



**2022+ Toyota GR86 • Subaru BRZ
Jackson Racing Supercharger Kit
Installation Manual**

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Parts List

Part #	Description	Qty
1011-12-J01	Rotrex Oiling System Kit – GR86/BRZ	
2003-00-001	Oil Reservoir, Rotrex	1
2003-00-001C	Reservoir Clamp, Rotrex	2
92000-06015R	Screw, AHCS M6x1.0x15mm	2
91600-06000R	Nut, Nylock, M6x1.0 - Rotrex	2
2530-01-J01	Mounting Bracket, Rotrex Oil Reservoir	1
01200-06038	Spacer, Bracket, Rotrex Reservoir	1
91100-06060	Bolt, Flanged, M6x1.0x60mm	1
91610-06000	Nut, Nylock, Flanged, M6x1.0	1
2002-00-M01	Magnetic Oil Filter, Rotrex	1
2015-00-R01	Banjo Bolt, Rotrex	2
2016-00-R01	Banjo Fitting, Rotrex	4
2017-00-R01	Copper Crush Washer, Rotrex	4
2712-07-J01	Bracket, Rotrex Oil Filter, 86/BRZ	1
95401-57001	Clamp, Rotrex Filter (57mm)	1
91100-06018	Bolt, Flanged, M6x1.0x18mm	1
91610-06000	Nut, Nylock, Flanged, M6x1.0	1
2018-RS-PP	Prime Pump, Rotrex	1
95300-08000	Spring Clamp, 8mm	8
95350-08000	Screw Clamp, 8mm	2
91100-06020	Bolt, Flanged, M6x1.0x20mm	1
93001-06000	Washer, Fender, M6	1
2001-00-150	Traction Fluid, Rotrex, SX150 - 1 Liter	1
2001-00-150F	Funnel, Rotrex Fluid	1
1012-12-J01	Intercooler & Mounting Kit – GR86/BRZ	
4100-12-J01	Intercooler, GR86/BRZ	1
2710-12-J01	Bracket, IC, Upper, GR86/BRZ	1
05000-01019	Setrab Oil Cooler, 19 Row, 1 Series	1
91193-07-J01	Stud, IC Bracket, FR-S/GR86/BRZ	1
91100-06018	Bolt, Flanged, M6x1.0x18mm	1
93001-06000	Washer, Fender, M6	3
91610-06000	Nut, Nylock, Flanged, M6x1.0	2
92510-08016	Screw, BHCS, SS, M8x1.25x16mm	2
93001-08000	Washer, Fender, M8	3
03530-22516	AN Fitting, JR 90°, M22 to AN5 Rotrex	2
05199-99000	Assembly Lube, Setrab	1
91100-06018	Bolt, Flanged, M6x1.0x18mm	4
05190-06000	Threaded Mounts, Setrab	2
05199-06000	Rubber Spacer, Oil Cooler, Setrab	2
02300-08003	Hose, Oil, 5/16" - 3" Long	1
02300-08017	Hose, Oil, 5/16" - 17" Long	1
02300-08047	Hose, Oil, 5/16" - 47" Long	1
02300-08046	Hose, Oil, 5/16" - 46" Long	1
02300-08065	Hose, Oil, 5/16" - 65" Long	1
1013-12-J01	Intercooler Tubing & Hose Kit – GR86/BRZ	
4151-12-J01	Tube, SC Intake, GR86/BRZ	1
03109-13000	Grommet, Vacuum .5"ID	1
4152-12-J01	Tube, SC Exit, GR86/BRZ	1
9020-12-J01	Tube Badge, Formed, Jackson Racing	1
4153-12-J01	Tube, IC Inlet/Outlet, GR86/BRZ	2

4155-07-J01	Tube, AFM Inlet, FR-S/GR86/BRZ	1
4181-12-J01	Tube, AFM, 3" w/ GR86 MAF	1
4156-07-J01	Tube, TB Inlet, FR-S/BRZ	1
02103-76090	Hose, Sil, 3" x 90°	1
02105-50063	Hose, Sil, Hump, Straight, 2"-2.5"	1
02102-50045	Hose, Sil, 2" x 45°	1
02101-50063	Hose, Sil, Trans, 2.0"-2.5"	2
02101-50076	Hose, Sil, Trans, 2.0"-3.0"	1
02100-76000	Hose, Sil, Straight, 3"	1
02101-63076	Hose, Sil, Trans, 2.5"-3.0"	1
4305-07-J02	Hose, Sil, Trans, 2.5"-3.0" 45°	1
02411-25000	Hose, Bypass, 1.0" x 3.5"L	1
02412-25090	Hose, Bypass, Formed 1.0" x 90°	1
04000-25000	Valve, Bypass, Std	1
95105-20032	Clamp, Sil Hose, 20-32	4
95105-40060	Clamp, Sil Hose, 40-60	6
95105-50070	Clamp, Sil Hose, 50-70	1
95105-60080	Clamp, Sil Hose, 60-80	4
95105-70090	Clamp, Sil Hose, 70-90	7
2731-07-J02	Bracket, Washer Reservoir Main, 86/BRZ	1
5350-12-J01	Washer Reservoir Bottle, GR86, JRSC	1
98080-07018	O-ring, Reservoir Cap	1
5351-12-J01	Hose Seal, Reservoir Cap, GR86/BRZ	1
02988-30012	Flexible Hose, Reservoir	1
92510-06012	Screw, BHCS, SS, M6x1.0x12mm	3
93001-06000	Fender Washer, M6	3
91600-06000	Nut, Flanged, M6x1.0 10AF	3
91100-06035	Bolt, Flanged, M6x1.0x35mm	1
93001-06000	Fender Washer, M6	1
91100-08035	Bolt, Flanged, M8x1.25x35mm	1
93001-08000	Fender Washer, M8	1
91615-08000	Nut, Flanged, FUJI, M8x1.25	1
1014-12-J01	Vacuum & Misc Kit – GR86/BRZ	
02501-13018	Hose, Valve cover Vent, SAE 30R7, 1/2" - 18" Long	1
95301-13000	Spring Clamp, CTL13	2
03201-13090	Connector, Hose, 1/2" x 90°	1
02200-04036	Hose, Vacuum, 5/32" - 36" Long	1
3202-12-J01	MAP Vacuum Adapter, GR86/BRZ	1
92701-05038	Thread Forming Screw, M5x38mm	1
91100-06025	Bolt, Flanged, M6x1.0x25mm	1
01200-06006	Spacer, M6x6mm	1
3500-12-J01	MAF Extension Harness, GR86/BRZ	1
92900-04010	Screw, M4x0.7x10mm	2
4200-07-J01	Air Filter, Round, JR, 3"	1
95900-11000	Zip Ties, 11"	10
99300-10002	Thread locker	1
	Factory Tuned (EPA)	
3102-12-E01	ProECU Programming Kit – JR Phone Flash	1
3950-12-J01	Jackson Racing EcuTek Calibration	1

