

Replacing the EFI hoses on a V12 HE.

I am writing this to assist owners who are finally recognising the need to change ALL these hoses periodically.

The OE set up for the 12, or 14, Injector hoses was “push on” with “cups” at each end. The supply hose, and the return hose were of the hydraulic swaged style.

The rail and Injector spigots are of a SHARP barb style, and when pushed into cups, the seal is fuel tight. NO NEED for clamps. Clamps on the SHARP barbs will cut the hose and fuel will leak, not good.

Many “Wally Wombats, Gary Goose” people simply clamp the offender when a leak is noticed. GOOD in theory, but fatal in many cases.

When removing the old, there are many, many ideas, and NONE are wrong.

I went my way, beer fridge first, then looked at the hoses, selected the MIDWAY point, and sliced Horizontally straight through each hose, between the 2 spigots. That got the rail out of the way, and onto the bench for better work ethics.

The hoses on the Injectors were VERY CAREFULLY sliced vertically, and removed. Same procedure for the rail. I did not remove the Injectors.

Damaged spigots were found, read below.

PLEASE READ THIS SECTION A FEW TIMES UNTIL IT SINKS IN.

The sealing of the OE hose/cup relied on very sharp edges to the barbs, and as I said, worked well. All 4 of my HE cars had clamps on some, and new hoses on all, none were 100% cupped, WEIRD, but it will get clearer.

Someone had done the right thing, MAYBE. When I got all the hoses off and INSPECTED the sharp edges of the barbs, MANY, were damaged with Vertical gouges, AKA knife slicing. These vertical scores will never seal, no matter what you do, fuel at 40+PSI will find a way out.

Aussie fix;

Some 600 Wet & Dry paper, between the fingers, carefully rotated each spigot in said paper, until the sharpness was dulled. Then a small “Contact Points File”, YES, you can still get them, I more carefully removed as much of those vertical scores as possible without removing too much “meat” from the spigots. TIME CONSUMING. Hell Yes, but needed.

NOW these will ALL need clamps and NO cups. BUT, EFI spec clamps MUST be used, standard water hose spec clamps, NO WAY.

If your car still has the OE set up and the hoses are 30+ years old, AND, you remove those hoses WITHOUT damaging the spigots, “push on/cup” will be fine.

BUT

As said, many of these cars have been “played” with in many areas, and EFI hoses are not immune to this playing, so YOU will need to look very carefully at each and every spigot barb when its dismantled. There are NO shortcuts here, and I make NO apologies for that. Engine fires WILL KILL, so its your call.

YOU CANNOT USE CLAMPS ON THE SHARP BARBS, as I mentioned earlier, but repeat here, just because.

Once you have sorted all that, refit the 10 Injector hoses, leaving #1 on each side off. It is a curved to fit hose, so when all the rest are done, "hand fit" the #1 hoses by simple trial and error, NOT rocket science, just take it slow, and THINK what you are doing.

The other hose assemblies are standard swaged fittings, as in Hydraulic Hose style, so, cut the cups with a hacksaw, and peel away the remnants, fit the sections of hose and EFI clamp them as required. These will NOT have sharp barb spigots, due to the swaging pressure of the OE arrangement.

CLAMPING:

Always orientate the clamps so you can easily get at them in a few hours time. Pressurise the system, LOOK around, have a sniff, LOOK some more, make sure there are NO leaks/weepers.

NEVER overtighten these clamps, that is just dumb, "nice and firm" is all that is needed. After an hour or 2 of running, let it cool, and go around each clamp and check for firmness, some will take a ½ turn, some will be OK.

If you don't want clamps, and wish to retain the OE set up, the spigots MUST have sharp edge barbs. If you have damaged barbs, the only alternative I know of is a New Fuel Rail, and New Injectors, your car, your call.

The PreHE with the dual fuel rails had clamps, and worked at the same pressure as the HE. The spigots were "clamp spec" spigots. Some had cups at the Injectors, none of mine did, and clamps always at the rail, and the 2 FPR units.

This scribe also applies to the Pressure hoses in the boot, and the 2 above the rear cradle.

Sooooo, if you have a car with a combination of clamps and cups, and YOU want to return it to OE with "push on/cups", SLOW DOWN, you may be able to do so, if the spigots will support the Push On spec, or you may not be able to, and have to revert to Plan B, C or D.

I may sound a tad over the top above, but engine fires from stupidity and arrogance, will kill or injure. I went through one, many years ago, and NO, it was not a Jag, it was an M A N V10 Roadtrain, and I still have the scars, NOT pretty.