The following article describes replacement of the heater core on 1992+ Crown Victoria, Grand Marquis, and '91+ Lincoln Town Car.
Note, the dash trim removal steps are different for '92-'94 than the 1995- CV/GMQ interior pictured. The Town Car dash (whether '92-'94, '95-'97, '98-'02, or '03- current interior) is also unique from the dash outlined below, however the general procedure is mostly the same.

The following article was authored by ***Fordiesel69*** and has been converted into UBB format
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Panther Heater Core Replacment

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Applies to:
1992 – Current Crown Victoria
1992 – Current Grand Marquis
1991 – Current Town Car
Older Panthers with slight difference in procedures.

Introduction: This article will detail the removal and replacement of the heater core. The job itself should take a general home mechanic 4-12 hours depending on your skill level. It is a very general procedure with only a few challenges. You should request a helper for two parts of this job. Doing it yourself certainly is possible, but very difficult, and possible damage to your dash assembly is more likely to occur. I recommend reading this entire guide prior to starting, then tailor the steps in the order you want to work.

The job could start at $300 and go as high as $700 if you choose to have a shop do it. Anything over $700 you are likely being overcharged. The dealer will be towards the high end but picking the right dealer or shop can mean a lot in getting the job done right. I know we all have used “low budget” garages to do some work on our cars, but this is NOT THE JOB to let just anyone do. There is a lot of risk and a lot of potential damage that could be done, being either cosmetic or electrical.

Diagnosis: Generally the heater core will give no signs of failure. You will be driving down the road and all of a sudden the smell of coolant fills the cabin, followed by your windows fogging up. Sometimes (like me), you get a nasty boiled celery smell (coolant) and you have the chance to bypass it until you can set aside the time to do the job. A very minor smell, with no fogging, could be something as simple as an out of round worm drive clamp, causing the hose to leak, and thus allowing the coolant to drip down inside the heater box. Make certain you rule out all other possibilities. Also the A/C oil could smell kind of like coolant to some people, if your A/C quit working right at the time you notice the smell, suspect a leaky evaporator. Do your homework on this one.

Parts Needed:
-Motorcraft aluminum heater core. FACTORY only!!!!! No aftermarket!!!
-TEST THE NEW HEATER CORE FOR LEAKS!!!!!!!!!!
-Heater hose restrictor. (Optional)
-Blend Door Servo. (Optional)
-A generic window A/C foam insulation kit (Optional, just in case!)
-Green or Gold G-05 type coolant if you choose to do a coolant flush at this time.

Tools Needed:
-Basic ¼” drive metric socket set.
-Basic 3/8” drive metric socket set.
-An assortment of ¼” and 3/8” drive extensions.
-Coolant drain pan.
-Large flat screwdrivers
-Needle nose pliers
-Long metal or wooden rod & 20oz or greater hammer.

-Access to a water hose.
-Black electrical tape and zip ties.

***Follow the directions BELOW the associated pictures.**

1. Remove either the NEGATIVE or POSITVE cable from the battery to allow the airbag module to discharge for 10 minutes. I don't think I need a picture to show you how to do that!