	Rotrex Unit Assembly, C38 – GR86/BRZ	
2043-00-240	Rotrex C38-81 Supercharger - 240° Rotation	1
2130-12-J01	SC Pulley, 105mm, GR86/BRZ	1
92005-06012	Screw, AHCS, M6x1.0x12mm – Short Head	6
1016-12-J01	SC Bracket Assembly, C38 – GR86/BRZ	
2515-12-J01	Bracket, Supercharger, GR86/BRZ	1
91191-07-J01	Stud, M8x1.25x180mm	1
91590-07-J01	Nut, Coupling, M8x1.25x19mm	1
2630-07-J01	Spacer, Idler, 86/BRZ	2
91600-08000	Nut, Flanged, M8x1.25	1
91190-07-J01	Stud, M8 x1.25x120mm	1
2610-07-J01	Spacer, SC Bracket, 86/BRZ, Lower (8mm)	1
91600-08000	Nut, Flanged, M8x1.25	1
91192-07-J01	Stud, M10x1.25x125mm	1
2611-07-J01	Spacer, SC Bracket, 86/BRZ, Upper (10mm)	1
91600-10000	Nut, Flanged, M10x1.25	1
2151-12-J01	Pulley, Idler, 89mm	1
2150-07-J01	Pulley, Idler, 76mm	2
2205-07-J01	Belt, Supercharger, 79.1", 86/BRZ	1
2513-12-J01	Bracket, Alternator Idler	1
92000-08035	Bolt, SHCS, M8x1.25x35mm	2
91611-08000	Nut, Flanged, FUJI, M8x1.25	1
91100-10040	Bolt, Flanged, M10x1.25x40mm	1
93000-10000	Washer, Flat M10	1
2630-01-J01	Idler Spacer, Standard	1

General Information

Jackson Racing supercharger systems are designed to be installed by a professional mechanic with a complete set of tools. If you have decided to complete the installation on your own, please ensure you have the tools to complete the installation and the ability to follow all instructions.

Please review the complete instruction manual before starting your installation. Please follow the instruction manual step by step and do not skip ahead.

Please refer to the Genuine Toyota or Subaru Service Manual for all mechanical and safety procedures. Make sure all vehicle updates and Technical Service Bulletins (TSBs) have been completed before installation.

Many stock parts are reused/reinstalled during installation. Do not damage or discard any pieces during disassembly or installation. We recommend marking any hose or wire before disconnecting to avoid confusion during reassembly.

Always wear safety glasses while working on your vehicle.

You will be working around gasoline vapors. Keep all cigarettes, sparks, and flames away while working around gasoline and fuel-related parts.

Jackson Racing Supercharger Systems are designed to be installed on stock, factory engines. The Jackson Racing Factory Tuned ECU Calibration has been calibrated with the stock header and catalytic converters. Do not tamper with the exhaust system. Any change to the exhaust system can cause catastrophic engine failure. Engine failures are not covered under the Jackson Racing warranty. Jackson Racing is not responsible for any engine damage.

Jackson Racing supercharger systems require Premium grade (91 Octane or greater) gasoline, as does a stock GR86/BRZ. Fuel quality is very important with a high-performance application, so remember to only use a "Top Tier" gasoline. Do NOT use Octane Boosters in your fuel system. Octane Boosters will damage your spark plugs and your oxygen sensors when mixed incorrectly.

Never fuel-starve a forced induction engine, or catastrophic engine damage will occur. Fuel-starved detonation happens very quickly. Be aware of your fuel level.

You will be working under the car during this installation. Be prepared to raise the car up with a floor jack and support stands, or a professional hydraulic vehicle lift. Do not work under your car without proper vehicle support!

General Information

TOOLS REQUIRED:

- Set of metric wrenches from 8mm to 19mm
- Set of metric sockets from 8mm to 19mm
- Set of Phillips and flat-blade screwdrivers
- Set of metric hex key wrenches
- Set of pliers

SPECIAL TOOLS RECOMMENDED:

- 7mm nut driver
- The plastic trim panel retaining clips, or push-pin clips, on the GR86/BRZ are difficult to remove. We recommend buying a Push-pin pliers set.
- Torque wrench capable of reading in inch-pounds and foot-pounds.
- Adjustable wrench
- The plastic covers bolted to the A/C compressor and the alternator will need to be trimmed to fit back in place after the supercharger is installed. A Dremel rotary tool works best for this type of work. A Dremel tool is available at most hobby and hardware stores.
- Drain pan for the windshield washer fluid

Standard Hardware Torque Specs	
M5	5 ft lbs (7 Nm)
M6	9 ft lbs (12 Nm)
M8	16 ft lbs (22 Nm)
M10	22 ft lbs (30 Nm)

NOTICE ON HOSE CLAMPS:

This supercharger system comes with high-quality, stainless-steel hose clamps used by OEMs and top race teams around the world. Gently tighten the hose clamp until the clamp stops taking input easily. At that point, they are fully tightened. Do not over-tighten these clamps, or you will damage them. The 7mm nut driver is used for hose clamps.

