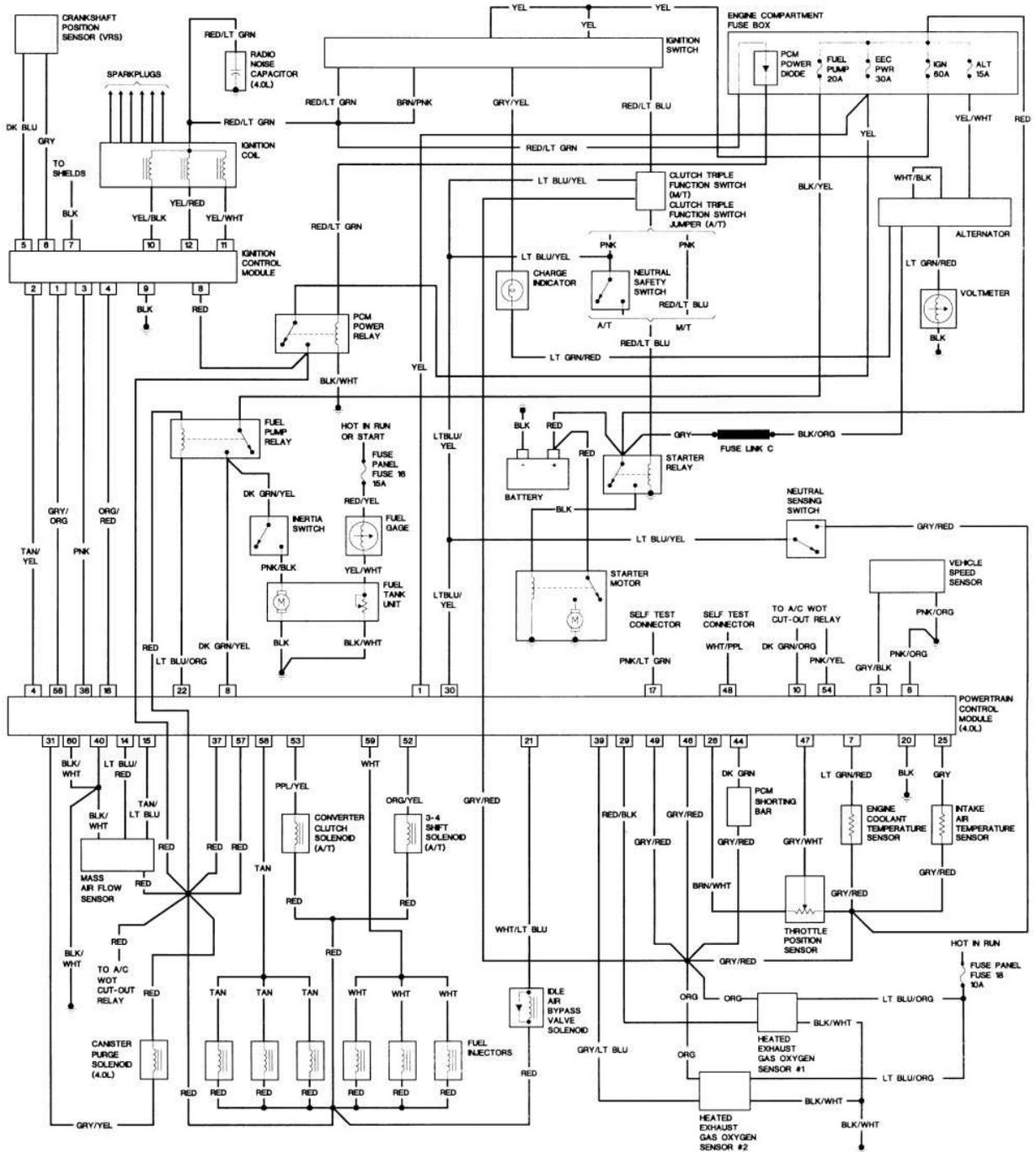


Hi, Carguy3J

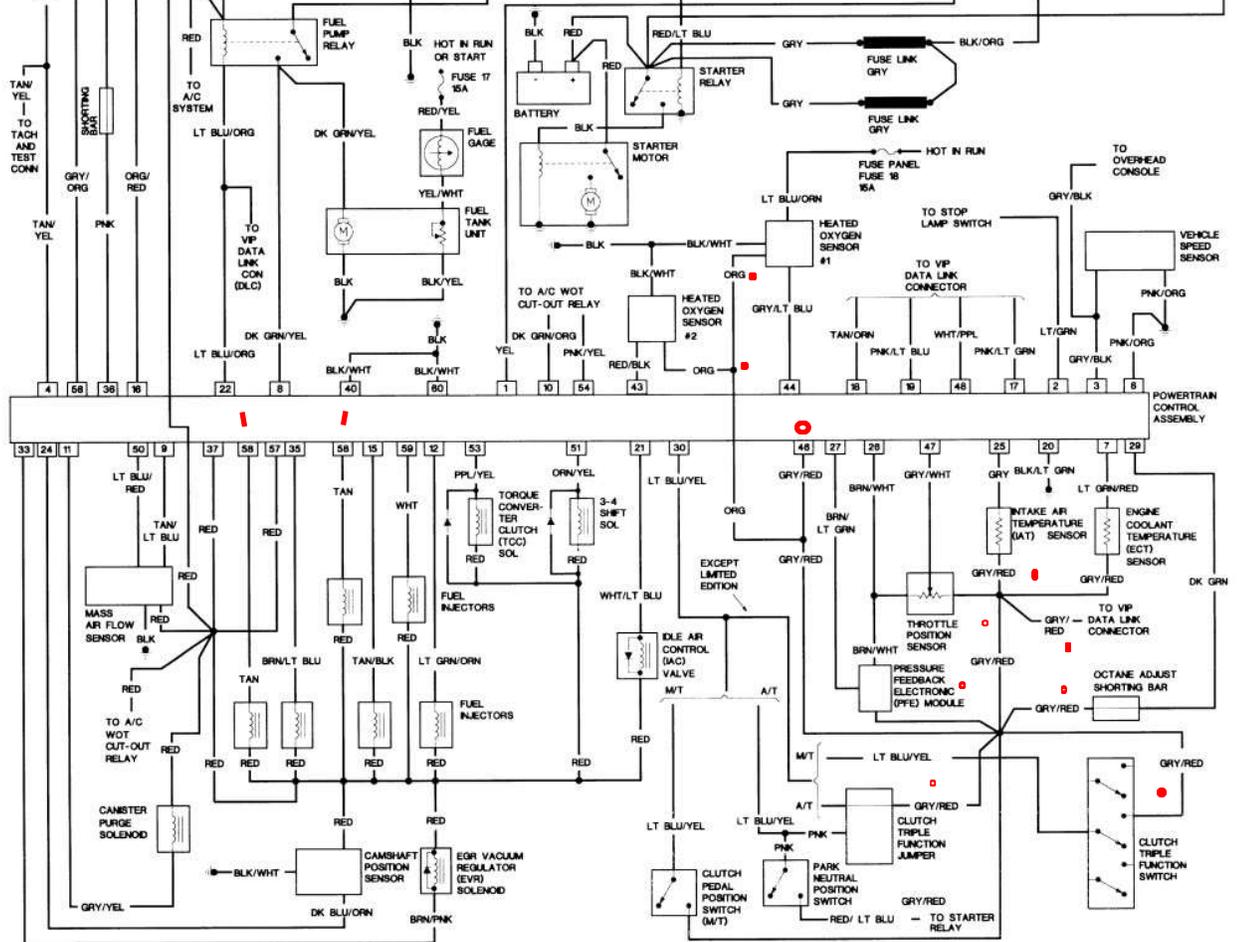
Here is your ECU(computer) wiring diagram.



Here is a 1994 ECU wiring diagram. (notice how the injector wiring changes)

dbID1968  
New Member

Joined: April 1, 2014  
Messages: 24  
Likes Received: 0  
Trophy Points: 0  
Year, Model & Trim Level: 1988 ranger



The problem is Ford never put a CMP-camshaft position sensor (be careful CPS means crankshaft position sensor in Ford lingo) on the Rangers in these years (federal emissions) for some reason. I have yet to find out if the Ranger ECUs are capable of using SEFI (sequential fuel injection).

But if you want to switch to SEFI here is what I think you have to do,

Disclaimer:

(this is where I am at on my project so I do not have the data to confirm this, but from studying the wiring diagrams and the Ford documents this is what I have come up with. I will post a whole thread on my findings on one of the forums ((most likely this one since it has helped me the most)) when I finish my project. I keep with the same user name so it will be easy to find).

Ok the switch from EFI (batch fire fuel injection, basically this means each bank of injectors opens at the same time ((for 4.0L OHV CYL. 1,2,3 injectors open and inject fuel when #1 is on intake stroke. This means CYL. #2 and #3 have fuel just sitting around until they are back to the intake stroke.)) I believe this is not a huge deal on high RPM but at idle and in town driving this would be completely wasteful.)

expand on it more as I go.

If you have a manual(standard) transmission (I have no idea about automatics since I do not play with those, but this should apply the same, you just might have to change the pins on your ECU, DO YOUR HOMEWORK OR YOU WILL FRY YOUR ECU) ranger or explorer that is a 4.0L OHV from 19xx to 1993 (1993 explorers are supposed to have a CMP but are not wired for SEFI, I do not get this as the only purpose for the CMP is SEFI confuses the heck out of me. Can some one explain that to me??)

