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## INSTALLATION INSTRUCTIONS

**TURBOCHARGER SYSTEM:  
2010/2011 Chevrolet Camaro SS Automatic  
P/N 15193**

**This turbocharger kit is emissions legal per CARB E.O.: D-99-7**





**Read This First**

Study these instructions completely before proceeding. Engine and/or turbocharger damage may occur if any component within these instructions is improperly installed. Turbonetics, Inc or any of its distributors cannot be held responsible for damages as a result of negligent or improper installation. This complete turbocharger system can be installed using common tools and automotive procedures, but installer must have a thorough knowledge of automotive engine operation and feel comfortable working on the vehicle. If in doubt, contact Turbonetics' technical support staff at 805-581-0333, between the hours of 8:00AM and 5:00PM PST, Monday through Friday.

Remove the turbocharger system from its carton and inspect for any obvious physical damage. All kit components are thoroughly inspected and carefully packaged prior to shipment from the factory. If any shipping damage is evident, contact your supplier and request that they process a claim with the shipper involved. Be sure to review the parts list on page 3 & 4 to verify that you have all necessary system components to proceed. If any components in the parts list are missing, contact Turbonetics' customer service staff.

**INFORMATION REGARDING DIFFERENCES IN MODEL YEARS:** This kit is currently released for 2010/2011 Model year only.

The information contained in this publication was accurate and in effect at the time the publication was approved for printing and is subject to change without notice or liability. Turbonetics reserves the right to revise the information presented herein or to discontinue the production of parts described at any time.

**SAFETY REQUIREMENTS:** It is recommended to follow these precautions.

- Always wear safety glasses & gloves.
- Turn the ignition switch to the OFF position & disconnect the battery.
- Always use properly rated jack stands when working under the vehicle.
- Prevent unexpected vehicle movement by using wheel chocks and/or parking brake.
- Operate the vehicle only in well ventilated areas.
- Do not smoke or use flammable items near or around the vehicle's fuel system.
- Keep hands, clothing and other objects away from moving parts when engine is running.

**SUPPLIES:** It is recommended to have the following items before beginning installation.

- Factory service manual.
- A large table or bench and plenty of adjacent available workspace.
- Standard selection of automotive tools, primarily metric sizes.
- The ability to securely lift the vehicle at least a few feet off the ground.
- NPT thread sealant, Loctite threadlocker, High Temp. Sensor Safe RTV Sealant.
- Replacement engine oil and oil filter.
- Hammer
- Drill
- Bench Clamp
- Small Container
- Pinch Hose Clamp Pliers

**TORQUE RECOMMENDATION:** When removing and re-installing factory fasteners, refer to the service manual for torque values. When installing fasteners included in this kit, refer to the following chart:

Fastener Size	Torque (Pound-Feet)	Torque (Newton-Meters)
1/4" or 6mm	10	13
5/16" or 8mm	19	25
3/8" or 10mm	33	45
NPT fittings	2-3 turns past finger tight	



## #15193 CAMARO TURBOCHARGER SYSTEM PARTS LIST:

QTY	P/N	DESCRIPTION
<b>TURBO KIT# 15193 (COMPONENTS)</b>		
2	11570	Wastegate Ass'y, 6 Psi
1	11491-P	Duo Gate blow off valve
1	11545-BB	Turbo, T_Se-H76-68-Tund0_96
1	11638	Hardware Kit, Nuts/Bolts/Fittings
1	11559	Hardware Kit, Fuel Parts
1	11639	Hardware Kit, Clamps
1	11561	Hardware Kit, Hoses
1	11562	Hardware Kit, Gaskets
1	11563	Tube Ass'y, Intrclr to T-body 2
1	11566	Clamp, Air Filter, 2010 Camaro
1	11571	Coolant Reservoir, Camaro
1	22240	Tube Ass'y, Cat to Turbo 1
1	22241	Tube Ass'y, Cat to Turbo 2
1	22127	Tube Ass'y, Cat to Turbo 3
1	22128	Tube Ass'y, Exh. Downpipe 1
1	22129	Tube Ass'y, Exh. Downpipe 2
1	22242	Tube Ass'y, Exh. Downpipe 3
1	22243	Tube Ass'y, Exh. Downpipe 4
1	22245	Tube Ass'y, Exh. L. Tail Auto
1	22246	Tube Ass'y, Exh. R. Tail Auto
1	22132	Tube Ass'y, Intrclr to T-body 1
1	22134	Coolant Pipe, Upper, 1.38"
1	22135	Coolant Pipe, Lower, 1.38-1.5"
1	22139	Bracket, Cat to Turbo 2
1	22140	Bracket, Cat to Turbo 2-3
1	22141	Bracket, Cat to Turbo 3
1	22142	Bracket, Turbo Downpipe 2
1	22144	Tube Ass'y, P.S. Waste Dump
1	22145	Tube Ass'y, D.S. Waste Dump
1	22163	Bracket, Air Filter position limiter
1	22244	Bracket, Turbo Down to Trans
2	30315	License Frame - Turbonetics
1	31172	Heat Shield, T4, Tangential
1	31360	ECU Programmer, 2010 Camaro
1	60202	Instruction packet, Stickers
1	70063	Intercooler Assembly, 2010

### HARDWARE KIT #11559 (FUEL COMP'TS)PARTS:

1	22147	Decal, CARB Cert, Camaro
8	31345	Fuel Injector, 2010 Camaro
8	31347	Spark Plugs, TR6, Camaro