Part Numbers will be listed throughout the installation instructions in parentheses.
(1234-56-789) or (12345-67890)

VEHICLE MAINTENANCE:

Proper vehicle maintenance is essential to any high-performance vehicle. Do not neglect your vehicle.

Rotrex maintenance - Change your Rotrex traction fluid and Rotrex oil filter every 2 years/50,000 miles. Use only Rotrex traction fluid in your Rotrex oiling system. Failure to use Rotrex traction fluid will void the Rotrex warranty and cause damage to the drive unit.

Engine maintenance - Change your engine oil/filter every 3 months/3,000-5,000 miles. Use a factory-recommended oil and filter.

Air filter – The provided air filter is a cleanable “dry” style filter. We recommend cleaning every oil change for the best performance. Use Dryflow Air Filter Cleaner.

General Information

Emissions Control Systems:

The U.S. Environmental Protection Agency (EPA), the California Air Resources Board (CARB), and Environmental and Climate Change Canada (ECCC) require that vehicles comply with applicable exhaust emissions standards during their useful life.

You may not remove or disable any device or element of design that may affect an engine's emission levels.

Emissions Tampering Includes:

1. Removal of, or puncturing the muffler, baffles, header pipes, or any other component which conducts exhaust gases.
2. Removal of, or puncturing of any part of the intake system.
3. Lack of proper maintenance.
4. Removing or disabling any emissions compliance component, or replacing any compliance component with a non-compliance component.

Product Registration:

Register your supercharger system to qualify for warranty and to receive the latest updates.



SCAN QR CODE or visit:
jacksonracing.com/support/product-registration/

Technical Support:

Please contact Jackson Racing for any questions and concerns during your installation.

Jackson Racing Technical Support
8am-5pm PT Monday- Friday: 909-927-8500
All Hours Email Support: tech@jacksonracing.com

Disassembly of Stock Components

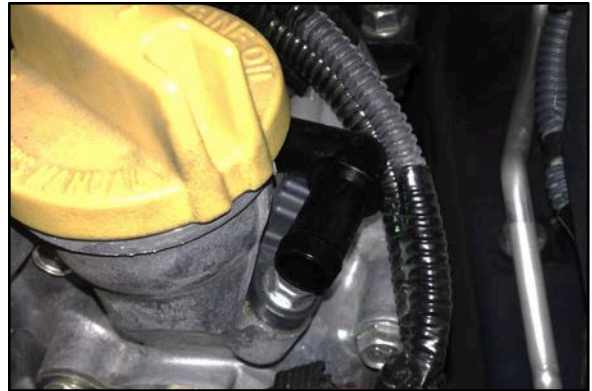
1. Disconnect the negative battery cable from the battery.
2. Raise the car up so that the front tires, under side plastic panels and front bumper can be removed.
3. Remove Front Bumper:
 - A. You will either need a small screwdriver and patience to pry the auto-locking plastic clips on the plastic trim parts or the push-pin plier set listed in the "Recommended Tools" section to remove the plastic clips.
 - B. Remove the plastic clips and bolts that hold the under tray to the front bumper and the radiator support.
 - C. Remove the front wheels to gain access to the inner fender plastic liner. Remove all plastic Phillips screws and bolts from each side of the leading edge of the front bumper that hold the inner fender liner to the bumper.
 - D. Remove the two plastic clips and the five bolts that hold the upper bumper to the chassis from the upper radiator area.
 - E. Pull on the outer corners of the front bumper to get it to "pop" off its mounting points. Unplug the headlights/fog lamps and set the bumper in a safe place.
4. Remove the passenger and driver side headlight assemblies at this time. This will aid in the installation of the intercooler tubing later on. Remove the intake air snorkel in front of the radiator. Remove the air deflection shield from the area of the upper front bumper.
5. Remove vertical bumper air guides on both sides of the radiator inlet area.
6. Remove the plastic retaining clips that hold the vertical air guides to the lower radiator panel on either car at this point to make the lower radiator panel removable.
7. Unbolt the horn from horn bracket that is bolted to the front bumper support. Remove the horn bracket from the bumper support. You will be installing a stud for mounting the intercooler in this location later in the instructions.

8. Unclip the wiring harness bracket from behind the air temperature sensor that is mounted to the lower A/C condenser bracket. Route the horn and wiring harness over to the 10mm hex bolt that hold the bracket to the radiator.



9. Unplug the Mass Air Flow (MAF) sensor and remove the two (2) Phillips head screws that secure the MAF sensor to the air box. Set the sensor in a SAFE place for installation in the new intercooler piping later in the installation. The original screws will not be reused.

10. Remove the plastic valve cover vent pipe assembly from the intake rubber hose. Reroute the valve cover hose from the passenger side of the A/C compressor to the driver side. Route the hose below the A/C compressor and behind the oil filter and the oil filler neck. The hose should be routed under the fuel injection high-pressure fuel line in the area directly behind the oil filler cap and the 90° plastic fitting should end up right next to the oil filler neck on the outside. You will be connecting a new valve cover vent hose to this plastic fitting later in the instructions.



11. Remove the stock air box assembly, rubber intake hose and related air box mounting components,

12. Remove the plastic covers from the alternator and the A/C compressor. You will be trimming the plastic covers with a Dremel type rotary tool to fit back in place after the supercharger is installed. It is not required that you cut your original covers and reinstall them. You can leave the covers off but we think the engine compartment is safer and looks better with them installed.

13. Route the MAF sensor wiring harness under the throttle body so that it is headed towards the passenger side of the engine. Plug in the Jackson Racing MAF extension harness (3500-12-J01) and route the wiring behind the alternator for connection to the new MAF location later in the instructions.



14. Push the automatic belt tensioner down to remove tension from the serpentine belt and remove the stock serpentine belt. It will not be reused.

15. Remove the steel serpentine drive belt idler pulley that is bolted to the engine in the area between the alternator and the air conditioning compressor. You will not be reusing the idler or the mounting hardware.

