



If you are in any doubts about the results or current state of your vehicle, consult a qualified professional mechanic.

Many people seek increased performance from their vehicle due to existing lackluster performance. There are many factors that could be leading up to your existing lackluster performance, chiefly relating to vehicle design, maintenance, and usage. Make sure that your engine and vehicle are in tip-top shape before you increase its performance in any way.

If your vehicle has a pre-existing problem, supercharging will find that problem quicker instead of fixing that issue. Increasing power output 50-100% can impact underperforming parts on your vehicle more quickly as they fail to handle the extra stress from increasing power output. Sprintex products are designed not to give you or your vehicle more than either can handle.

We go to great lengths to ensure the quality, durability, and ease of installation and maintenance of our patented twin-screw superchargers and systems. All of our supercharger units are run on a SAE J1723 test bench. No supercharger leaves our multi-million dollar facility unless it has met all the stringent tolerances required by the test bench and delivered excellent results. Our superchargers and systems are all built within ISO quality standards.

**Q. The noise from the supercharger is excessively audible.**

A. Check that the intake duct is properly installed and does not leak. The Sprintex system is designed to run with the factory air box. Many aftermarket air intakes and cold air systems have much less silencing ability than the factory item. If necessary, refit the factory airbox as a trial. In most cases where a Sprintex system is installed, there is little or no performance gain achieved by installing an aftermarket intake system.

**Q. My transmission does not shift normally.**

A. The ECU in your car has a self-learn capability. If the battery is disconnected, all the learned computer parameters are reset to zero. This goes for the engine computer as well. In this case it will take about 10-15 miles for the computer to re-learn normal shifting. The computer also 'learns' the engine torque curve. As the torque is significantly more in a Sprintex supercharged engine, it takes time for the computer to adjust. Driving style also has a major effect on the learn features of both the engine and transmission computers.

**Q. My check engine light is on.**

A. It shouldn't be. If this occurs immediately after the install, do not drive the car. If it happens during the test drive or later, then drive the car gently until the cause of the fault is identified.

Common causes of the engine light immediately after install are:

- A sensor may not be connected. Check the fault code with the re-flash unit provided and investigate as necessary.

- The MAP sensor that was supplied with the system has not been installed, or the seal damaged during install. Make sure the correct sensor is installed and that the seal was not damaged causing a leak.
- ECU programming is not properly installed. Detailed instructions are provided for re-flash. Make sure the battery in the car is well charged and carefully follow the steps in the instructions.

**Q. My engine misfires.**

A. Something is mechanically wrong. Check engine basics (i.e. ignition leads, plugs, etc.)

**Q. My engine 'pings' with light acceleration.**

A. Light pinging is not abnormal in modern engines particularly in part throttle driving. Ensure that you have good quality premium fuel in the tank. Give the computer some time to learn the new configuration and drive 'normally' during this period. If heavy pinging persists, contact Dealer/Jobber for tech support.

**Q. My engine pings at full throttle.**

A. It should not ping appreciably at full throttle. Depending on the age and mileage of the car, it is possible the fuel pump is weak or the fuel filter partially blocked. Remember that if the car makes 30 or 40% more power, then at full load it will need 30-40% more fuel flow. This will show up any shortcomings in the car's fuel system, which may not have been evident with the standard engine setup.

**Q. I can smell fuel.**

A. This is not normal. Check that there are no leaks in the engine bay. If a leak is found it should be fixed immediately as a safety concern. Determine if the smell is coming from the exhaust. If the smell is in the exhaust, it is likely that the check engine light will show after re-starting the engine. The likely root causes are related to either a sensor not being correctly connected or the map sensor seal or hose leaking. Another possible cause is that the computer re-flash was not completed properly.

Before you begin your installation—read the instructions! This means read all of them. Explanations of all of the features are included in the system and available for download before you even purchase. There are further tips and advice in the instruction manual of your chosen Sprintex Supercharger system.

Make sure your work area is clean and uncluttered.

Make sure all necessary tools are available at the time of installation (no specialist tools are required for you to fit your Sprintex system). Sprintex recommends that you run at least one fuel tank full of premium grade fuel through your system prior to doing a system install. The

use of mid or lowgrade fuel after installation of the supercharger can impact the performance of your engine creating detonation and pre-ignition problems.

Make sure you've got a healthy battery! If your battery is old and worn, replace it. Calibration devices require a full charge and stable voltage for a successful installation of the tune. If in doubt connect a battery charger while programming the vehicle.

Should your vehicle be requiring or close to requiring a routine scheduled service we would recommend this be undertaken including the installation of new spark plugs prior to commencing installation.

Change your fluids if you have been putting it off. If something is wrong with your driveline, it is better to find out beforehand by analyzing fluids and checking any magnetic drain plugs for shavings.

Do not remove the protective tape from the supercharger including the intake manifold, inlet and discharge ports until you are ready to attach to your vehicle. It is important no debris falls into the superchargers during installation. Pay special attention to the seals and sealing surface of the components. If damage occurs this can cause air leaks between components. Small vacuum leaks can be hard to diagnose and cost time.

Sprintex superchargers run a self-contained oil set up. OIL LEVELS ARE SYSTEM SPECIFIC. Special attention must be made in order to fill and maintain correct levels. The correct oil level required for each system can be found within the installation manual. WARNING. Incorrect oil levels can cause permanent damage. Please also ensure the use of the correct grade of oil. Sprintex recommends Redline 75W90NS. Prior to starting the vehicle after installation double check fuel, coolant and electrical connections.