### HARDWARE KIT# 11639 (CLAMPS) PARTS LIST:

-See page 4 for assembly components

### HARDWARE KIT #11561 (HOSES) PARTS LIST:

-See page 4 for assembly components

### HARDWARE KIT #11562 (GASKETS) PARTS LIST:

-See page 4 for assembly components

### HARDWARE KIT# 11638 (NUTS/BOLTS/FITTINGS)

1	11564	Fitting w/o-ring, a/c sensor
1	21651	Fitting, Tee, 5/8" Barb to -6AN
1	21652	Fitting, Tee, 3/4" Barb to -6AN
1	21705	Spacer, 1"odx.41"idx.8"l
1	21956	Flange, 45 Oil Drain, 1/2" Npt
1	22034	Plate, Block off, MAF relocation
1	22165	Union, 1.5" Dia x 1.5"L, SS
1	30306	Fitting, 1/8" Npt X 5/32", Str
2	30307	Fitting, 1/8" Npt X 5/32", -90
1	30308	Fitting, "T", 5/32" Hose
1	30324	Fitting, 1/8mnpt x 1/4" barb 90°
2	30554	Fitting, Oil Line 1/8" Npt X-4, 90°
1	30567	Bolt, 1/4-20 x 3/4 Hex Hd
1	30582	Locknut, 1/4-20, Nylon
2	30588	Washer, Flat - 1/4"l.D.
12	30593	Washer, Lock, 5/16" or M8
8	30653	Hex Nut, M8x1.25
3	30654	Nut, Hex Nylock, M8-1.25
2	30700	Bolt, M8-1.25 x 20mm, HHD
4	30570	Bolt, 5/16-18 x 1", HHD
4	30803	Nut, Hex, M10-1.25
4	30804	Washer, Flat, M10
10	30805	Washer, Split Lock, M10
2	30806	Stud, M10-1.25 X 42mm
1	30809	Tap, 3/8 Npt
5	30860	Stud, M8-1.25 x 30mm
1	30862	Hex Plug, M18-1.5, O2 Sensor
1	30943	Bolt, HHD M10-1.5 x 30mm
2	31003	Bolt M10-1.25x40mm HHD
2	31071	Screw, M4-0.7 x 10mm, BHCS
2	31155	Bolt, Banjo - 16mm
3	31160	Vibration Dampener, M8x1.25
4	31199	Nut, Hex, M10x1.5
2	31269	Set Screw, Duo Gate
1	31285	Fitting, 3/8 mnpt x 1/2" barb
1	31286	Fitting, 1/2" NPT x 1/2", Straight
1	31334	Fitting, 1/4 mnpt x 3/8" barb 90°
1	31336	Adapter, a/c quick connect to M14
1	31338	Fitting, M16-1.5 male x 1/8 fnpt
2	31339	Washer, Rubber, M8, .093"Thk
1	31340	Fitting, 1/16 mnpt to 3/16 Barb
1	31341	Fitting, Tee, 1/2-1/2 Barb to 1/16
5	30807	Washer, Fender, 5/16" or M8
1	31343	Bolt, HHD, M10-1.5 x 50mm
4	31373	M10-1.5 x 25mm, Button HCS
1	31352	Check Valve, Pill, 1/4" OD
1	31354	Cap nut, M10-1.25
1	30867	5/16" Barb Hose Union
1	30597	1/8" Pipe plug



## #15195 CAMARO TUNER KIT

QTY	P/N	DESCRIPTION
<b>TUNER KIT# 15194 (COMPONENTS)</b>		
2	10781	Wastegate Ass'y, 9 Psi
1	11491-P	Duo Gate blow off valve
1	11558	Hardware Kit, Nuts/Bolts/Fittings
1	11560	Hardware Kit, Clamps
1	11561	Hardware Kit, Hoses
1	11562	Hardware Kit, Gaskets
1	11563	Tube Ass'y, Intrclr to T-body 2
1	11571	Coolant Reservoir, Camaro
1	22125	Tube Ass'y, Cat to Turbo 1
1	22126	Tube Ass'y, Cat to Turbo 2
1	22127	Tube Ass'y, Cat to Turbo 3
1	22128	Tube Ass'y, Exh. Downpipe 1
1	22129	Tube Ass'y, Exh. Downpipe 2
1	22130	Tube Ass'y, Exh. Downpipe 3
1	22131	Tube Ass'y, Exh. Downpipe 4
1	22132	Tube Ass'y, Intrclr to T-body 1
1	22134	Coolant Pipe, Upper, 1.38"
1	22135	Coolant Pipe, Lower, 1.38-1.5"
1	22138	Bracket, Cat to Turbo 1
1	22139	Bracket, Cat to Turbo 2
1	22140	Bracket, Cat to Turbo 2-3
1	22141	Bracket, Cat to Turbo 3
1	22142	Bracket, Turbo Downpipe 2
1	22143	Bracket, Turbo Downpipe 2-3
1	22144	Tube Ass'y, P.S. Waste Dump
1	22145	Tube Ass'y, D.S. Waste Dump
1	60202	Instruction packet, Stickers
1	70063	Intercooler Assembly, 2010
<b>HARDWARE KIT# 11638 (NUTS/BOLTS/FITTINGS)</b>		
-See page 3 for assembly components		

### Tuner Kit Notes:

1. The Turbonetics turbocharger of your choice is to be purchased along with this tuner kit.
2. This kit requires additional parts (primarily fuel system and air inlet) in order to complete the installation.
3. Some sections of this turbocharger kit instruction manual will not be applicable.
4. This kit is not legal for use in California and does not have a CARB EO#.

<b>HARDWARE KIT# 11639 (CLAMPS) PARTS LIST:</b>		
1	30242	Clamp V-Band 3"
2	30275-155	Hose Clamp, T-Bolt Band 1.5
2	30616	Hose Clamp, Worm Drive, #44
6	30817	Hose Clamp, Worm Drive, 5/8"
11	31260	Hose Clamp, Worm Drive, #24
4	31287	Hose Clamp 1/2" Pinch
4	31288	Hose Clamp 3/8" Pinch
1	31335	Loop Clamp, 1.38", .28 hole
1	31349	Hose Clamp, Worm Drive, #48
7	31350	Hose Clamp, Worm Drive, #64
9	31125-250	Exhaust Band Clamp, 2.50"
3	31125-300	Exhaust Band Clamp, 3.00"

<b>HARDWARE KIT #11561 (HOSES) PARTS LIST:</b>		
1	10724	Oil Supply Hose Assy, -4X 36"
2	21657-52	Water Supply Hose, 52"
1	22121-4	Hose, Silicon 45° Elbow, Ø1.50
1	22122-4	Hose, Silicone 90° Elbow, Ø4.0
1	22123-4	Hose, Silicone 45° Elbow, Ø2.50
2	30302-4	Silicone Hose Coupling, 4"
1	30502-4	Hose, Silicone 3-4" Increaser
15'	30542-BK	Silicone Vac. Hose, 5/32"
2'	30543-BK	Silicone Vac. Hose, 1/4"
1.5'	30827	Hose, Oil Drain, 5/8" I.D.
1	31000	Hose Coupler, Coolant, 1.5" ID
2'	31290	Hose, J30R9 1/2" I.D.
1	31337	Breather hose, from Camaro auto
3	31351-4	Hose Coupler, Coolant, 1.38" ID

<b>HARDWARE KIT #11562 (GASKETS) PARTS LIST:</b>		
2	20142	Gasket, Deltagate/Evo
1	30141	Gasket, Oil Drain, T3/T4
1	30143	Gasket, Turbine Inlet, T4
20'	31042	Heat Wrap, 1.0" Diam.
2'	31093	Safety Wire, S.S. .035"
4	31156	Washer, Crush - 16mm
1	31270	O-ring, Duo Gate
2	31299	Heat Wrap, 2"x25' Roll
8	31300	Tie, Heat Wrap
40	2-43620	Cable Ties, Nylon - 8 1/2"
1	31311	O-ring, Viton 1.068 OD

