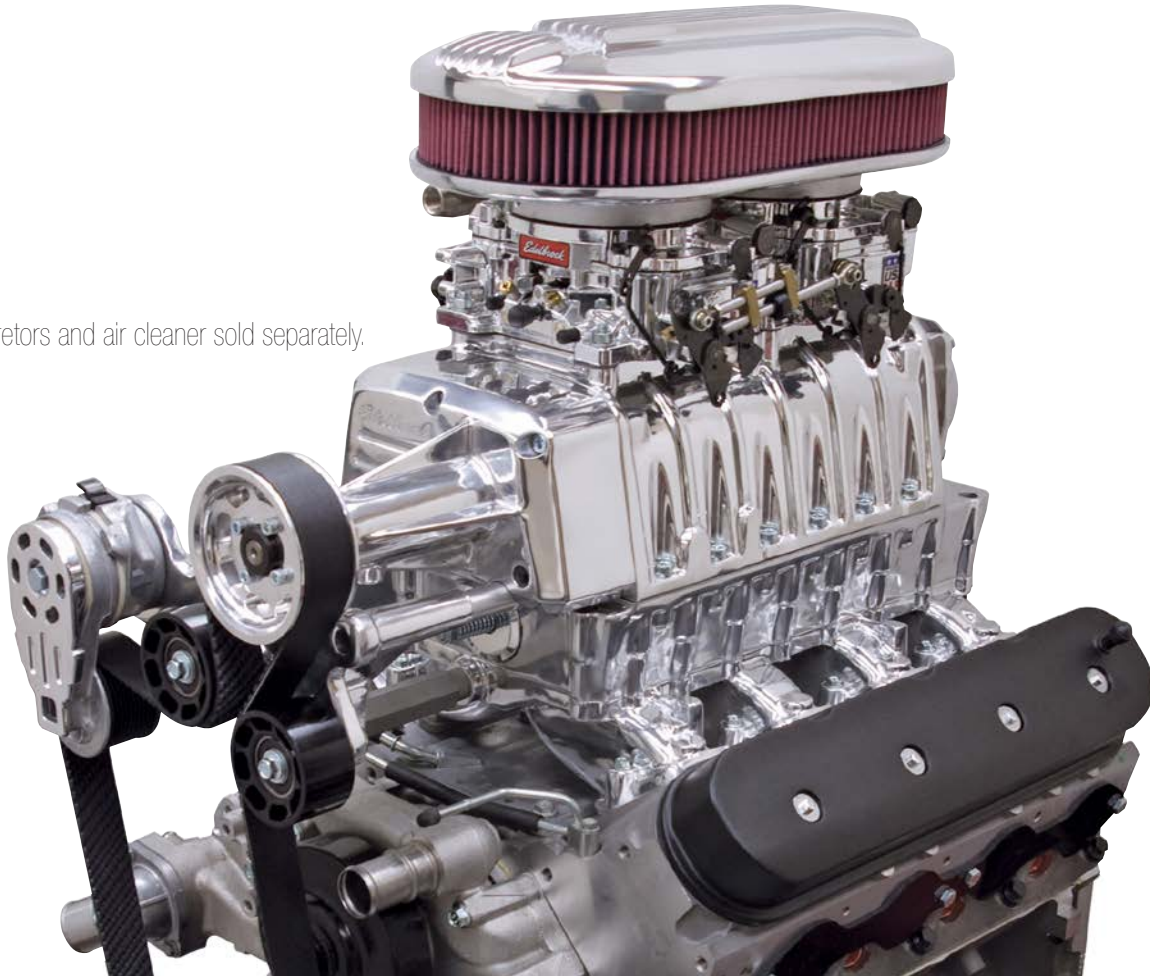




Carburetors and air cleaner sold separately.



Edelbrock E-Force RPM Carburetor Supercharger Chevrolet LS Engines

Rectangular Port Heads: 1511, 15111, 15113

Cathedral Port Heads: 1512, 15121, 15123



Edelbrock E-Force Supercharger System
Chevrolet LS Engine
Installation Instructions

INTRODUCTION

Thank you for purchasing the Edelbrock LS Dual-Quad E-Force Supercharger for the Chevrolet LS engines. The Edelbrock E-Force Supercharger utilizes Eaton's TVS2300 Supercharger rotors, which features a four lobe design with a full 160° of twist. This design offers quiet operation, maximum air flow, minimal temperature rise and the reliability for which Eaton is known. These rotors however, are merely the foundation of the system. The Edelbrock Supercharger is a complete system that maximizes efficiency and performance by minimizing air restriction into and out of the supercharger. As a result, the E-Force supercharger maximizes airflow with minimum temperature increases and minimum power consumption. This LS Dual-Quad E-Force Supercharger will accept standard flange 4-bbl carburetors. Edelbrock Performer 600 CFM carburetors specifically tuned for the LS Dual-Quad are available separately.