16. Remove the plastic idler pulley directly below the alternator. Replace the original plastic ribbed pulley with a 76mm flat pulley (2150-07-J01). Reinstall the original mounting bolt and washer and torque to 16ft lbs.

17. Remove the 12mm headed engine timing cover bolt that is located just behind and to the passenger side of where the steel idler pulley was mounted. It will be just below the Throttle Body. You will not be reusing this bolt.

18. Remove the long alternator-mounting bolt that is closest to the throttle body. You will not be reusing this bolt.

19. Remove the A/C mounting bolt that is closest to the throttle body. You will not be reusing this bolt.



Supercharger Installation

20. Thread the M8x1.25x180mm stud (91191-07-J02) into the alternator with the short threads of the stud threading into the back mounting point of the alternator. Thread the stud in so that just two threads show through the rear mounting point on the alternator. Apply a small amount of Loctite thread locking adhesive to the first two threads of the stud prior to installation.



21. Remove the passenger side 8mm bolt from the alternator. Raise the alternator up and install the alternator idler bracket. Secure with (2) M8x1.25x35mm SHCS and (1) M8x1.25 flanged FUJI nut. Install a 76mm idler pulley onto the bracket using a standard idler spacer and tighten in place using M10x1.25x40mm flanged bolt and M10 washer.



22. Thread the M8x1.25x19mm coupling nut (91590-07-J02) onto the alternator stud and tighten this nut down against the alternator to set the alternator mounting position.

23. Thread the M8x1.25x120mm stud (91190-07-J02) into the vacated hole in the engine timing cover. Apply a small amount of Loctite thread locking adhesive to the first two threads of the stud prior to installation.

24. Thread the M10x1.25x125mm stud (91192-07-J01) into the vacated hole in the A/C compressor until two threads shows through the rear of the A/C compressor. Apply a small amount of thread locking adhesive to the first two threads of the stud prior to installation.



25. Install an 8mm ID stepped idler spacer (2630-07-J01) onto the alternator stud so that the widest part of the shoulder sets back against the coupling nut.

26. Install an 89mm flat idler pulley (2150-12-J01) onto the stepped spacer.

27. Install another 8mm ID stepped idler spacer (2630-07-J01) into the 89mm flat idler pulley.

28. Install an 8mm ID x 76.5mm SC standoff spacer (2610-07-J01) onto the stud that is threaded into the engine timing cover.

29. Install a 10mm ID x 70.25mm SC standoff spacer (2611-07-J01) onto the stud that is threaded into the A/C compressor.

30. Install the double-sided serpentine supercharger drive belt (2205-07-J01) over all of the pulleys just as it was in the stock configuration. The exception will be where the belt comes over the alternator you will continue to route the belt over the new idler pulley that is mounted on the alternator mounting stud and not under the idler.

NOTE: Be sure to get the belt located correctly on the crankshaft pulley prior to starting the car. The clearance between the engine casting on the driver side of the crank pulley is moderately close. If the serpentine belt isn't properly engaged into the crankshaft pulley belt ribs when the car is started it will damage the new serpentine belt.



31. Locate the Rotrex supercharger and install the two banjo bolts, four copper crush washers, and two banjo fittings supplied on the supercharger unit. The banjo fittings will be in your oil kit while your supercharger banjo bolts/washers will be in your supercharger box. Install a crush washer on the top and bottom of each banjo fitting. With the supercharger pulley side facing you and the compressor inlet facing away from you, install the two banjo fittings so that they face away from you at a 45-degree downward angle from the supercharger-mounting surface. Torque to 15 ft lbs. (20Nm)



32. Set the Rotrex unit on a bench, with the compressor inlet down. Install the Jackson Racing SC mounting bracket (2510-12-J01) onto the Rotrex supercharger with the counter bored mounting holes of the supercharger bracket facing you and the flat side of the supercharger bracket located near the bottom of the supercharger opposite the banjo fittings. Torque to 6.6 ft lbs (7Nm). Do not over tighten these bolts as it could damage the compressor housing and compressor wheel.



33. Install the Jackson Racing SC pulley (2130-12-J01) to the supercharger pulley adapter using six (6) Allen Head Cap Screws (AHCS) M6x1.0x12mm (92005-06012). Apply a small amount of thread locking adhesive to the first two threads prior to installation. Torque to 9ft lbs.

34. Install supercharger/bracket assembly:

A. Apply a small amount of thread locking adhesive to the first two threads of the three mounting studs.

B. Hold the automatic belt tensioner down with a 14mm wrench while lowering the supercharger/bracket assembly down onto the mounting studs.

C. Align the serpentine belt on the bottom of the supercharger drive pulley as you lower the supercharger/bracket assembly onto the mounting studs.

D. Once the SC bracket is installed onto the mounting studs you can release the automatic tensioner. Install two M8x1.25 flanged nuts onto the 8mm studs and one M10x1.25 flanged nut onto the 10mm stud. Torque the M8 nuts to 16ft lbs and the M10 nut to 20ft lbs.



35. Trim the plastic belt covers from the alternator and the A/C compressor so that they clear the serpentine belt and reinstall the two covers.

Your supercharger mounting is now complete. Check your serpentine belt at each pulley and make sure the belt is completely seated in the proper grooves. Check the torque on the supercharger pulley mounting bolts one more time now that you have belt tension on the pulley to assist holding the pulley.

Oil Cooler and Intercooler Installation

36. Locate your intercooler (4100-12-J01) and upper intercooler-mounting bracket (2710-12-J01). This long bracket will be mounted with the oil cooler mounting tabs facing back towards the radiator.

37. Bolt the intercooler bracket to the top of the intercooler, using two (2) M8x1.25x16mm Button Head Cap Screws (BHCS) (92510-08016) and two (2) M8 fender washers (93600-08000). Torque the BHCS to 16ft lbs. Apply a small amount of Loctite thread locking adhesive to the threads prior to installation.

