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Tuesday, May 19, 2015

## How to remove the intake manifold and replace the heater hoses of your Jaguar XJ 4.0 liter

The title says it, here is how to remove the intake manifold on your 4.0 liter Jag and replace those heater hoses that love to leak.

You'll need the following two heater hoses

- ['Z' APA Heater Hose](#)
- ['L' APA Heater Hose](#)
- [Victor Reinz MS19440 Intake Manifold Gasket Set](#)
- [Lisle 39900 Master Disconnect Set](#)

For the procedure:

First we need to remove the engine covers and the intake boot.



To remove the intake boot, undo the two 8 mm bolts that hold it to the throttle body and the 5 clamps that hold it to the air filter housing. Then unplug the MAF and the air breather hose that connects to the valve cover.

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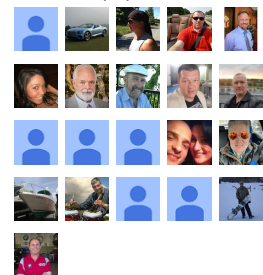
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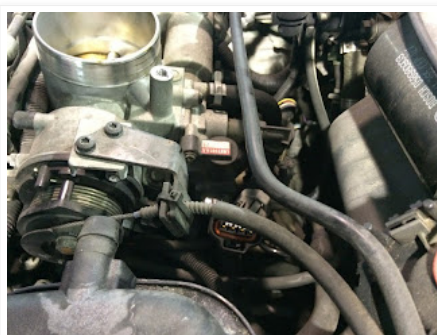
About Me

[Daxter Bels](#)

I've been an automotive technician since 2007. I graduated Robert Morgan Educational Center in 2008 and I am ASE certified. I specialize in Jaguar, Volvo and Land Rover cars and work for Gables Cats Automotive



Now we need to start disconnecting the electrical connections that go to the throttle body. From the left side there are two connectors that you need to undo, look at photos below.



From the right side there are another pair of connectors.



Now undo the two TORX screws that hold the throttle cable, and detach the throttle cable from the throttle body. Move it out of the way:



From the back of the throttle body there is a vacuum hose and a cooling hose. Undo them.

in Coral Gables.  
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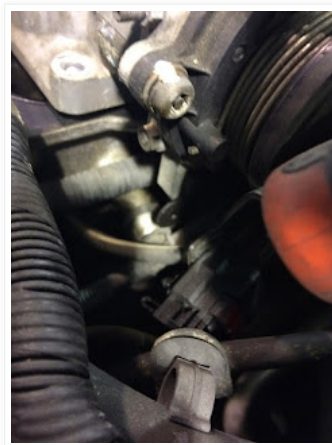
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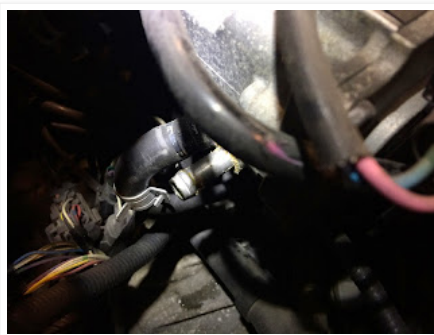
Now you can remove the four 10 mm bolts that hold the throttle body in place.



There are two connectors that don't have to be unplugged but they have to be unclipped from the throttle body to make it easier to remove. There is one on each side.



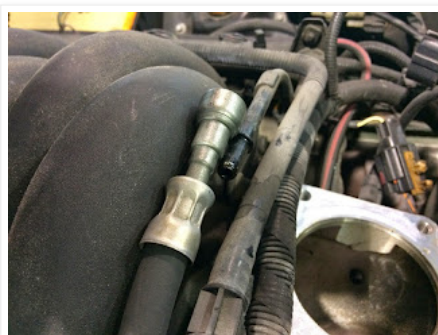
With the four 10 mm bolts removed the throttle body can be moved to facilitate the detachment of the second cooling hose that connects to it.



Now you can pull out the throttle body, make sure you don't lose the metal gasket.



Now we are going to start removing the intake manifold. First undo the fuel lines with the special tools. [Lisle 39900 Master Disconnect Set](#)



Then undo the fuel return hose:



Now we need to start unplugging the connectors with a long screw driver. Just push up on the silver clip and pull up gently on the rail. There are eight connectors (one per cylinder, four per side).



Undo the ten 10 mm bolts holding the manifold in place.



There are two more 10 mm bolts holding the manifold at the back, remove them. There is one at each side, way at the back where the throttle body use to sit. There is also two vacuum hoses you need to disconnect from the left side.