PART NUMBER	FINISH	APPLICATION	DESCRIPTION
1511	Satin	Chevy LS Rectangular Port Heads	E-Force TVS2300 Supercharger, Non-Intercooled, Dual Carbureted, Without Carburetors
15111	Polished		E-Force TVS2300 Supercharger, Non-Intercooled, Dual Carbureted, Without Carburetors
15113	Black		E-Force TVS2300 Supercharger, Non-Intercooled, Dual Carbureted, Without Carburetors
1512	Satin	Chevy LS Cathedral Port Heads	E-Force TVS2300 Supercharger, Non-Intercooled, Dual Carbureted, Without Carburetors
15121	Polished		E-Force TVS2300 Supercharger, Non-Intercooled, Dual Carbureted, Without Carburetors
15123	Black		E-Force TVS2300 Supercharger, Non-Intercooled, Dual Carbureted, Without Carburetors

The Edelbrock E-Force supercharger is intended for Chevrolet LS engines with stock style front end accessory drive (FEAD) utilizing the Corvette belt offset. The superchargers will utilize the factory accessory drive belts in conjunction with the secondary 10 rib supercharger pulley drive system. Accessory Crankshaft Drive Pulley Adapter are available separately for applications with Truck, Gen V Camaro and F-Body Camaro belt offsets.

Part Number	Description
15816	Crankshaft drive Pulley Adapter, Gen V Camaro/Truck Belt Offset
15818	Crankshaft drive Pulley Adapter, F-Body Camaro Belt Offset

As with any universal power add-ons, actual power outputs will vary depending on the application. Below is a general baseline with actual power numbers from testing. Please note that this is just a guideline used for reference only. Actual power and boost output will vary depending on your application.

SPECIFICATIONS			
Displacement	402 C.I.D	Compression	Stock 10.7:1
Block	Stock GM LS3	Pulley Size	3.5"
Cylinder Heads	Stock GM LS3 Rectangular Port	Boost PSI	*8 PSI (+1-1.5 in upper RPM)
Camshaft	Stock GM LS3	Horsepower	*599
Carburetors	Edelbrock Performer 600 CFM #14055	Torque	*544

**Actual horsepower, torque and boost numbers will vary depending on application.*



Edelbrock E-Force Supercharger System Chevrolet LS Engine

Installation Instructions

TOOLS AND EQUIPMENT:

- Box and Open End Wrenches
- Socket Set
- Distributor Wrench
- Pliers
- Screw Drivers (Regular and Phillips)
- Torque Wrench
- Gasket Scraper
- Timing Light
- Vacuum Gauge
- Rags
- Water Bucket
- Paper and Pencil
- Masking Tape

ADDITIONAL MATERIALS REQUIRED:

- Dual-Quad Fuel Hose Kit
- Dual-Quad Air Cleaner
- One-to-one Throttle Linkage or Progressive Linkage #7094
- Spark Plugs *2-3 heat ranges colder than plugs currently using in your naturally aspirated engine*
- High Volume Fuel Pump:
 - Edelbrock #1791 (*120 gal/hr, electric*)
 - Edelbrock #1792 (*160 gal/hr, electric*)
- Fuel Pressure Regulator:
 - Edelbrock #1727 (*Non-Bypass Style*)
 - Edelbrock #1778 (*Bypass Style*)
- Silicone
- Edelbrock Gasgacinch (#9300)
- Thread Sealer
- Loctite™ - Red, Blue, or Equivalent
- Radiator Coolant

IMPORTANT WARNINGS

Before beginning the installation, use the enclosed checklist to verify that all components are present in the box. Then inspect each component for damages that may have occurred in transit. If any parts are missing or damaged, contact Edelbrock Technical Support (800-416-8628), not your parts distributor.



