AAM Competition Twin Turbocharger System Frequently Asked Questions

Q - What size is the exhaust?
A - The downpipes are 3" for maximum power and reliability.

Q - What will be used for tuning?
A - Uprev will be utilized for tuning. A base startup tune will be supplied with all turbocharger systems and custom tuning options will be available.

Q - Will there be a "tuner" kit available for customers who already have a tuning solution?
A - Yes. The "Tuner" version of the turbocharger system will come with everything minus the Uprev tune/system, fuel injectors and fuel system.

Q - What size is the intercooler tubing?
A - To achieve lightning fast response and maximum power we utilize 2 x 2.5" tubing from the turbochargers to the intercooler. This is the optimal size to keep the system pressurized and limit the pressure drop, but big enough to sustain high HORSEPOWER. The intercooler piping post intercooler (from the intercooler to the engine/throttle bodies) is twin 2 3/4" light weight aluminum piping which is fully polished for "show car" quality look.

Q - Is the intercooler one or two cores?
A - The 370Z intercooler features one single core split into two sections for maximum power and reliability. The core design utilizes vertical flow technology, which is proven to outperform standard horizontal flow intercooler configuration - much like the design found on the Nissan GT-R. The intercooler features CAD designed casted endtanks engineered for optimal flow and efficiency while minimizing pressure drop and ensuring maximum long-term reliability.

Q - Are the intercooler tubes welded together?
A - Some sections of the intercooler tubes are welded together. To ensure maximum flow, all of the intercooler tube bends are done with a mandrel bending process and we control the quality of the bends and limit the number of bends required, maximizing power. Mandrel bending is a process in which the full diameter of the pipe is retained when it is bent vs. standard bending techniques that reduce the internal diameter of the pipe. In Mandrel bending there is a minimal distance between bend radi. This distance dictates how close two bends can be together without having to cut & weld the piping. This occasionally leads to bends which are too close to other bends, therefore requiring welding and ensuring the full diameter of the pipe is retained.

Q - Explain the air filter placement
A - Keeping our focus on a true OEM style kit without relocating any OEM parts, we strived to keep the washer reservoirs and other stock components in place. We have placed the air filters as far from the engine as possible achieving a perfect balance between keeping the vehicle as stock & easily serviceable as we can while yielding maximum power and long term reliability by limiting direct heat.

Q - What are the exhaust manifolds made of?

A - Cast 304 stainless steel and CNC machined for flanged surfaces for a leak free, powerful and reliable exhaust system.

Q - What type of exhaust housing is used?
A - The BorgWarner EFR housing - stainless exhaust housing for maximum power and reliability with internal wastegate positioning for optimal flow & response without surge.

Q - Will the wastegate be recirculated back into the system?
A - Yes, since the BorgWarner EFR turbochargers feature an OEM style internal wastegate it will internally (within the turbocharger itself) recirculate back into the system for maximum power. Unlike other turbocharger systems on the market which use an external wastegate, by using the proven BorgWarner OEM style turbocharger setup you will eliminate boost creep issues. The integrated internal wastegate also saves weight, improves reliability, decreases pesky leaks associated with external wastegate setups, and decreases installation trouble when trying to pipe the external wastegate back into the system.

Q - Will this system come with an electronic boost controller?
A - No, this will be an optional upgrade, but the installer will have the ability to initially configure the setup between 5-10psi using the integrated wastegate actuators. This helps reduce the need for a boost controller, simplifying installation and reducing overall cost.

Q -what are you guys using for boost controllers? the efr's have the solenoid built into the turbo don't they? So the boost controller would need to be compatible with the twin borg warner solenoids right?

A - Great question 1slow30 and you are correct - the BorgWarner EFR turbochargers have an integrated boost control solenoid valve (BCSV). The installer will have the ability to configure the wastegate actuators between 5-10 PSI and AAM Competition will offer an optional boost controller which will work in conjunction with the built in BCSV solenoids for those who want to run more boost. The release date for the optional AAM Competition boost controller is mid-November.

Alternatively, for those who are interested in using an aftermarket boost controller or who may already own one, the BorgWarner turbochargers do allow for the use of a boost controllers by simply bypassing the built in BCSV and configuring the boost controller as you would on any turbocharged system.

Q - What size are the silicone couplers?
A - We only use high thermal protective reinforced 4-ply silicone for maximum reliability.

Q - Will this system be compatible with aftermarket mipdipe/cat back systems?
A - We cannot speak for ALL of the aftermarket cat back systems available on the market, but we can say since this turbocharger system features OEM style fitment and is designed to mate with the OEM system it will be compatible with the majority of all high quality midpipes/cat back systems (including our own AAM Competition 370Z 2.5" and 3" True Dual Systems, wink wink. Ok - sorry for the sales plug here).

Q - Which turbochargers are used in the system?
A - We utilize the new BorgWarner EFR (Engineered For Racing) turbochargers, specifically the 6758's which are rated at 500 HORSEPOWER each. These proven turbochargers utilize stronger OEM grade

materials and have special design considerations such as purpose deigned internal wastegate, integrated recirculation (CRV) valve and a titanium aluminide (Gamma-TI) turbine wheel. This simplifies the overall installation and setup of the turbocharger system which contributes to their superior performance and superior reliability of the turbocharger system itself. These integrated features also help to justify the higher cost of these turbochargers and provide our customers with an extremely reliable, high power turbocharger system.

Q - Can the stock crash bar be kept with the turbocharger system?
A - Absolutely! We have designed this kit as OEM "friendly" as possible. The stock crash bar is fully retained and no modification is needed to this critical safety-engineered component.

