

# How-To/DIY: MAINTENANCE & MODS

A Guide to Regular Maintenance & Modifications for 3<sup>rd</sup> Generation Acura Integra

By Randolph Do of The How-To/DIY Honda Integra Blog @

<http://www.howtodiointegra.com>



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# A Preface

These eBooks are dedicated and made possible to my old 1996 Acura Integra LS sedan. We went through a lot, numerous of ups and downs, but you made me a better mechanic and helped me grow as a person, only strengthening my character and helping me find myself. I can only hope whoever owns you now is taking care of you. Your spirit lives on through these publications in eBooks and How-To/DIY tutorials on the website.

All the information presented in these eBooks were recorded these past several years & finally now being publicly published to help others. In due time, I will provide more thorough, easy-to-follow tutorials & eBooks. As of now, I hope you, the reader, learn something new & strive on diligently! Most the information illustrated and presented are of me simply following step-by-step instructions from my service maintenance manual. Some information is simply by my creativity and strive to achieve a modification. I have a lot more unpublished rich-information content so these eBooks will be updated later on with more detailed How-To/DIY tutorials. As of now, I hope you learn and enjoy the read throughout this and the other eBooks.

*Enjoi.life* 😊



# About the Author

I hope *you*, as the unique visitor, enjoy the tutorials, my photography and learn something new. I hope you revisit this site for more thorough tutorials, detailed images & different topics from different generation Integra models to the Honda CBR600RR motorcycle. Yep! I'm a rider too! 😊

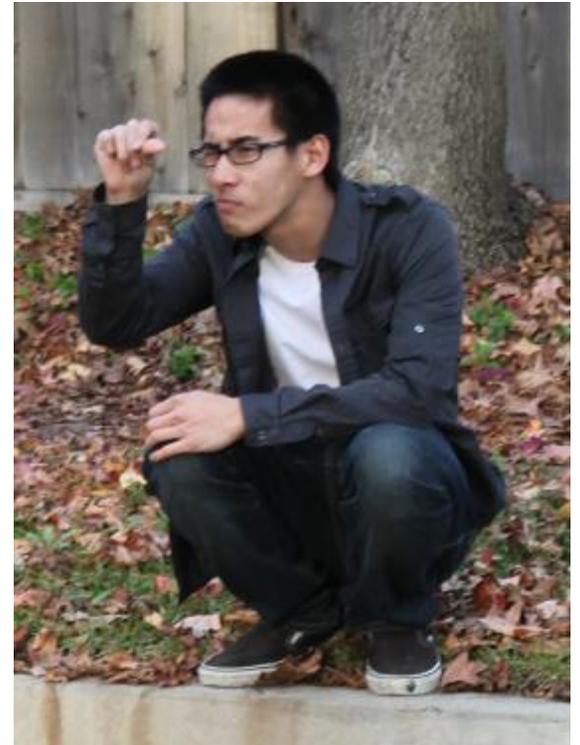
My website and eBook publications gives me the opportunity to be a teacher and share my knowledge & passions through photography. It also gives me the opportunity to monetize my content through publication of eBooks & affiliate marketing. Giving me the chance to become a writer entrepreneur and a teacher in my own way.

I am by no means a professional mechanic nor professional writer. I am simply following my passions because I know the rest will follow. So if you are wondering how I am able to provide these tutorials, just know I have always had a mindset of exploration and how things work. As a young lad, I played games a lot and always wondered how they work. My first How-To/DIY type project was opening up a console gaming controller and seeing all its circuitry and then putting it all back together. From there, I learned to build a computer on my own through the information provided online. After becoming bored with computers and gaming, I moved onto cars and fell in love with the Honda Integra Type R and the rest is history, shown through numerous of photo shoots, the How-To/DIY tutorials on my website and exclusive information only provided in these eBooks.

This eBook will be the first of many so stay tuned to @ <http://www.howtodiointegra.com> for an upcoming Kawasaki Ninja EX500, Honda CBR600RR and other Integra generation eBooks in the future! Because my joys in life are applicable in a way where I can transform them to monetizing resources for myself, I intend to share my experiences with a library of eBooks which I hope becomes valuable resources of information to all readers.

