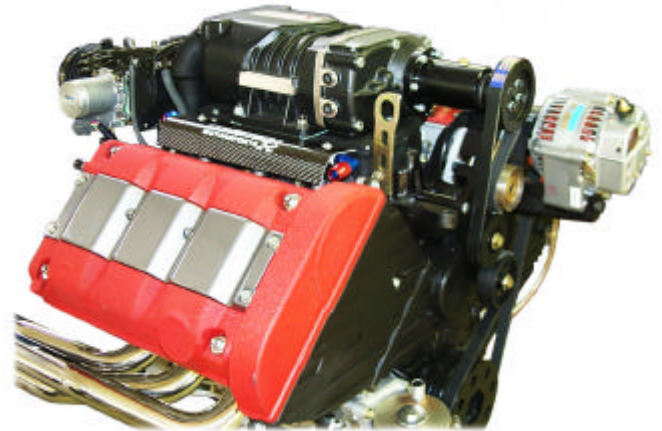


Thank you for purchasing Comptech Sport's Supercharger kit for the Acura NSX. All components have been designed and manufactured utilizing the latest in technology and materials. All Comptech products are designed to blend with the original vehicle design while improving performance without modifying the original vehicles integrity or emission certification. We are sure you will be pleased with the look, fit, dependability, and performance this kit will provide. Should you have any questions, feel free to call us at 916-933-1080.

In order to realize the full potential of this Supercharger kit, we recommend the addition of Comptech Sports Headers, Cat-Back exhaust system, and Carbon Fiber Air Box Assembly.

Before Starting:

- Thoroughly Read these instructions.
- **We reference and recommend the factory service manual to supplement these instructions**
- We recommend that only a competent and qualified mechanic perform this installation.
- Thoroughly check the enclosed parts list to insure that all components are included **before** proceeding with the installation.
- Many parts are reused for installation, use caution not to damage or discard any parts during removal or installation.
- Always work in a clean environment and use appropriate tools and safety equipment.



STEP #1

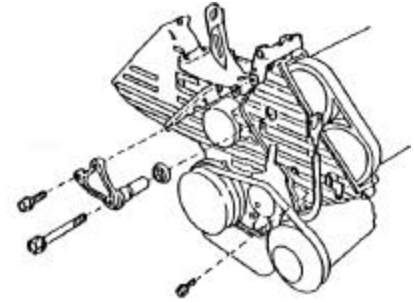
- **Disconnect battery:** Move both seats all the way forward **before** disconnecting battery. Access battery in front (under hood near spare tire) and disconnect negative battery terminal.
- **Remove interior rear panels:** To allow installation of new Fuel Pump Regulator Unit (FPRU). Remove upper rear panel and left rear trim panel directly behind driver's seat and rear side trim panel.
- **Remove shock brace:** Remove brace in engine compartment that ties shock towers together. Some early model NSX's may not have this brace. Targa top cars will require use of a Comptech "K" type brace (supplied in kit) to clear supercharger.
- **Remove air cleaner assembly:** Access fuse box to wire in (FPRU) unit. This also allows more room for manifold removal and installation.

STEP #2

- **Remove cooling fan:** (only present on some early NSX's) Fan is located on passenger side of the engine bay. It will not be reused with the supercharger kit.
- **Remove Alternator:** Remove factory alternator and alternator adjusting mechanism (it will not be reused). Keep the 10x90 bolt it will be reused in step #5.

STEP #2 (cont.)

- **Remove alternator bracket stiffener:** New Idler Plate assembly will mount to these three mounting points this bracket used. An additional support for plate attaches to alternator adjusting slot. Transfer rubber grommet to large standoff on front of new Idler plate.



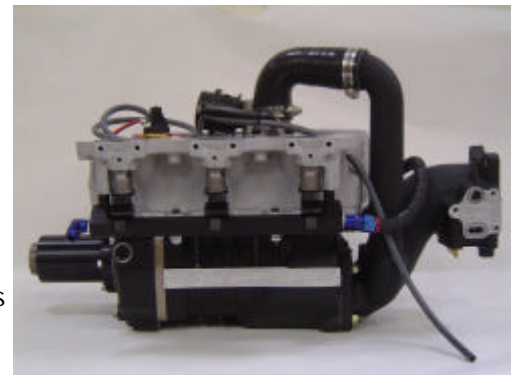
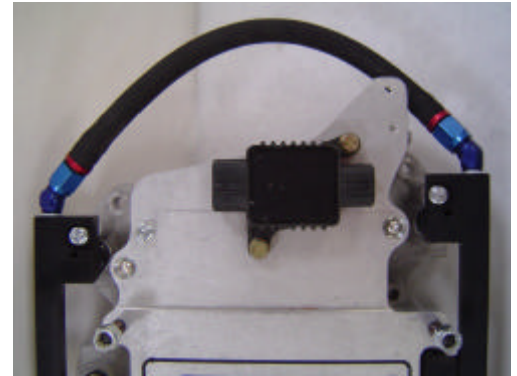
02 Alternator Stiff. Bracket

