Additions to Brake Adustment Article

By Dick Ray
WM M9 #67

The March/April 1998 issue of ***THE SETOFF*** carried an article on adjusting your brakes for the best performance. Since that time a few additional items have come up and should be added.

The first thing is to look for uneven shoe wear. I have noticed on my M9 and on other cars that the top of the front brake shoe, actually called the "liner" wears faster than the bottom. You cannot simply turn them upside down to compensate because of the taper that wears into the liner due to the wheel taper. It is my guess that the uneven wear is due to the same effect that wears automobile brake shoe leading shoe or edges more than the trailing shoe or edge. In any case the liner thickness is not obvious, and you may actually be grinding down one of the bolt heads which cannot be seen. While you are refurbishing the brake system it would be a good time to replace needed liners in pairs.

Another brake–related issue has come up, and it relates to the cotter pins in the tube on which the shoe pivots. The drawing with the previous article on brake adjustment (or the one in your manual) shows the cotter pin on the outside. This makes sense, so that the condition of the cotter can be inspected. A lot of cars out there, however, have the cotter on the inside. While some might have done it for neatness, I suspect it just came out that way the last time the brakes were overhauled. Although cotters on the inside work as well on most cars, there can be a problem with MT14 and larger cars which use a wider brake liner. The cotter pin can rotate so that one end can contact the edge of the brake shoe. That causes a short across the insulation when the brakes are applied and can set off signals. If it is on the inside, this flaw cannot be seen and causes a lot of head scratching when the signals come on. The solution is to put the cotter pins on the outside where they can be seen. Then bend the legs of the cotters so that they cannot possibly touch the shoes.

For those who like to go to the ultimate in appearance as well as safety, I suggest stainless steel cotter pins. They are easy enough to obtain, never rust, and are always shiny. The pins with a cotter on each end that go through the vertical links can be replaced with stainless also. Simply get a stainless bolt of the proper diameter that has at least 1.5 inches of unthreaded stock next to the head. Then saw off all the threaded portion, drill a hole for the cotter pin at the right point, and insert the bolt from the back, securing it with a stainless cotter pin. Since it does not rust the bolt makes a pivot which can function freely with little or no lubrication. The photo shows all cotter pins on the outside and a brake pin made from a bolt.

The rulebook says that the brake lever cannot reach the stop when the brakes are fully applied. The actual inspection is often done by requiring that the car not be moveable when the brake is in the first notch. This of course applies only to M– and S–series Fairmonts. The A–series cars have a whole lot of notches, and other brands don't fit this criteria for one reason or another. Actually, what the inspectors are looking for is that the car not be moveable when the brake lever has used up half of its travel. Check out the adjustment in advance of a trip and save yourself some last–minute changes while people wait.

In closing I suggest looking at your brake system carefully, even if you rebuilt it only a few years ago, or especially if you recently bought the car. Last summer I saw a M19 with a two-foot extension bolted to the brake handle. I asked the owner why and he said it was so hard to stop. Then I looked over the brake linkage and realized that it was assembled with the vertical links ABOVE the arms. This changed the angle of the operating rods enough that much of the mechanical advantage was lost. The owner said it was that way when he bought it!