P/N 11570



P/N 11491



P/N 11638



P/N 11559



P/N 11639



P/N 11561



P/N 11562



P/N 11571



P/N 31359



P/N 11545-BB



P/N 70063



P/N 22244



P/N 22134



P/N 22135



P/N 22240



P/N 22241



P/N 22127



P/N 22128



P/N 22129



P/N 22242



P/N 22243



P/N 22145



P/N 22144



P/N 22245



P/N 22246



P/N 22140



P/N 22141



P/N 22142



P/N 22139



P/N 11566



P/N 22034



P/N 22122



P/N 22123



P/N 22121



P/N 22132



P/N 11563



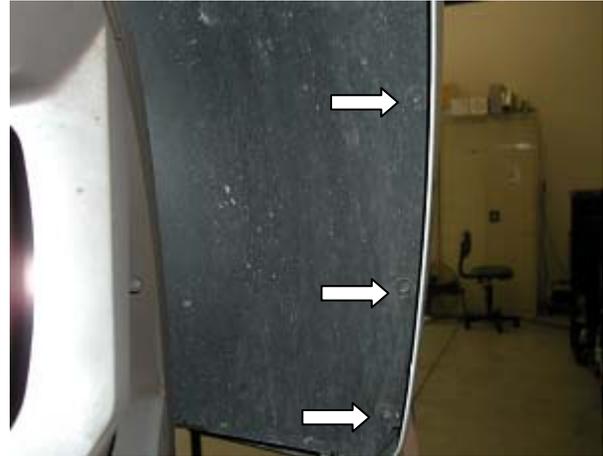


## PREPARING THE VEHICLE FOR TURBO KIT INSTALLTION

1. Jack the vehicle up to a workable height. Secure the vehicle with jack stands.
2. Remove the negative cable from the battery terminal.
3. Drain the engine coolant.

## FRONT END PREPARATION

1. Remove the six plastic clips and two 10mm headed screws from the top of the core support.
2. Remove the three T20 torx headed screws securing both front fender well liners.



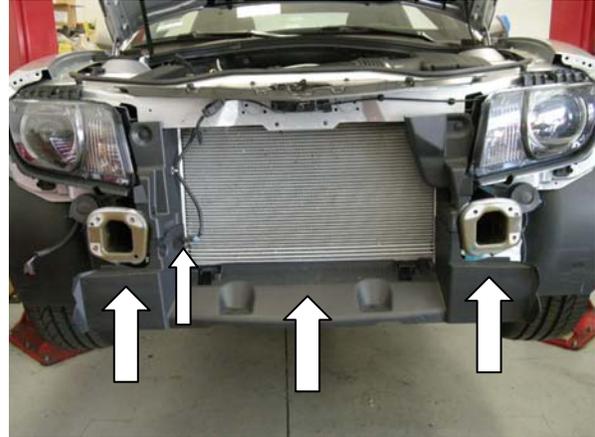
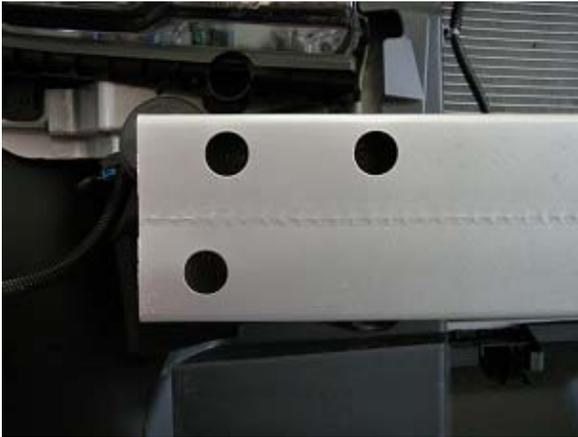
3. Remove the two plastic fasteners securing the plastic fender liner to the fender well.
4. Remove the two 10mm headed screws on the underside.
5. Remove the three 10mm headed screws behind headlight and one on the fender edge (both sides).



6. Unplug the light harness on passenger side. Remove the front bumper cover.



7. Remove 6 bolts securing the metal bumper (3 each side).



8. Remove 6 plastic clips and ambient air temp sensor from air guides and remove air guides.
9. Remove 4 bolts holding headlights. Unplug and remove headlights.

## ENGINE COMPARTMENT PREPARATION

1. Remove the plastic engine cover and the air filter top cover and set aside for later use.
2. Remove the remaining air filter housing and all ducting up to the throttle body. Set aside the two nuts for later use.
3. Remove the windshield washer reservoir from the vehicle. Set aside the w/w pump for later use.
4. Remove the coolant reservoir and upper and lower radiator hoses.
5. Remove the cover and the power cable from the fuse box on the passenger side.
6. Release the four clips and lift the fuse panel out of the way.
7. Remove the bolt holding the fuse box lower.
8. Slide the fuse box towards the rear of the vehicle approximately 2" to align with the hole in the tray.
9. Use factory bolt with the supplied flat washer and ny-lock nut to hold box in new location.



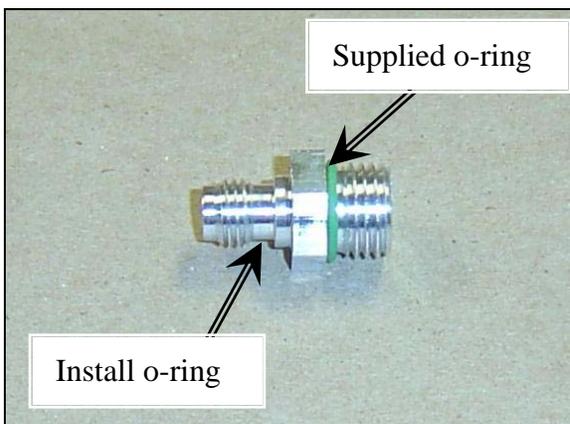
10. Replace the fuse panel and cover.



11. Disconnect the AC pressure sensor harness. Remove the sensor and O-ring. The schrader valve inside the AC line will prevent refrigerant from escaping. Install the supplied cap over the port.



12. Install the supplied a/c fitting into the quick connect adapter. Install the o-ring removed from the vehicle onto the small end of the a/c fitting. Install the pressure sensor onto the small end of the a/c fitting. Remove the plastic cap from the upper a/c tube and attach sensor. Plug in sensor as shown.



## FUEL INJECTOR INSTALLATION

1. Unplug the electrical connectors from all 8 of the fuel injectors.
2. With the engine cool, remove the gas cap to bleed any residual pressure. Bleed the pressurized fuel into a container by depressing the schrader valve located in the front of the driver side fuel rail. **NOTE: Fuel is under pressure! Eye protection is a must.**
3. Remove the 2 bolts securing each fuel rail.
4. Pull the fuel rail with injectors away from the engine. Hold them over the container. **NOTE: Fuel may squirt out of the engine as the injectors are removed.**
5. Using a flathead screw driver, metal injector clip off of the metal retainer on the fuel rail. Remove each fuel injector. Drain any fuel out of the rail and into the container.
6. Install the metal clips onto the supplied fuel injectors.
7. Lubricate the o-rings on the new injectors using motor oil or similar lubricant. Install the new injectors onto the fuel rail. Be sure that the plugs will face away from the engine. Seat the injectors into the cylinder head. Be sure they are properly seated in order to avoid any leaks. Re-secure the fuel rail with the original bolts. Plug the harness back on all the injectors.



