

Project 300F: Brake Conversion Part II

We recently converted the front braking system on our 300F to use a newer style drum brakes. It works very well and we decided to convert the rears as well.

When we did the front brakes we used the 63-64 style C-body fronts that are 3x11 with self-adjusters. We want to use a similar style in the rear.

To do the rear brake conversion properly we need to change the entire rear end. The axle housing uses a different flange where the backing plate attaches so the later backing plate won't bolt directly to the earlier housing.

If we're changing the entire housing we might as well try to get a 65 rear axle housing. This was the first year that the rear brake drums could be removed without a drum puller. Rear brakes are 11x2.5 or 11x3 (heavy duty) so they are the same as available in 63-64.

Price and availability is always a factor. I have a friend who is parting out a 65 300 and offered me the rear axle housing free if I take it out. So it will be a 65 rear with 11x2.5 rear brakes for the conversion.

I removed it and took it home. When I dismantled it completely I found that the drums were junk so I would still need to find a pair of drums. The brake lines on the axle housing were not salvageable. Both were very badly rusted and twisted in two when I removed them.

Otherwise the remainder looks great. I have a large bead blaster so I bead blasted the entire rear housing. When cleaned it is primed and painted and ready to reassemble.

I got a new brake hardware kit, new wheel cylinders, new gaskets, pinion seal and axle seals. The bearings are pressed on the axles so my machine shop took care of replacing the bearings and seals.

I decide that its time to remove the old housing from the 300F. The 'F' sags in the rear so I'll have the springs repaired or replaced when removed. When I start to remove the rear springs I see that the previous owner had put coil-over-shocks on the rear to help the tail-dragging. That's not a good sign.

With the springs removed I took them to the local spring company. The springs were tested for hardness and were pronounced perfect so they dismantled and rebuilt them. The cost was only \$90 and included new rubber bushings. The new seals, bearings, gaskets labor etc. at the machine shop was \$140. New wheel cylinders and hardware kit was \$74.

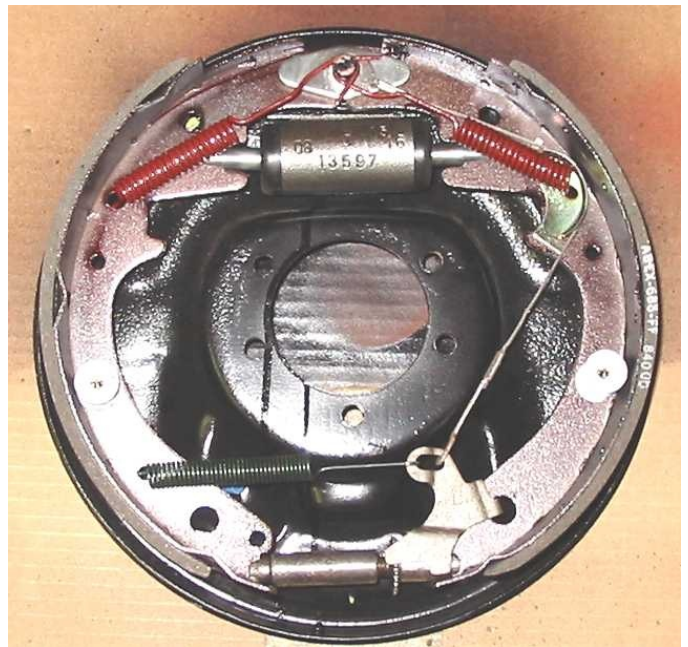
I'm still looking for drums and I need to pick up new 11x2.5 rear brake shoes.



With the 65 rear axle housing apart you can see that the mounting flange is flat on top with the bolts around the remaining flange area. The 60 housing flange is completely round with the bolt pattern placed accordingly. Note on next page the backing plate shape is flat on top also to fit the flange.



With backing plates painted assembly is starting. Beginning in 63, emergency brakes were on the rear brake shoes, with a cable going through each backing plate. Since I won't need the cable or interior connections they have been removed. The arrow in the photo, above, shows where I have plugged the cable hole to keep dirt and water out of the brakes. I used a plastic plug that fit the hole and sealed it with a bead of silicone sealer.



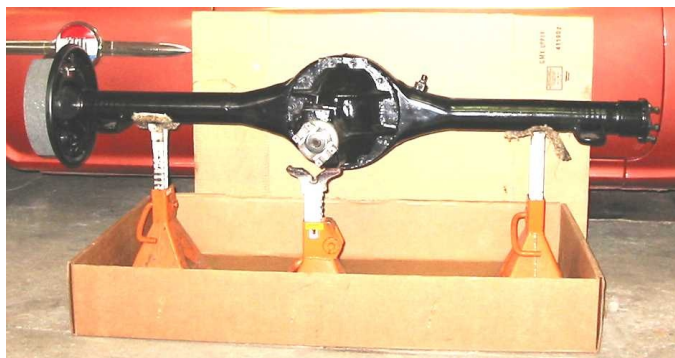
as we put this unit in the car and bled the brakes again.

The brakes were much improved with the conversion of the fronts. By also converting the rear brakes the car should have dramatically improved braking and fade resistance from high-speed stops on the freeway when necessary.

I checked with Year One but couldn't get new brake lines that were made to fit. The old lines were junk so I scavenged a set of brake lines from another housing that had good-looking brake lines. I will use those for now but plan to make some brake lines to fit at a later time.

I have the proper flaring tool so I will buy a pair of stock steel brake lines with fittings that are too long, cut the lines to length and flare the one end. Then bend to shape and I'll be done.

A trick to measure a brake line with bends where you want a pattern for length is to insert a piece of limber multi-strand electrical wire in the tubing. It will follow the shape. When you have it all the way to the end, mark it, pull it out, measure and you know how long to make your new line.



I have at this point painted the entire housing and replaced the center section with a new gasket and pinion seal. I now have the new brake shoes at \$28 but still need the brake lines.

Now the rear brakes are assembled and ready to attach to the axle flanges. There is a right and left to these assemblies so it is necessary to assemble them using the correct components and put the correct backing plate on the correct axle flange.

When we converted the front brakes we converted the car to silicone brake fluid. It works well and we will continue its use