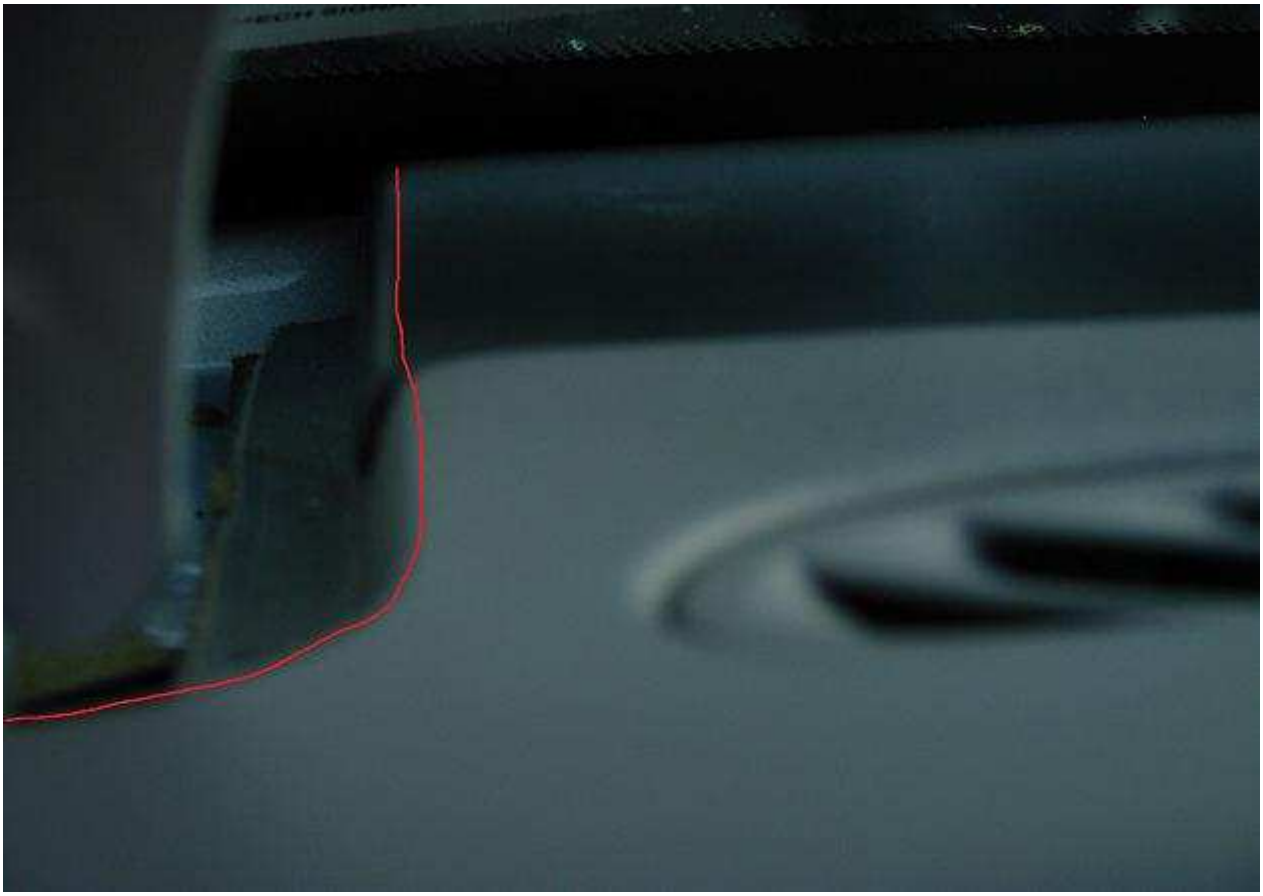
2. Place a coolant drain pan under the car below this general area. There is no need to drain the coolant from the entire system unless you are doing a coolant flush. Remove both hoses from heater core and then remove the nut to the right of the hoses. Also you may want to remove the two nuts circled in red and move the ***EVAP purge valve*** out of the way to allow better access to this stud for later on.

3. Start by pulling up on the sill plates enough to pull the weather strip out, and also to unfasten the kick panels. Remove the weather strip all the way up to the headliner and allow the rest to hang in the interior. Remove the kick panels completely. (They just pull away with friction pins). Do this for both the driver and passenger side.

4. Cover the tip of a large flat screwdriver with electric tape. This will avoid making marks on your upper dash pad or defrost panel. CAREFULLY start at the driver's side corner and begin to pry the panel up. Once you get the panel up you can look at where the other clips are.

5. Once this panel is raised, the front most clips closest to the windshield can be a real pain. Pry up and pull the panel toward you. Remove this panel from the vehicle and stow away. Remove the (3) 7MM screws holding the top of the dash to the firewall.