## TURBO WATER LINE INSTALLATION

1. Locate the two heater hoses where they attach to the thermostat housing on the passenger side of the engine. Cut as shown.
2. Install the 5/8" Tee (P/N 21651) into the rear hose. Install the 3/4" Tee (P/N 21652) into the forward hose. Secure using the supplied hose clamps (PN 30817).



## TURBO OIL DRAIN INSTALLATION

1. Drill an 1/8" hole in the oil pan approximately 2.5" up from the bottom as shown. Enlarge the hole to 9/16" using a drill packed with grease to absorb the metal chips.



2. Liberally grease the included tap (30809). Use it to tap the hole in the oil pan. The tap is tapered so check the hole with the included 3/8 NPT fitting before using more than half the threads on tap.

**Warning: Threading the tap all the way in will result in a hole that is too large and leaks oil!**

3. Using thread sealant, coat the threads of the 3/8 NPT fitting and install it into the oil pan.
4. Drain the rest of the oil from the engine.
5. Thread the 1/2" NPT x 1/2" barb oil drain fitting (31286) into the supplied 45° oil drain flange (21956) with thread sealant. Install the oil drain flange onto the turbo using the supplied gasket so that the fitting points towards the turbine housing.
6. Cut the supplied 1/2" hose (31290) to a length of 22". Slide it over the oil drain fitting on turbo and secure with pinch clamp (31287).



7. Install 12" of heat shielding over the oil drain hose and secure with zip ties.

### **BATTERY CABLE / OIL FEED LINE INSTALLATION**

1. Remove the bolt holding the battery cable to the terminal and replace it with the supplied nut.
2. Remove the power terminal from the driver side fender well and secure it to provide the most battery cable slack.



3. Remove the accessory belt from the alternator.
4. Remove the battery cable from the alternator and lower alternator out of mount.
5. Remove the socket head oil galley plug from the side of the engine block.
6. Using thread sealant, attach the 1/8" NPT to -4 90° fitting to the M16 adapter. Using engine oil on the o-ring, install the M16 adapter into the engine. Tighten both fittings and point the -4 fitting down and toward the rear of the vehicle as shown.



7. Install and tighten the -4 oil line (with heat shielding) to the fitting as shown, leaving the other end disconnected.
8. Replace the alternator and belt and reposition alternator cable to allow as much room as possible for the exhaust system.
9. Attach heat wrap to all alternator wiring, spark plug wires, a/c line and power steering hose as shown. Slit heat wrap as needed and secure with cable ties.



10. Secure the a/c line and battery cable as close to fender well as possible.

## EXHAUST PIPE REMOVAL

1. Before removing any exhaust components, measure forward from the back of the differential housing cover 19.5" and mark the passenger side tail pipe. Measure forward from the back of the differential cover 13.5" and mark the driver side tailpipe. The exhaust will need to be cut at these locations in order to meet up with the turbo exhaust pipes.



2. Loosen the lower part of the rear valance panel (black panel beneath the rear bumper that the tail pipes protrude through).



3. Loosen the two nuts on each of the exhaust clamps connecting the cats to the cat back exhaust and slide passenger side back and driver side forward.

4. Remove the four bolts securing the brace and then remove the cat back exhaust.

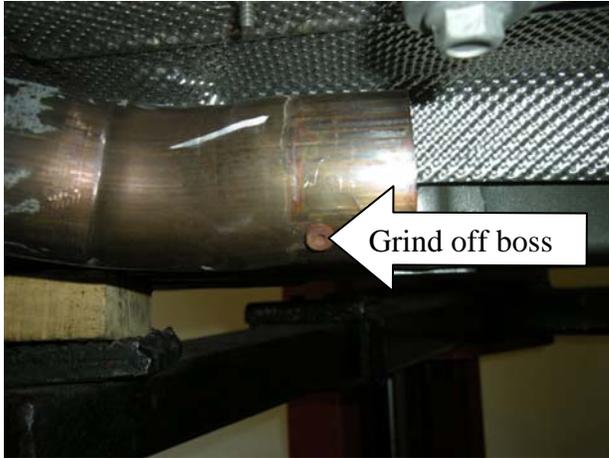


5. Cut the factory cat back exhaust at the marked locations from step 1. Dress the cut ends.

6. Disconnect the oxygen sensors on the driver side catalytic converter (cat).



7. Loosen the two nuts securing each cat to the exhaust manifold. Remove the driver side cat. Leave the passenger side cat loose but in place.
8. Remove the alignment boss (twist or grind off) from the passenger side cat and smooth any burrs.

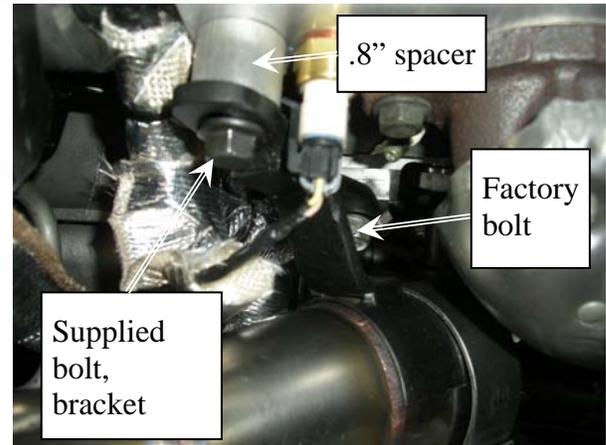


## TURBOCHARGER INSTALLATION

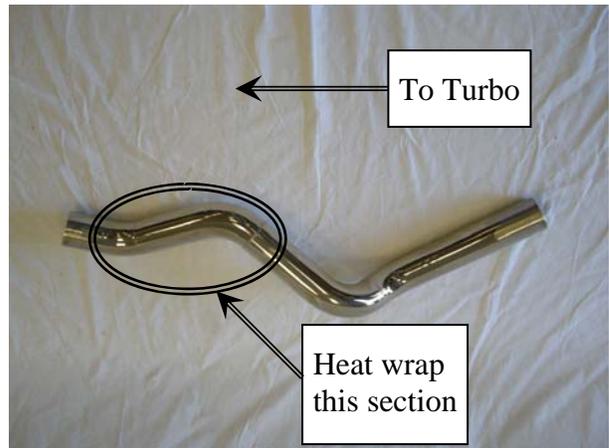
1. Loosely attach the cat to turbo #3 bracket (22141) to the cat to turbo #3 pipe (22127) flange using two M10-1.25x40mm bolts and flat washers as shown. Install the two M10-1.25x42mm studs into the remaining two holes in the turbo flange. Use the supplied exhaust wrap to insulate the pipe and secure with the supplied exhaust ties
2. Remove the nut from the alternator bracket and attach the cat to turbo #3 bracket using the factory nut.



