



INSTALLATION INSTRUCTIONS

DIRECT CONNECTION 3.0L SUPERCHARGER KIT

PART NUMBER: P5160607AA

OFF ROAD OR RACING USE ONLY

www.dcpower.com



TO PREVENT **SERIOUS INJURY** AND **PROPERTY DAMAGE**, YOU SHOULD READ, UNDERSTAND AND FOLLOW THE WARNINGS AND INSTRUCTIONS IN THIS MANUAL **PRIOR** TO INSTALLATION.
FOR ASSISTANCE CONTACT **DIRECT CONNECTION TECH HOTLINE 1-800-998-1110**



Bill of Materials

| Part Description | Part Number | Service Part | Quantity |
|--------------------|-----------------|----------------------------|----------|
| 3.0L Supercharger | 121S-500 | Not available individually | 1 |
| Supercharger Belt | 53011324AA | Mopar | 1 |
| Fuel Injector | 1050.48.14.14.8 | Not available individually | 8 |
| Fuel Injector Clip | 04627561AA | Mopar | |
| Instruction Sheet | KQ865081AA | Online | 1 |

Verify all contents listed within the Bill of Materials are included within the kit before proceeding with installation.
Contact Power Broker Dealer or Tech Hotline with issues regarding kit contents.

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DESCRIPTION

The twin-screw supercharger has integral charge air coolers and an integrated 64 mm electronic bypass valve to regulate boost pressure. The supercharger has a drive ratio of 2.55:1 (with 205mm Harmonic Damper) and a maximum speed of 16,600 rpm. Exceeding rotor speeds could cause damage to components. The one-way clutch de-coupler improves refinement without detracting from the engine noise. The supercharger intakes air through a 92 mm throttle body mated to a 105 mm inlet adapter.

The supercharger has its own internal oil. The oil has no service maintenance requirement and is NOT serviceable.

No special tools required

IMPORTANT SAFETY AND EMISSIONS INFORMATION

WARNING

To prevent **SERIOUS INJURY** or **DEATH**:

- ALWAYS wear eye protection and appropriate protective clothing. You may be exposed to flammable, corrosive and hazardous liquids and materials when handling automotive components.
- ALWAYS secure the vehicle with the parking break or wheel chock before working on a vehicle.
- If you raise the vehicle, securely support the vehicle using jack stands before working under the vehicle.
- Make sure you or the installer has the appropriate skills and the tool required to safely install the supercharger.
- If you do not understand the instructions, call Direct Connection Tech Hotline for assistance at 1-800-998-1110
- DO NOT connect battery until all connections are made.

DO NOT start or run an engine in a closed garage or in confined area. Exhaust gases contain Carbon Monoxide (CO), which is odorless and colorless. Carbon Monoxide is poisonous and can cause serious injury or death when inhaled.

Follow the precautions below to prevent Carbon Monoxide poisoning:

- DO NOT inhale exhaust gases.
- NEVER run the engine in a closed area, such as a garage, and never sit in a parked vehicle with the engine running for an extended period.

PLEASE CAREFULLY READ THE FOLLOWING TERMS AND CONDITIONS

Installation and use of IHI Turbo America Co.'s (ITA) supercharger and its components (the "Product") used in the Direct Connection Supercharger kit signifies that you have read, understood, and agree to these terms and conditions which are intended to prevent damage including possible serious injury or death.

Do not attempt to modify, alter, disassemble, misuse, or abuse the Product. Do not attempt to over-speed the vehicle's engine in any manner including, without limitation, by modifying the RPM's or adding other manufacture's parts or components. Modification, disassembly, misuse, abuse, alteration of the Product, over-speeding the engine, or combining the Product with other manufacturer's parts or components can result in damage to the Product and/or the engine, and/or the vehicle, and may also result in possible serious physical injury or death.

The Product is sold "as is," "with all faults" and without any express warranty. Further, ITA expressly disclaims any and all implied warranties including any implied warranty of merchantability and of fitness for a particular purpose.

ITA does not assume and shall not, under any circumstances, be liable for any direct, indirect, special, incidental, or consequential damages including, but not limited to, physical injury, death, damages or loss of any sort, loss of profits or revenue, inconvenience, cost of purchased or replacement goods, or claims which may arise and/or result from the sale, installation or improper installation, operation or improper operation, modification, alteration, use, misuse, abuse, or lack of reasonable care regarding the Product.



EMISSIONS STATEMENT

Intended Use:

Direct Connection supercharger kits are designed only for installation in:

1. Any motor vehicle manufactured prior to model year 1976, and
2. In any vehicle that lacks features customarily associated with safe and practical highway use that is not operated on a street or highway.

It may be a violation of federal law subject to civil penalty to install a Direct Connection supercharger kit in any motor vehicle designed for transport on a street or highway that was manufactured in model year 1976 and later.