6. Start by pulling the top of the A- Pillars away and work your way to the dash.



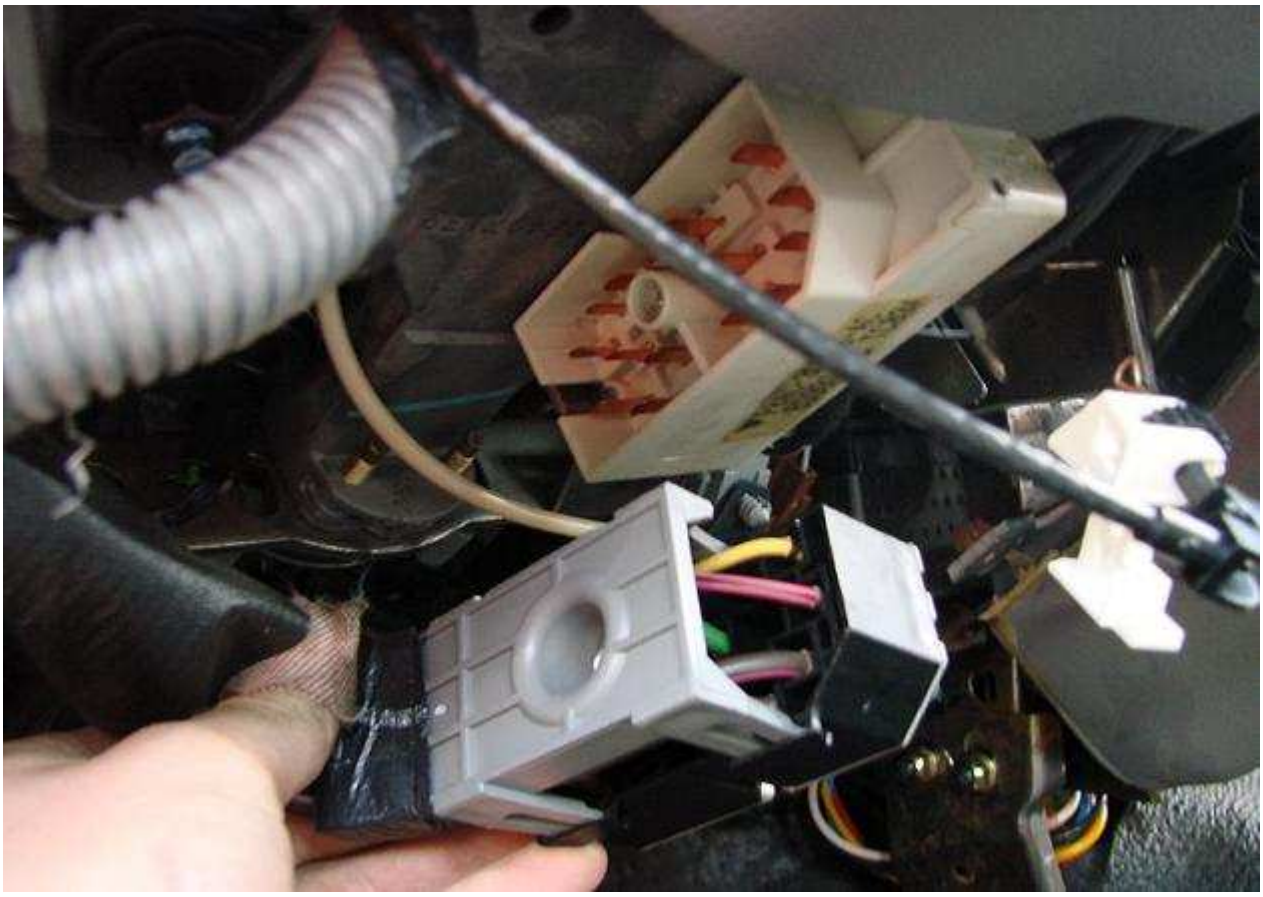
7. Pictured here is the area where the A- Pillar cover meets the dash. Indicated in red is the edge of the dash pad. Use caution removing the covers as to not damage or crack this area.

8. Remove the bolt holding the parking brake release handle in place as well as the other bolt located on the far right side of this knee panel.

9. There are 5 bolts securing this metal panel, remove and stow away from other parts. This is sharp and will cause damage to other pieces or can cut your seat if you choose to just pile everything in the back.