38. Locate your Rotrex Oil Cooler (05000-01019). Install the JR 90° M22 to 5/16" hose adapters (03530-22516) to the oil cooler so that the two fittings face towards each other. Lube the threads of the oil cooler with a small amount of Setrab lube before installing. Hold the lower hex on the oil cooler with a wrench while gently tightening fittings with another wrench. Failure to hold the oil cooler hex while tightening the oil cooler fitting may damage the oil cooler and it will not be covered under warranty.



39. Install the Rotrex oil cooler to the intercooler bracket using four (4) M6x1.0x20mm flanged bolts (91100-06020), two (2) oval cushion spacers (05009-06070), and two (2) M6x1.0mm threaded cushion mounts (05009-06000).

A. Peel the protective layer off of the cushion spacers and stick the cushion spacers to the top of the oil cooler, so that the holes in the cooler match up with the holes in the spacers.

B. Lift the oil cooler into position on the intercooler bracket.

C. Thread the four (4) M6x1.0x20mm flanged bolts through the top of the intercooler bracket, the mounting cushions, the oil cooler, and then into the threaded mounts. Apply a small amount of Loctite thread locking adhesive to the threads prior to installation.

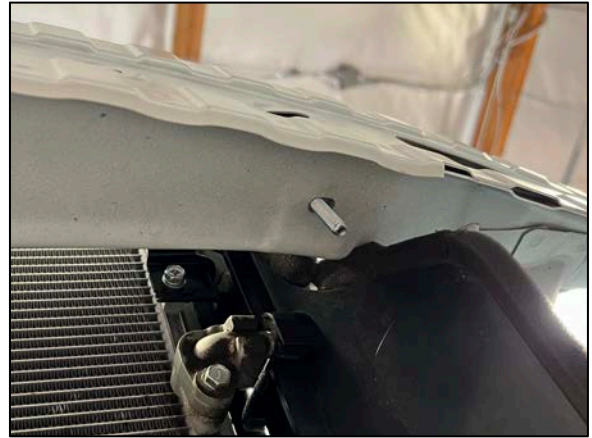
D. Torque gently until the cushions start to distort. This will keep the oil cooler isolated from harmful vibrations.



40. On the passenger side of the front bumper you will find a M6x1.0mm threaded boss welded to the underside of the stock front bumper support. Thread the high-strength M6x1.0x27.5mm steel stud into this threaded boss. Install the end with the shorter threads into the bumper. Apply a small amount of Loctite thread locking adhesive to the first two threads of this stud prior to installation. Thread in the stud until the non-threaded area seats against the bumper support.



41. On the driver side of the front bumper support you will find an open mounting hole with no threads that is approximately 23" from the stud mounting location. Reach in through the opening in the front bumper support and install an M6x1.0x25mm flanged bolt (91100-06025) with a M6 fender washer (93600-06000) down through this mounting hole.



42. Lift the intercooler/Rotrex cooler/intercooler bracket assembly up to the mounting stud on the passenger side. Install an M6 fender washer (93600-06000) and M6x1.0mm flanged nylock nut (91610-06000) onto the mounting stud.

43. Lift the driver side of the intercooler/Rotrex cooler/intercooler bracket assembly up until it passes through the M6x1.0x25mm flanged bolt previously installed through the bumper. Have someone hold the bolt inside the bumper while you install a M6 fender washer over the bolt and secure this complete assembly with a M6x1.0 flanged nylock nut. Tighten both sides at this time. Your top intercooler mounting is complete.

Intercooler Tubing Installation

NOTE: Check all tubes and hoses for any foreign material before installation. Lube all hoses lightly with penetrating oil spray prior to installation to make it easier to align the tubes and hoses.

44. Remove the two bolts that hold the radiator inlet neck to the bracket secured to the upper radiator support. Remove the bracket from the radiator support and install two (2) M6x1.0x20mm flanged bolts (91100-06020) through the bracket. Reinstall the bracket onto the chassis using the original mounting bolts. Reinstall the bracket OVER the TOP of the radiator neck so that the neck gets relocated lower in the chassis. Install two (2) M6x1.0 flanged nylock nuts to secure the radiator neck to the new bolts. Torque to 9ft lbs.



45. Remove the plastic clip that secures the windshield washer filler neck to the chassis. This will be reused later in the installation. Remove the windshield washer neck at this time.

46. Unclip the wiring harness from the windshield washer bottle. Unplug the windshield washer pump. Pull the windshield washer hose from the pump and drain the washer fluid into a clean container. Unbolt the stock windshield washer bottle assembly.

47. Remove the windshield washer pump and rubber gasket from the bottom of the stock washer bottle. Install the pump and gasket in the bottom of the new washer bottle. Lube the inside of the rubber gasket so the washer pump slides in without binding.



48. Bolt the new washer bottle to the washer bottle bracket using three M6x1.0x12mm BHCS (92510-06012). Put the screws on the backside of the bracket and place a washer and flanged nut on the bottle side of the bracket. Tighten the flanged nuts gently to prevent damage to the bottle.



49. Lift the washer bottle/bracket assembly up to the area where the original bottle was located. Thread a M6x1.0x35mm flanged bolt and 6mm fender washer through the bracket and into the existing threads in the fender structure.

50. Install an M8x1.25x35mm flanged bolt and 8mm fender washer through the bracket and through an existing hole in the chassis. From the back of the chassis install an M8x1.25 FUJI nut on the flanged bolt. Tighten both the 6mm and 8mm mounting bolts at this time.

51. Rotate the washer pump so that the pump electrical plug faces towards the left front fender. Connect the electrical plug and washer hose at this time.



52. Insert the new flexible filler tube into the cap on the new bottle. Leave the flexible filler tube loose at this time. The bottle may leak fluid if overfilled.

The new washer bottle capacity is 0.5 gallon.



53. Install the 2.5x2.0"ID silicone hump hose (4303-07-J02) on the compressor outlet and loosely secure with a 50-70 silicone hose clamp (95105-50070) provided.