Q -Why did you decide to make the intercooler tubing reach further into the intercooler? (The top part is not the traditional intercooler in the sense that the exit tubing is closer to the center). Wouldn't this cause a reduction in efficiency?
A - Great question! This was a major design consideration when developing the system. In order to keep the stock crash bar and retain the OEM level of fitment and finish we designed the intercooler as you can see in the renderings. We also use a shorter and more direct pipe which keeps bends to a minimum and increases overall efficiency and power.

Q - Will I be required to drill or tap the cylinder head or upper oil pan?
A - Absolutely not - this would be counterproductive to our OEM style fitment. Other forced induction kits require this which can adversely affect the reliability of your vehicle and create many installation headaches. This was one of our major considerations when developing this kit and it required many hours of CAD development from our engineering team to successfully accomplish. Development hours well spent if you ask us.

Q - Does the factory steering system remain intact?
A - It most certainly does, as well as the factory power steering system. Again - major considerations we had when developing this kit to feature an OEM level of fitment and retain maximum reliability in these areas.

Q - Will I need to remove this turbocharger system for a clutch job?
A - Negative. You do NOT have to remove the turbocharger system for a clutch job. Are you starting to see a trend here?

Q - Will this system impact the "area under the curve"?
A - I'll let you guess... No! You are correct - since this is an OEM style fitment focusing on driveability there will be no impact to the "area under the curve". You will have the full power you are accustomed to right off the line - no power loss whatsoever.

Q - Do I have to move the location of my oil filter?
A - OEM style fitment and reliability = you do not have to move the oil filter. Moving the oil filter can lead to problems. We designed the turbocharger systems to retain the location and functionality of the OEM oil filter and its fitment.

Q - Will this system work with oil cooler kits?

A - Generally speaking yes. If the oil cooler kit was mounted to the OEM oil filter than it should have no problem fitting. Even if your oil cooler kit required a relocation of the oil filter it still should be compatible - but we'd prefer the retention of the OEM oil filter location and an upgrade to an oil cooler that allows this. This turbocharger system also comes with our own oil pan spacer increasing oil capacity by about a quart to help aid cooling.

Q - What type of blow off valve comes with the system?
A - The BorgWarner EFR turbochargers feature an integrated compressor recirculation valve (CRV) which is designed to run with these specific turbochargers and does not require any adjustments. The CRV vents boost quickly and efficiently when the throttle closes further raising the reliability of the turbochargers. It is also internally-recirculated to keep turbo speed high during the shift and to keep engine control systems satisfied yielding maximum power. The BorgWarner EFR integrated CRV valve is far superior to the traditional BOV offering improved response, maximum power and exceptional reliability.

Q - In general what kind of materials are used in the system?
A - High quality cast stainless or high quality 16-gauge 304 stainless for any and all exhaust side related components. Lightweight aircraft quality 16-gauge 6061 aluminum for all intake related components and tubing, high-temp reinforced 4-ply silicone, motorsport grade hoses for coolant, etc. We use only the best materials available to provide our customers with the most powerful and reliable twin turbocharger system available.

Q - Does this system come with an oil pan?
A - The system comes with an engineered billet aluminum oil pan spacer. Standard provisions are included in the oil pan spacer should you want to run an external oil temperature gauge.

Q - About how long can you estimate the kit to be installed?
A - Our technicians take between 8-12 hours to install the turbocharger system after the engine is out of the vehicle.

Q - Have you experienced any AIT (air intake temperature) issues?
A - None whatsoever. This was also a significant consideration during our development process to ensure a reliable kit eliminating any intake temperate issues. All piping was kept to an absolute minimum with minimum bends to elevate bottlenecks and provide maximum efficiency and air flow.

Q - What is the horsepower potential for this kit?
A - This would depend on your engine and level of build. But the turbochargers are rated for up to 500 HORSEPOWER each, so it would be safe to assume between 900 HORSEPOWER -1000 HORESPOWER on a fully built motor and setup.

Q - Other than purchasing the turbocharger system, what else do I need to buy for a proper installation?
A - Nothing. The kit comes with EVERYTHING you need aside from fluids. Between what's included and the integrated features of the BorgWarner EFR turbochargers your installation shop should be pleasantly surprised at the ease of installation due to the OEM style fitment and having everything included (tools aside). You will want to do a fresh fluid change (new oil and antifreeze).

Q - Is there a layaway program?
A - Yes, Advanced Automotive Manufacturing & Competition will offer a layaway program for those of you who would like to take advantage of it. We will require 25% down and it must be paid off in full within 6 months with minimum monthly payments.

Q - Will there be financing options?
A - Yes! We hope to have several financing options including Paypal's Bill Me Later. More details to come as we finalize these programs.

Q - Will an extended warranty be offered?
A - Yes. We are proud to offer an optional warranty for the Advanced Automotive Manufacturing & Competition turbocharger system. Please contact your sales associate for more information and specifics on the warranty program.

Q - When will these twin turbocharger systems be available to the public (full release)?
A - Before we officially release this kit we will be looking for a limited number of R&D vehicles locally to perform a final installation and confirm instructions of the twin turbocharger systems. These R&D vehicles will get to keep the turbocharger systems after all testing has been completed for a very significant discount. We are still looking for R&D vehicles local to the MD/DC/VA area so if you are interested please reach out to me for all of the details. After we have confirmed everything on the R&D vehicles and ship the presale orders we expect to have systems available to the public within a few weeks as the majority of all components are manufactured in house.