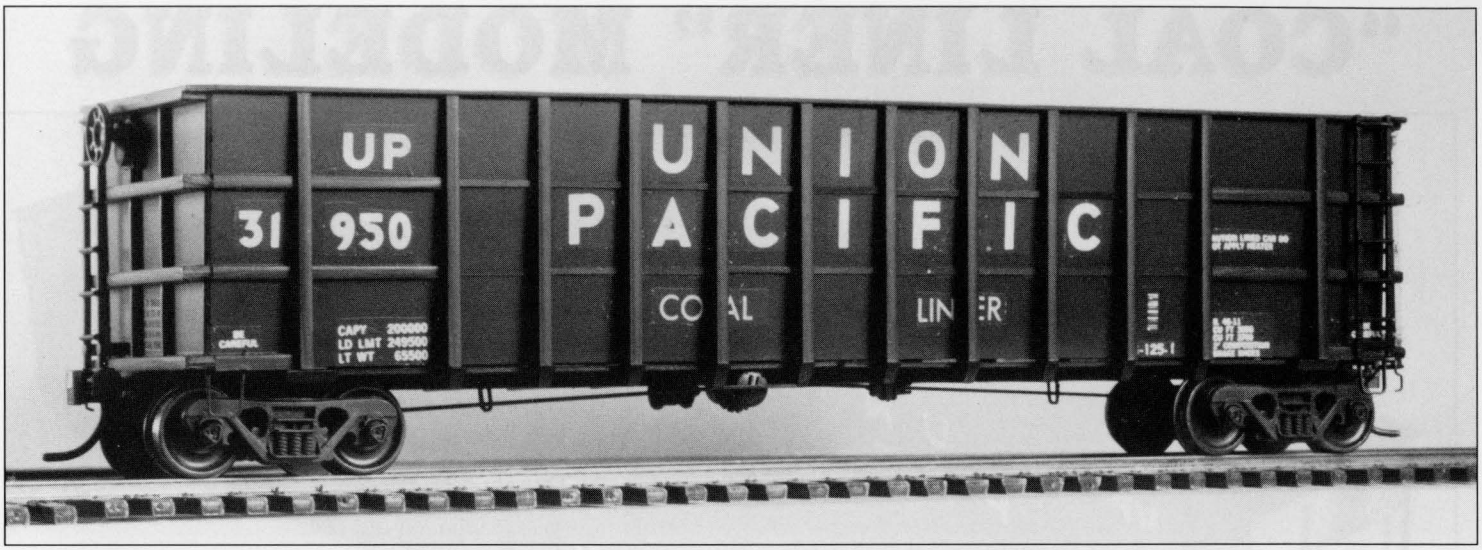
New motive power acquired specially for this service. The Union Pacific SD-45 series 3638-3649 were non-RCS equipped as opposed to the rest of their order. The Rio Grande engines, numbers 5326-5328 and 5336-5338, were among the first to incorporate the new large "Rio Grande" logo. The D&RGW engines also had Union Pacific cab signal systems installed so they could run in the lead position in UP territory.

Union Pacific's first group of 95 "Coal Liner" cars, series 31900-31994, were delivered from Thrall in 1969. They were classed G125-1 by the UP. The cars were designed to be high capacity (3850 cu. ft.) and were delivered equipped with a remote control retainer system and 38" wheels. The D&RGW also ordered a group of five cars in 1969, numbers 56995-56999. They were very similar in appearance to the UP cars except for the small horizontal ribs running between the heavy vertical ribs. Union Pacific purchased an additional group of 100 cars for Kaiser Steel unit train service in 1970. Numbers 32000-32099, were classed G125-2. These were also quite similar to the first group of cars, differing only in some minor dimensions and a lower capacity (3700 cu. ft.).

Fleet Detailing the MDC Thrall Gondola

The MDC Thrall unit train gondola has been available for quite some time, the die work dating from the mid-1970s. While the model may have some flaws, especially by today's standards, it's certainly a good starting point. My goal for this project ties in directly with my planned layout featuring the D&RGW around Helper, Utah in the 1970s. From speaking with acquaintances and from various books, I knew the Kaiser Steel unit train was a regular sight on this portion of the railroad, and to not model it would be a serious omission on my part. I wanted a 30-car train and decided to build one of the cars completely through to determine the level of detail I wanted, keeping in mind I still had another 29 cars to build.

The one major flaw of the MDC kit is the mismatch between the car floor and the underframe halves. Rather than making a huge production out of it, I chose to clean up the mismatches with a file after the car floor had been glued in place. Other "basic" additions included metal stirrup steps from A-Line, coupler cut bars from Detail Associates, and a simplified underframe arrangement using brass wire bent into "U" shapes for hangers and longer sections to simulate the train line. For some reason I really focused on the size of the prototype's 38" wheels. I wanted the same look on my cars and was determined to duplicate it. At the time, there weren't any 38" wheels available in HO scale, but after some searching, I decided to use Con-Cor passenger car wheels which measured larger than 36", yet smaller than 40". Good enough! If I were doing the project today, I would use either Jay-Bee or NorthWest Short Line 38" wheels. I also elected to replace the kit's stock trucks with new ones from InterMountain. The combination of these excellent trucks and the heavy Con-Cor wheels produces a very free-rolling car with a nice, low center of gravity. One consequence



The MDC Thrall gondola lacks the smaller horizontal ribs of the Union Pacific cars. these were added after the lettering was applied to simplify the decal cutting and placement.

of the large diameter wheels is that the coupler height was raised by quite a margin. My solution was to designate a first and a last car with the appropriate low head shank Kadee couplers installed.