54. Install a 40-60 hose clamp on the open side of the 2.5x2.0"ID hump hose. Install the SC Exit tube with the 1" bypass fitting on it (4152-12-J02) into the hump hose. Loosely secure the tube at this time with the 40-60 hose clamp.



55. Install a 2.0"ID x 45° silicone hose (02102-50045) onto the open end of the SC Exit tube and loosely secure it with a 40-60 hose clamp.

56. Install a 2.0"-2.5"ID transition silicone hose (02101-50063) onto each end of the intercooler and secure with the 60-80 hose clamps (95105-60080) provided.

57. Install one of the 2.0"ID x 90° x 45° IC inlet/outlet tubes (4153-12-J01) into the 2.0" x 45° silicone hose and the intercooler inlet hose using two 40-60 clamps provided. This pipe will be routed so that it sits just behind the end of the steel bumper support and back close to the washer bottle assembly.



58. Rotate all tubes until they have a natural alignment and tighten all hose clamps. When complete, this tube should sit back and close to the new washer bottle. Temporarily reinstall the headlight and check clearances. Adjust to make sure you will have clearance. Headlight reinstall/trim will be at Step 65.

59. Install the other 2.0"ID x 90° x 45° IC inlet/outlet tube (4153-12-J01) into the intercooler exit hose. Insert the 90° end into the intercooler exit hose. Loosely secure using a 40-60 hose clamp provided. The 45° end of the tube should exit behind the headlight area.



60. Install a 2.0"-3.0"ID transition silicone hose (02101-50076) on the end of the intercooler exit tube. Loosely secure with a 40-60 hose clamp provided.

61. Install the 3.0" x 45° MAF inlet tube (4155-07-J01) in the open end of the 2.0"-3.0"ID transition hose and loosely secure with a 70-90 clamp provided (95105-70090).

62. Install a 3.0"ID straight silicone hose onto the 3.0" x 45° MAF inlet tube and secure with a 70-90 hose clamp provided.

63. MAF Sensor and Tube installation:

A. Inspect the factory MAF O-ring. Be sure there are no kinks or breaks in the O-ring.

B. Lube the MAF O-ring and install the MAF sensor in the MAF tube (4181-12-J01) using two (2) M4x0.7x10mm screws (92900-04010) provided.

C. Install the air straightener side of the MAF tube into the 3.0"ID straight silicone hose and loosely secure with a 70-90 hose clamp provided. Align the tube so that the MAF sensor is level with the ground, with the plug facing towards the front of the car.

D. Do NOT remove the air straightener from the MAF tube.

64. Throttle Body Inlet Tube Installation:

A. Locate the throttle body inlet tube, one (1) 2.5"-3.0" transition 45° silicone hose, and one (1) 2.5"-3.0" transition straight silicone hose.

B. Install the 2.5"-3.0" transition 45° silicone hose onto the throttle body. Loosely secure using a 70-90 clamp. The 70-90 clamp will fit directly against the throttle body cast "bead". It is important to get the 70-90 clamp alignment correct before final tightening.

C. Install the 2.5"-3.0" transition straight silicone hose on the MAF tube and loosely secure with a 70-90 hose clamp on the MAF side.

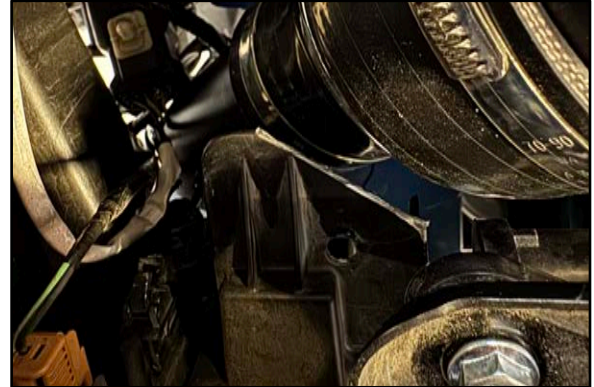
D. Install the throttle body inlet tube into both of these hoses and loosely secure using two 60-80 hose clamps. Rotate all the tubes so they have a natural alignment. The throttle body inlet tube should not make contact with the supercharger pulley or supercharger bracket. The tube should



fit closely to the alternator belt cover and have at least 6mm of clearance between the tube the supercharger pulley. Tighten all hose clamps from the intercooler exit to the throttle body at this time. Be sure to watch the 70-90 clamp at the throttle body to make sure it maintains alignment against the throttle body cast bead.

65. Reinstall the headlights at this time. You will need to trim the corner off of the wiring tab so it does not rub on the intercooler hose. Remove the headlight wiring from the retainer clips on the headlight. This will give you more wire length to plug the headlights back in.

When reinstalling the headlights, make sure the wiring plug is above the intercooler tube and not trapped below.



66. You will be mounting the windshield washer filler neck bracket to the top of the windshield washer flexible hose, and using the original plastic clip to mount it all to the radiator support.



Rotrex Oiling System Installation

67. Locate the Rotrex oil reservoir. It will be preassembled with a 6mm ID x 38mm spacer (01200-06038), a M6x1.0x60mm flanged bolt (91100-06060), a M6x1.0 flanged nylock nut (91610-06000), and a Rotrex reservoir mount bracket (2530-01-J01). The Rotrex reservoir will be mounted to the existing M6x1.0 threaded boss located just behind the driver side top shock mount using an M6x1.0x20mm flanged bolt (91100-06020) and an M6 fender washer (93600-06000).

The distance between the top of the Rotrex reservoir clamp to the top of the reservoir should be approximately 28mm (1.125").

68. There is a sensor on the power brake canister right behind the brake master cylinder. It comes from the factory pointing down towards the main wiring harness. Rotate it 90° so it faces the driver side mirror. This will leave room for the Rotrex reservoir.

69. Remove the OEM bolt from the location on the top of the driver side shock mounting area and bolt the reservoir assembly with the mounting bracket facing directly back towards the windshield so you can decide what direction the banjo fittings need to be located and the height of the reservoir to the top Rotrex wrap around clamp. You will have to lift the plastic windshield washer hose bracket slightly to get the mounting bracket in place.