WARNING: Installation of this supercharger will result in a significant change to the performance characteristics of your vehicle. It is highly recommended that you take some time to familiarize yourself with the added power, and how it is delivered, in a controlled environment. Take extra care on wet and slippery roads, as the rear tires will be more likely to lose traction with the added power.

WARNING: Exposed fuel and oil will be present during this installation. When working around gasoline and/or oil, always work in a well ventilated area, and keep all open flames, sparks and other sources of ignition away from the work areas. Failure to do so can result in a fire and/or explosion

Proper installation is the responsibility of the installer. Improper installation will void all manufacture's standard warranties and may result in poor performance and engine or vehicle damage.

Successful operation of the engine with this supercharger kit requires a working knowledge of the set-up and tuning of an engine. This supercharger kit is capable of supporting over 500 HP. Aftermarket pistons, connecting rods, and valves are not required but are highly recommended to ensure engine durability. See the "Boost and Ignition Timing" section in this manual for further information. The valve lash or lifter preload should be properly adjusted. If the valves are not properly seating, or the valve lash is not properly adjusted, the increased temperatures created by the increased power output could accelerate valve seat wear and cause burnt valves. If for any reason your engine has oil pressure that is below the acceptable service limits as specified in the Factory Service Manual, this problem should be corrected before installing this supercharger kit.

FUEL PUMP REQUIREMENTS: This supercharger requires significantly more fuel to properly operate when compared to naturally aspirated applications. A High Volume Fuel Pump is required. Please select one properly rated for your application. Edelbrock #1791 (120 gal/hr, electric) or #1792 (160 gal/hr, electric). **NOTE:** #1792 fuel pumps require the use of a fuel pressure regulator such as an Edelbrock #1727.



91 octane or higher gasoline is required at all times. If your vehicle has been filled with anything less, it must be run until almost dry and refilled with 91 or higher octane gasoline twice prior to installation.

Failure to use the required 91 octane gasoline or higher could permanently damage your engine. Any failures associated with not using premium 91 octane gasoline or higher, will be ineligible for warranty repairs.

AFTER INSTALLATION, BEFORE STARTING THE VEHICLE: The use of colder spark plugs are strongly recommend when installing a supercharger. In our testing, we used Champion RC9YC spark plugs, which are 2-3 heat ranges colder than the spark plugs used in a naturally aspirated engine. Any manufacturer's plugs that match the correct plug configuration for your application will be adequate.

HOOD CLEARANCE: This supercharger is tall by design. An aftermarket hood and/or modifications to the hood may be required. Please make modifications before operating the vehicle.

It is recommended that you check the Edelbrock Tech Center Website for any updates to this installation manual. Please refer to the lower left hand footer to verify that you have the latest revision of this installation manual before beginning the installation.

Tech Center: http://www.edelbrock.com/automotive_new/misc/tech_center/install/index.php

Edelbrock Authorized Installer Disclaimer

Authorized installers of Edelbrock products are independent companies over which Edelbrock has no right of control. Edelbrock LLC makes no claims regarding the abilities, expertise or competency of individual employees of any authorized installer. Each authorized installer is an independent company and makes its own independent judgments. Edelbrock LLC specifically disclaims any responsibility to any party including third parties for the actions, or the failure to act, of individuals, agents or a company authorized in the installation of Edelbrock LLC products.

KIT CONTENTS (parts not to scale)



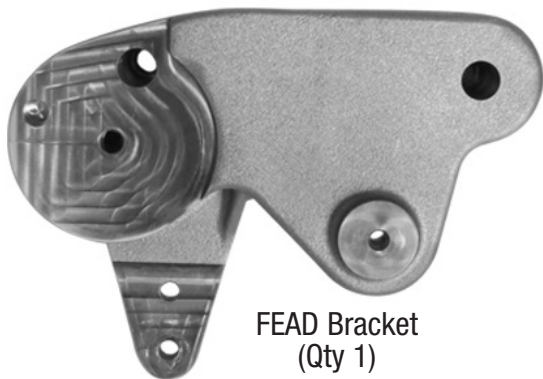
Damper
(Qty 1)



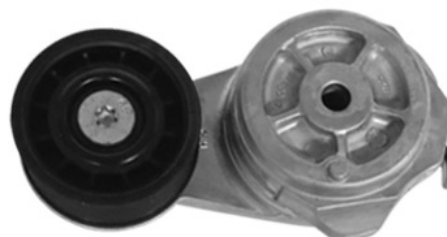
Crank Pulley
(Qty 1)