3. Remove the bolt from the engine behind the alternator (has small ground wire) and attach cat to turbo #2-3 bracket (22140) using the factory bolt in the lower location and the supplied M10 x 50mm bolt, lock washer and .8" spacer. Loosely install a 2.5" clamp over the pipe and the bracket.



4. Place the cat to turbo #2 pipe (22126) into the space between the driver side exhaust manifold and the steering shaft and insert it into the open end of cat to turbo #3 pipe.



5. Attach cat to turbo #2 bracket (22139) to the boss on the engine block behind the exhaust manifold with the supplied M10-1.5 x 30mm bolt and lock washer. Loosely install a 2.5" clamp over the bracket.



6. Loosely re-install the driver side cat.
7. Using a banjo bolt (31155) and two crush washers (31156) connect one of the supplied braided water lines to the front of the turbo center housing. (There is better access at this time than after the turbo is installed.)



8. Place the supplied gasket onto the turbo mounting flange. Mount the turbo (guiding oil drain line under alternator) using four M10-1.25 nuts and lock washers.



Installed water line

9. Connect the oil drain line to the fitting previously installed in the oil pan and secure with a pinch clamp.
10. Using a banjo bolt (31155) and two crush washers (31156) connect the remaining braided water line to the back of the turbo center housing. Route both water lines down and across to the previously installed Tees in the coolant lines.
11. Thread the supplied 1/8 NPT x -4 90° fitting into the oil feed on the turbo. Slip heat sleeve over the oil feed line and attach the line to the turbo.

## TURBO EXHAUST INSTALLATION

1. Bend the forward transmission cooler lines (below a/c compressor pulley) down as far as possible.



2. Slide heat shield over the A/C clutch harness.
3. Bend the lower transmission cooler lines towards the transmission.



4. Using a pry bar, bend the A/C tubes against the A/C compressor.

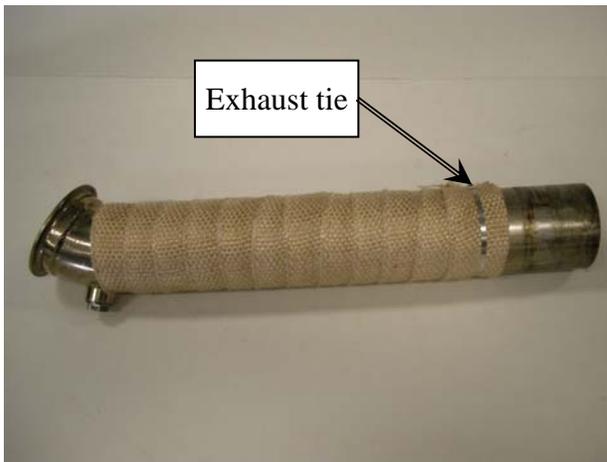


5. Remove the two bolts from the rear of the A/C compressor. Install the supplied turbo downpipe 2-3 bracket (22142) and re-install the A/C bolts.





6. Using the supplied exhaust wrap to insulate the Turbo downpipe #1 and #2 pipe. Secure with the exhaust ties.



7. Install the turbo downpipe #2 pipe (22129) into the space between the A/C compressor and the frame. The flared end should be facing the turbo as shown below. Loosely secure it with a 3" clamp.



8. Cut a 17" piece of 5/8" hose. Install an 8" piece of heat sleeve over hose as shown. Install the supplied 5/8" hose (with heat shielding) onto the original location where the upper radiator hose teed off to the bottom of the engine. Secure with a hose clamp.





9. With a 3" clamp pre-installed, slide the turbo downpipe #1 pipe (22128) into the #2 pipe. Clamp it loosely onto the turbine housing outlet using a 3" v-band clamp (30242).



10. Install the supplied heat shield onto the turbine housing and secure with safety wire looped around the three metal hooks.

11. Remove the two nuts securing the transmission mount to the cross member. Hold the transmission up with a jack and remove the cross member from the vehicle.



12. Install the supplied bracket (22244) under the two bolts that secure the mount to the transmission. Re-install the cross member.





13. Install the turbo downpipe #3 (22242) into the #2 pipe previously installed.

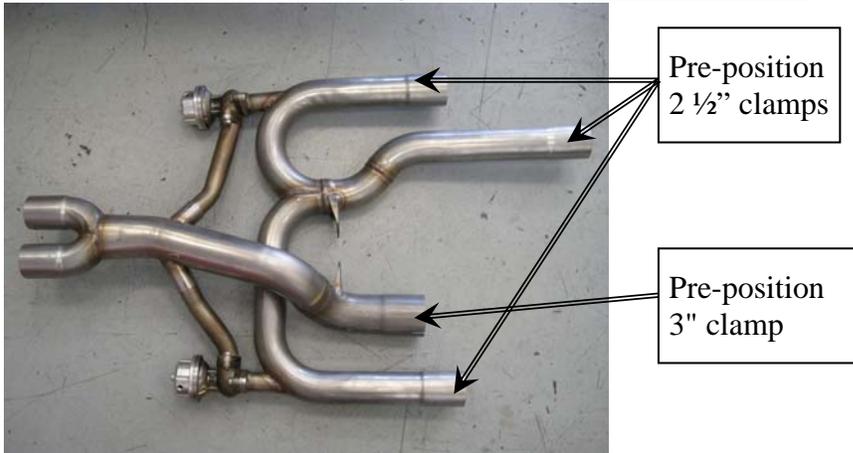


14. Thread 90° deg fittings into the waste gates with a small amount of sealant as shown.



**NOTE:** This vehicle is has dual waste gates and a relatively low boost setting (6.5 psi). In order to maintain boost control, the kit comes with smaller diameter valves installed in the waste gates. This flattens out the boost curve resulting in increased horsepower. The tuner kit maintains the larger valve in order to handle higher horsepower/boost applications. If you have any boost pressure stability issues, please contact Turbonetics for assistance.

1. Thread four M8 x 30mm studs (80860) into the waste gate flanges on the cat to turbo #1 pipe. Attach and tighten the base of the waste gates to the cat to turbo #1 pipe flanges using M8 nuts and lock washers. Install two 1 ½" clamps (30275-155) over the female waste gate dump ports on the exhaust pipe and install the waste gate dump tubes loosely using gaskets, 5/16 x 1" bolts and lock washers. Orient for best fit. Pre-assemble the turbo downpipe #4 pipe (22243) onto the cat to turbo #1 pipe (22240) as shown below.