STEP #3

- **Disconnect wiring harness from intake manifold:** Disconnect all electrical connections from intake manifold (injectors, throttle body, etc.). Plastic wiring harness clips can be removed and discarded (they will not be re-used).
- **Disconnect hoses from intake manifold:** Several hoses go to intake manifold and components attached to it. Label and disconnect all fuel lines, vacuum lines, PCV hoses, water lines, etc. Disconnect EGR pipe from intake manifold and EGR valve (2 new gaskets are supplied in this kit, Honda #18721-PR7-A01).
- **Remove intake manifold:** Remove (4) nuts at corners and (2) bolts on each side of intake manifold. Lift manifold straight up and off engine. **NOTE:** On 2000-up models Intake Air By-Pass diaphragm screws will need to be removed to obtain clearance around Air Pump.
- **Remove parts from stock intake manifold:** Several components from stock intake manifold, that will be re-used, need to be removed. These include: throttle cable bracket, bolts, and idle valves (91-94), air assist rails (95-03) and bolts, fuel injectors and seals, igniter, air temp sensor and screws, throttle body with bolts, EGR Tube and nuts, 6x16 bolts from the stock Fuel pressure regulator, and vacuum tube manifold.

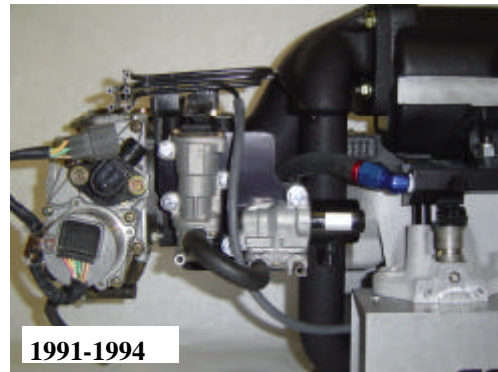
STEP #4 Assemble new intake manifold:

- **Install injectors in new manifold:** (just as in stock manifold) using supplied new injector top O-ring seals (Honda #91301-PM7-003) to insure no fuel leaks. **(it is highly recommended that injectors be cleaned and checked for proper performance before installation)** Comptech can perform this service for a small fee.
- **Install igniter on top of manifold:** using stock Fuel Pressure Regulator 6mX16 mounting bolts (use Teflon thread tape to prevent vacuum leaks) See picture.
- **Install supercharger unit onto manifold:** using supplied O-Ring (**IMPORTANT: remove protective warning label from bottom of supercharger before installing**). Position supercharger so that intake side of unit is on same side as newly installed igniter and attach blower using the (4) 3/8-16 Nyloc nuts.
- **Install new inlet manifold onto supercharger:** using supplied O-Ring (**IMPORTANT: remove protective warning label from intake side of supercharger**). When installing inlet manifold, start nut directly behind by-pass tube first and install. Then tighten other (3) nuts.
- **Install By Pass Hose:** Flip supercharger/manifold assembly upside down and install the 90° 1 1/2" black hose to by-pass valve and by pass tube on the inlet manifold using supplied hose clamps. **NOTE:** Make sure hose clamps do not interfere with operation of By-Pass Valve.

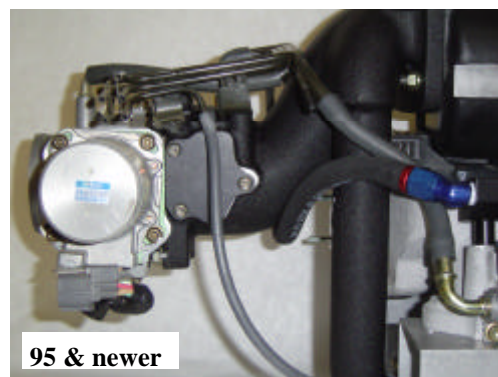


Step 4 (cont.)

- **On 91-94 models:** install idle valves (just as on stock manifold) using supplied bolts. **NOTE: make sure O-rings (2) under idle valve mounting block do not move during idle valve installation.** Install the six 10/32 allen bolts into the threaded hole at the base of each injector. Install throttle cable bracket
- **On 95 and newer models:** install the idle valve block off plate using the two o rings and the (3) 6m screws in the kit. **NOTE: make sure O-rings (2) under idle valve block off plate do not move during installation.** Install the air assist rails off of the stock manifold using the same o rings and bolts.
- **Install vacuum tube manifold:** Trimming off rear mounting tab to fit new intake tube (see step #6). After this is installed, attach shorter of 2 vacuum lines coming from bottom of intake manifold (this will be your new MAP Sensor source) and install the vacuum cap on to the old FPR hook up (see step #6 image).
- **Install air temperature sensor:** Using Teflon tape on threads use the original screws. **Note: To help installing the manifold later install the 8m manifold bolt in before mounting the Air temp. sensor.**
- **Install EGR tube:** to manifold using one of the supplied new gasket. Do not tighten until manifold is bolted to cylinder head.
- **Install throttle body assembly:** on to the new inlet manifold using all of the stock hardware.



