

MBC+A(Anticipator) for Saab 9000 Setup Instructions



Key

BPC= Boost Pressure Control (APC Solenoid)

MBC= Manual Boost Controller

APR= Air Pressure Regulator

TB= Throttle body

CW= Clockwise

CCW= Counterclockwise

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SMART turbo **PERFORMANCE**

Installing the Mounting Plate to the Car

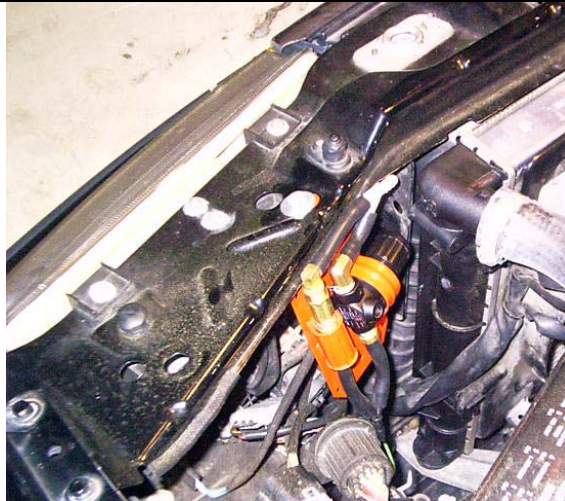


The mounting plate is shipped to you with the MBC and APR mounted and connected with "T" Connectors. The APR is shipped to you closed, so when adjusting later in the process, you will be rotating the APR bonnet clockwise after pulling the bonnet out to unlock it. This will be explained later in the directions.



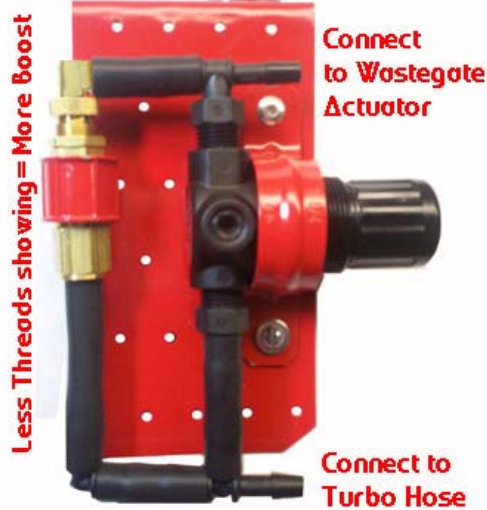
Locate the existing hole at the front of the car as shown, as this will be used to mount the plate to the car. Place the mount underneath the hole and the washer and bolt goes through the hole then through the top of the plate and nut* underneath which is attached to the mount. You will see the existing hole in which you will use

*The Nut is attached to the plate by epoxy or hot glue, neither of which is strong enough to hold when you torque the bolt down. It is used to help with fitment of the bolt onto the nut as it is a tight spot to do so.



When the mount is secured it will look like this and now you can attach the WG hose.

Connecting the hoses to the MBC+A



This illustrates which hoses get connected to where.

The Bottom port where it says “Connect to Turbo” is the inlet side of the kit,

Where it says “Connect to the Wastegate Actuator” is the outlet side of the kit.



For T-5 Engines, this is your Boost Pressure Control Valve (BPC) or also known as the APC solenoid. There are three hoses attached to it. This illustrates where each hose goes to or comes from. The Top hose, labeled turbo, comes from the turbo compressor. The middle hose goes to the waste gate actuator. The third hose goes back to the air intake before the turbo. This third hose will not be disturbed.
DO NOT CUT ANY OEM HOSES.



Remove the Hose off the BPC from the Turbo (top hose) and connect the straight hose coupler to it and the extension piece of vacuum hose and connect it to the bottom Wye (black one in picture above) Run the hose under the radiator hose down to the bottom of the mount. The couplers are attached to the extension hoses when shipped. Use zipties on both sides of couplers.

Then disconnect the hose going to the WGA and connect the other straight hose coupler and the extension piece of vacuum hose and connect it the outlet wye (white one in picture)

**** NOTE:** The extension hoses are sent to you long so you can decide the best route to the mount. Keep your hoses short and rout them the shortest distance to the wye's.



Take the 3" inch long piece of supplied vacuum hose and plug off the two hoses you just removed from the BPC to keep the BPC clean should you ever want to return the car to stock or decide to use a modified ECU that requires the use of the BPC.



The final setup / product will look similar to this.

You can see the BPC plugged off in the upper right hand corner of the picture

Time to Drive and Tweak

The Kit is sent to you with The Air Pressure Regulator (APR) fully closed so that you can first adjust your MBC setting.

Take the car out for a drive and get the MBC setting where you like it. Increase boost by turning the top on the MBC clockwise and locking the jamb nut t the desired setting. Most people want the maximum amount of boost possible so adjust to where you experience a fuel cut (sudden jerking of the car) and then readjust your MBC by backing it off some. Once you are happy with the setting you can now move onto the APR.