2. Pre-position one 2 1/2" clamp on each flared end of the cat to turbo #1 pipe. Pre-position one 3" clamp onto the flared end of the turbo downpipe #4.

15. Install the assembly in the vehicle. Secure using the supplied M10 Button head cap screws, lock washers and nuts.



16. Cut approximately 8" of 5/32" hose and attach it to the passenger side waste gate boost reference fitting. Cover with heat sleeve. Attach the supplied 3/16" "T" to the open end.

17. Cover approximately 38" of 5/32" hose with heat sleeve. Route the hose from driver side waste gate fitting and attach it to the same 3/16" tee. Zip tie in place.



18. Cut approximately 80" of 5/32" hose. Cover 48" of hose with heat sleeve. Connect hose to 3/16" tee and route to the front of the car alongside the factory fuel lines. The open end of the hose will later be connected to the bottom of the intercooler.

19. Wrap exposed fuel lines with heat shielding as shown.



20. Using 2 1/2" clamps on each end, install the driver (22245) and passenger (22246) tailpipes into downpipe #4. Re-install brace.



21. Slide the tail pipes through the rear valance. Line up the modified factory cat back and slide it forward into the turbo exhaust. Clamp loosely and reconnect all factory rubber hangers.



22. Check all pipes for proper clearance and tighten all clamps, bolts and brackets.

## RADIATOR HOSE INSTALLATION

1. Install the lower radiator tube (22135) using a 1 3/8" coupler on the bottom and a 1 1/2" hose coupler on the top. Secure with four #24 clamps.



2. Install the upper radiator tube with two 1 3/8" couplers and #24 hose clamps. Connect the open end of the previously installed 5/8" hose to the upper radiator tube using a hose clamp.



3. Using thread sealant, install the supplied 1/4 npt x 3/8" 90° fitting and the 1/8 npt x 1/4" 90° fitting into the bottom of the supplied reservoir so that they will both point towards the front of the vehicle.



4. Install the supplied radiator reservoir onto the two 6mm studs on the driver side fender well. Secure with the factory nuts removed with the air filter housing.
5. Trim and attach the 3/8" factory radiator surge hose to a 3/8" barbed fitting installed in the bottom of the reservoir. Attach the supplied 1/4" hose to the remaining fitting and leave loose.
6. Install the factory radiator overflow tank cap and the windshield washer cap onto their respective locations on the reservoir. Clean recessed area with lacquer thinner and apply the supplied sticker.



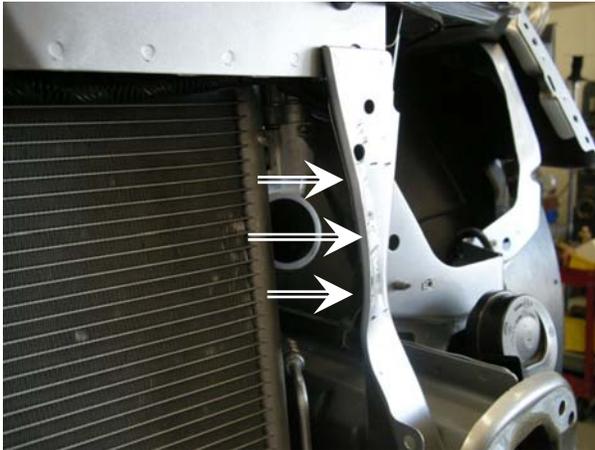
7. Remove the windshield washer pump from the factory reservoir. Use the supplied loop clamp and 1/4" bolt to secure it as shown. Connect the factory windshield washer hose and the electrical plug to the top of the pump. Connect the pump inlet (bottom) to the previously installed 1/4" hose from the reservoir.





## INTERCOOLER INSTALLATION

1. Bend the driver side sheet metal on the core support forward as shown. Thread two vibration dampeners (31160) into the two threaded holes below the hood latch.



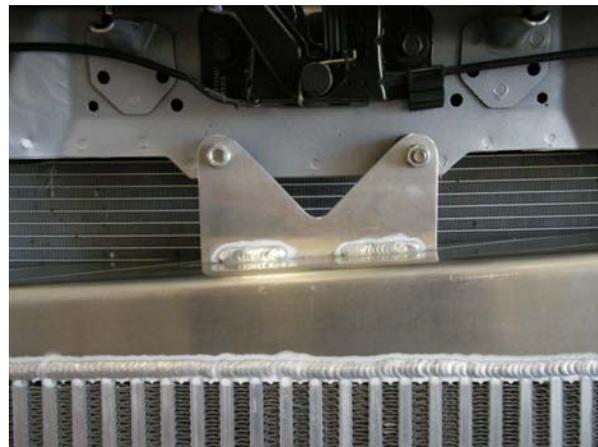
2. Thread the supplied 1/8" npt to 5/32 hose fitting into the hole in the bottom of the intercooler. Thread a vibration dampener into long boss on bottom of intercooler and an M8 x 25mm stud into the short boss.



3. Install the bypass valve o-ring onto flange. Loosely attach the bypass valve to the intercooler. Test fit intercooler, clock bypass valve, and then tighten the set screws as shown.



4. Install the short end of the 2 1/2" 45° compressor discharge sleeve onto the intercooler inlet.
5. Install the intercooler by sliding the inlet sleeve between the radiator and the core support and onto the compressor discharge elbow. Align the lower mounting studs with the lower core support slots. Mount the top of the intercooler to the vibration dampeners using M8 nuts and lock washers.

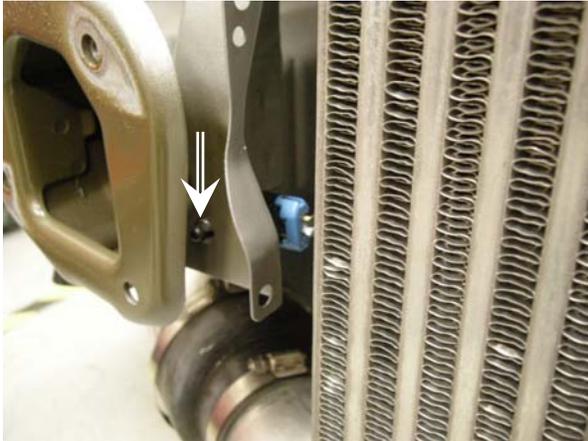


6. Mount the intercooler to the bottom of the core support as shown using large flat washers and the two M8 lock nuts. Connect the 5/32" silicone hose from the waste gates to the fitting on the intercooler using a zip tie.



Supplied rubber washer under mounting boss and a M8 fender washer above and below core support.