When initially started allow the engine to warm up whilst checking for any leaks before driving and recheck oil and coolant levels. Take care and follow the instructions for a successful installation. Also, remember routine maintenance as you enjoy your Sprintex Supercharger over time, check supercharger oil level (do not overfill) as part of your vehicle servicing schedule.

### **Sprintex Twin Screw Superchargers**

Twin screw superchargers contain a male and a female rotor which mesh and form helical 'packet' volumes. The twin screw supercharger is also a positive displacement device however the different shaped rotors mesh very closely meaning that there is minimal internal leakage. This makes it very efficient from a very low speed right up to the supercharger's limiting speed, no other supercharger has such a broad efficiency window. As the supercharger rotates, it compresses the air inside the supercharger before then releasing it to the intake manifold. This internal pressure ratio can be changed to suit certain applications making the twin screw very efficient in its designed application. It also makes the twin screw compressor

capable of very high boost pressures if needed. The Like roots superchargers, twin screws are also typically installed in or on the intake manifold making it a compact and neat install.

### **Turbochargers**

Turbochargers are powered by the engine's exhaust gasses, which spin a turbine. This turbine is connected to a compressor via a shaft which forces air into the engine. The advantage of using the exhaust gas to power the compressor is that the speed of the compressor can be controlled by bleeding off exhaust by using a wastegate. The main disadvantage of a turbocharger is that they generally cannot be sized to provide maximum boost throughout the entire rev range. A small turbocharger will spin-up quickly and have minimal turbo lag but will start to become inefficient at high RPM and therefore limit the maximum power achievable. A large turbo can provide high boost pressure all the way to the engine's redline RPM, but will be slow to respond at lower RPMs. In an aftermarket application a turbocharger can engine's oil system for the turbocharger's oil supply and drain lines.

### **Centrifugal Superchargers**

Centrifugal superchargers are essentially the compressor part of a turbocharger that is driven by a belt on the engine rather than by a turbine in the exhaust. This makes centrifugal superchargers compact and relatively easy to install in an aftermarket application. However being driven directly via a belt means that the boost from a centrifugal supercharger cannot be controlled by a wastegate and instead the boost produced is set at a pre-determined amount. Centrifugal superchargers generally make low boost pressures at low RPM's building to maximum boost just before the engine's redline. This means that an engine with a centrifugal supercharger fitted will often make a good peak power figure however the torque gains at low rpm's are often minimal.

### **Roots Superchargers**

Roots superchargers have changed a great deal over the decades. Roots superchargers are the most common type of supercharger found in OEM applications. They are more efficient and are capable of higher boost levels than the original ones found on GM trucks and Toyotas. A roots supercharger is a positive displacement device meaning that it displaces a set volume per revolution. This means that in theory a roots should make the desired boost level at all speeds, however internal leakage means this is not the case and boost is limited at low speeds. Roots superchargers are bigger than a centrifugal supercharger, however being able to install them directly on or in the intake manifold means that the overall installation can remain relatively compact.

**Years Supported?**

2012 to 2014 using a Diablo i-1000DCX.

**Type of supercharger?**

Positive displacement Sprintex S5-335 twin screw

**Why are your systems better than the others?**

Sprintex superchargers are positive displacement units. Boost is available from idle low to high rpm i.e. across the range eliminating lag and significantly enhancing torque and power eliminating lag.

**Explain positive displacement units?**

Positive displacement superchargers deliver airflow linearly and maintain set boost throughout the RPM range. This best matches the engines airflow requirements.

**Will the system fit under the stock hood?**

Yes, no cutting or modifications necessary.

**Do I need any other modifications?**

No. The system comes with all components required for installation on a stock vehicle.

**Do I need a dyno tune?**

No. Sprintex provide a flash tune unit that is plug and play.

**How often do I need to service the supercharger?**

It is recommended the supercharger oil level be checked at the regular service interval of your vehicle in addition to checking all other system components e.g. Belt, tensioner and idler pulley. Check the installation manual for correct levels

**Can Sprintex supply pulleys for adjusting boost?**

No. Sprintex has designed systems to provide a balanced torque and power uplift to the stock vehicle and to avoid unnecessary strain on the drivetrain. For these reasons Sprintex systems are not intended to be modified. Superchargers can be purchased with separate components for enthusiasts wishing to develop and modify their vehicles further but this avenue will not receive the support of Sprintex warranty systems.

**Years Supported?**

2007 – 2010 with Diablo i-1000, 2011 with Diablo i-1000DCX.

**Type of supercharger?**

Positive displacement Sprintex S5-210 twin screw.

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**What if I have big tyres or re-gearred?**

The Diablo flash tuner provides a setting to correct the speedometer for larger wheels or re-gearing.

**Do I need a dyno tune?**

No. Sprintex provide a flash tune unit that is plug and play (TJ 1996 – 2004 is the exception).

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**The drive belt appears to move on the idler pulley.**

Some movement can be seen when the painted section (part number) of the belt runs past the flat idler pulled. This is slightly raised because of the paint marking and will cause the belt to move around. This is normal and won't cause an issue.



**Years Supported?**

2012 to 2014 using a Diablo i-1000DCX.

**Type of supercharger?**

Positive displacement Sprintex S5-335 twin screw

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