Operation and Use Limitations:

- Federal and California law prohibit tampering with emissions control equipment or components required to be equipped on Motor Vehicles. This means that persons may not remove or render inoperative any device or element of design that impairs the emissions of such Motor Vehicles. Violators of this prohibition may be subject to civil penalty.
- Direct Connection superchargers may not be used in place of a regulated or certified non-road supercharger (such as in marine applications).

Direct Connection customers are responsible for complying with applicable federal state and local environmental laws and regulations. Many Direct Connection and Mopar Performance parts and components are designed to be equipped in vehicles that are operated not on streets or highways (such as vehicles intended for competition or off-road use). Motor Vehicles designed for transport on streets or highways and equipped with such parts may cause such Motor Vehicles to be out of compliance with applicable emissions standards. It may be a violation of federal and state law to operate such Motor Vehicles equipped with such parts, except where vehicles equipped with such parts are operated not on streets or highways and where such vehicles lack features customarily associated with safe and practical highway use.

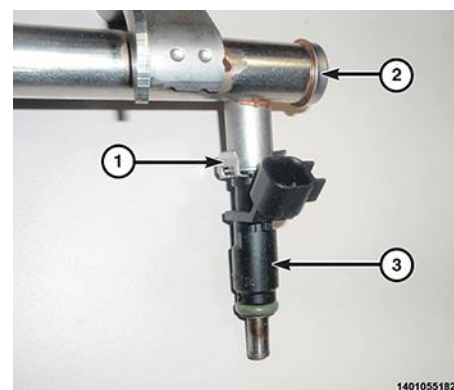
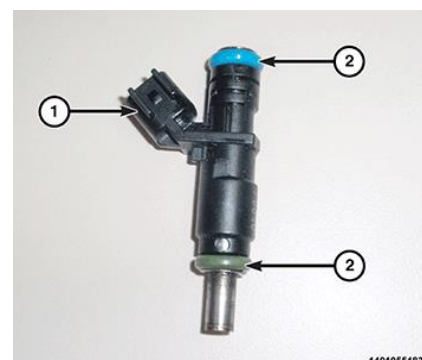
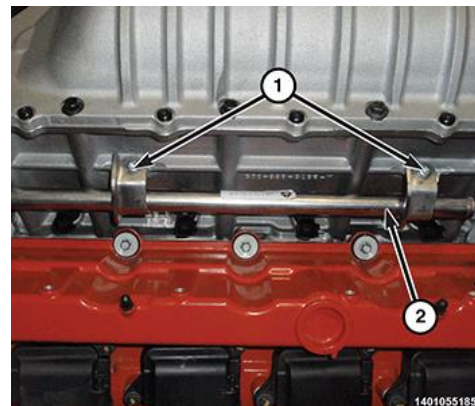
If you install such parts on a Motor Vehicle, and your Motor Vehicle fails a required state or local inspection and maintenance (I/M) emissions test, including any test required to maintain or renew your Motor Vehicle's registration, or if your Motor Vehicle is subject to an emissions recall, in either case FCA US LLC may not be required to repair your Motor Vehicle under the emissions warranty, and you may be required to remove those parts and replace them with other parts at your own expense in order to obtain repairs necessary to pass the I/M emissions test or to ensure your Motor Vehicle is compliant with applicable emissions standards after the recall repair.

Supercharger Kit Installation

The following instructions assume an installation onto a 6.2L Hellcat or Redeye Engine with full wiring harness. Instructions may vary based on application. Off-road use only.

Fuel Injectors

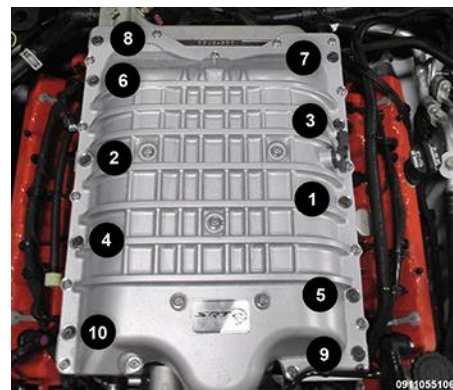
1. Depressurize fuel system, if applicable.
2. Remove the fuel rail bolts (1) on either side of supercharger.
 - a. One side shown as installed on engine, opposite side is similar.
3. Apply a small amount of clean engine oil to each fuel injector O-rings (2).
4. Install the fuel injector(s) (3) into the fuel rail (2) and install the retaining clip(s) (1).
5. Reinstall fuel rail and torque fuel rail bolts to 10 N·m (89 In.·Lbs.)