Supercharger Drive Pulley
(Qty 1)



FEAD Bracket
(Qty 1)



Tensioner
(Qty 1)



FEAD Spacer
(Qty 1)



74mm Idler Pulley
(Qty 2)



FEAD Spacer Bracket to Nose
(Qty 2)



Pulley Adapter
(Qty 2)

HARDWARE BAG #1

(parts not to scale)



SHCS M8 x 120mm
(Qty 2)



SHCS M10 x 65mm
(Qty 3)



SHCS 5/16\"-18 x .125\"
(Qty 1)



Hex Flange M10 x 90mm
(Qty 1)



M8 Washer
(Qty 2)



Hex Flange M10 x 30mm
(Qty 3)



Hex Flange M8 x 55mm
(Qty 2)



5/16\"-18 Set Screw
(Qty 1)

HARDWARE BAG #3

(parts not to scale)



Hex Flange M6 x 45mm
(Qty 10)



Hex Flange M6 x 40mm
(Qty 4)



Button Head
M6 x 16mm
(Qty 2)

HARDWARE BAG #4

(parts not to scale)



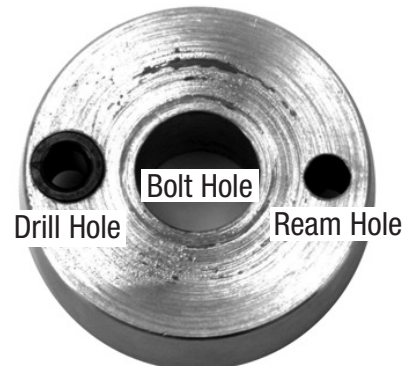
(1x) - M16 x 2 x 120mm Hex Bolt



(1x) - 1/4\" x 3/4\"
Steel Dowel



(1x) - OEM Damper Bolt
(Image for reference only. Actual product may differ)



(1x) - Crank Pinning Drill Guide



(1x) - 15/64\" High Speed Steel Drill Bit



(1x) - .2500\" Reamer

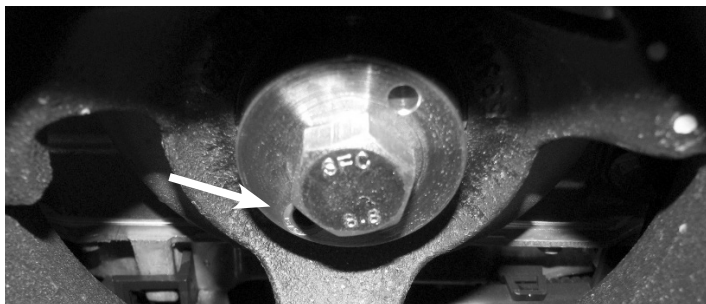
PARTS REMOVAL AND PREPARATION

These are general installation instructions for the Edelbrock Chevy LS Dual Quad E-Force Supercharger. Removal and installation of factory components will differ from vehicle to vehicle. Please refer to your service manual for specific details on removal and installation of factory components if necessary.

1. Disconnect the negative battery terminal.
2. Loosen the tension on the accessory belt(s) and remove belt(s).
3. Remove the crankshaft balancer bolt and damper.
4. Remove the gas cap to relieve fuel pressure. Disconnect and remove any fuel lines connected to the intake manifold. Plug all fuel lines to avoid excessive fuel drainage. Replace the gas cap.
5. Remove the intake manifold bolts and remove the intake manifold.
6. THOROUGHLY clean the intake manifold bolt holes and cylinder head surfaces.

E-FORCE INSTALLATION PROCEDURE

1. The supplied damper is slotted for a key. A crank pinning kit is also supplied and can be used as a secondary option. Below is the procedure to pin the crank using the supplied pinning kit. Disregard Steps 2-6 if using alternative avenues to pin the crank.
2. Loosely install the supplied damper using the hex bolt and crank pinning drill guide from Bag #4. Rotate the reamer guide until the drilling bushing is at a comfortable position for drilling. Securely tighten the reamer guide and bolt using a 24mm socket.