But anyway back to the point, you need to find yourself a 1994 ECU from an explorer even if you have a Ranger.(If your vehicle is a manual find a manual fed emission ECU, or if you have an automatic find an automatic ECU. The Ford federal emission ECU for manual trans. part number is F47F-12A650-KA or F47F-12A650-KB).

Then after you find yourself the right ECU you will need to rewire your injectors (so each one goes to the ECU on the ground side they each have separate pins on the ECU), wire in a CMP to pin 33, and a second o2 sensor if you do not have one, you also can wire in a EGR vacuum regulator off of pin 24 if you want one, pin 60 an 40 coming off of the ECU now will be a combined ground I don't understand this yet?, and the MAF no longer grounds to the ECU.

So simply switching ECUs will not save you money on gas, it will fry your ECU. BUT if you go through a little work I think it will improve your gas mileage quite a bit! As for the EGR like I said it is just a electronic controlled vacuum regulator that is connected to your ECU. That is a huge benefit!

One last time I have a 4.0L OHV but I am not using it, I went straight to the 4.0L SOHC with this system. I have no idea how much you will gain in fuel economy but it SHOULD be noticeable. So give it a shot! Go get yourself an extra harness out of the junk yard and give it a try! Then let us know how much money you are saving! In the mean time I will be doing the same thing but I am converting a 1991 harness to a 1994 harness (not worth it) for a stupid 4.0L SOHC for my stupid 1988 ranger and I will post my results.

I am sure I will need to add way more later as this is an extremely complex conversion, but this will get you thinking.

Edit #1 forgot 1994 wiring diagram.