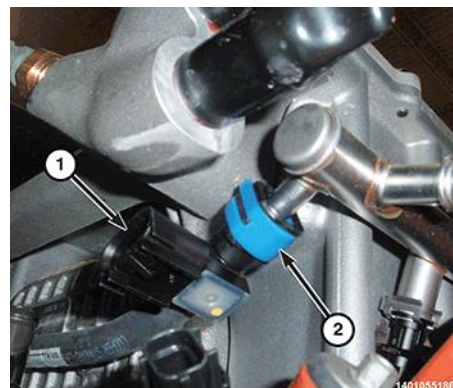
Supercharger

NOTE: The supercharger assembly will require the help of an assistant(s) to lift and install onto the engine.

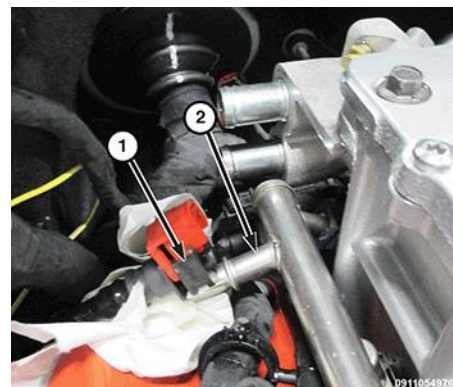
1. Position the supercharger assembly onto the cylinder heads, aligning the dowels in the supercharger with the holes on the cylinder head.
2. Using the sequence shown, install the supercharger retaining bolts and tight all retaining bolts as follows:
 - a. First tighten all bolts, using the sequence, to 5 N·m (4 ft. lbs.).
 - b. Next tighten all bolts, using the sequence, to 15 N·m (11 ft. lbs.).
 - c. Finally tighten all bolts, using the sequence, to 30 N·m (22 ft. lbs.).



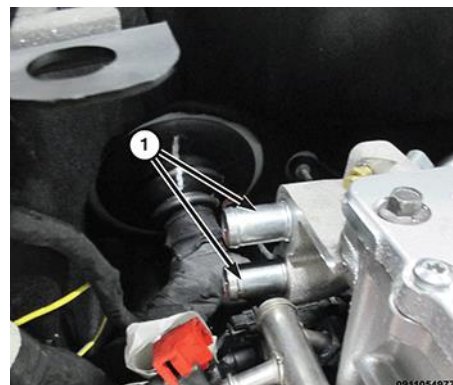
3. Connect the fuel pressure sensor (1) wire harness connector.



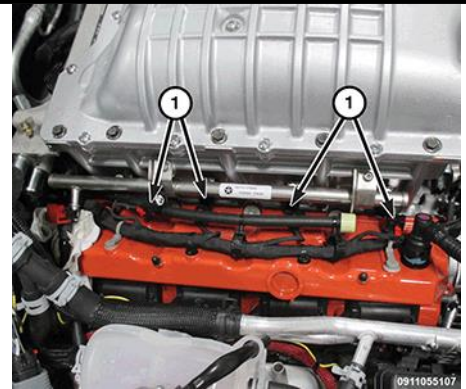
4. Connect the fuel supply line (1) to the fuel rail (2).



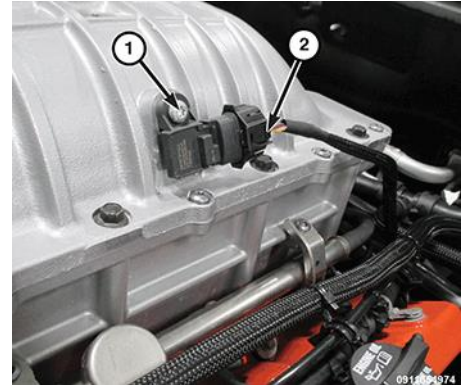
5. Install the Low Temperature Radiator (LTR) circuit hoses to the coolant crossover (1).
 - a. Upper: In/Out
 - b. Lower: In/Out
6. Connect the wire harness connector to the charger air cooler temperature sensor, located on the crossover tube.



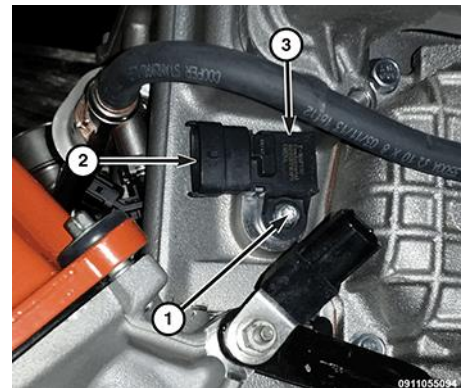
7. Connect the fuel injector wire harness connectors (1) on both sides of the supercharger.



