

Brake Bungles

If you have a Mustang with front drum brakes and are thinking wishfully about having a nice, shiny, great-stopping set of late-model disc brakes on your fine filly, please don't forget that there is more to the conversion than just an axle spindle swap. The disc-brake equipped Mustangs (and Cougars) had an entirely different hydraulic system compared to the drum brake cars of the same vintage.

The easiest thing to do when contemplating this swap is to locate a disc-braked Mustang or Cougar of the same or similar year in a wrecking yard or a friend's boneyard. This way you can get all the necessary pieces easily. Of course, this is often not possible.

There are three major differences between the disc brake cars and the drum brake cars. On 1967 and later cars, the pressure differential valve, which splits the hydraulic system into two separate entities as required by federal law and which also actuates the brake warning light, is entirely different for the disc brake vehicles. The shop manual details the difference.

There is also the proportioning valve, which limits the pressure to the rear drums. (Disc brakes require more fluid volume and more pressure than do drum brakes, for equal stopping power.) This proportioning valve is a very high precision piece, is not rebuildable, and is quite expensive.

The third item is the master cylinder. On 1967 and later cars with the dual braking system, the reservoirs are of different sizes, the larger feeding the front discs and the smaller the rear drums. On 1964½-66 models, the master cylinder is also larger and must be changed for effective braking.

Of course, the flexible brake hoses to the wheels will not interchange either.

Considering all this makes one understand why it is advisable to find and remove the disc brake system as a complete unit from a junker or parts car. Remove the brake lines, pressure differential valve, proportioning valve, master cylinder, etc. If you wish to install new stainless steel brake lines,

make sure all have a double flare or they will not hold. When one "stomps" the brakes, nearly 3500 psi is generated in the hydraulic lines. Single flares will not contain it!

Another tip in the braking department concerns power brake boosters for 1967-68 Mustangs. You can use the power brake booster from a 1969-73 Mustang or Cougar after making only minor modifications to the vacuum line attachment. Otherwise, it fits like a glove!

If you are converting from manual (non-power) brakes to power, the entire pedal assembly and bracket under the dash must be changed to the proper assembly for power brake Mustangs or Cougars.

Finally, if you are ever in doubt on any part of your braking system, contact your local Ford dealer or the service manual for your year of Mustang.

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Proof Your Pony

A place where one is almost certain to find rust on a Mustang is in the heater airbox area. This is the enclosure underneath the slotted vent behind your hood and in front of your windshield. Air enters through this vent and then passes into the heater through two inlets at the sides of the car. These inlets have a rim which stands above the floor of the airbox enclosure to prevent water, which comes through the slotted vent, from draining into the passenger compartment. These inlets or "stove-pipes" rust at the floor to pipe seam and lose their effectiveness. As the water collected has to pass these holes feeding the heater on the way to draining out through the front quarter panels, any substantial amount of rust in this area can lead to a very wet interior during inclement weather.

One fix was discussed in the January 1981 issue of the *Mustang Times*. Another method, useful for the more severe cases of tin-worm, is shown here. After removing the heater box or

outlet, tear out the rusted original water deflecting hood. The new hood is best fabricated from a piece of galvanized stove pipe. Select a larger diameter pipe so that you can decrease the diameter providing a fit with a good amount of springiness. This will give a good mechanical bond. To reduce the diameter, simply unlock the crimped edge and cut a strip along the pipe's length from one side. Reform and relock the edge and then caulk the joint to prevent a leak there. The height of this new piece should be at least as high as the original but not so high as to contact the roof of the airbox. This means about 2-2½ inches tall, or 2½-3 inches before forming the ½ inch wide retaining lip at the bottom. Cut ½ inch slots at about five or six points around the diameter of the pipe and bend to form the lip.

The new assembly is installed from inside the car. Freely apply silicone sealer to the lip and then insert the sleeve up into the airbox from below. Hold or prop the pipe in position until the silicone sealant cures or until the heater assembly or vent outlet is replaced. Seal the top side voids as described by Bob Haynes in that January 1981 tech tip mentioned earlier.

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Brackets Low-Down

Thinking of dropping a 390 or 428 into your Windsor-equipped pony? Don't overlook the fact that the motor mount brackets on the frame are different, regardless of how they look to the naked eye. There is a difference of about ten degrees in the angle of these mounts which will hamper your ability to get that Ford FE big-block to sit down in there. In the same vein, in these days of triple digit fuel costs, many are going the other way: from a 390 to a 289 or 302. The same advice applies: swap the motor mount brackets to get the new engine to seat flush to them.

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