I hope you the reader will keep this collection of eBooks and use them as a reference anytime you need help or images to help finish whatever project you plan to work on. As a provider in information, I hope you understand the content and information provided. I advise to have patience, go steady in work and careful at all times whenever doing any work. I want to stress safety as much as possible now and throughout the eBooks because I only hope success for you and continuance of living an awesome life! It is always crucial to have proper safety measures so please, take a promise now to ensure safety for yourself, your vehicle and others/things around. So if you are reading this, thank you. I am truly honored and blessed to be a helpful hand in any way or form possible. Because in the end, I am trying my best to help others and am living by a personal philosophy & universal law: the Will to Do Good.

*Thank you and I hope you have great present-time moments fulfilled with happiness, always.*



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## Replace A Thermostat On A Honda Integra B-Series Engine

Now for a motor to perform optimally, it needs proper cooling. An engine will usually have a water pump, thermostat, radiator, radiator cap, fan switch, cooling fan, coolant and several different size rubber hoses that circulate coolant throughout the whole cooling system.

If there is not proper cooling, the engine block will heat up very quickly which will cause severe damages to the cylinder short-block & cylinder head. When a temperature needle raises past the middle mark and towards the hot mark, it is usually an early warning sign to pull over, check the system for leaking or burning of coolant because any further damage will cause severe failure of engine performance. The head-gasket blowing is one of the worst sign of failure because the motor will constantly be overheating. When a head-gasket is blown, it causes a leak where there is a mixture of oil and coolant inside the engine block. If it is indeed blown, you can check by removing the oil cap and checking for a milky-like texture & color.

So to avoid all the mishaps & disasters, I HIGHLY advise to have a properly maintained cooling system for your engine. If you have an older car, then I recommend replacing the thermostat first because it is controls the regulation of coolant going in and out of the engine block.

Other smaller and easier replaceable items would be the radiator cap, coolant & main radiator hoses. For this How-To/DIY article, I will be

showing you how to replace the thermostat and the steps to bleeding/removing air bubbles in the engine.

**WARNING:** *System is under high pressure when the engine is hot. To avoid danger of releasing scalding engine coolant, remove the cap only when engine is cool.*

If any engine coolant spills on the car's paint, rinse it off immediately. Check all hoses for damages, leaks or deterioration and replace if necessary. Check all hose clamps & re-tighten if necessary.

### Cooling System Capacity (including the heater core & reservoir):

B18B1 w/ Manual Transmission – 6.4 liters / 6.8 US quarts

B18B1 w/ Automatic Transmission – 6.7 liters / 7.1 US quarts

B18C1/B18C5 w/ Manual Transmission – 6.7 liters / 7.1 US quarts

## Step 1:

Locate the thermostat housing & unplug the ECT/fan switch plug. It is usually located beneath the intake arm and distributor. Unbolt the 10mm bolt holding the ground terminal.



## Step 2:

Remove the upper radiator hose from the thermostat housing. I recommend placing a towel underneath as a small amount of coolant will spill out.



### Step 3:

Remove the 2 x 10mm bolts and remove the thermostat cover. I recommend placing a towel underneath as a small amount of coolant will spill out.



### Step 4:

Remove the old thermostat. Prepare the new thermostat with its proper rubber gasket. Here you can see the OEM thermostat on the left and a AutoZone generic brand on the right.



## REMEMBER:

Install with pin up.