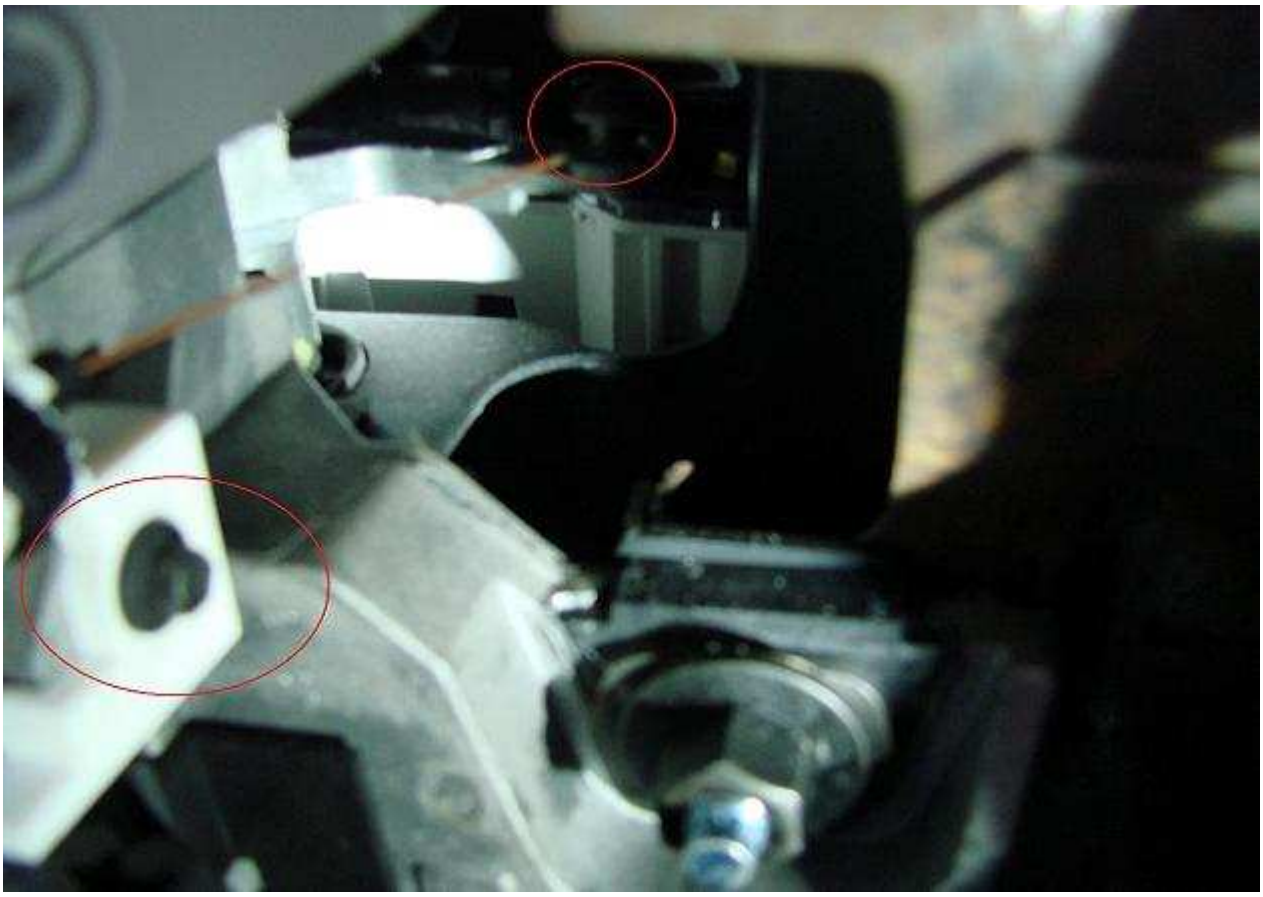
10. Remove the three screws circled in red and remove this bracket to allow room for the steering column to drop down.

11. At this point you will need to disconnect the steering shaft from the column. This shaft is collapsible and will simple push down. Remove the bolt and push the rod down. Mark with a marker or paint so you do not accidently assemble incorrectly. You do not want the clock spring 360 degrees out of rotation.

