



Photos by Jerry Hixson

Fairmont A4E gang car rail skids bolt directly onto the wheel bearing housings (above left) and have a center support point (arrow above right). Jerry Hixson from Carlton, WA, traced his wheel alignment problem to bent rail skids. Either through poor heat management during manufacturing, or heavy use by the railroad, his rail skids were bent (below left). Although his frame was square, the bend in the skids caused his wheels to be out of alignment. Hixson made new skids (below right) - solving the problem.



# A-4-E RAIL SKIDS

## THE HIDDEN WHEEL ALIGNMENT PROBLEM

BY JERRY HIXSON

I bought one of the A4E's a couple years back. I tore it down to the frame, and then started putting it back together again. I went to replacing, restoring, rebuilding and painting everything I could to make my dream railroad car!

During its first, run the car did not track very smoothly and was very rough riding. After the run, looking at the new pressed steel wheels, I found one wheel on each side had lost 50% of its usable thickness in less than 175 miles.

Researching in the NARCOA technical articles I found a wonderful article by Dick Ray called Good Tracking 1 & 2. I started doing what Dick suggested and was doing fine until I came to the part about the straight edge across both wheels on one side. I could only get two points out of four touching. Looking closer, I found one wheel that turned out and the other went in. I just could not see by looking at the frame what was wrong (I had squared off the frame while it was stripped down).

However, looking along the skid rail a gentle bend was apparent. It was most likely from the welding process of making a channel out of two angle pieces. Checking with the other A4E owners they said theirs were that way also, giving the front and rear a very slight tow-out. Now with all the support cross-members, brackets, and axle bearing mounts, it was really hard to tell how badly the skid frame was bent or twisted.

So apart she came!

First, I blocked up the center of the car. Then removed the support cross-member bolts. The two bolts and nuts from each end were removed next. The frame skid rail should just drop out after the last one is removed. What I found was a bent and twisted piece of junk that had no straight lines anywhere.

Duplicating the frame was not hard because Fairmont used standard metal sizes. The only thing I did differently was weld the lower angle to the upper one, very slowly not letting the heat build-up enough

to warp or bow the piece. Laying the new frame rail next to the old one I could see how badly out of alignment it was. Hole-drillings were in the same spots except for the two cross-member's holes which were in a different area. These holes were about 1/4 inch to the inside from the factory openings because of the fast production welding on the original piece.

Reinstalling the new rail skids was just the reverse of the removal. Now for the moment of truth, I again did the alignment test. The straight edge now touched the two wheels on each side in four places. I was able to complete the final steps of the alignment with no more problems. Next step was to wait for the next excursion.

Setting-on, on a beautiful spring day and traveling down the Snake River, I could not believe how much better the ride was. Then one more day of riding on some older track with very little visible wear on my wheels convinced me that I had found and fixed the problem.