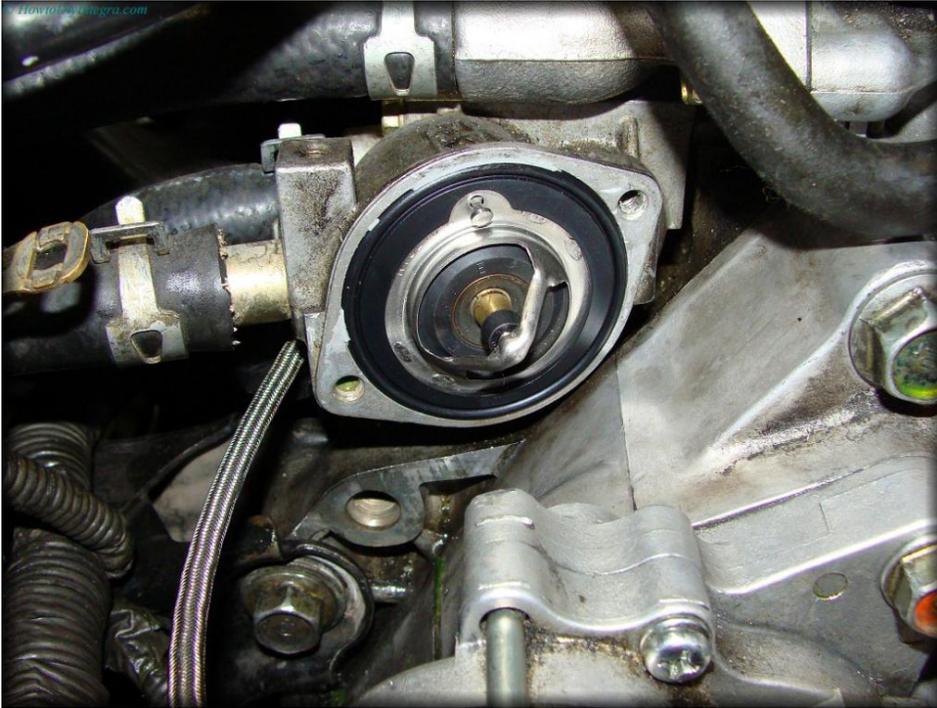
## Step 4:

Clean the surface area & scuff off the leftover liquid gasket.



## Step 5:

Place the new thermostat (pin up) inside the thermostat housing.



## Step 6:

As a precaution, I recommend applying liquid gasket maker on the outer thermostat housing for a better seal to avoid leaking. Reinstall the two 10mm bolts with 12nm/8.7lb. Plug the ECT/fan switch & mount ground terminal.



# Steps to Bleeding the Engine Coolant

**NOTE:** Do not mix different brands of anti-freeze/coolants.

**Step 1:** Slide the heater temperature control lever to maximum heat.

**Step 2:** With a cooled down engine & radiator, remove the radiator cap.

**Step 3:** Start the engine and let it run until it warms up in which the radiator fan comes on at least twice. As a precaution, check the temperature needle to make sure it does not get too hot.

**Step 4:** Turn off the engine and add coolant if needed to the top of the filler neck of the radiator.

**Step 5:** Put the radiator cap on tightly, run the engine & check for leaks.

From past experience, if you remove the radiator cap, turn on the engine and it sprays coolant upward, there is a strong likelihood the head-gasket is already blown & damaged. If this is the case, then you're out of luck and should try your best to getting your vehicle back home safely. If you go the route of replacing the head-gasket and/or rebuilding the engine, then make sure the motor is still salvageable by a compression test and then order all the necessary parts. Hopefully this is not the case and that you only have a faulty thermostat or radiator cap.

*Good luck & strive on diligently!*



## Installing A Front Carbing Lower Arm Bar

Carbing Lower Arm Bars improve steering response and increases traction. Works by linking the left and right sub-frame to reduce flex and twisting of the chassis. Here's the white Carbing Front Tie Bar I picked up from a friend who was parting out his Acura Integra GSR sedan for \$40! I was definitely excited to install it and put it to use on hard turns. And of course, the added bar helps protect the underside of my engine when my car is slammed. You will see the aftermath of what this bar goes through after driving slammed for a year towards the end of this How-To/DIY guide. It takes quite a beating!