7. Attach the factory air temperature sensor to the hole near the intercooler outlet.

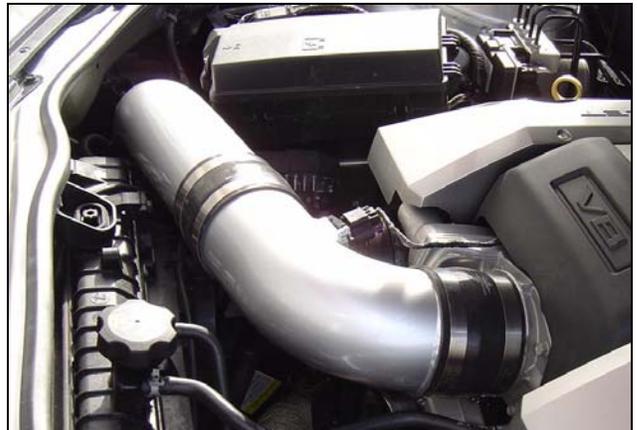


### INTERCOOLER DUCTING INSTALLATION

1. Clamp the 3" – 4" step sleeve (30502) to the intercooler outlet using a #48 hose clamp.
2. Connect the intercooler to T-body #1 tube (22132) to the sleeve with a #64 hose clamp.



3. Remove the Mass Air Flow (MAF) sensor from the factory air box lid. Install the MAF into the supplied intercooler to T-body #2 tube (11563) using the supplied M4 screws. Install the tube using two 4" sleeves and secure with #64 hose clamps. Connect the MAF harness to the MAF sensor





## AIR INLET INSTALLATION

1. Install the supplied o-ring on the MAF block-off plate and attach it to the MAF boss on the air filter housing using the original fasteners.



2. Do not remove the white pad from the air filter housing. Place the factory air filter onto the housing and secure by snapping on the supplied clamp as shown.



3. Install the 4" silicone elbow onto the air filter housing. (Lightly grease the elbow to aid installation.) Attach the open end of the elbow to the compressor inlet. Orient for best fit and secure with #64 clamps.

4. Use the supplied 1.5" tube to attach the bypass valve discharge to the air inlet elbow using the supplied 1.5" 45° elbow.





5. Unplug the evap. purge solenoid (located on the front of the passenger side head) electrical connector and hose and move out of the way. Secure the heater hoses out of the way.
6. Disconnect the PCV hose from the intake manifold. Use a 1/4" drill bit to slightly enlarge the inside diameter of the plastic tube by hand turning the bit.



7. Clean the plastic, apply a small amount of sealant to the check valve and press it into the intake manifold. Remove excess sealant and reinstall the PCV hose.



8. Connect the valve cover breather to the air inlet elbow using the original breather tube and the supplied breather tube. Cut tubes as shown, heat the supplied 5/16" hose mender in an oven to 250°F, and press the long plastic tubes onto the heated fitting.





9. Orient for best routing, protect with heat shield where it passes near the exhaust, and attach the plastic tube to the air inlet using the supplied pinch hose clamp.



10. Remove the vacuum hose from the brake booster reservoir. Using sealant, install the 1/16 npt to 3/16" barb fitting into the 1/2" barb x 1/2" barb x 1/16" female npt tee fitting. Clamp a 2" section of 1/2" hose to the tee using the supplied pinch clamp. Attach the tee to the factory vacuum hose using the original clamp. Attach the 1/2" hose to the brake booster reservoir and secure with pinch clamp.



11. Run 5/32" hose from the tee to the hose barb on the bypass valve. Secure away from the exhaust.

## RE-ASSEMBLY

1. Cut the stud off of the rear of the driver side headlight assembly where it would interfere with the inlet sleeve. Install the headlight.

(Note: The headlight may still be adjusted after the stud is cut but range will be limited. If large changes in headlight adjustment are foreseen, leave stud as is and protect with a vacuum cap until after headlights are adjusted).

2. Install the front bumper and cover.

3. Install the engine cover.

4. Re-attach the rear valance body panel.

## CLEAN UP



1. Review these instructions to make sure that all fasteners, clamps & electrical connections have been installed and torqued correctly.
2. Check that all hose routings are free of any kinks or near any hot or abrasive surfaces that may cause wear over time. Adjust or reroute as necessary to provide adequate slack for engine movement.
3. Refill all fluids (oil, power steering, coolant and windshield washer) to factory recommended levels. The use of synthetic motor oil (with the factory recommended oil weight) is strongly recommended, as it will prolong the life of the turbocharger.
4. The use of premium octane (91+) unleaded fuel is required for proper engine performance and to reduce the possibility of internal engine damage from detonation.
5. Re-connect the battery.

### CARB EO, SPARK PLUG GAP, & FUEL DECAL

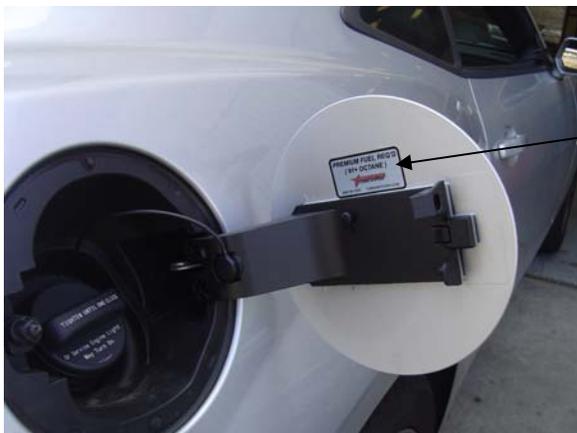
1. Included with each Turbonetics turbo kit, are adhesive backed decals with the CARB E.O number that is associated with this product, the spark plug gap spec, and the premium fuel required decal. Both the CARB E.O and spark plug gap spec decal is required to be adhered in the engine compartment that is visible and easily located by Smog Check and Service technicians. Turbonetics suggests cleaning and adhering the labels on the upper core support where the hood latch is located.



CARB EO#  
Decal

Spark Plug  
Gap Decal

2. Adhere the premium fuel required decal on the back side of the fuel door. Ensure surface is clean before adhering decal.



“Premium Fuel Required”  
Decal



## ECU REPROGRAMMING

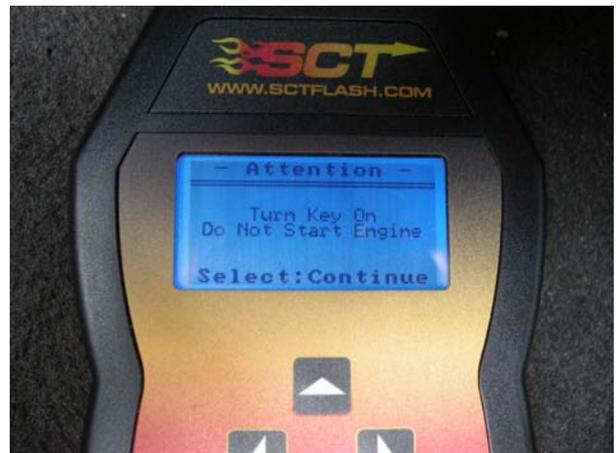
1. Before the vehicle can run the ECU must be reprogrammed. Use the included SCT flash tool to reprogram the ECU. Plug the SCT flash tool into the OBD port under the steering wheel.