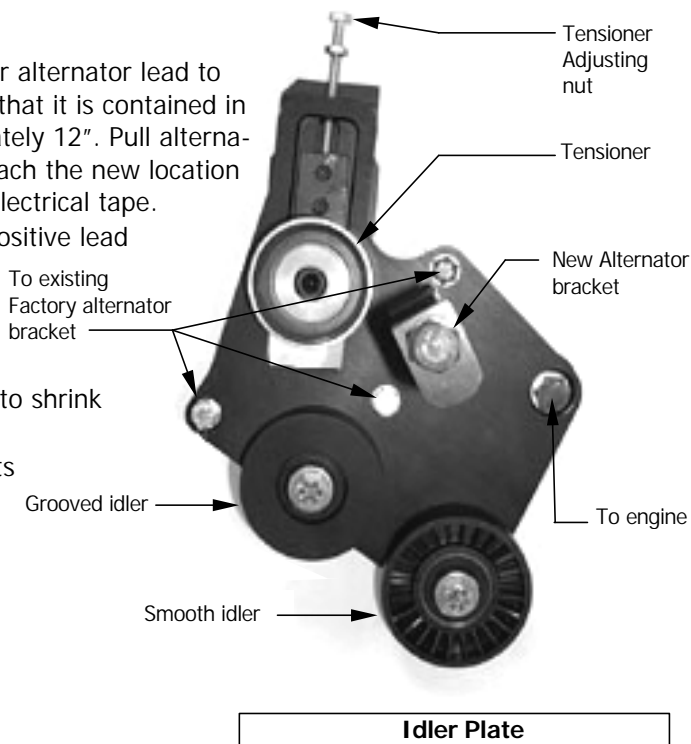
1991-1994



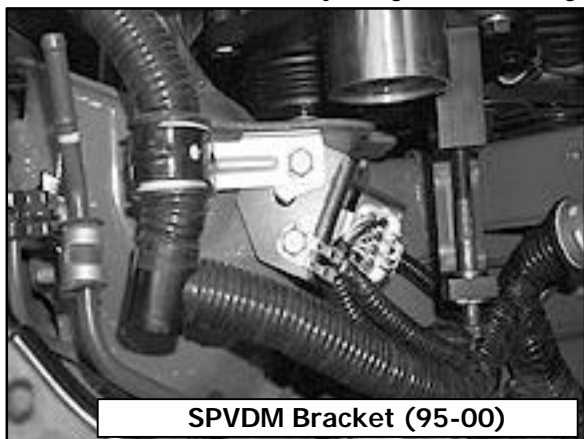
95 & newer

STEP #5

- **Free alternator 4-P connector lead:** In order for alternator lead to reach the relocated alternator, corrugated plastic loom that it is contained in needs to be cut back from wiring harness by approximately 12". Pull alternator 4-P lead out of harness enough (approx. 12") to reach the new location of the alternator. Reinstall plastic loom and wrap with electrical tape.
- **Lengthen alternator positive lead:** Alternator positive lead needs to be lengthened to reach relocated alternator. Pull rubber boot off original alternator lead and slip it on supplied alternator lead extension. Bolt extension (side with shrink wrap) to end of original lead and slide shrink wrap over connection. Apply heat to shrink wrap until connection is sealed.
- **Install front Idler Plate:** Plate mounts to (4) points on engine, 3 of which are mounts from removed alternator stiffening bracket. 4th mount uses a spacer tube bolted to alternator adjusting slot (see image).



Idler Plate



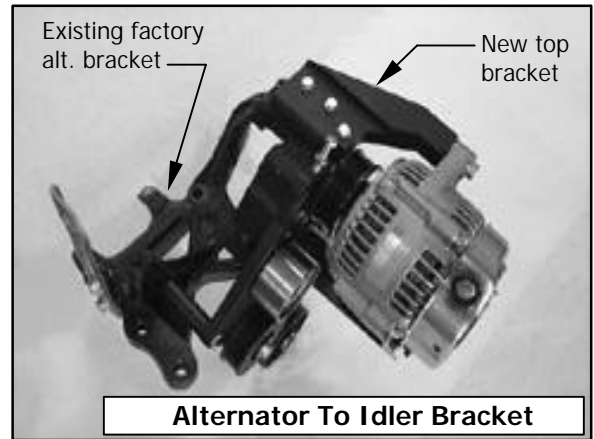
SPVDM Bracket (95-00)

Replace Spark Plug Voltage Detection Module (SPVDM) bracket (95-newer only):

A modified bracket has been included to provide clearance for relocated alternator. Remove module and ground terminal from original bracket. Mount module and ground terminal on new bracket with stock hardware and mount to original rearward mounting hole (1 connection only). See image.