**Let's begin!**

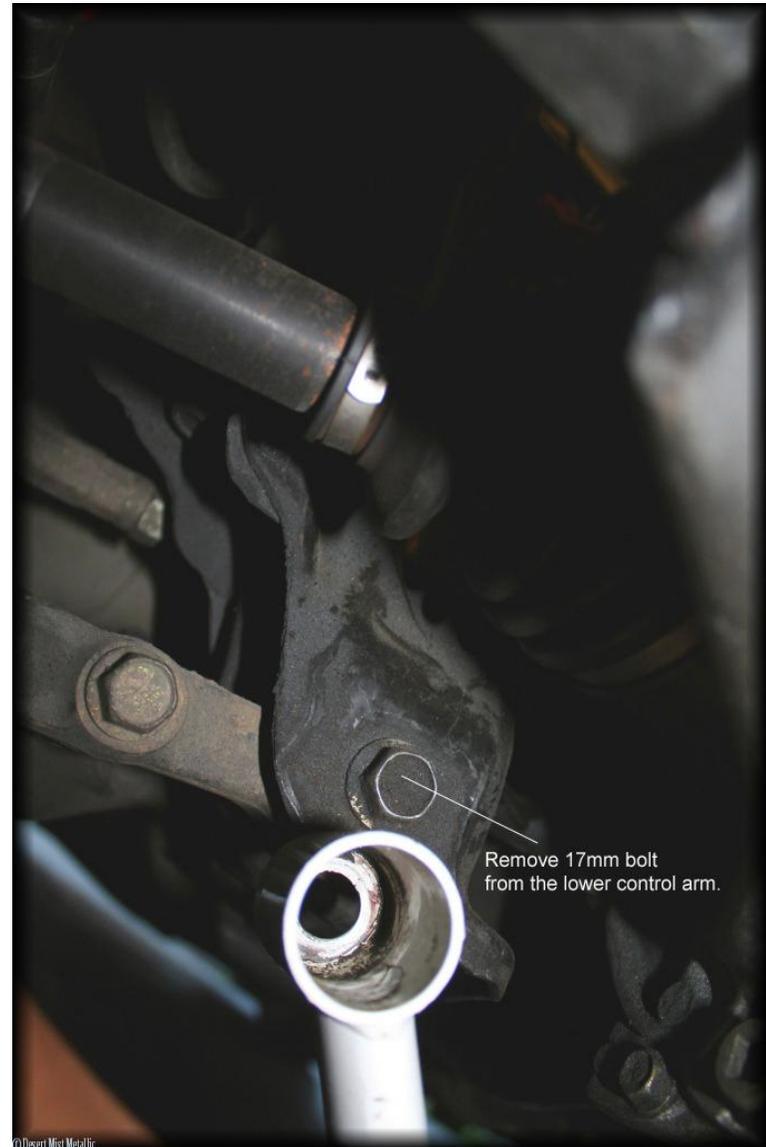
## Step 1:

Jack up the front of the car up and have it properly supported with jack stands and/or with the use of OEM scissor jacks on the sides.



