



## Specialty Products **FAQ**

### Epsilon Platform - Chevrolet Malibu and Pontiac G6

The Chevrolet Malibu has been around for a long time in one form or another. The latest version that started in 2004 uses the Epsilon Platform and has the same suspension as the Pontiac G6. The front wheel drive suspension consists of MacPherson strut on the front and a multi-link independent suspension in the rear. Alignment of these vehicles has been pretty straightforward with a standard strut up front using an EZCam® to adjust camber. There is no stock adjustment for front caster. The rear offers factory camber and toe adjustment cams. This is where we will focus our interest. Realistically the two rear cams change camber and toe equally. Because of the position of each arm they basically act as a parallel set of lower control arms that, if both are moved in the same direction affect camber, and if adjusted in opposite directions affect toe. Unfortunately it is possible to run out of camber adjustment with the toe set to the proper specification.

There have been many requests for something to extend the range of camber correction. We have found that the easiest and most cost effective solution turns out to be everybody's favorite, the EZ Shim®. Whether you love it or hate it the dual contact shim has been around for a very long time and shim usage is becoming more popular as the number of vehicles that can use a shim increase. The EZ Shim® can correct rear camber and/or toe up to 1.5 degrees and with only needing 3 part numbers to cover most applications the shim becomes a real problem solver.

The 75400 grey shim will fit the rear hub of this vehicle very well, but there are a few tricks to make it work properly and attain good adjustment range. The most common problem on these vehicles is running out of rear positive camber adjustment. Just like many other vehicles the wear and tear on the suspension takes its toll on alignment.

The first trick on this vehicle is to set both camber and toe cams to the center position of travel before determining the amount of change that will be needed. The reason for this is that the adjusters are usually not in the same position relative to each other when toe is set to correct specifications. The toe cam will be in about the center position and the camber cam will normally be maxed out. The method to make the vehicle have good adjustment range for both camber and toe is to first set both adjuster cams to the center position. This will ensure a good range of adjustment now and in the future. Next determine the amount of change needed for both camber and toe, even though all you wanted in the first place was more positive camber. After the selection is made follow the directions to cut the shim and install it. If your alignment equipment already has a shim program on it then simply follow the guidelines on the screen to



correct camber and toe. Remember, have both adjuster cams in the center of travel before setting the shim.

The shim template is the same as many other GM front wheel drive vehicles and has a good contact area on the axle housing. There is no clearance trimming needed for brake lines or ABS sensors.

Most of these units have rear disc brake systems and the caliper may need to be shimmed to match the brake rotor. The #75970 spacer set is used to space out the brake caliper. This kit has 2 each of 4 thicknesses of spacers. Make sure the rotor turns freely after the brake caliper is installed as there is limited space for the rotor on the brake caliper bracket.

After the shim is installed the camber and toe can now be fine-tuned if needed. By following this procedure instead of the standard EZShim installation to solve the original camber problem, both cams will be approximately in the center position so future alignments will be a breeze. Thus, installing the EZShim® can serve as a simple and inexpensive method of maximizing the factory adjustments. The benefits include longer tire life and a better handling vehicle along with a happier customer.

