

# Technical Notes

## Brake Adjusting Shaft Information

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These special clevis clamps (A-2042) are mounted to each brake shoe on both the front and rear brake systems. These rest against the brake adjusting wedge (A-2041). Figure 1 shows the adjusting shaft, wedge and how they fit together. It is critical that both brake adjusting shafts within a brake assembly be the same length. Figure 2 shows incorrect lengths with the tool used to set angle and length of the arms. If they are not the same length the shoes will not be centered in the brake drum. All of the force will then be placed on one brake shoe.

The original brake adjusting shafts were heat treated so they are hardened steel. To change the length they should be ground as they are the same hardness of a file. In my experience I have found that the USA made adjusting shafts and wedges are heat treated. I have found that the units made in China and Taiwan may not be correctly hardened, and can be hand filed. They also wear out very fast.

Ford specifications state that both the adjusting shaft and the wedge were at an angle of 60 degrees. Figure 3 shows an arm and a protractor set at 60 degrees. A simple tool can be made to use with the arms so the correct angle and length can be measured. I used a piece of 1 inch flat bar 3  $\frac{3}{4}$  inches long, 3/16 inches thick. I drilled a hole in one end and pressed an old adjusting shaft pin into it, on the other end, 5/8 of an inch from the end I drilled a #7 hole, and tapped it  $\frac{1}{4}$ -20. I then used a piece of 1 inch flat bar 4 inches long by 1/8 inch thick. I bent it to 60 degree angle and made a  $\frac{1}{4}$  inch wide slot by 1 inch in length. The tool was put together using a brass  $\frac{1}{4}$  round head screw a length of  $\frac{3}{4}$  inches. I also used a brass wing nut for easy adjustment. Figure 4 also shows the brake arm tool with an adjusting arm in the tool.

In conclusion, be sure that the arms are the same length in each brake unit. Check that the angle is ground to 60 degrees. Also check to see that the head of the adjusting shaft pin is towards the backing plate and the cotter keys that hold the arms to the brake shoe point out towards the brake drum; otherwise they will rub against the backing plate.



Fig 1



Fig 2



Fig 3



Fig 4