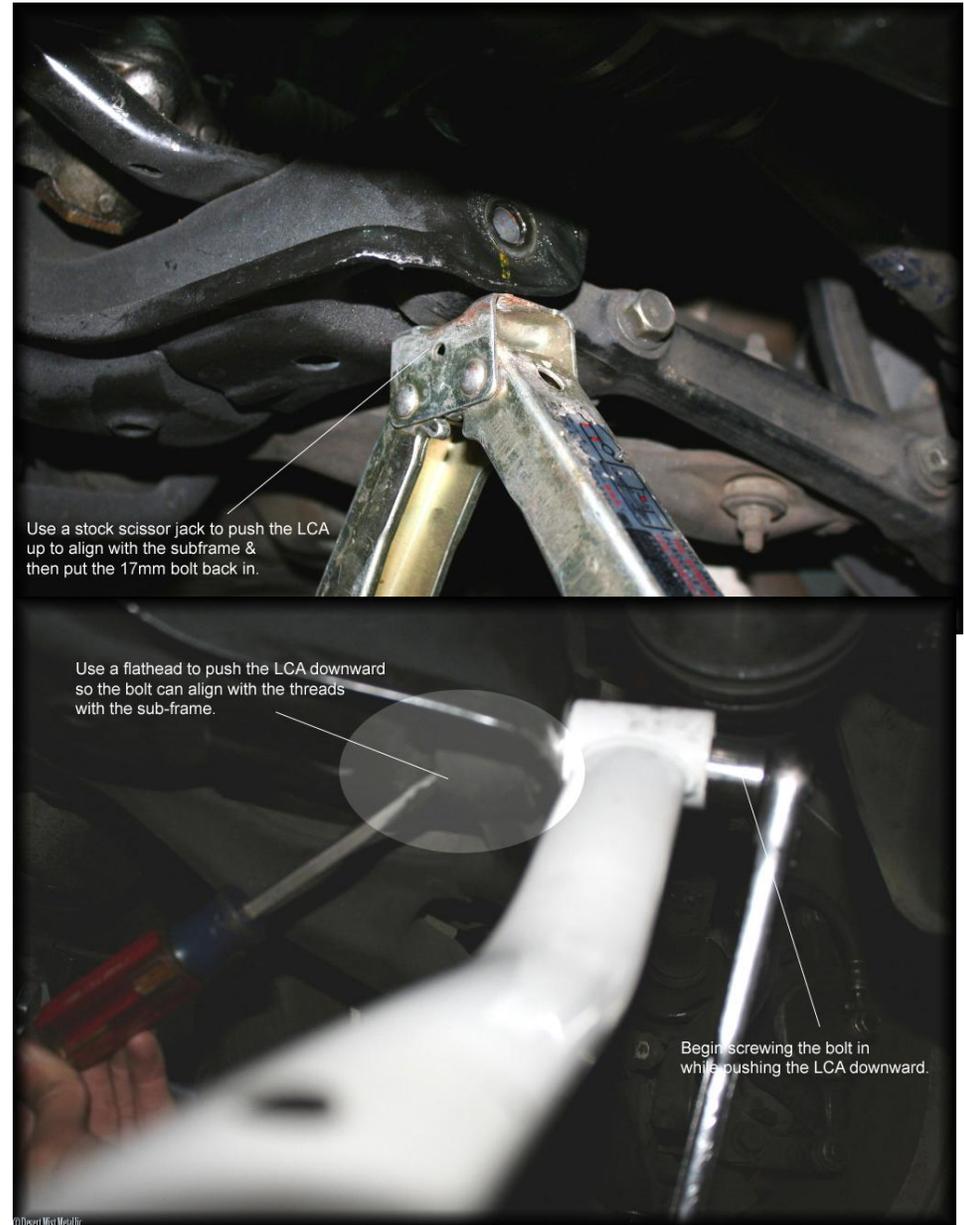
## Step 2:

Remove two 17mm bolts from the sub-frame & control arms.



### Step 3:

Place the Carbing Lower Arm Bar aligned with one side of the sub-frame and control arm and insert a bolt back in. It will prove difficult to align the bolt back in the treads but a tip is to use a scissor jack and flat-head. The scissor jack supports the LCA's weight upward while you use a flat head to "pry" the lower control arm to align with the threads on the sub-frame. A tip to avoid stripping the threads is to use the 17mm socket & flat-head at the same time, constantly prying up-and-downward motions until you "feel" the bolt threading in.



