GOOD TRACKING
PART II
WHEEL ALIGNMENT

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In my previous article on good tracking, I discussed the aspects of wheel contour, and how it affects the tracking characteristics of a motor car. In this article I will describe how to check and make any necessary corrections to the wheel alignment of your car to further improve the tracking characteristics. The procedure requires four steps, and another person is required to assist.

The first step is to place the car on blocks so the wheels will be free to rotate. As you rotate each wheel, watch for any signs of a bent axle or wheel. A minor flaw is tolerable, but this will make further alignment steps more difficult. During this step, it would be advisable to mark the exact center of each axle, and to carefully measure the wheelbase dimensions on each side of the car, as shown in figure 1 (A). If the dimensions differ by more than 1/16th of an inch, the cause must be found and corrected before going on to the next step.

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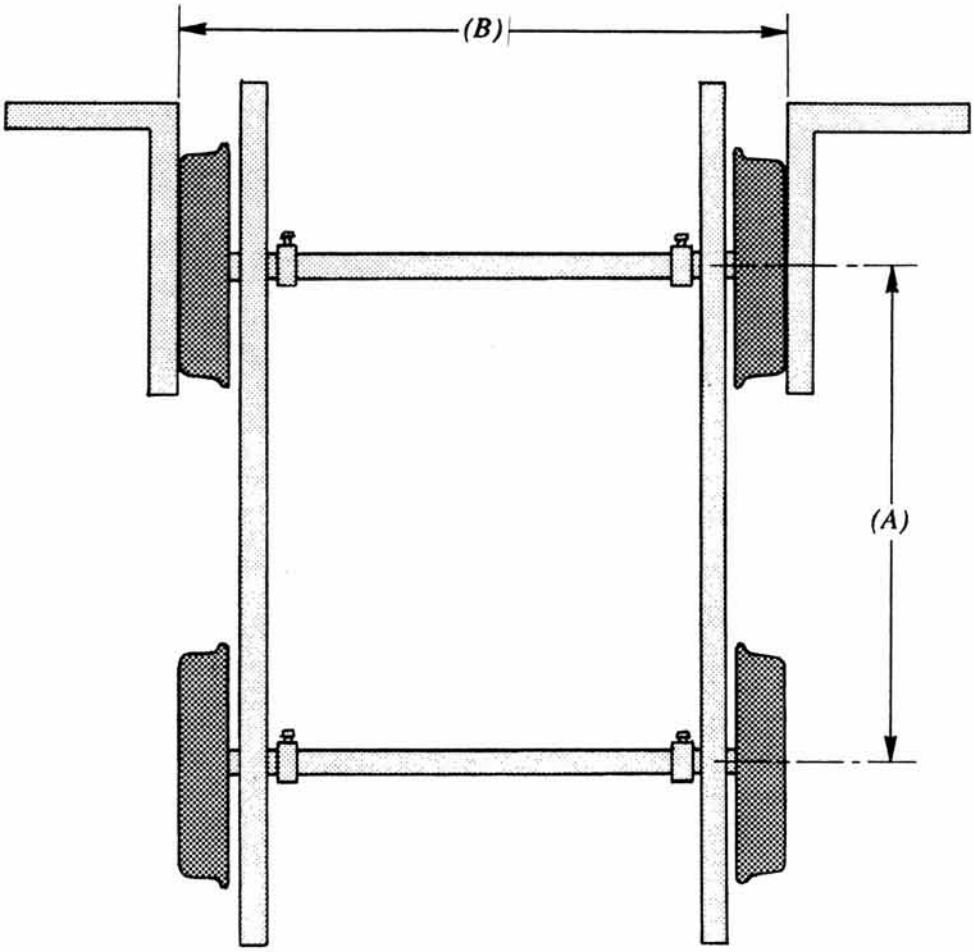

Figure 1

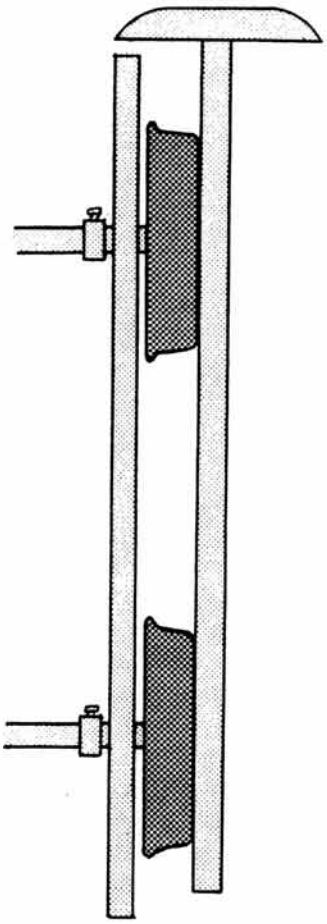

Figure 2

The second alignment step is to measure across the wheel outer faces at each end of the car, as shown in figure 1 (B). Hold a straightedge across each wheel face and measure the distance between the straightedges. The Fairmont instruction manual says the distance should be 62-13/16 inches for cars with 14-inch wheels, or 62-15/16 inches for cars with 16-inch wheels. One can assume that the tollerances are similar for other makes of motor cars. Keep in mind that minor deviations from these tollerances are allowable, but major ones should be corrected.

After pulling the hub with a wheel puller, you can add a layer of package sealing tape to widen the distance, or sand the insulation to narrow the distance. Ideally, both ends of the car should measure the same.

The next step is to adjust the axle thrust collars, so that all slack is removed and the wheels are equally spaced from the frame. The collars should be tightened at this point, but not wired, because they may have to be moved.

All of the proceeding adjustments are in preparation for the final check, which is the most important one for good tracking. This check begins by placing a long straightedge across both wheels on one side, as shown in figure 2. The straightedge should touch the two wheels in four places (as you rotate the wheels). This should be done several times to assure accuracy with all wheels, in four different positions. It is very important that both sides of the car are even. Adjust the axle thrust collars to achieve this, then tighten and wire the set screws.

I have been through this process with two cars that had tracking problems, and the results following these procedures was well worth the effort. Both cars track *much* better now. Perhaps this procedure might help make *your* car track better also.