The APR adjusts by pulling the bonnet out to unlock it. By turning it CLOCKWISE(CW), you increase the air pressure going through the APR. By turning it COUNTERCLOCKWISE(CCW), you decrease the air going through. Push the adjustment bonnet back in to secure the setting.

Start with the APR closed (fully counter clockwise) so that no air gets through the APR, gradually open up CW the APR in increments allowing more air each run. When you start to notice that boost is decreased, decrease the setting a notch or so by turning it back CCW. At this point, you will be sending enough air to the waste gate line without making it open prematurely. At this point you should be noticing that boost is maximum without overshoots. The boost needle goes to its highest place and stays there until you let off the gas.

The original MBC adjustment was set to accommodate the pressure overshoots of the MBC. With the MBC+A, these pressure overshoots are avoided. When you have the overshoots eliminated, you can then increase the MBC setting to take advantage of higher boost. This increase is not major, but you will feel it!


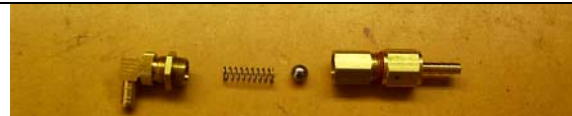


Disclaimer:

The use of a SMBC or MBC is very safe in many applications. You must research and evaluate the use of these devices on your own model/year/engine etc. The MBC will work well where any MBC could be safely used. When increasing boost; the engine must be in good mechanical condition, a true synthetic oil and good filters should be used, plugs must be in good shape and the heat range might need to be changed (cooler), premium fuel must be used, keep fuel injectors and combustion chambers clean (Techron Concentrate suggested), as a rule of thumb - one needs to have a low restriction intake and exhaust when increasing boost pressures, it might be foolish to increase boost pressures with a stock intake and exhaust setup.

Lean air fuel mixtures at higher boost pressures and air flows can lead to knocking and damage. If you hear any knocking, get off the throttle and reduce boost immediately. Learn what can be done with your vehicle. A MBC may be all that you need for more power, but some applications would require larger injectors or greater fuel pressures. Study and find out what works and what does not. You may need to install a fuel-air meter to monitor the AF ratios. Some well known applications need none of that, but you need to know these details for your self.

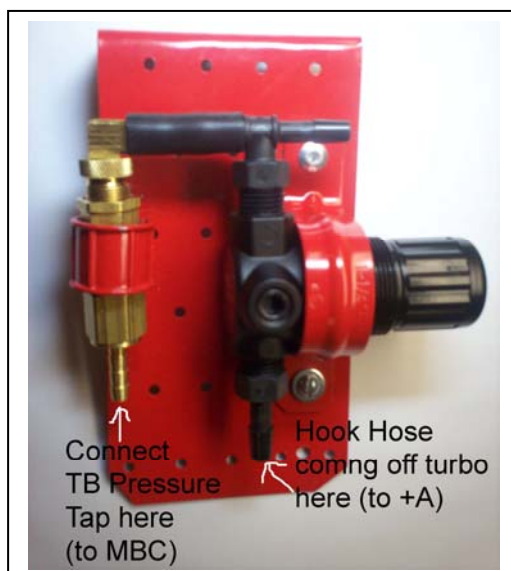
You are your own warranty. We are not responsible for what happens to your engine or drive train when increasing boost pressure.

Adding the Washer inside MBC to increase boost pressure If needed.

	<p>If you find that you have maxed out the MBC and you are not reaching max boost or need a little more, you can add the washer included in the kit to the MBC. ONLY DO THIS IF YOU HAVE SCREWED THE MBC ALL THE WAY IN AND ARE STILL NOT REACHING MAXIMUM BOOST WITHOUT FUEL CUTS.</p>
	<p>Take apart the MBC and you will find the spring and ball inside.</p>
	<p>Take the top part of the MBC (90 degree elbow side)</p>
	<p>Insert the washer inside the top and carefully put the MBC back together. The spring tension is now increased so you might have to turn down the MBC setting from where it was before.</p>

***This setup will allow you to effectively move your pressure tap for the MBC downstream of the IC. If you can locate a good place to tap for boost pressure at the TB, you can do so now. If you do, you can disconnect the Wye barb off the inlet and reconnect the hose off the turbo to the APR(+A) and connect your new pressure tap at the TB to the MBC. This will allow for longer sustained boost at higher rpms without droop. Since each model and year poses changes in the 9000, the cars equipped with the manual cable TB and a IAC motor might be able to use that location for a pressure tap. On cars with a MTB(motorized TB) it might be more difficult.

Here is what you will do if you do find a good place to tap for boost pressure near the TB.



Remove the inlet "tee" barb and reconnect the line coming off the turbo to the Air pressure regulator(APR or +A) The run a vacuum hose from your new pressure port at the TB to the MBC. This will allow longer sustained boost at higher rpms without boost droop. The anticipator will continue to take pressure from the turbo and prime the line. This is important because your vac line from the TB will now be even longer and overshoots are more likely to occur with longer lines. The +A will deal with the overshoots effectively allowing you to do this.