Step #5 (cont.)

- **Install top alternator mount:** Top mount uses stock long alternator bolt (removed earlier) and 3 supplied new bolts (6mx30 & 6m washers) that attach mount from top. Start top 3 bolts first, then long bolt leaving all bolts loose before final tightening (see alternator image below?).



Step #6

- **Install Supercharger manifold assembly:** reuse the factory intake manifold gaskets they can be used many times with out needing to be replaced. Carefully align and lower intake assembly onto the 4 cylinder head studs and start (4) side (8mm) bolts first. Make sure to start all hardware before tightening (refer to service manual for torque specifications). **Be sure to run the long vacuum line (FPR) and boost switch wires out the passenger side of the manifold so that you can connect them in a later step.**

- **Add oil to Supercharger:** Fill supercharger at unit top by removing large silver screw dipstick and pouring in a high quality 10W40 synthetic motor oil (approx. 4 oz. is required). Fill until there is about 1" of coverage on dipstick. **DO NOT OVER FILL (this will damage the blower)**

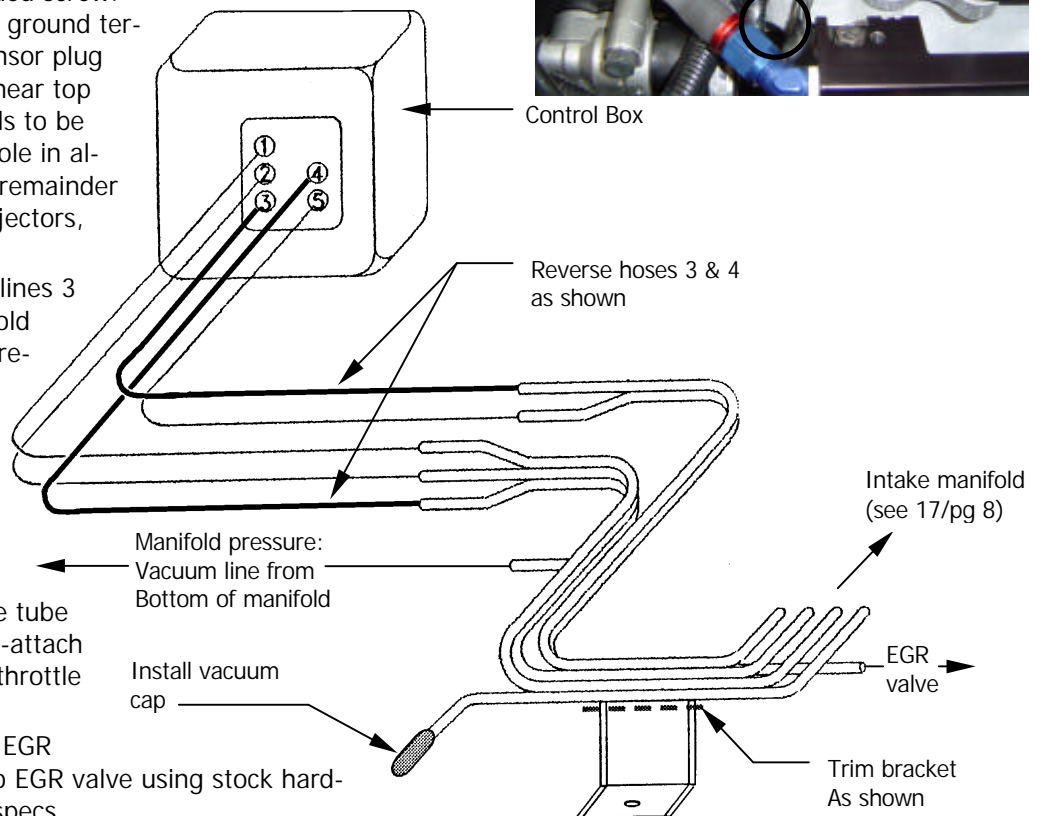
- **Attach all electrical connections:** Re-connect igniter (under intake tube). Igniter plug may have to be trimmed flat on bottom to plug it into relocated igniter. Ring terminal near rearward igniter connector must be grounded. Attach terminal to left (driver's side) rear corner of manifold, near igniter, with provided screw.



There is also a main harness ground terminal near crank cylinder sensor plug (large gray 8-pin connector near top alternator bracket) that needs to be grounded to last open bolt hole in alternator top bracket. Attach remainder of electrical connections – injectors, TPS, air temp sensor, etc...