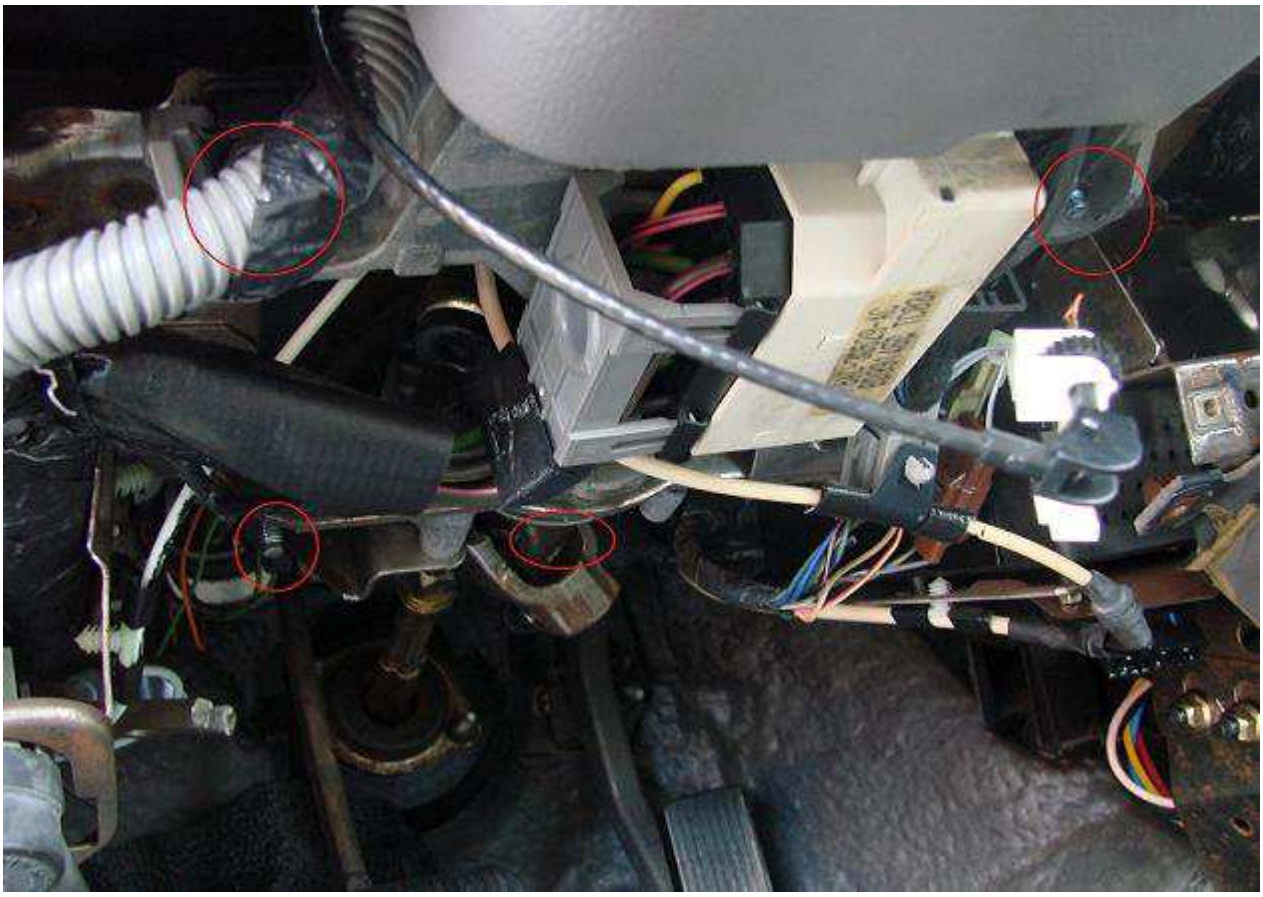


12. This step is optional, but disconnecting the wire from the ignition switch allows for less stress on the main wiring harness when the column drops. This connector just unscrews and pulls out at the same time.

13. Remove this screw circled in red and prepare to remove the PRND21 cable shown in the next picture.



14. Looking at the top red circle, there is a stud sticking out that the cable loops over. Carefully pull the cable off this stud and move the cable away from the column. Do not allow this cable to catch on any part of the column while you lower it or you will damage the instrument cluster and/or the cable.



15. Circled in red is the approximate location of the nuts holding the column in place. Remove these carefully and allow the column to drop. Rest the steering wheel on the driver's side seat cushion. Put some tape around the plastic wrap cover on the column. This is the cover where your turn signal stalk, ignition lock, and shifter come out of. Later, the dash may come into contact and cause damage or scratches.

16.) Here is a close-up of what the dash will look like when the column is dropped. There is no need to remove the column from the vehicle; this will allow plenty of room. From here you will see the fuse box to the left, and the LCM to the right (black vented box).