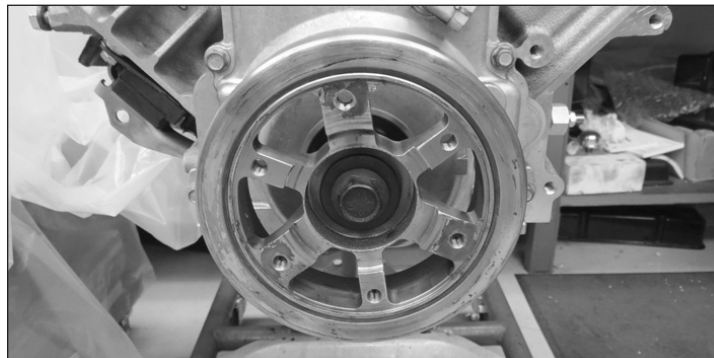


3. Mark the supplied drill bit with a piece of masking tape. It must measure 1.5" from the tip.
4. Lubricate the drill bit with a small amount of engine oil. Then locate the guide hole with the drilling bushing. Begin drilling using a Right Angle Drill (or equivalent) and the supplied 15/64" drill bit. The drilling process is complete when the tape mark on the bit meets the guide.

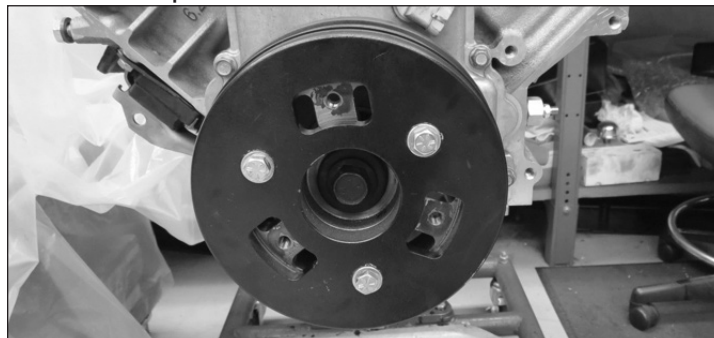
5. Loosen the balancer bolt and remove any metal debris with compressed air. Rotate the guide until the ream hole lines up with new dowel pin hole on the crank. Use the supplied .2500" ream tool to verify that the holes are aligned. Then tighten the bolt and ream the hole.

6. Remove the balancer bolt and reamer guide. Clear out any remaining metal debris with compressed air. Apply red Loctite retaining compound or equivalent, to the supplied dowel pin and gently tap it into the new dowel pin hole until it is flush.

7. Using a 24mm socket and torque wrench, install the supplied balancer and balancer bolt onto the crank. Torque balancer bolt to 37 ft-lbs + 140°.



8. Using a 14mm socket and three (3) M10 x 30mm Hex Flange bolts from Bag #1, install the crank drive pulley to the balancer. Torque bolts to 35 ft-lbs.



9. Using an 8mm Hex key and three (3) M10 x 65mm SHCS bolts from Bag #1, install the 10 Rib secondary drive pulley to the balancer. Torque bolts to 35 ft-lbs.



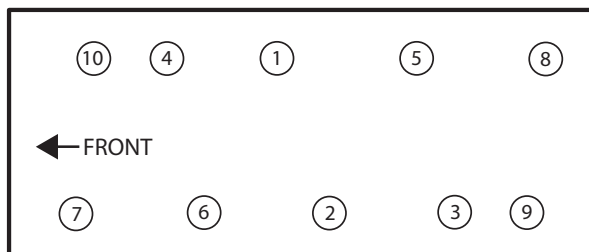
10. Install the accessory drive belt(s) and adjust the tension on the accessory belt(s) as needed.