2. The SCT flash tool screen will display Program Vehicle. Press the **select** key to continue. Then select "PreProgrammed Tune"



3. Press the **select** key to continue. The screen will display Turn Key On, Do NOT Start. Turn the key to the on position. Be sure that your battery is not weakened by added electrical components such as a stereo or alarm. The flash tool needs a constant 12 volts to properly flash the ECU. Press continue.

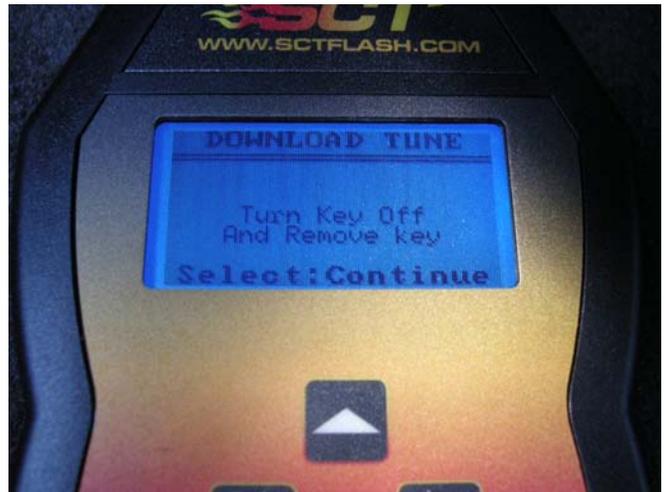




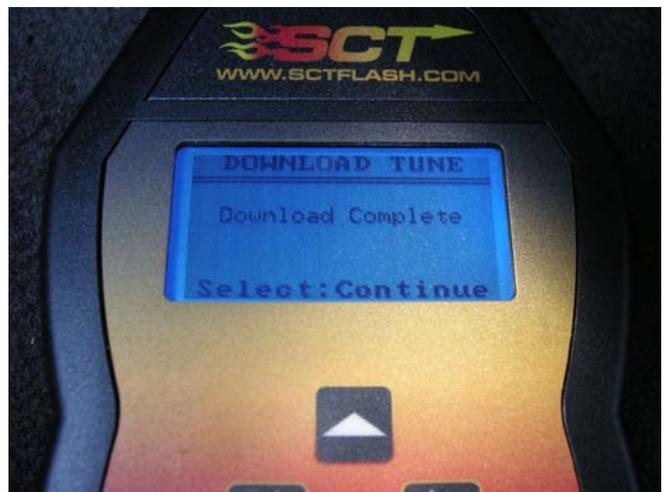
4. Select the "Camaro Automatic" program. Select "Begin Program".



5. Allow the program upload to complete. When instructed: turn key off and remove.



6. Allow the ECU to power down.



7. Disconnect the flash tool from the OBD port.



8. Cycle the ignition to the "ON" position several times to pressurize the fuel system & check for any leaks.
9. Start the vehicle and check for any oil, power steering or air pressure leaks. **NOTE: It is normal for the vehicle to emit some amount of white smoke & a strange odor for an hour or two of operation, as the oils within the exhaust pipes burn off.**
10. Test drive the vehicle, check for oil/coolant leaks again, check all fluid levels and top off as necessary. If you are experiencing any issues of idling, bucking, running extremely rich, or poor performance, ensure that all hose clamps are tight and all hoses are installed properly and that there are no air leaks of any kind in the plumbing from turbo to intercooler to throttle body. If you need any support, our tech lines are open Monday through Friday from 8am to 5pm at (805) 581-0333, or go to our website at [www.Turboneticsinc.com](http://www.Turboneticsinc.com) to our forums under "Tech Support".

**CAMARO DRIVING NOTE:** This vehicle is equipped with catalytic converters which take energy out of the exhaust in order to heat up. This slows the initial boost response until the CATs are warm. Subsequent full throttle performance is not as heavily affected.

**EMISSIONS NOTE:** This vehicle is emissions legal only when the parts are installed as described in this instruction manual. Making changes to the kit or ECU programming voids the CARB exemption order making the vehicle illegal for use on California roads.

**"NO FAULT / NO HASSLE" WARRANTY PROGRAM:**

TURBONETICS will repair or replace, at our expense, any new TURBONETICS / Sparco products that fail, including products used in racing or competition applications, for a period of one year from the original date of purchase. All turbocharger and cartridge assemblies have a factory installed inline oil filtration device. This filter device must remain in place if any warranty is to be considered under the No-Fault / No-Hassle program. Electrical components that fail due to misuse are not covered under the No-Fault / No-Hassle Warranty Program. Warranty is limited to TURBONETICS products and does not include progressive or subsequential damage and does not cover removal or installation labor or associated parts. No warranty is made for any other claims for special, indirect or consequential damages including but not limited to component removal or installation equipment downtime, prospective profits or other economic loss.

Warranty will not be granted for recurring damage, malfunction, or failure due to improper installation, misuse, unauthorized repair or alterations, or externally induced physical damage.

Warranty is non-transferable and must be processed via the original purchaser from TURBONETICS.

Remanufactured units, performance upgraded units, and O.E.M. replacement units are covered by a 90-day warranty or the O.E. warranty period.

TURBONETICS highly recommends that the installation of mechanical or electrical parts be performed by trained professionals. Improperly installed products may lead to unsafe and unreliable conditions.

**RETURN POLICY:**

Only unused and complete merchandise may be accepted for return subject to inspection and acceptance by TURBONETICS. No goods will be accepted without prior return authorization from TURBONETICS. Call for approval and RGA (Returned Goods Authorization) tracking number. No returns will be accepted without an RGA tracking number. No returns will be accepted after ninety (90) days from the original shipping date from TURBONETICS unless approved. All approved returns are subject to a 15% restocking charge – NO EXCEPTIONS. The original invoice must accompany the return. Accepted warehouse / distributor and open account returns will be issued credit only.

**RETURNED GOODS AUTHORIZATION TRACKING NUMBER:**

TURBONETICS will only accept product returns, repair orders / upgrades, and warranty requests that have been approved and are returned with a corresponding RGA (Returned Goods Authorization) tracking number.

Contact TURBONETICS for approval and the RGA number. Write the RGA number clearly on the outside of the package and include it inside the package. This is very important in allowing us to properly identify and process your request. Failure to comply with this requirement will result in the delay of processing or the product being returned to you.