- **Hook up hoses:** Vacuum lines 3 & 4, between vacuum manifold and control box, need to be reversed with supercharged engine (see #3). A new vacuum line will go from passenger side of manifold to new FPR when it gets installed. (**3.2 liter cars:** A longer PCV hose is required (provided) to run from intake tube to original PCV location.) Re-attach 2 coolant lines to bottom of throttle body.

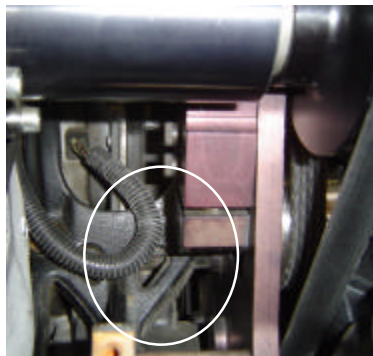
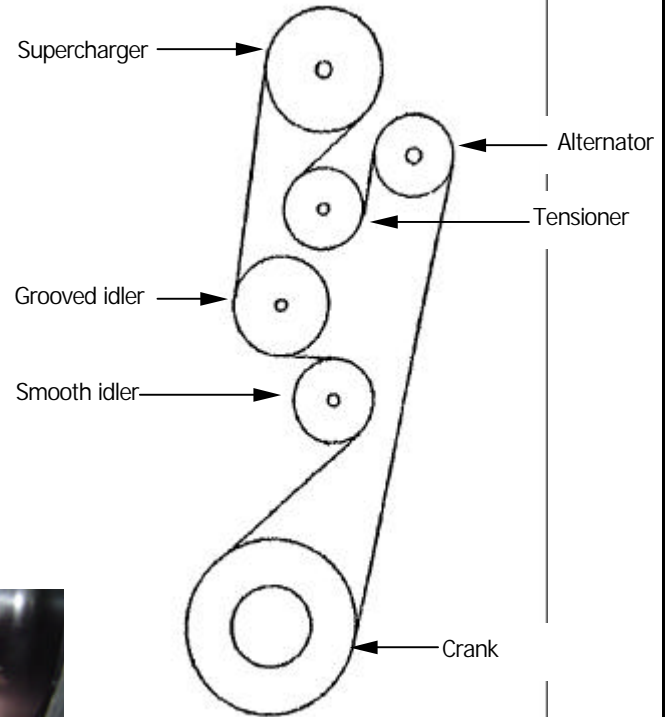
- **Install EGR tube:** Install EGR tube using the new gasket to EGR valve using stock hardware and tighten to factory specs.



03 Vacuum Hose Routing

STEP #6 Continued:

- **Install Supercharger belt:** Belt needs to be installed prior to alternator installation.
- **Install Alternator:** once the belt is in place the alternator can be installed using the two bolts supplied in the kit. Hook up the newly extended main power wire to the alternator using 1 of the 6m flange nuts from the stock manifold's fuel rail hold down hardware.
- **Tension the belt:** using the long threaded bolt on top of the idle plate turn it clockwise until you have about a 1/2" gap between the lower part of the tensioner and the main body. Once set use the two allen bolts on the back to lock it in place.



05 Belt/Pulley Configuration

STEP #7

- **Install new fuel supply hose:** With hose pointed right (passenger) side, attach supply hose to fuel filter. Loop hose back to left (driver) side, behind fuel pump resistor brace and attach to the fuel rail.
- **Install fuel pressure regulator (FPR):** FPR is mounted at rear of engine compartment on panel that divides engine and trunk compartments, just below VIN numbers. Pull carpet back in trunk to expose back side of VIN panel. Use provided template (cut template out and square up with VIN panel) to locate and drill two (2) 5/16" holes (make sure holes are below VIN number). Using supplied hardware, mount FPR as shown in FPR Image.
- **Attach lines to FPR:** Connect provided fuel line to rear fuel rail and to port on side of FPR. Connect provide fuel return line to top port of FPR. Connect other end of fuel return line to fuel return hard line with provided (2) hose clamps. Connect the newly installed vacuum line from the bottom passenger side of the intake manifold to the FPR.