11. Install the eight (8) supplied manifold O-ring gaskets to the manifold ports as shown below.

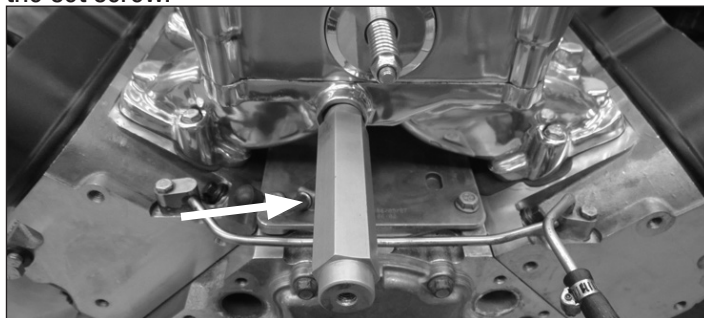


12. Carefully install the supercharger manifold onto the engine, making sure the bolt holes line up with the gaskets.

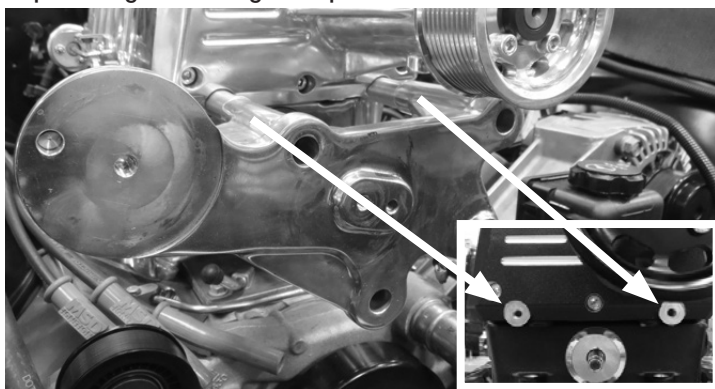
13. Using a 10mm socket and ten (10) M6 x 45mm bolts from Bag #3, secure the manifold to the cylinder heads. Torque bolts to 8 ft-lbs using the sequence below.



14. Thread the 5/16" x 1.25" set screw into the provision on the front of the manifold. Then install the Hex Spacer onto the set screw.

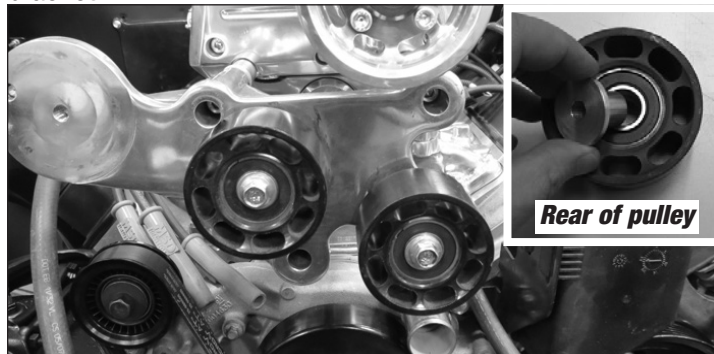


15. Using two (2) M8 x 120mm SHCS bolts from Bag #1 and the supplied spacers, install the FEAD bracket onto the supercharger housing. Torque bolts to 37 ft-lbs.



16. Using the 5/16" x 1.25" bolt from Bag #1 secure the FEAD bracket to the Hex Spacer previously installed.

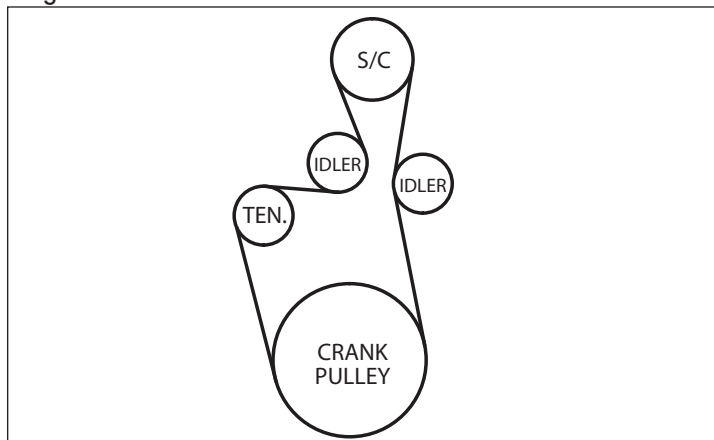
17. Place the pulley adapters onto the supplied idler pulleys. Using Blue thread locker, two (2) M8 x 55mm Hex bolts and two (2) M8 washers from Bag #1, install the idler pulleys onto the FEAD bracket. Torque bolts to 18 ft-lbs. **TIP: The larger side of the Pulley Adapter must mount towards the FEAD bracket.**



18. Using the M10 x 90mm bolt from Bag #1, install the supplied belt tensioner to the left provision of the FEAD bracket. Torque bolt to 37 ft-lbs. **NOTE: Tensioner cover sold separately (PN: Polished #15551, Black #15553).**



19. Install the supercharger drive belt using the belt routing diagram below.



20. Using the installation hardware from the carburetor kit, install the carburetors to the supercharger manifold.

See *Carburetor Recommendation* section for recommend carburetors.

