Powersports System Instructions

Dry EFI Applications

Part #'s 50-1XXXX-XX

INSTALLATION INSTRUCTIONS

Thank you for purchasing the highest quality nitrous system on the market. Nitrous Outlet strives to offer the best product with the best price and customer service available. Nitrous Outlet has trained professionals on staff to help with any questions you may have before, during or after your installation. You can contact Nitrous Outlet @1-866-648-7637

Most Nitrous Outlet systems are designed to work on specific applications. We suggest you contact the tech dept to learn what modifications, if any, are needed for this system to operate properly on your application.

It is the purchaser's responsibility to follow all installation instructions, guidelines and safety procedures supplied with the product. It is up to the customer to determine the compatibility of the product with the application the purchaser intends to install the product on.

Nitrous Outlet assumes no responsibility or liability for damages incurred by these products manufactured and sold by Nitrous Outlet.

Nitrous Outlet neither recommends nor condones the use of products manufactured or sold by Nitrous Outlet on vehicles which may be driven on public roads or highways, and assumes no liability for damages incurred by such use.

Nitrous Outlet accepts no responsibilities of knowing your state laws, and recommends that all products be for off road use only.

These instructions will guide you through the installation of your Nitrous Outlet nitrous system. For the best results please follow the directions in order, step by step. This way you can insure you have a safe and properly installed system.

Use blue Loc-Tite on all pipe thread connections. Do not use ANY KIND of sealer on the AN connections. DO NOT USE TEFLON TAPE. If you use blue loc-Tite you may need to warm the connection to loosen the seal

Before starting your installation, disconnect the negative battery connection. See your owner's manual for further information, if needed.

The system layout of your Nitrous Outlet powersports on direct port style system begins at the nozzle(s). On the spider style systems the layout begins with the distribution block in the air box.

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SECTION 1A NOZZLE INSTALLATION

For direct port style installations you will need to create a mock up of a nozzle and the hose that attaches to it, First step is to install the correct jet in the nozzle based on the enclosed jet chart. Then attach the appropriate AN-3 stainless steel hose to the nozzle. When you find a good location for each nozzle, indicate the center of the hole to be drilled with a center punch. Using a 1/8" bit drill, slowly begin drilling the hole; aim the drill to end at the best location inside the port. If the hole does not end up exactly where you wanted it to, use a 3/16" drill to redirect the hole to a be closer to where you wanted it to be. Then using a ¼" drill you can finalize the hole.

1/16NPT tapping instructions:

For this you will need a 1/16" NPT tap. National pipe threads provide a good seal and correct nozzle depth without the use of a jam nut. Because of this, how deep you tap will determine how far the nozzle is inside the port. You can verify the nozzle depth by only tapping until the tap is just barely inside the port. Remove the tap, thread the nozzle in BY HAND until it stops to check the depth, repeat until you reach your ideal depth. When checking the depth by treading in the nozzle BY HAND, note your final depth will be one more turn in with a wrench. Clean the area of metal shavings and cutting oil, install the nozzle using loc-tite to prevent the nozzle from loosening. The discharge of the nozzle needs to be aimed toward the piston or intake valve. For multiple cylinder installations, repeat this procedure on the remaining cylinders.

SECTION 1B DISTRIBUTION BLOCK AND DISCHARGE TUBE INSTALLATION

Remove the fuel tank and air box lid so the throttle body inlets are visible. Find a good central location with a 1" flat area inside and outside for your distribution block. Make sure there is nothing obstructing the bottom side where the bulkhead and hose will be coming out of the air box. Use a 7/16" drill bit to make the hole for the bulkhead and attach it. install the distribution block and one by one bend and cut your tubes so that they are aiming down the velocity stacks, be sure the tubes are not interfering with the butterflies in the throttle bodies. Once you have your tubes bent the way you want them make sure to install the correct jets based on the jet chart that came with your system jet pack.

09-11 SUZUKI HYABUSA AIR BOX

USEFULLTIPS using a piece of wire or welding rod as a pattern will aid in making the discharge tubes. We offer high quality tube benders #00-56020 and tubing cutters #00-56000 available.

SECTION 2 SOLENOID INSTALLATION

Install the 1/8" npt to AN-4 male fittings into the inlet and outlet ports on the solenoid. Again, blue loctite goes on the pipe thread section of the fittings. Use the solenoid bracket that is included in your system to secure the solenoid, or as a pattern for a bracket that fits better where you want to secure the solenoid. Prior to connecting the nitrous feed line from the solenoid to the distribution block. it is recommended that the hose be cleaned of any contamination that can occur during manufacturing and shipping by using a compressed air source to blow through the hose. After clearing out the feed line attach one end to the nitrous solenoid outlet fitting and the other end to the bulkhead fitting previously installed, Remember to tighten both ends of all the hoses. NOTE: The solenoid does not have to be mounted at any specific angle. Also, rubber mounting the solenoid bracket to the vehicle is not a bad idea.