STEP #8

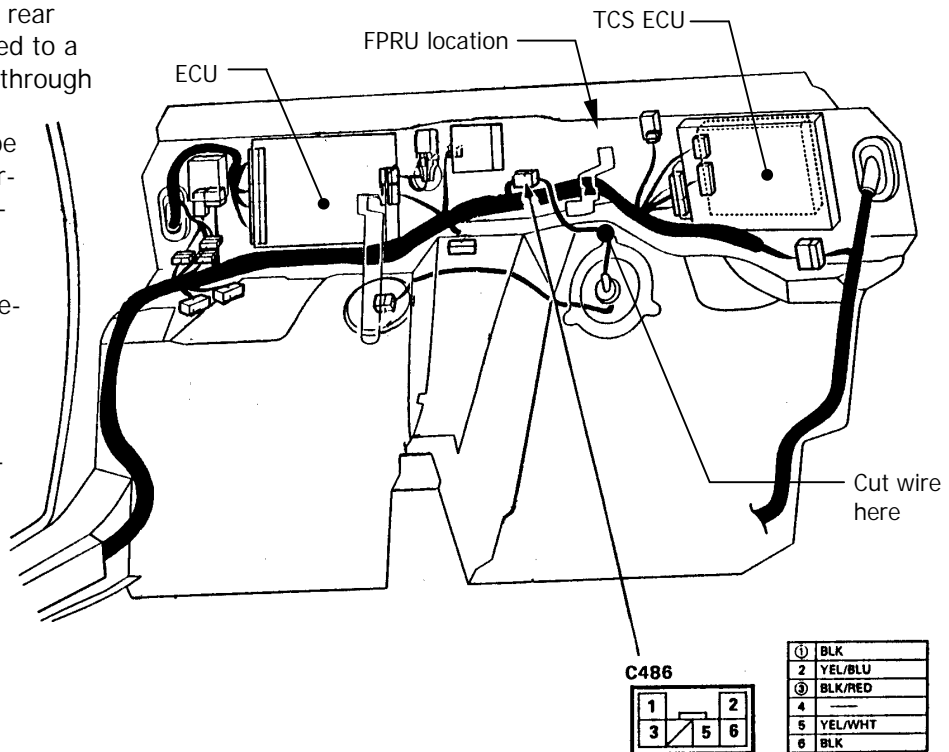
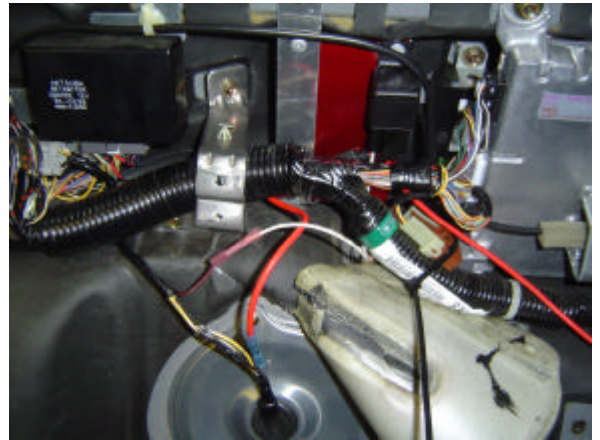
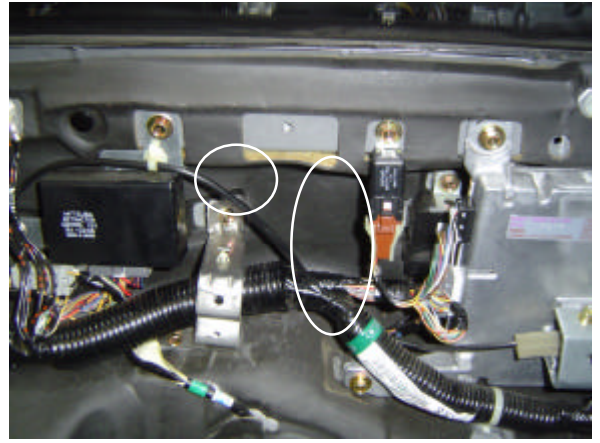
Install Fuel Pump Regulator Unit (FPRU): This unit will increase voltage to fuel pump, to increase fuel pressure, as boost builds during acceleration. This unit will be installed behind the driver's seat under top interior panel. There should be an open 6 mm bolt hole to passenger side of Traction Control ECU. Mount unit behind wire loom with cooling fins facing towards rear and FPRU wires exiting towards passenger side. Remove the old fuel pump relay it will not be reused. Disconnect the wire plug from the relay and ty-rap the unused connector to the main wiring harness.