There is another vacuum hose you need to undo from the right side.



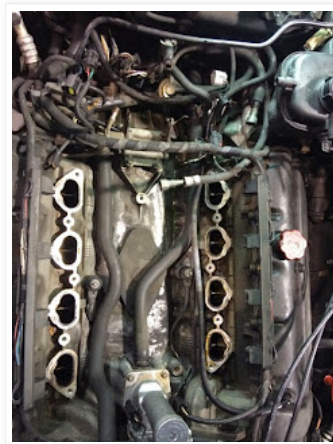
Don't worry about the other vacuum hose, it attaches to the fuel regulator which is coming up with the manifold so is not a problem.



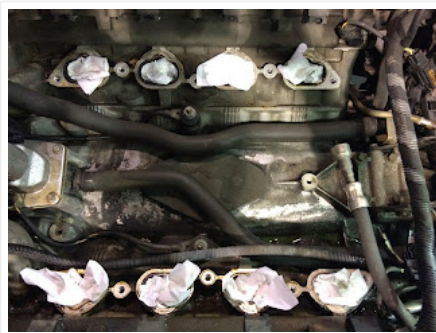
Now you can fish out the manifold.



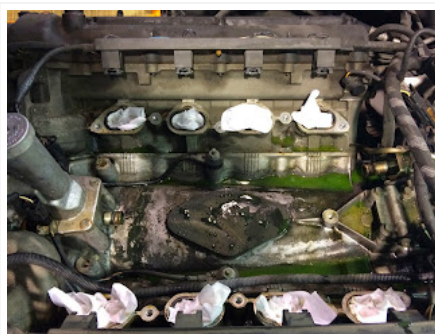
This is what your engine and the two annoying heater hoses look like.



Make sure you run to your nearest pollo tropical and steal eight napkins to cover the holes of your cylinders. You don't want nothing falling inside the engine.



Removing the hoses is very easy now. Undo them and remove them. Be careful with the plastic connector going to one of the hoses, it loves to break. If it does you might need to replace it.



Clean your manifold with a rag and flip it over. With a pick dig out the eight gaskets and replace them with the new ones.



Here is a photo of the beautiful new gaskets in place :D



Now place the new hoses just like you took them out, if you forgot here is a pic.



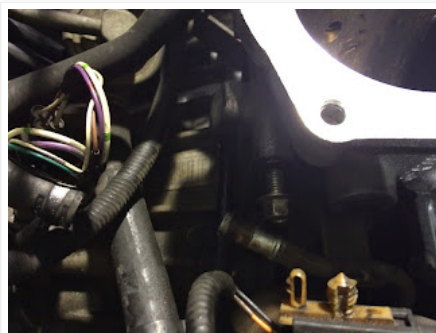
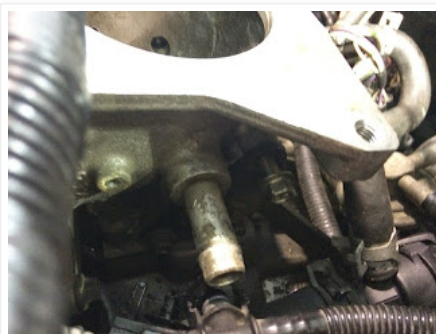
Now we are going to put everything back together. Place the manifold in place. Be careful that none of the gaskets fell out of place, otherwise the manifold will have to come out again, do it right, do it once! Also connect the fuel hoses they should just clip in.



The following photo is just to note how you have to be neat with where you place your screws, in groups and somewhere where you won't drop them. If you have bins and labels extra credit! I know how they go by heart so I don't need it.



When the manifold is back in place, catch all the screws by hand first. The ten 10 mm bolts at the top, the two 10 mm bolts at the sides at the back.



When they are all caught and snug by hand, start tightening them. Don't go crazy and break them. Is usually better to start at the center and work your way out. When all twelve bolts are tight start connecting all the vacuum hoses at the sides of the rear of the manifold.



Some silicon spray makes the job a lot easier now. Connect all the vacuum hoses at the sides (there are four total if I recall correctly)



Make sure everything is in order, nothing looks kinked or in an unnatural position.



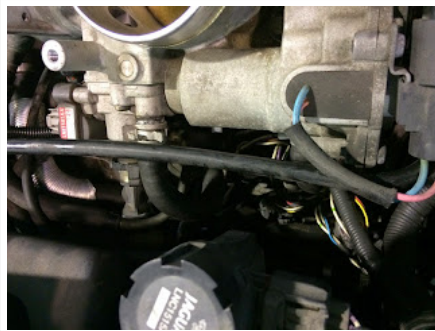
Place the throttle body back in place, make sure the gasket is in the correct position, there is only one possible way the gasket can fit. Then catch and snug by hand the four 10 mm bolts. When they are snug, tighten them. Also connect the electrical connectors at the right of the throttle body.