## Step 4:

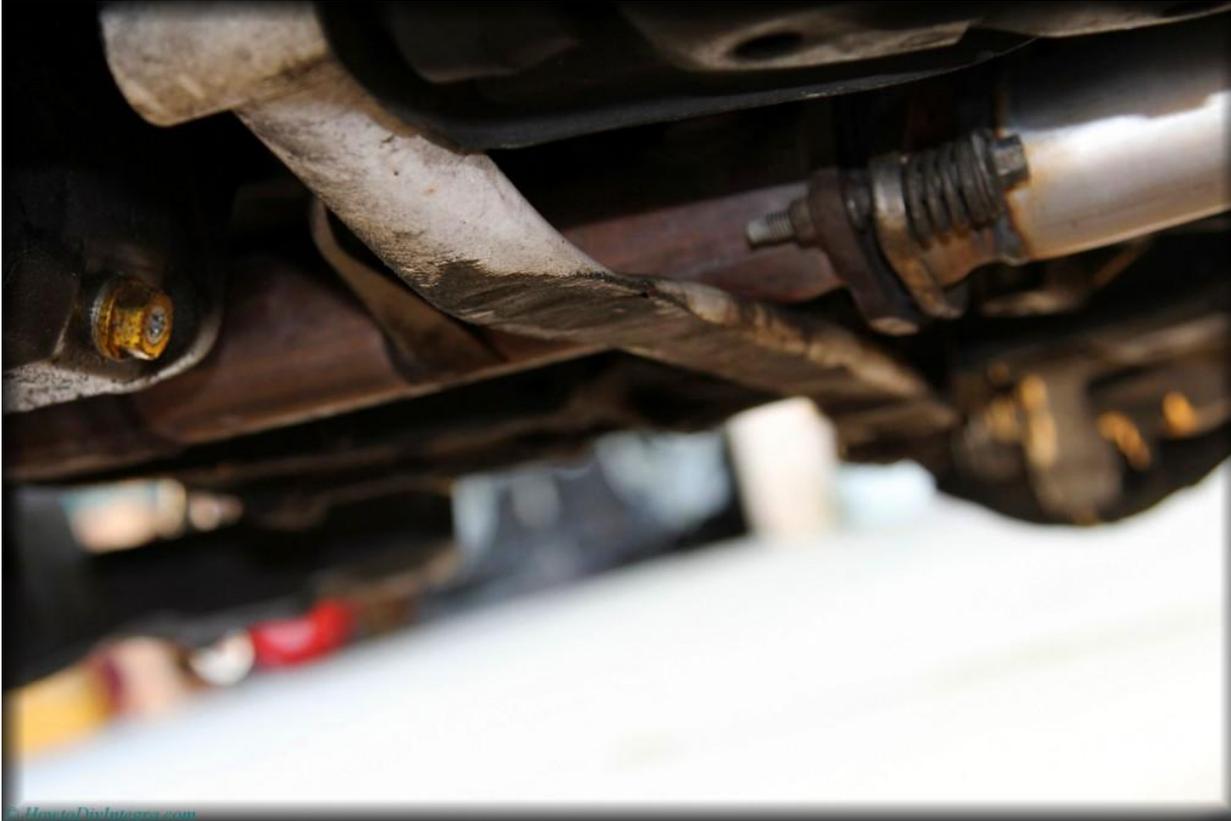
Tighten the bolt down and repeat on the other side of the sub-frame. Lower car and enjoy the extra chassis rigidity, improved steering response and increased traction. Now that the bar is installed, I can now worry less when driving slammed.



## Step 5:

Drive your car slammed for a whole year and experience the Static Life.

So after a year of driving slammed with this front Carbing tie bar, I'm quite glad with this investment because it withstood the abuse of daily slammed driving and still kept my car feeling rigid during hard turns. Definitely a nice investment with function & form. Obviously I comprehend the impractical reasons to driving a slammed car...it's stupid and non-functional yet still manages to drive. Why? Because it is a type of driving skill that needs to be practice and ultimately mastered. You learn how to take speed bumps at the right angles and proper speed where it is enough to get



over yet gentle enough to scrape slowly with less minimal damage. Think about it, the car is already low and inevitably will scrape. How can you control that to avoid damages to the engine?

*Scrap Slow.* 🧑🏻‍🔧

Every day I leave my garage, I go through a downward hill struggle to get out of and this was my main obstacle everyday! I had to do a 3-point turn just to get out the driveway. But once I was out, driving to my destinations were easy and non-troublesome. So every day I had to "control" how I scrape by positioning the car at the right angles and right speed, only sometimes scraping either the stock tow hooks or oil pan. Now there are times where you get stuck. It can be embarrassing from bystanders, a slight blow to the ego, or simply hilarious. I've experienced this all before and can sometimes ruin the fun of driving slammed. Another bad part of driving slammed are tires. If you don't have a properly aligned adjustments for

your toe and/or camber, usually toe goes first, then your tires will wear out a lot quicker. A simple flipping of the tires can help you run the tires a bit longer. But proper alignment is strongly recommended.

Since I only drive my car and did not really track the car due to it being a very expensive hobby, I enjoyed the slammed life. It is all about how good your car looked at an extremely low right height and simultaneously keeping the car looking immaculate as possible. Because quite frankly, the slammed life itself is a hobby and quite a skillful one as you have to learn how to avoid damaging your aero parts and paint. I remember my front JDM ITR lip had numerous of paint chips but I still rocked it because the overall paint of my car was still gleamingly clean! For those who do not believe me, here is my old 1996 Desert Mist Metallic Acura Integra LS sedan. The suspension were Tein Superstreet Full Coilvers and the wheels are Work VS-KF 15x7 +20 All Around.



And yes that is a pile of leaves in front of my car.



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