- **There are 6 wires from FPRU that need to be connected.**

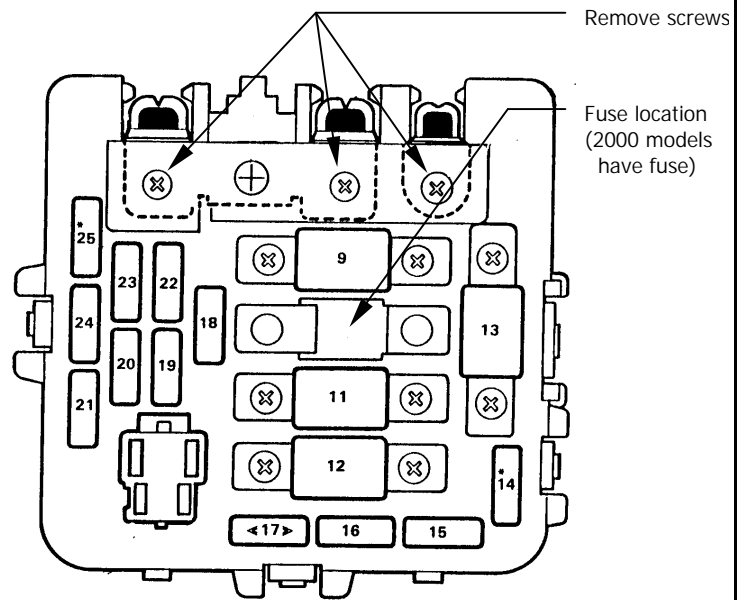
1. Long red (main power) goes to main fuse box by the air intake box.
2. Red & Black (boost switch) these wires are wrapped together as one and they go to the boost switch under the intake manifold.
3. White (system input) this will connect to the Black/Red wire coming from the #486 connector.
4. Short red (High voltage output wire) this wire will go to the fuel pump.
5. Black wire (ground) this will connect to a ground point on the rear bulk head.

- **Routing the wires:** wire routing varies depending on NSX model (Targa or non-Targa). **Targa:** All 3 wires that go into the engine bay can be routed through main wiring harness penetration at center of the rear bulkhead. Wires can be taped to a small diameter rod and fed through hole. **Non-Targa:** Red & Black (together) wires will be run through main wiring harness penetration on passenger side of rear bulkhead. Long Red wire will pass through wiring harness penetration located on bulkhead behind driver's seat.

1. **Red & Black (together) wires** need to be cut to appropriate length and connected to boost switch located under super-charger intake manifold. Install 2 provided female connectors to wire ends, connect to switch wires (red to red & black to brown).

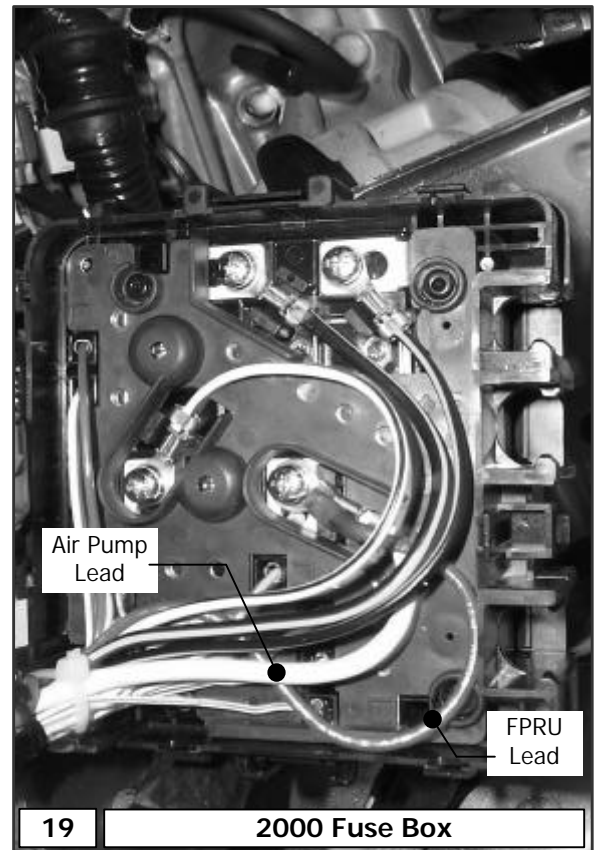


2. **Long Red (main power) wire** needs to be run along wiring harness to bottom left front corner of fuse box. Place new fuse (provided) in available space in fuse box (see photos, next page). **NOTE:** 2000 & newer models already have a fuse installed. Remove 2 fuse box mounting screws and release 2 harness connectors from their mounting brackets on bottom of fuse box. Disconnect 3 main power screws from top of fuse box. Flip fuse box over and remove bottom cover with a small screwdriver. Cut Red wire to appropriate length, attach supplied ring terminal, heat shrink the connection, and connect it to center open screw hole that corresponds with new fuse. Route wire out of fuse box with harness and re-assemble and mount fuse box back in original location. **NOTE:** 2000 models have Air Pump (smog) power lead connected to above noted screw hole on fuse box. Run Red FPRU power lead along Air Pump power lead (Bend the connecting ring terminal to allow clearance for bottom fuse box cover).



3. **White and Short Red wire** needs to be attached to fuel pump power wire located in the harness on the inside of the rear bulkhead (see 04, previous page - C486). Remove tape to expose the wires in the harness and cut Black/Red wire midway between connector and penetration grommet. Connect White wire to end coming from connector and Red wire to other end going to the fuel pump, heat shrink connections and re-tape.

4. **Black wire** needs to be connected to one of the wiring harness grounding point on rear bulkhead.



