Graveyard

05-23-2016 02:57 AM

Lower intake gasket replacement

Morning Everyone,
I was on here the other day and found a very descriptive procedure on replacing the lower intake gaskets. I can't seem to locate that thread now.
It was very nice with pics and certain tools needed.
Can anyone post a link or something?
Thanks

Graveyard

05-23-2016 03:45 AM

Found it, thx anyway

0ffroader

05-23-2016 01:52 PM

Check this site as well, very helpful

How To Replace Intake Manifold Gaskets On A GMC Jimmy 4.3 Liter V6 To Fix A Coolant Leak - GM Truck Engine Repairs

Racer_X

05-23-2016 03:02 PM

Quote:

> Originally Posted by **0ffroader** (Post 665196)
> *Check this site as well, very helpful*
>
> *How To Replace Intake Manifold Gaskets On A GMC Jimmy 4.3 Liter V6 To Fix A Coolant Leak - GM Truck Engine Repairs*

That site is an excellent "How to" for this job.

A few additions, and one recommendation.

The bolts for the lower manifold have to be tightened in proper sequence, in three separate steps. The actual torque specs are 26 ***inch*** pounds for the first step, 106 ***inch*** pounds for the second step, and 132 ***inch*** pounds for the final step. I'll see if I can scan or photograph the diagram with the order, but you criss-cross, working from the center out.

The bolts are "replacement recommended." Personally, I'd never reuse the original bolts, and I strongly recommend stainless steel replacement bolts. ARP makes a set specifically designed for this application (ARP part # 434-2002), or you can get 8 good quality stainless bolts, 5/16-18 x 1.5 inches long, with smooth flanged heads. Install the bolts with aluminum anti-seize on the threads, and on the bearing surface of the bolt head flanges. Anti-seize (not thread locker) is even more critical if you use "stock" or aftermarket replacement bolts that are not stainless.

Graveyard

05-24-2016 04:30 AM

Well I wasn't going to replace the bolts but I may now. It seems like I've seen both methods discussed here. I may be mistaken but I thought someone said use medium thread lock, someone said use a good sealer and you recommend anti seize.
That makes me a little confused :)
Later

p.s. Thanks for the info and the links!

Racer_X

05-24-2016 06:26 AM

Quote:

> Originally Posted by **Graveyard** (Post 665225)

> *Well I wasn't going to replace the bolts but I may now. It seems like I've seen both methods discussed here. I may be mistaken but I thought someone said use medium thread lock, someone said use a good sealer and you recommend anti seize.*
> *That makes me a little confused :)*
> *Later*
>
> *p.s. Thanks for the info and the links!*

Well, here's more than you want to know about the three choices.

- Anti-seize lubricates the threads and bearing surface of the head (when applied to those areas), it significantly reduces the chances of galling, and it somewhat reduces galvanic corrosion and chemical corrosion in the event of leakage. Since it also lubricates things, the bolts will be slightly tighter (turn slightly more) at the same tightening torque, compared to dry installation. This slight additional clamping generally helps the gaskets seal. Many manufacturers specify anti-seize for intake manifold bolts.
- Thread locker can reduce galling and can also reduce galvanic corrosion, but that's not it's main purpose, and the effect is less than with anti-seize. It makes the threaded joint 'stickier' and can slightly reduce the clamping force at the same tightening torque when compared to dry installation. That can work against you for gaskets sealing properly.
- Sealant is almost always a bad idea in threaded joints. It is much 'stickier' than even thread locker. The attraction is that you hope it will keep the Dexcool out of the threads and prevent total seizure of the bolt when the gasket finally does fail. At the same time, though, it significantly reduces sealing of the gaskets by reducing clamping force at the specified tightening torque, making the leak more likely.

The best approach, IMO, is to use the right gasket (the one with the metal substrate) so it won't leak, and get the fasteners tightened down to spec with the best clamping force you can achieve. Anti-seize does all of that.

Graveyard

05-24-2016 09:40 AM

alrighty, I like those explanations. I've been a machinist for over 35 years now and the anti seize makes sense. One more question...I think,lol, should the lower intake gaskets be installed with both surfaces clean and dry...nothing but gasket other than each end where you have to use the tube of sealant?

0ffroader

05-24-2016 09:47 AM

The factory service manual, at least for my 99 blazer, specifies that thread sealant be used for the intake manifold bolts.

0ffroader

05-24-2016 09:57 AM

Quote:

> Originally Posted by **Graveyard** (Post 665236)
> *alrighty, I like those explanations. I've been a machinist for over 35 years now and the anti seize makes sense. One more question...I think,lol, should the lower intake gaskets be installed with both surfaces clean and dry...nothing but gasket other than each end where you have to use the tube of sealant?*

Exactly, a clean and dry mating surface is very important. Alot of the members here recommend the felpro MS98002T kit for the 4.3, it has a metal core and is significantly more durable than a plastic gasket. That kit includes both intake gaskets, valve cover gaskets, throttle gasket, upper plenum gasket, valve cover grommets, an oring for the brake booster vacuum connection at the upper plenum, an evap purge valve o ring (viton), and two orings for the fuel feed/return pipes at the firewall. I installed this kit last month along with an upgraded spider. Also completed a full tune up as well.

