

King Clamp Installation Instructions

Thank you for buying the King Clamp!

Its very important to read though all the instructions before installing.

NEVER run your car without testing your car on a dyno or with a Wideband Air/Fuel meter when making adjustments to the MAP Clamp! You do this install at your own risk. If unsure at anytime consult a specialist, usually a performance shop.

VERY IMPORTANT!!!!!!

Your clamp is pre-adjusted all the way clockwise. Make sure you don't turn it clockwise any further or you risk damaging it. With it set clockwise it will not alter any of your MAP Sensor's readings. So its safe to install the clamp, and drive around without the immediate need to tune.

Find your MAP Sensor, it will most likely be on your intake manifold, and have three wires. Each of the three wires serves a specific purpose.

1. One wire is the MAP Sensor's ground wire.
2. One wire is the MAP Sensor's 5 volt input.
3. One wire is the MAP Sensor's 0-5 volt output signal wire.

Most cars use the Red for 5v input, Green for Signal, and Black for ground. Check with your dealership or shop manual to verify. I know they are correct for Srt-4 and MX3.

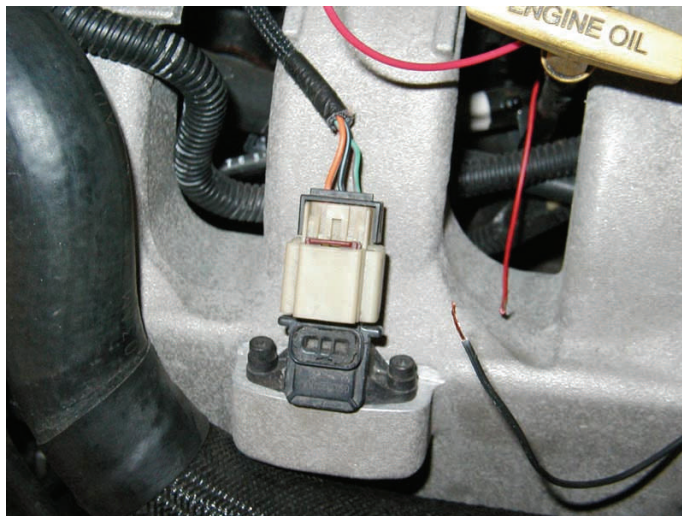
MAP Clamp Wire

Clamp's Red wire
Clamp's Green wire
Clamp's Black wire

connects to
connects to
connects to

MAP Sensor wire

MAP Sensor's 5 volt input
MAP Sensor's 0-5 volt output signal wire
MAP Sensor's Ground



(Shown SRT-4 MAP SENSOR)

Install

First you need to wire it into your car. All wires get spliced INLINE with the existing wires on the car. **There is no need to CUT the car's harness**, just peel some insulation back. Red goes to red or orange (it's supposed to be an orange wire, but I have seen a few of them that look more red than orange. There are only have three wires to pick from, so it is NOT the black or the green one). Green goes to green, and black goes to black. Make SURE you seal up your connections. I recommend installing it off to the left or right of the engine and not on top the engine. To keep it cool or things can melt.

If you ground something out, your car will really hate you. I STRONGLY recommend soldering your connections, not twisting them like many people do.

(Optional) From time to time one thing I like to do is install the MAP clamp wires directly to the terminals on the harness. It gives it a much cleaner look, but is not necessary. If you want to do this, make a specific note to what wire is in what position in the plug, then unplug the harness from the MAP sensor, use a flat tip screwdriver to pry the red terminal cap out from inside of the connector, then undo each of the pins from inside by LIGHTLY prying the tabs away from them inside. Slide out the pins and solder your MAP clamp directly to these pins. Then just push them all back into their corresponding positions in the harness and your done with that part.

Tuning

You really should use a wideband O2 and/or a dyno to tune your MAP clamp, but it can also be done with a scan gauge if you have one. Very important!! Remember it comes all the way to the right don't turn it any more unless you are tuning it and have gone to the left some. The potentiometer screw has 15 turns to it (meaning 15 full turns left to right, or right to left) without a stop to it on either end, so when you first begin, you MUST be VERY careful not to turn too quickly or firmly or it is possible you could jump the stop and it may no longer work or may work improperly.

Turning counter-clockwise means leaner and more timing, the reason why is because it will show the car less boost. On pump gas it is recommended you stay in the mid 11's AFR unless your pumps have some really nice gas like 94 or 95 then you may feel brave enough to go as lean as mid 12's AFR. The voltages on the table below show you what voltage corresponds to what pressure signal for both the 2 bar AND the 3 bar MAP sensors for our cars. Please bear in mind that trimming TOO much MAP signal can cause unwanted effects too. If you go as low as 13 psi signal I have noticed a lot of hesitation in many cars. Some people still recommend tuning that low, but I do not. The choice is yours though, it is your car. I recommend staying around 14-15 psi for better results. If you have a scan gauge, you can tune your MAP clamp using the manifold pressure reading to show you where you are clamped at. Whatever pressure it stops at is where you are clamped. You can go up or down as desired. While doing this, keep an eye on your knock retard count as well though, because going lower normally will increase your timing, but going too low will cause the car to knock and pull timing WORSE.

I STRONGLY recommend using a wideband because it gives you an intuitive and understandable number to look at for your AFR, but the scan gauge will also show you your O2 millivolts. When at WOT if your O2 millivolts is in the 890-930 range you are relatively safe. This will put your car in the 10.5-11.5 range AFRs and will be safe enough for daily drivers on pump gas.

If you do not have a scan tool available, there is still another way you can get a halfway decent base tune. You can use a boost leak tester to pressurize the system and probe the MAP sensor with the key in the ignition position. Probe the green line with the positive lead on the tester and the black wire with the black lead on the tester. Make sure your tester is set to the 20V reading and then SLOWLY turn the screw on the clamp counterclockwise until you see the voltage readings changing on the meter. Reference to the voltage table shown below to aim for your desired boost setting. This is the setting that the car will not see ANYTHING HIGHER. From this point forward, unless you start messing with the boost and fuel settings mechanically on your car, you basically will never have to mess with the MAP clamp again.

DO NOT tune your MAP clamp on gas that you normally would not use, like race gas or 100 octane unleaded. doing this will make it appear as though you are not getting any knock and running safer at leaner AFRs but then when you go to use your NORMAL gas your car will run VERY poorly.

I hope you enjoy the gains, and hey race on the track, not the streets..

Visit us online at: WWW.KingClamp.com for updated versions of this manual as well as new products and advice.

Or contact me via e-mail: Dking@kingclamp.com

The chart below is for SRT-4 Only. The top graph is for Stage 0/1 bottom is for Stage 2/3 due to larger injectors. This graph is only for reference and may not be the same for you vehicle. So please be careful.