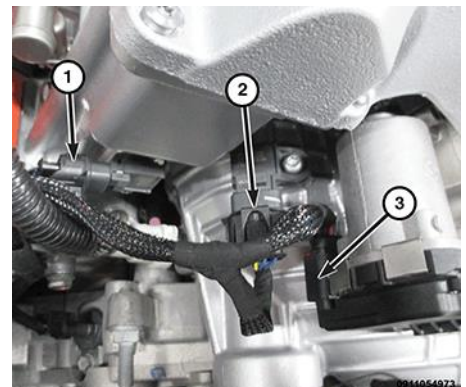
8. Connect the wire harness connector (2) to the intermediate Temperature-Manifold Absolute Pressure (TMAP) sensor (1).



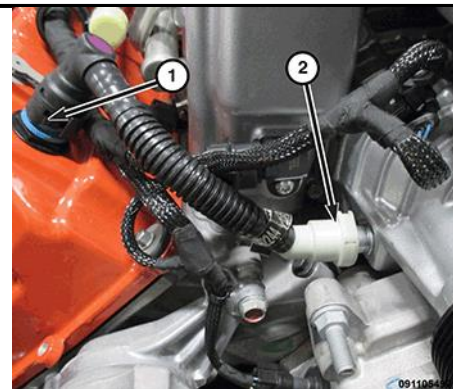
9. Connect the wire harness connector (2) to the bank two TMAP sensor (3).



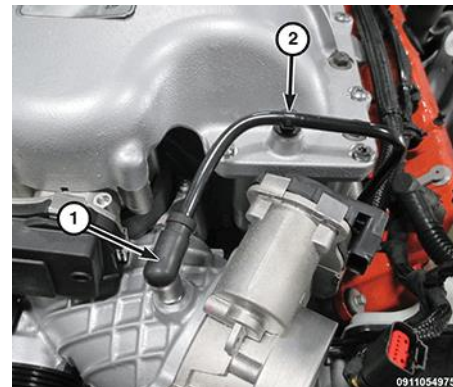
10. Connect bank one (1) and throttle outlet (2) TMAP sensor wire harness connectors.
11. Connect the wire harness connector to the throttle body at the nose of supercharger.
12. Connect the bypass valve wire harness connector (3).



13. Install the Positive Crankcase Ventilation (PCV) hose (1) to the right side of the supercharger nose (2).

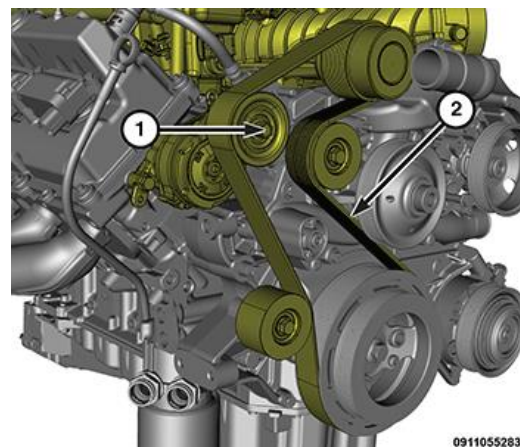


14. Install the fuel purge hose (2) to the top of the supercharger nose (1).
15. Install the brake booster hose, located under the nose of the supercharger.



Supercharger Belt

1. Position the drive belt (2) over all pulleys, except for the idler pulley.
2. Rotate the tensioner (1) clockwise and slip the belt over the idler pulley.
3. Gently release the belt tensioner.



OPTIONAL PARTS

| Part Description | Part Number | Quantity Needed | Source |
|--|-------------|-----------------|--------|
| Supercharger FEAD Kit (includes tensioner & idlers) | 53011570AA | 1 | Mopar |
| Supercharger Belt Tensioner | 53011558AA | 1 | Mopar |
| Tensioner to Front Cover Bolt | 06104221AA | 1 | Mopar |
| Tensioner to Bracket Bolt | 06102382AA | 1 | Mopar |
| Tensioner Bracket | 68217886AB | 1 | Mopar |
| Tensioner Bracket Bolt | 06509171AA | 3 | Mopar |
| Upper Idler Pulley | 53011557AA | 1 | Mopar |
| Upper Idler Dust Shield | 05281264AA | 1 | Mopar |
| Lower Idler Pulley | 53011556AA | 1 | Mopar |
| Idler Pulley Bolt | 06511356AA | 2 | Mopar |

SUPERCHARGER COOLANT

| Description | Capacity | Type | Part Number |
|----------------------------|---|--|-------------|
| Intercooler Cooling System | 4.5 Quarts / 4.2 Liters (Challenger Vehicle) | We recommend you use MOPAR Antifreeze/Coolant 10 Year/150,000 Mile Formula OAT coolant conforming to MS.90032. | 68163848AB |

OCTANE RECOMMENDATION

91 Octane or higher

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