70. Bolt the banjo bolts, banjo fittings, and banjo washers to the top and bottom of the reservoir. Install a crush washer on the top and bottom of each banjo fitting. Both fittings should face the area between the brake master cylinder and the driver side shock tower. Once you have the angle set in place tighten both fittings completely.

71. Install the 5/16" x 17" Rotrex oil hose (02300-08017) to the bottom fitting of the reservoir and secure with the 5/16" spring clamp provided prior to bolting the reservoir to the chassis. Otherwise it is very difficult to install the hose and clamp once the reservoir is bolted in place.

**ROTREX OILING SYSTEM
STEPS ARE VERY CRITICAL.**

**DO NOT CROSS THE OIL
LINES!**

**UNIT FAILURE WILL OCCUR
FROM OIL STARVATION.**

72. Apply a small amount of thread locking adhesive to the first two threads of the M6x1.0x20mm flanged mounting bolt before final installation through the mounting bracket. Torque the M6x1.0x20mm flanged bolt to 9ft lbs.



73. Insert the Rotrex priming pump in the open end of the 17" hose. Make sure the arrow is going AWAY from the reservoir. Secure with the spring clamp provided.



74. Install the 5/16" x 3" Rotrex oil hose (02300-08003) onto the other end of the priming pump. The arrow should be POINTING TOWARDS the 3" hose. Secure with the spring clamp provided.



75. Remove the shouldered nuts on the bottom and side of the ABS assembly to facilitate the installation of the JR Rotrex Filter bracket. There are three nuts that hold the ABS assembly to the OEM mounting bracket. You will be removing the top one that faces back towards the firewall and the one on the bottom closest to the headlight. Do NOT mix these nuts up. They are different sizes. Install the JR Rotrex Filter bracket to the ABS assembly using the original shouldered nuts. You will not be reusing the washers that were originally used.



76. Install the Rotrex oil filter onto the 3" hose, and secure with spring clamp. The "FLOW" ARROWS on the Rotrex oil filter should be GOING AWAY from the 3" hose and priming pump.

Wrap the Rotrex Oil Filter with the large cushion clamp provided. Bolt it down to the JR Rotrex Filter bracket using a M6x1.0x18mm flanged bolt and M6x1.0 nylock nut.



77. Route the 5/16" x 47" Rotrex oil hose (02300-08047) from the "IN" fitting on the supercharger and route this hose behind the hood latch vertical support so that it meets up with the Rotrex oil filter. Secure the hose to the supercharger with the spring clamp provided. Now install the hose onto the Rotrex oil filter, with the direction of the "FLOW" arrows heading TOWARDS the supercharger. Secure with spring clamp. Using plastic ties secure the oil hose to the hood latch cable so that it cannot be chaffed against engine parts, fan blades or chassis parts.

78. Route the 5/16" x 65" Rotrex oil hose (02300-08065) from the "OUT" fitting on the Rotrex supercharger and route this hose behind the hood latch vertical support across the top of the radiator area towards the passenger headlight area. Route the hose down near the intercooler tubing on the passenger side and connect it to the vacant fitting on the Rotrex oil cooler. Secure this hose at the oil cooler with an 8mm stainless steel screw clamp (95500-08000) provided. Tighten the screw clamp all the way until it is tight. Using plastic ties secure all oil hoses so that they cannot be chaffed against engine parts, fan blades or chassis parts.

79. Route the 5/16" x 46" Rotrex oil hose (02300-08046) from the top of the Rotrex oil reservoir and route it near the lower reservoir hose that was previously installed. Secure this hose to the top of the Rotrex reservoir using the spring clamp provided. Route this hose near the compressor outlet piping and out to the front of the car so that it can be installed onto the oil cooler. Secure this hose to the oil cooler with an 8mm stainless steel screw clamp (95500-08000) provided. Tighten the screw clamp all the way until it is tight.

80. Carefully fill the Rotrex reservoir with Rotrex Traction Oil so that the level is close to the top of the reservoir at this time. Use only the included funnel to fill the reservoir. Once the system is running it will draw down the excess amount of oil in the reservoir to fill the supercharger and the oil cooler. There will be specific instructions about initial startup procedures later in the installation.

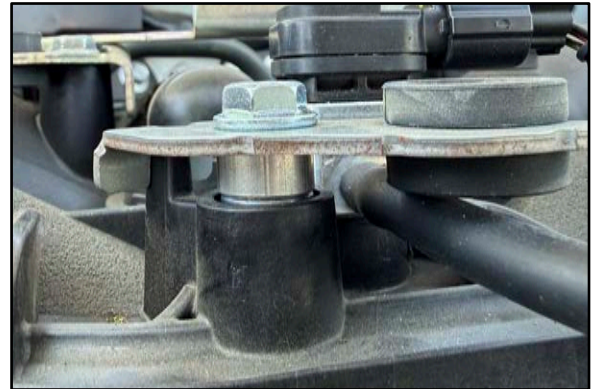
Bypass Valve and MAP Vacuum Installation

81. Remove the cosmetic intake manifold cover. Remove the MAP sensor.

82. Lightly grease the O-ring and install the MAP Vacuum Adapter in the intake manifold. Lightly grease and install the OEM MAP sensor into the adapter. Secure with M5x38mm thread forming screw. Do not overtighten!



83. Remove the cosmetic cover mounting bracket next to the MAP sensor. Install the included 6mm spacer and secure with M6x1.0x25mm flanged bolt.



84. Install the 36" vacuum hose from the MAP vacuum adapter over towards the driver side of the engine for connection to the bypass valve later. Route best way, and then trim the hose to size.

85. Install the 1.0"ID x 3.5"L bypass hose (02411-25000) onto the spigot that is part of the compressor exit tubing. Secure with a 25-40 hose clamp (95105-25040) provided.