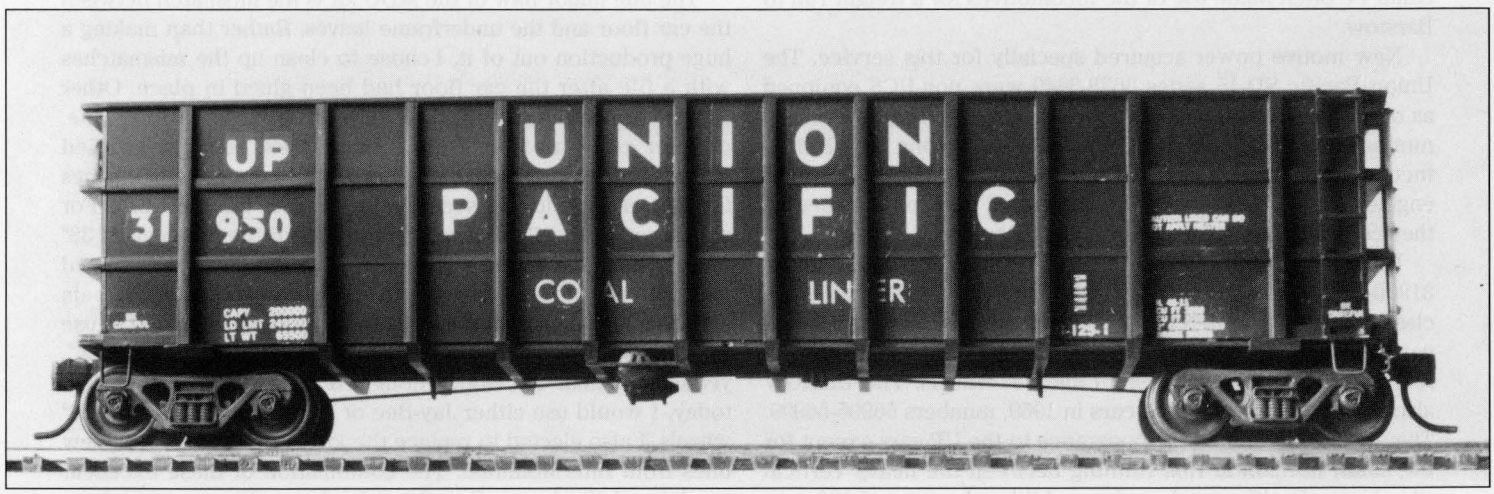
With the balance of the kit assembled, I moved on to the painting. I knew the cars had been painted in two schemes. One was basic black with white letters, and the words "Coal Liner" in yellow. The other scheme differs in that the ends of the cars are painted yellow. I wanted most of my cars to have the yellow ends, so I began by priming the car ends with Accu-paint CP Gray, which served as an undercoat for the medium yellow that was applied next. I was then faced with the monumental task of masking the yellow ends before painting the carbody black. I solved this problem by making a two-piece paint mask from small pieces of styrene. The first piece covers most of the car end from the extreme right edge to the ladder and around the brakewheel. Three tabs were made which interlock with the model's heavy end braces. The second mask has three smaller tabs that also engage the end braces. This piece overlaps the first one by almost the width of the car, making it easier to handle. Using the masks in conjunction with quick drying Accu-paint made the balance of the painting relatively easy. The masks were positioned and black was airbrushed around the ends of the car and in toward the middle. The masks were then removed and repositioned on the other end and the airbrushing was completed.

After all the cars had been painted, I settled into the task of lettering. There really is no shortcut here, except for careful trimming of the decals, which makes keeping things lined up much easier. It was a time consuming effort, but I took great pleasure in seeing each car come to life with the addition of the bold "Union Pacific" letters and numbers.

With the decal work done, I began adding the horizontal ribs. This was done with small pieces of strip styrene that had been painted black on three sides. The strips were then cut into short pieces to fit between the car's vertical ribs. I used a caliper and a NorthWest Short Line chopper for the job, frequently stopping to check that all the pieces would fit properly. They were ACC'd in place and lined up by laying a straightedge on the car side and scribing a very light line as a guide. For a 30-car fleet, this was a tedious job. When the bracing was finished, I Dullcoted the cars and airbrush weathered them, being careful to avoid getting them excessively dirty, as for my time period the cars are fairly new.

Coal loads for the cars were made using Chooch Industries woodchip loads. These were chosen for their fine texture. Color for the loads was a mixture of Floquil Engine Black and Grimy Black, which was brushed onto the loads with a large paintbrush. With this done, the loads were installed in the cars. The end result was a set of very distinctive cars which were quite rewarding to build.

Black & White Photos by Robert Hundman



InterMountain trucks with 38" wheelsets provide the massive look of the prototype "Coal Liner." Underbody detailing was kept at a minimum so a 30-car fleet could be built.