HOOD

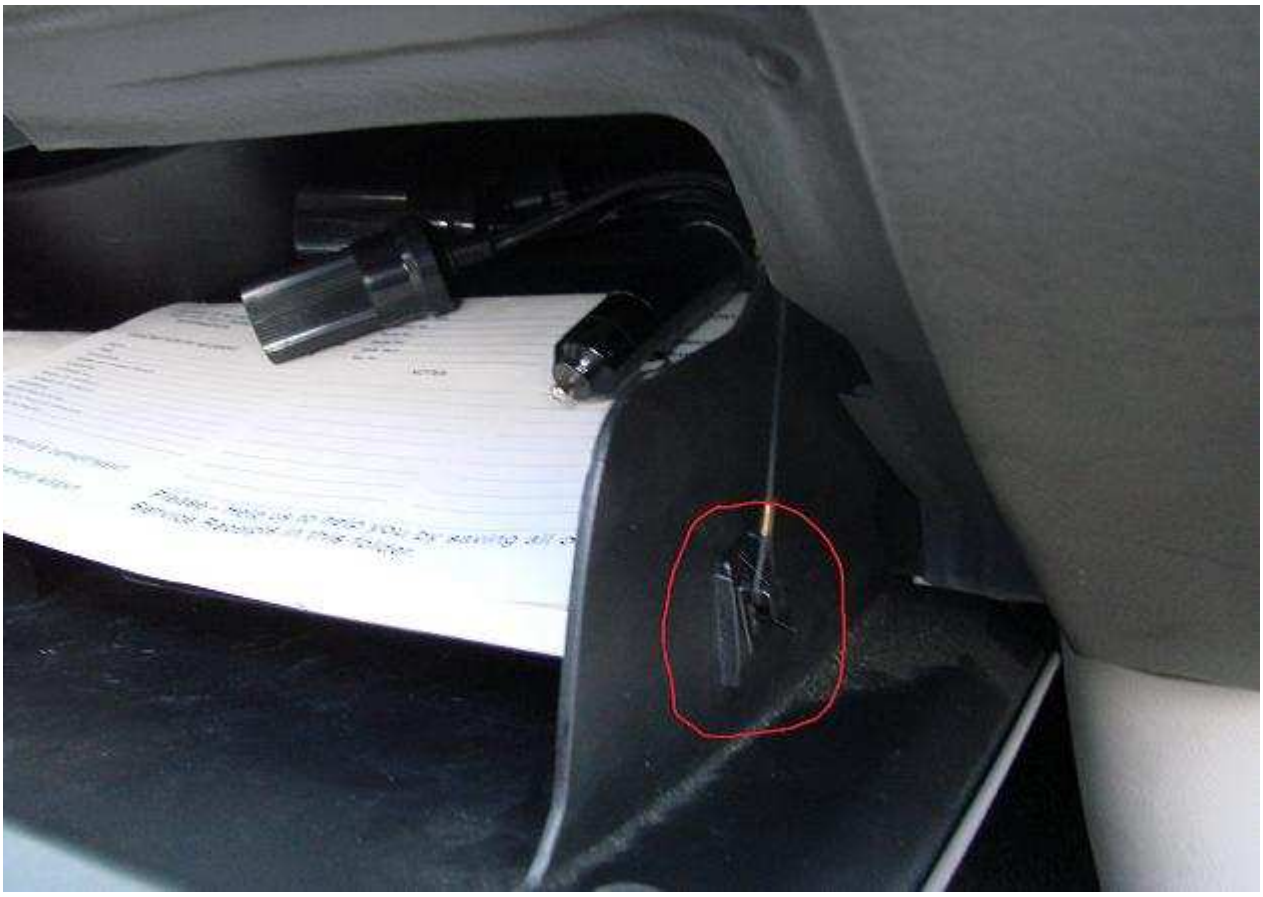
17. Remove the bolt circled in red.

18. Look up inside and find this nut. This is to the left of the steering column. It’s kind of hidden and will cause to dash to stay firmly attached if you miss it...

19. This is just a picture to show you the hidden nut & stud pictured in (18) in case you were having difficulty finding it.

20. At this point you need to remove the carpet trim piece to expose one last mounting bracket on the driver’s side. Use a pair of long needle nose pliers to get behind these friction pins and pry them out.

21. Remove the 2 nuts at the top and the 2 bolts under the floor covering. Remove and stow this bracket away from other pieces as it is sharp and can cause damage.