And connect the connectors at the left.



Now connect the cooling hoses (the two of them) and the vacuum hose at the back of the throttle body.



Now connect the throttle cable one more time and catch by hand the two TORX screws and tighten them.



Don't forget to connect your injectors back in place. Place the intake boot back in place. Tighten the two 8 mm bolts and clip it back to the air filter housing.



Before putting the rest of the covers back top up your coolant and start the car. Make sure you don't hear any vacuum leaks. And no coolant is leak.

Posted by [Daxter Bels](#) at [7:42 AM](#)

Labels: [heater](#), [heater hoses](#), [Intake manifold](#), [XJ8](#)

14 comments:

[Anonymous](#) [May 21, 2015 at 6:54 PM](#)

What a great write-up ! Thanks !! Any significant variance in doing this on an XJR?

[Reply](#)

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**Daxter Bels** May 22, 2015 at 6:03 AM

Thanks, the significant variance would be the supercharger! But lucky you there is an article for that too!

Link: <http://www.jaghelp.com/2014/01/2006-s-type-supercharger-removal.html>

is for an S-type but it should help a lot!

---

[Reply](#)

**Bob** [September 2, 2015 at 11:16 AM](#)

Thanks a million Dax, I have just been through this procedure for my 2001 Xj8 4.0L. With a couple of bad o-ring seals on the small black coolant tube connectors and... "Be careful with the plastic connector going to one of the hoses, it loves to break. If it does you might need to replace it.", replaced this also.

I lost track of the vacuum hose T-connection on the lower left side of the throttle body and the engine ran terribly with DTC P0300-P0308. I found the hose thanks to your "how-to", runs great again!

[Reply](#)

[Replies](#)



**Daxter Bels** September 3, 2015 at 1:02 PM

You are welcome, I'm glad to help!

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[Reply](#)



**Unknown** [August 5, 2016 at 1:53 AM](#)

greetings to all and thank you for this well done tutorial. I need another tutorial for dismantling, marking, cleaning of injectors on the manifold. XJ 8 - X 308 / 3.2 / 1998. member club "Sovejag.com" I'm in France, Normandy. thank you very much for the information of Gérard Montérin.

[Reply](#)



**Peter** [October 21, 2016 at 7:03 PM](#)

Hello. I changed out the hoses and the car first would start. After several attempts it turned over but when I hit the throttle it went into failsafe mode immediately I check for spark , wet plugs, and all lines. Please help

[Reply](#)

**Anonymous** [December 30, 2017 at 4:06 AM](#)

Great survey, I'm sure you're getting a great response. [OMC elbow](#)

[Reply](#)

**Anonymous** [July 16, 2018 at 4:21 AM](#)

Wonderful great going, I love your work and look forward for more work from your side. I am a regular visitor of this site and by now have suggested many people. [Iron Casting](#)

[Reply](#)



**Unknown** [September 22, 2018 at 6:53 PM](#)

Yours is the best video? I've found so far but it would have been a huge help if you could have used pencils or other object to point to what you are describing. So many parts, all equally dirty and black, UGH !

[Reply](#)



**Unknown** [September 26, 2018 at 7:25 AM](#)

Could you replace some of the pix that have difficult hoses,etc. to see with pix including a pencil or other type of pointer touching the item in the text? It would sure help. Otherwise, a great job !

[Reply](#)



**Unknown** [September 26, 2018 at 7:28 AM](#)

Do you have a video for replacing the rear main crank seal on this same engine ?

[Reply](#)



**Unknown** May 5, 2019 at 5:35 AM

Brilliant explanation. Just in the process of doing this & trying to figure out how to release the fuel line couplings correctly. The photos really help to understand how the couplings fit. I shall buy the correct tool. Greatly appreciated.

[Reply](#)



**Unknown** July 24, 2019 at 3:12 PM

Outstanding!! Replaced valley hoses past weekend along with thermostat housing and water pump. Everything A OK!!! Parts relatively inexpensive. Job methodical but if were replacing thermostat housing in of itself would have been time consuming. KUDOS AND GREAT WRITE UP W/ PICS!!!

[Reply](#)



**Steve** September 28, 2020 at 4:14 PM

Excellent documentation! Could you indicate which of the Lisle tools you used? The angle tools are available separately, perhaps making the purchase of the entire kit unnecessary.

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