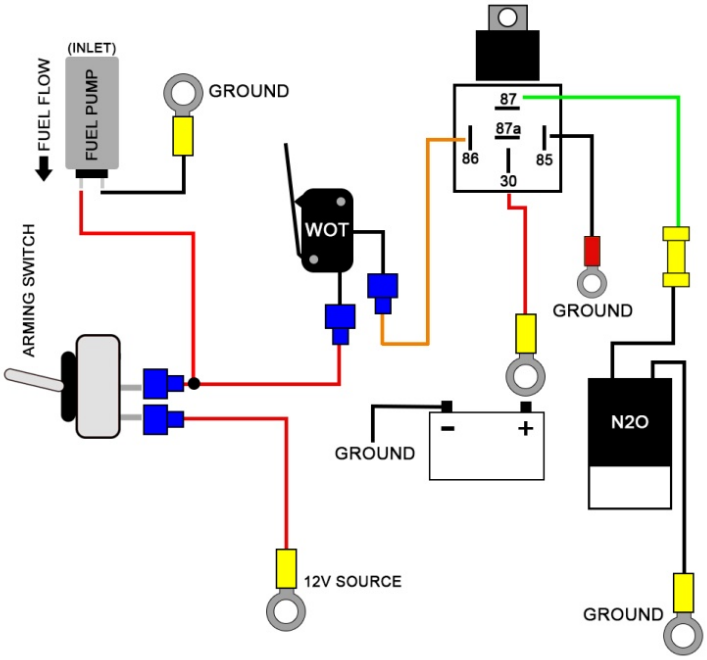
SECTION 4: BOTTLE PLACEMENT AND MOUNTING

Correct bottle orientation is critical for proper system performance. The bottle must be mounted so that the siphon tube (located inside the bottle) is in the liquid nitrous during system use. See illustrations below. If the bottle will be laying flat front to rear the valve must face toward the front of the vehicle and the outlet nipple where the main nitrous feed line attaches to the bottle must be aimed straight down. If the bottle is being mounted vertically the valve must be at the top with the outlet nipple facing to the rear. If the bottle is being placed flat side to side the outlet nipple must be at a 90 degree angle aimed to the rear. Once placement and orientation is determined use the bottle bracket(s) included in the system to secure the bottle to the vehicle. The bottle should not be mounted to any movable suspension component, non metallic location or near a heat source. Clamps are available to mount the bottle directly to a frame tube, call the tech line for more info. Before installing the main feed line be sure to blow the hose out with a compressed air source to clear out any debris that may have gotten in the line during shipping. Route any excess hose away from any moving parts.

SECTION 5: SYSTEM WIRING

Using the wiring diagram below as a guide, begin with finding a good location for the main arming toggle switch that the operator can easily reach during vehicle use. Mount the switch, next find a good location for the relay that will be away from any heat source. Assemble the WOT switch to the supplied bracket using the 4-40 screws and nuts. Be careful to not over tighten as you can crack the WOT switch. Mount the WOT switch and bracket so that it is triggered by throttle linkage to indicate when the throttle is wide open. The mounting bracket can be bent or modified to place the switch in the proper location. The activation arm is long enough to twist, bend, or cut to aid in installation. Using the supplied wire and terminals, make the connection from the positive terminal on the vehicle battery to the #30 terminal of the relay, it is the black wire. Next make the connection from the #87 terminal on the relay, it is the green wire, to one wire from the solenoid, (it does not matter which wire you use for power or which wire you use for ground) connect the other wire from the solenoid to a GOOD chassis ground. The wire from the #85 terminal on the relay also needs to be connected to a GOOD chassis ground. Make the connection from terminal #86 on the relay to one of the terminals on the WOT switch. Connect the other terminal on the WOT switch to one of the terminals on the arming switch and the final connection is from the other terminal on the arming switch to a keyed power source.

Testing the wiring begins with reconnecting the ground wire on the battery, turning on the vehicles ignition. Correct solenoid operation is verified by again turning on the vehicle ignition, turn on the nitrous system arming switch, when the throttle is opened fully you should hear the solenoid click. If you do not hear the solenoid click when you opened the throttle fully double check ALL connections. If you have questions call the tech line.



SECTION 6 SYSTEM TUNING

BOTTLE PRESSURE

For the best system performance and consistency nitrous bottle pressure is best kept between 950 to 1000psi. Bottle pressure is not an indication of the amount of nitrous in the bottle. It is a function of the bottle temperature. Ideal bottle pressure (950) is obtained at 87 degrees Fahrenheit. A bottle pressure gauge is the best method of monitoring bottle pressure. Using an automatic bottle heater will maintain the correct pressure, and the addition of a bottle jacket makes it even easier to maintain the correct pressure.

IGNITION TIMING

The ignition timing may need to be retarded from the base naturally aspirated timing, based on how much nitrous horse power you are adding.

The general rule is retard the ignition timing 2 degrees from the best base naturally aspirated timing for each 50 horsepower added.

SPARK PLUGS

The addition of nitrous will require a colder spark plug. If your are adding less than 20 hp per cylinder usually one step colder is suggested, if you are adding more than 20 hp per cylinder two steps colder is suggested. Do not go any colder than NGK heat range 9. This is the stock heat range in a lot of late model vehicles, Just avoid spark plugs with multiple ground straps, iridium, or platinum coatings.

FUEL

The use of nitrous will also require higher octane fuel, if you are using less than 20 hp per cylinder use a fuel with at least 95 (r+m/2) octane rating. If you are using more than 20 and less than 40 hp per cylinder use a fuel with at least 110 (r+m/2) octane rating. When using more than 40 hp per cylinder a fuel with a minimum octane rating of 115 (r+m/2). The fuel you use MUST NOT HAVE ANY OXYGEN ADDED!

FILL THE NITROUS BOTTLE, PUT YOUR HELMET ON, FIRE IT UP

AND HANG ON!