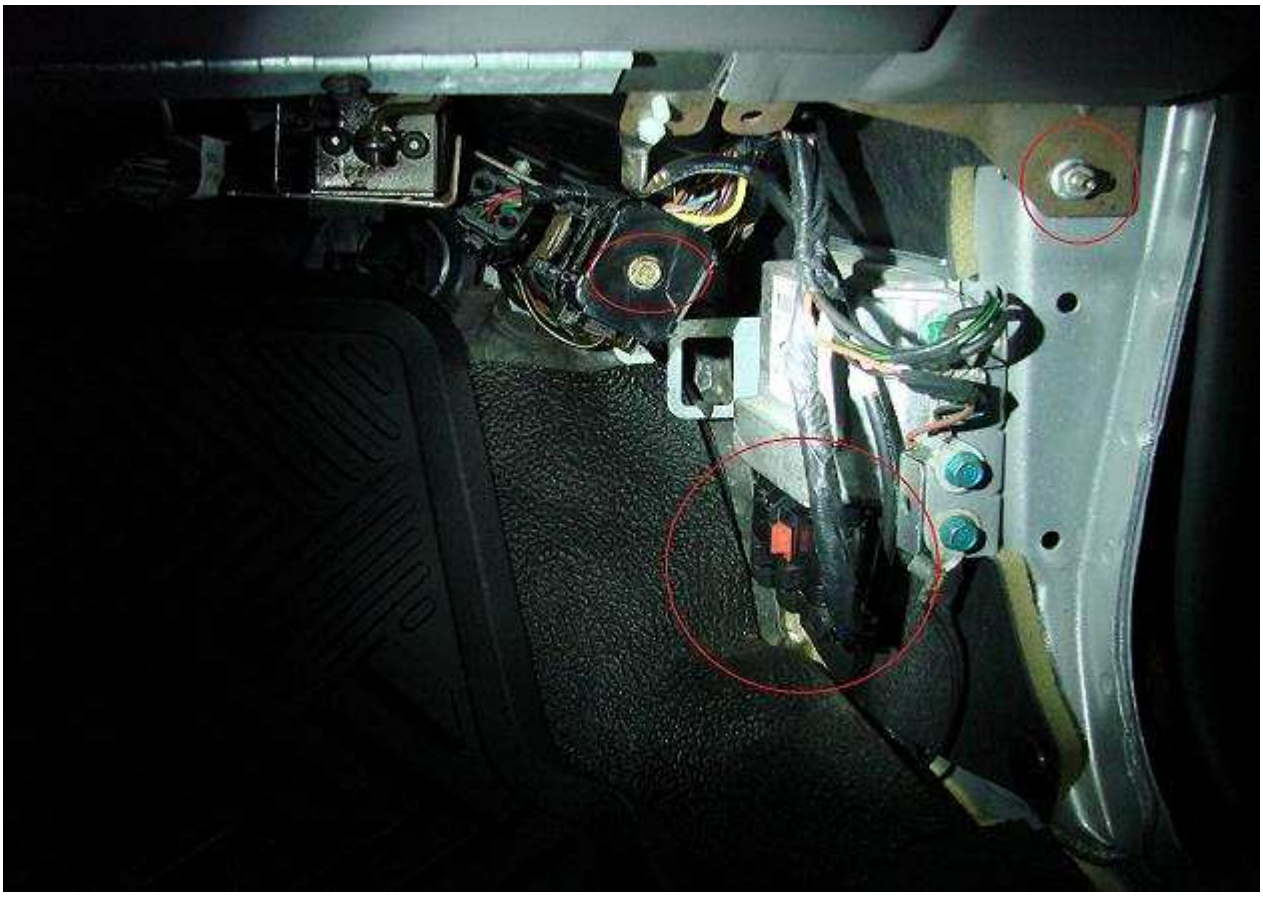


22. Now that the driver's side disassembly is all done, you will now focus on getting the passenger side loose. Some models will have a dampener on the glove box, DO NOT unhook the cable, but rather just slide the hook down and out.

23. Another picture of the hook from the back side. See how it just slides down to the bigger hole.

24. Remove the 3 screws holding the hinge and remove the glove box from vehicle.

25. Now that the glove box is out of the way, go ahead and remove the 2 nuts on the bottom of the heater box. For reassembly, there is the rubber floor covering shown above, but what is hard to see is also a firewall insulation blanket. This will get in the way when you reinstall the heater box. You will need to move it away after you get the bottom of the heater box over the studs. If you choose to just tighten the box, you will pinch this blanket and have air leaks and or dash alignment problems.



26. Remove nut in upper right corner for the passenger side dash bracket. Also side the red clip on the crash sensor to allow you to push the release tab. Then pull connector out of crash module. Lastly, unbolt the square black wiring harness plug. As you unscrew, it pulls itself out. This will allow more room for the dash to move away from the firewall.

27. Shown in a red line is a white vacuum line that needs to be unplugged from the recirc door servo. Also circled in red is a piece of metal supporting the wiring harness. Carefully lift up the harness and move it below this piece of metal. If there is not enough room, simply bend the piece of metal down slightly so you do not damage the harness.