STEP #8

- **Install Electronic Signal Modifier (ESM):** See the ESM instructions included with this Supercharger kit.
- **Reinstall all components:** Reinstall all components previously removed or disconnected (interior panels, air cleaner, strut bar brace – non-targa model, battery, etc...)
- **Install Comptech Strut Brace (Targa models only):** Targa top cars require use of Comptech's Billet "K" Brace to clear supercharger components. This easily mounts in factory mounting locations with provided mounting hardware.

STEP #10

- **Check for fuel leaks:** Turn ignition on and check **all** fuel lines to insure there are no leaking connections.
- **Install fuel rail covers:** Install new Carbon Fiber fuel rail covers with provided hardware.
- **Install CARB E.O. # & Vacuum Routing Decal:** Clean and degrease area beside factory emissions decal and apply two provided decals, making sure they can easily be seen.

STEP #11

- **Check coolant level:** Check coolant level per factory service manual.
- **Start car:** Start car and again check for any fuel or vacuum leaks and unusual noises. At idle, supercharger will make somewhat of a "growling noise" due to gear lash. This is normal and nothing to be concerned about (unless it seems excessive) and will go away off idle.
- **Install Comptech Engine Cover (Targa models only):** A newly designed engine cover is required to clear supercharger and accommodate Targa top. This easily mounts just as factory cover does using factory hardware off original engine cover. See Targa Engine Cover Installation Instructions for further details.

Drive car: Drive car around and let it fully warm up and again check for any leaks.

Comptech Warranty

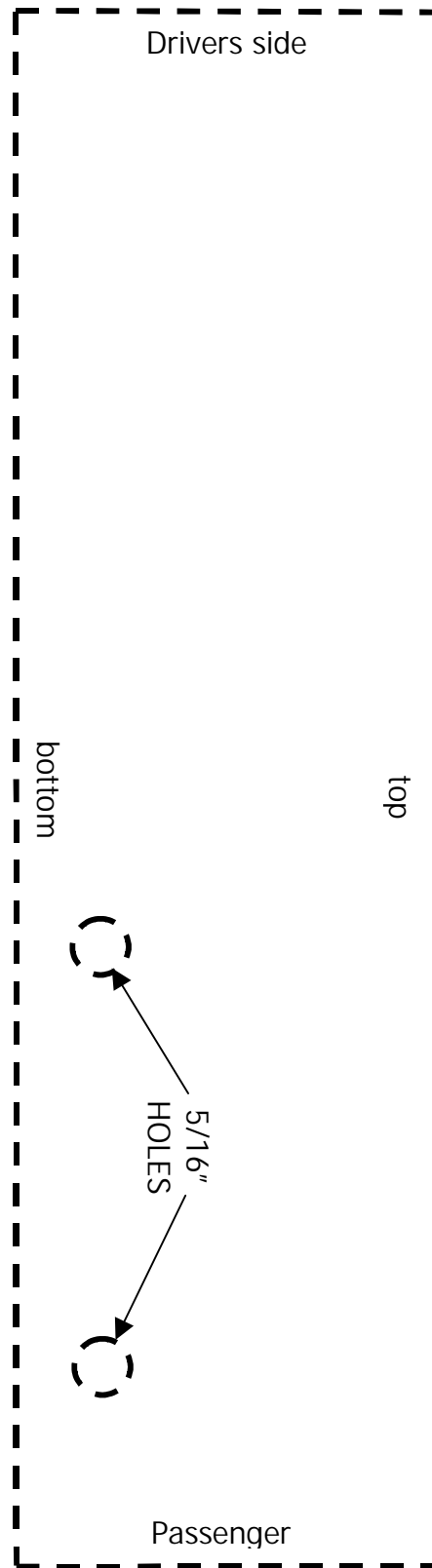
All products manufactured by Comptech USA are warranted against defects in materials and workmanship for the period of two years from date of original purchase. This warranty applies only to the original purchaser and is not transferable. This warranty is intended to cover Comptech Sport products when they are used in the manner for which they were originally designed. This limited warranty shall be void on all products found to have been used in racing or off-road applications, of any nature whatsoever, and on all products that show evidence of abuse, lack of maintenance, improper installation, misapplication, alteration in any way whatsoever from their original design or negligence in the use of Comptech Sport products by the original retail purchaser or by any agent of the original purchaser. The warranty specifically excludes, but is not limited to; brake pad material, brake rotors, clutch friction surfaces, belts, normal maintenance items, and those items designed as a racing part. This warranty does not cover consequential damages claimed as a result of the failure or use of a Comptech product. Other products distributed by Comptech USA are covered by the terms of that manufacturer's warranty.

COMPTECH USA

4717 Golden Foothill Parkway
El Dorado Hills, CA 95762
www.comptechusa.com



...Enjoy The Drive!



Fuel Pressure Regulator (FPR) Template