Graveyard

05-24-2016 10:33 AM

That is exactly the kit I have. I just ordered the ac fuel injector kit and a new upper plenum, mine has a crack in the rear passenger corner. Did you see a nice improvement on performance with the new parts?

0ffroader

05-24-2016 10:41 AM

Aside from the spider, not really. The new spider performs really well, no extended cranking, no rough idle, rpms drop smoothly with no hesitation. The tune up parts had no noticeable effect on the feel, but it was time to change them out at 90k miles.

Graveyard

05-24-2016 11:01 AM

I hope all these parts correct my problems. Every so often it just falls all over itself and then doesn't do it again for sometimes weeks. I just put a new radiator, mount grommets, upper and lower hoses, water pump and remote oil hoses along with the cooling hoses.
Mine has always seemed a little doggy but I didn't buy it to race... :)
Later

Lesmyer

05-24-2016 11:16 AM

Quote:

> Originally Posted by **Graveyard** (Post 665241)
> *That is exactly the kit I have. I just ordered the ac fuel injector kit and a new upper plenum, mine has a crack in the rear passenger corner.*
> *Did you see a nice improvement on performance with the new parts?*

You will only see a difference if you had a problem with one or more of the old parts.

Put a new Delco cap/rotor on, install new Delco platinum spark plugs, and set cam retard to exactly zero when the distributor goes back in. That will most likely get you some performance improvement if all other things are OK. Ignition systems are critical to performance in these Blazers.

Racer_X

05-24-2016 12:30 PM

6 Attachment(s)

Quote:

> Originally Posted by **0ffroader** (Post 665237)
> *The factory service manual, at least for my 99 blazer, specifies that thread sealant be used for the intake manifold bolts.*

Technically, you're correct. Here's the factory info I have:

Quote:

> If reusing the fasteners, apply threadlock GM P/N 12345382 or equivalent to the threads of the lower intake manifold bolts.

The bolts are almost always too corroded to reuse, IMO. If you use new, genuine Chevrolet bolts, part # 12550027, those bolts are coated with sealant/thread lock by Chevrolet. Most of the aftermarket "bolt kits" also have factory-coated bolts.

I've done a bunch of intake manifold jobs on GM, Chrysler/Dodge and Ford truck V-8 engines (as well as a lot of Mercedes Benz and BMW V-8's and Volvo, Audi and VW inline and VR series engines), and I've always used anti-seize on intake bolts for the reasons I esplained above. I've never had a problem with leaky gaskets caused by bolts working loose.

When I do my lower manifold gaskets later this week or next week, I'll use anti-seize on new stainless steel bolts. I want the job done right, to last a long time. I'm not worried about voiding the warranty on my 1996 model with almost 180,000 miles on it.

Quote:

> Originally Posted by **Graveyard** (Post 665236)
> *alrighty, I like those explanations. I've been a machinist for over 35 years now and the anti seize makes sense. One more question...I think,lol, should the lower intake gaskets be installed with both surfaces clean and dry...nothing but gasket other than each end where you have to use the tube of sealant?*

The cleaner you get the heads and manifold surfaces, the less likely you'll have problems.

Let me see if I can save a couple of images and upload them here.

Make sure you figure out which side is up on the gaskets. They should be marked. The factory calls for a small "patch" of sealant on the cylinder head side of the gasket, at the wide spot on the end of the rubber going down to the front and back block web sections. Here's a pic (I hope):

https://blazerforum.com/forum/attach...1&d=1464115760

That patch has two purposes. First, to hold the gasket in place as you assemble things, and also to put a small bit of sealant under the gasket where the head, block and manifold all meet in the corners.

Then, you place the gaskets on the heads. There are dowels in the gaskets to locate them properly on the heads.

Then apply a 3/16" (5mm) bead of sealant across the front and back webs on the block. Don't overdo it. "The bigger the blob, the better the job," does not apply in this situation. Extend those beads up onto the gaskets 1/2" at each end. It looks like this:

https://blazerforum.com/forum/attach...1&d=1464115760

Install the manifold and bolts and tighten the bolts in this sequence:

https://blazerforum.com/forum/attach...1&d=1464115760

Tighten the bolts in sequence to 26 inch pounds (some versions of the factory manuals say 27 inch pounds, but I doubt 1 inch pound difference matters).
Then tighten the bolts in sequence to 106 inch pounds.

Then tighten the bolts in sequence to 132 inch pounds (11 foot pounds).

This is a job for the 1/4 drive "inch pound" torque wrench.

BTW, this is the exact same procedure as for the Vortec V-8 engines, mostly because it's the same engine with two cylinders removed out of the middle.

Graveyard

05-25-2016 02:10 AM

Thank you for the info. Very nice write up!
I was looking at the cap and rotor yesterday and yes, it needs to be replaced.
It's actually not that old. it was replaced right before I bought this ride a short while back. It's not ac brand though and it has green corrosion on the contacts.
Later

All times are GMT -7. The time now is 11:01 PM.