28. Now you can grab your helper. You will be lifting up and pulling out the passenger side first, and they will do the same to the driver's side. Once the dash drops some, your helper will guide the steering column and dash, as you start to pull the passenger side far away from the firewall. Do this slowly, and watch for wiring getting stuck. There is a friction clip holding a wiring harness onto the metal track where the glove box hinge bolts to. It will need to be pulled out.

29. Here is the wiring harness and friction clip I was talking about. Also notice to the right is the wiring harness that I had you move below the metal finger. See how this gives more slack in the harness? Next unplug the electrical connector from the blend door motor. At this point, your helper needs to be out in the engine compartment and get the long metal or wooden rod. Place it against the stud shown in (2) and hammer the stud thru as you pull the box away from the firewall.

30. Remove the (5) screws holding the heater core cover. Pull heater core from box and transfer all the foam over to the new one. Wash any coolant from the heater box and inspect for cracks near the blend door hinges. Any foam that was destroyed you can get a window A/C foam kit from your local hardware store and cut it accordingly. From this picture you can see the problem stud that is left in place. This can stay during reassembly.

31. If you cannot pull the heater core out because the box simply will not pull away from the firewall enough, then the area circled in red is causing the problem. This duct connection needs to be pulled out before the box will pull completely away. Upon reassembly, this is the first connection that needs to be made, then the nipples and problem stud needs to be put thru the firewall, then the bottom of the box slips over the studs. Lastly, press the heater box firmly and tighten the nuts now before putting the dash back in place. The alignment of the dash relies on the box being bolted back in place. Reassembly is in reverse order following the notes below.

Reassembly Tips:

Upon reassembly, it is very straight forward with only a few snags. To recap what I mentioned in (31), the heater box to floor duct is a very difficult connection to make, patience is the key, and a helper could assist in guiding the box into the duct. The problem stud will go thru a lot easier than it came out but will still require some persuasion. After the heater box is in place, you must bolt it in completely, even though it is very hard to reach over the dash. You may need to pull the firewall insulation away to make it tighten all the way.

Make certain to plug in the blend door servo, recirc door vacuum servo, and correct any wiring harnesses that are in the way. Use black electrical tape and zip ties to correct any wiring harnesses that look like that have potential to rub in the future or during your reassembly. This is a major problem with some people who rush the reassembly; they pinch a critical wire and create a major electrical problem. The other problem is cars are not assembled perfect, and wires can chafe all by themselves, so take your time while you're this far and wrap any that you feel necessary.

Installing the dash is very easy but will feel very heavy; you basically lift it a little higher to get the top in place first then the bottom second. Leave all the nuts and screws hand tight and install the bottom bracket shown in (21). Bolt the bracket to the floor first, then have a helper lift up on the dash slightly and then tighten the nuts to match the scar(s) left in the bracket. This will allow the

bracket to do its job and relieve some of the stress on the top of the dash, which could cause cracks or noises in the future. I could see the scars on the bottom bracket where the nuts bit in from the factory and I could have easily just bolted it in place a lot lower, thus causing the upper part of the dash to support most of the weight (which is not a good thing).

One tip I will suggest is before going too far, get the heater hoses connected, wiring plugged back in, and get the engine started. Allow it to warm up and run the heater. Make sure everything works and verify the new core is not leaking. I will let you make the decision as to how much you want to assemble before starting the engine. The sooner the better in case there is a problem; you will not have to do the job all over again.

The rest is by the book in exactly the reverse order. Good luck! I hope I have saved you some hard earned money.

Conclusion: The overall job was not bad being my first time. Prior to this guide, there were lots of "grey areas" and very little documentation out there. During the entire job I was thinking when the hard part would come. It never did! The job was easy all the way thru, except for remembering where all the nuts and bolts go. Once you do this job, you should be good for at least another 5-10 years with proper cooling system maintenance. A note on that; do not over maintain and change your coolant every single year, but also do not just ignore it either. Change your green coolant every 3 years or 36-50k, and your gold coolant every 5 years or 150k. If in doubt, use a pH strip and test your coolant. Traditional green and gold G-05 are the ONLY two coolants you should be using. Other universal coolants can cause oil cooler failure and or accelerated heater core failure. GM Dexcool is not to be used under ANY circumstances!

As always, feedback is most certainly encouraged, whether it is good or bad. Let me know if you want something changed or find something just isn't right. Email: Fordiesel69@aol.com

------Courtesy Fordiesel69

Edited by dRock96Marquis (10/25/08 12:33 PM)
Edit Reason: SP / Image correction