21. Connect the fuel feed line to the carburetors at this time. The use of a dual-quad fuel kit (#8088, #8091, #80913) or a Dual Outlet regulator (#174103) is highly recommended. These can be purchased at your local Edelbrock retailer.



22. Connect your throttle linkage. We highly recommend the use of a one-to-one type throttle linkage. However, a progressive type linkage, like the Edelbrock #7094, can also be used if preferred. Install your air cleaner assembly.

23. Move any sensors from the stock intake manifold to the supercharger manifold, and connect any wires. Connect vacuum lines, replacing with longer or shorter vacuum hoses as required.

24. Replace the spark plugs with the recommended colder spark plugs (2-3 heat ranges colder, see page 3) and reconnect all ignition and spark plug wires. Make sure the spark plug wires are installed in the proper order.

25. The use of a MSD #6014, is required. Please consult your MSD owner's manual for specific installation instructions. **NOTE: Please contact our Tech Hotline at 800-416-8628 for Edelbrock recommended spark curve.**

26. Reconnect the battery.

27. Turn the key to the on position but do not start the vehicle. Check for any leaks that may be present. If leaks are found, turn the key off immediately and fix any leaks before continuing. If no leaks are found, allow engine to come up to operating temperature without revving the engine. Once engine is at operating temperature, it is highly recommended to set the ignition timing as described in the “**Boost and Ignition Timing**” section.

AFTER INSTALLATION (TUNING)

CARBURETOR TUNING: If using the recommended Edelbrock carburetors (See *Carburetor Recommendation Section*), the carburetors are pre-tuned for use with this supercharger. Minimal adjustment, if any, is required. If any adjustments are needed, such as idle speed or idle mixture settings, see the carburetor's owner's manual for proper tuning procedures.

If using non-Edelbrock carburetor(s), proper tuning will be required. See your carburetor's owner's manual for proper tuning procedures. If you are not experienced, or not comfortable with carburetor tuning, please see a qualified carburetor tuner.

BOOST AND IGNITION TIMING: A base ignition timing curve is provided with this supercharger. The base curve is intended for stock LS engines running approximately 8 PSI with a 3.5” supercharger pulley. **NOTE: Actual boost and retard timing will vary depending on application. Additional tuning is highly recommend.**

CARBURETOR RECOMMENDATIONS

The following Edelbrock Performer Carburetors are specifically tuned for use with the Edelbrock E-Force RPM Superchargers. These are included in #1514, #1516, #15141, #15143, #15161 and #15163 systems and are also available separately.

Please note that these carburetors have specific front and rear carbs. Make sure to identify the carburetors prior to installing.

Carburetor	CFM	Description
P/N 14055*	600	Performer w/ Mechanical Choke, Front Carb, Satin Finish
P/N 140535*	600	Performer w/ Mechanical Choke, Front Carb, Black Finish
P/N 140545*	600	Performer w/ Mechanical Choke, Front Carb, EnduraShine Finish
P/N 14056*	600	Performer w/ Mechanical Choke, Rear Carb, Satin Finish
P/N 140536*	600	Performer w/ Mechanical Choke, Rear Carb, Black Finish
P/N 140546*	600	Performer w/ Mechanical Choke, Rear Carb, EnduraShine Finish

**These carburetors are tuned for 500hp at 6lbs of boost using a 4.125” supercharger pulley. If making more horsepower and/or running a smaller supercharger pulley, retuning of the carburetors will be required.*

SUPERCHARGER PULLEY UPGRADE

10 RIB SUPERCHARGER PULLEY: Additional supercharger pulleys are available for fine tuning airflow for your specific needs. These 10 rib supercharger pulleys are available in black and polished.

Polished P/N	Pulley Size	Black P/N	Pulley Size
15842	4.125"	15845	4.125"
15843	4.00"	15846	4.00"
15844	3.75"	15848	3.75"
15829	3.50"	15849	3.50"
15851	3.25"	15850	3.25"
15853	3.00"	15852	3.00"
15855	2.75"	15854	2.75"



Edelbrock LLC • 2700 California St. • Torrance, CA 90503
Tech-Line: 1-800-416-8628