

Installation:

Remove the battery cable with an 8 mm socket. This is a smart thing to do whenever you work on your car. Get into this habit!

Disconnect and remove the intake tube from the MAF to the throttle body.

- A. Disconnect the vacuum hose at the back of the manifold
- B. Unplug the IAC (Idle Air Control) Solenoid
- C. Disconnect the Evaporative Emissions return tube
- D. Unplug the throttle position sensor
- E. Remove the 2 bolts and the bracket
- F. Remove the Positive Crankcase Ventilation (PCV) tube
- G. Disconnect the vacuum hose from the brake booster
- H. Remove the screws for the coil pack and set it aside
- I. Unplug the 2 vacuum tubes at the front of the manifold

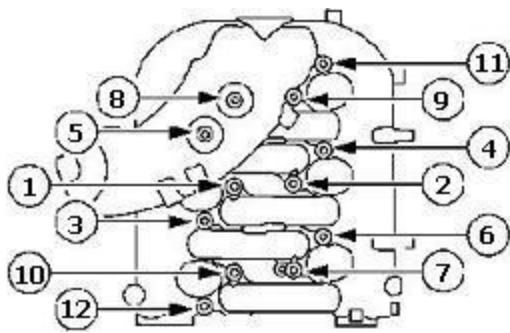


Remove the 12 bolts that are holding the upper intake manifold. Keep track of which ones are the short and long bolts! Carefully lift the manifold up. It may be stuck. If this is the case then gently pry it up taking care not to damage any gasket surfaces. Remember, the throttle/cruise control cables are still attached so don't go far with the

manifold. Just set it aside. The gasket should stick to the lower manifold. Peel it off gently. It is reusable but I chose to install a new one. If any gasket residue is left on either manifold, carefully scrape it off.

Right now you should be looking at a bare lower intake manifold. Lay a new gasket on top of it, then the spacer, and finally another gasket. Carefully position the upper intake manifold on top of your spacer. Put a small dab of anti-sieze compound (available at Auto Zone) on a bolt and start that bolt into a hole making sure you keep the manifold's holes aligned with the gaskets and spacer. The anti-sieze will keep the bolts from sticking if you ever have to take the manifold off again. It's a real good idea to use anti-sieze with steel bolts and aluminum threads! You don't want to strip the manifold!!! Tighten this bolt finger tight. Do the same with all of the rest of the bolts.

Once all of the bolts are finger tight, torque them down in 3 steps in the order shown in the illustration. Ford recommends tightening them down to 53 in/lbs, then 71 in/lbs



and then to give them an additional 90-degree turn. I didn't torque mine down. I used the German "goodentight" method. You just want the bolts to be tight. You don't need an air gun for this!!! 71 in/lbs is not much, so be careful you don't strip the bolt holes, break the bolt heads off or crack the manifold. The bolts are designed to only be used once but if you are careful you won't have any trouble.

Once the manifold is bolted down then go back and reinstall the components that you removed/unplugged.

Ford's torque specs:
Coil pack (H): 53 in/lbs
Bracket (E): 89 in/lbs

Note: These measurements are in/lbs, not ft/lbs! There is a HUGE difference!

Reconnect the intake tube between the throttle body and MAF. Reconnect the battery.

Don't be surprised if the car idles/runs rough for a day or two. Disconnecting the battery caused the PCM to "forget" it's long term fuel strategies. It has to relearn this over the next few days. It will get smoother as time progresses.

On your initial test drive you should feel an immediate improvement in throttle response. Low end and mid-range should be enhanced. Top end will virtually be unaffected. The spacer will allow you to leave the line quicker and it almost feels like a small gear swap. *Extreme Effects* dyno'd a 3/8" spacer on a 94-98 single port V6 and got 7.2 ft/lb of torque and 6 h.p..