86. Install the bypass valve (04000-25000) into the 1.0"ID x 3.5"L bypass hose. Install the valve so the 1.0"OD vacant fitting of the bypass valve faces across towards the passenger side fender and the vacuum fitting on the top of the bypass valve faces the driver side fender. Secure with a 25-40 hose clamp provided.

87. Install the 1.0"ID x 90° x 4.5" x 4.5" formed hose (02411-25404) onto the 1.0"OD vacant fitting on the bypass valve. Loosely secure this hose with a 25-40 hose clamp. Route the 36" vacuum hose to the bypass valve and install on the open vacuum barb.



88. Install the 3.0"ID x 90° silicone hose (02103-76190) onto the compressor inlet using a 70-90 hose clamp provided.

89. Insert the 3.0" SC intake tube with the 1" spigot and valve cover vent grommet (4151-12-J01) into the previously installed 3.0"ID x 90° silicone hose. Install it so that the 1" bypass spigot is facing down towards the 1.0"ID x 90° formed bypass hose and the ½" rubber valve cover vent fitting grommet is facing back towards the engine. Install the bypass hose onto this tube and rotate it so that the tube/hose has a natural alignment and tighten the bypass hose clamps at this time. Loosely secure this tube with a 70-90 hose clamp provided.

90. Install the new 0.5"ID x 18" valve cover vent hose (02501-13018) onto the end of the OEM vent hose fitting that is now located next to the oil filler neck. Secure the hose to the OEM fitting using a CTL 13 clamp. Install the 0.5"ID x 90° fitting (03201-13090) into the open end of the 0.5"ID x 18" vent hose. Secure with a CTL 13 clamp. Insert this fitting into the rubber grommet of the SC intake tube.



91. Install the air filter (4200-12-J01) onto the 3" SC intake tube. Secure with the hose clamp provided. With the air filter installed, rotate and align the SC intake hose, tube and air filter until the assembly follows the angle of the SC exit tubing.

92. Reinstall the front bumper, underside plastic panels, wheels and cosmetic cover on the intake manifold.

ECU Calibration Installation (Factory Tuned Systems)

This installation will help you flash your Jackson Racing vehicle calibration onto the ECU. Please review the complete installation guide before you begin.

EcuTek PhoneFlash Calibration Installation Requirements:

- iOS or Android Device (Device compatibility in App Store)
- EcuTek ECU Connect BT-enabled Vehicle Interface Device
- Internet Connection

Follow the “ECU Connect with PhoneFlash - Getting Started Guide”



SCAN QR CODE FOR PHONE FLASH GUIDE

It is recommended that all non-essential devices be switched off before attempting to program an ECU. This helps to minimize electrical interference to vehicle systems that may interfere with communication between ECUConnect and the ECU. This includes:

- Headlights
- Interior lights
- Air Conditioning, Fan Cooling and Heating
- Any devices powered from the 12v power socket, including inverters or power supplies.

Rotrex Supercharger Prime Procedure

IMPORTANT!

Priming of your new Rotrex supercharger is the single most important part of a successful Rotrex supercharger installation. Incorrect priming will lead to dry running of the high-speed planetary traction drive and will cause irreversible damage.

Do NOT allow the reservoir to run dry. If it runs dry, the supercharger will be damaged and will not be covered by the warranty.

1.



With the blue canister cap removed, fill up the oil canister with SX150 traction fluid, to just below the threaded hole. Use the one-time-use funnel to fill up the canister without spilling.

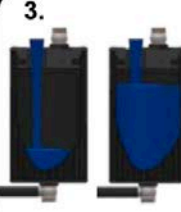
Canister volume ~400ml

2.



Carefully squeeze the primer bulb by hand to prime the feed line. The bulb slowly expands after each squeeze. When the bulb becomes firm, give it one more squeeze. Typically, 7-10 squeezes in total are required.

3.



Refill the oil canister with SX150 traction fluid. Take care not to overfill the lubrication system.

For an 86/BRZ installation, approximately 750mL will be required.

4.



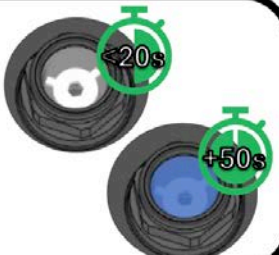
Turn on the engine and let it idle, while paying attention to the oil level in the canister by looking into the fill hole. **Be prepared to add SX150 traction fluid to avoid air pockets in the oil feed line.** The oil level should be below half full.

5.



After 20-50 seconds the oil will return from the supercharger and the flow indicator on the oil canister will turn blue, confirming oil flow. If the above time is exceeded, check the installation and restart the priming procedure from step 2.

Depending on engine idle speed and pulley ratio, the indicator may pulsate or be partially blue. This is ok. Above 3.000rpm it must be solid blue.

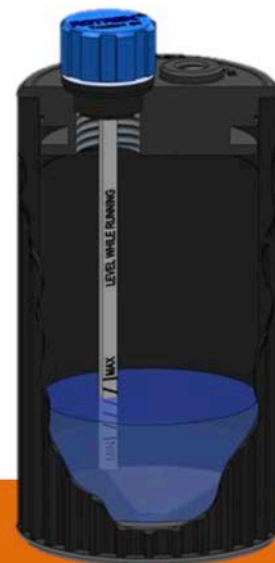


Oil level checking procedure

Check the oil level using the procedure described below.

1. Start the engine and let it idle
2. Remove the dipstick and wipe it clean
3. Check the oil level using the dipstick with its thread fully engaged

The correct oil level is between the “MIN” and “MAX” marking of the dipstick



IMPORTANT!

The procedure above is the correct and only way to check the oil level. Checking the oil level with the engine turned off does not give a correct reading.

Finalizing Installation

94. Check for any fuel leaks and check all hoses, hose clamps, fittings, and fluid levels at this time.

Your installation is complete!

Test drive your new Jackson Racing Supercharger system and enjoy!

Once you finish your first test drive, double check all hoses, fittings, and fluid levels once more.