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POWER SPORTS TECH LINE 877-648-7687

***THIS NITROUS SYSTEM IS AS COMPLETE AS POSSIBLE HOWEVER FOR RACING OR COMPETITION SYSTEMS, A DUAL OUTLET PINGLE PETCOCK MUST BE USED.

CONGRATULATIONS

You have purchased the most technologically advanced, researched, field-tested, state of the art nitrous system manufactured to date! The most important thing to do now is to:
READ...UNDERSTAND...AND FOLLOW
these instructions. If there is some you don't understand STOP.... Call the factory tech department for help.
1-877-648-7687 Mon-Fri 9AM-5PM PST.

CAUTION

Adding a NX Nitrous system to your Power Sport machine is a job best handled by a professional mechanic with nitrous oxide installation experience, Nitrous Express Inc. urges you to seek professional help on all installation procedures.

Absolutely do not mix any other brand components, of any kind, with your NX system. Using non-compatable parts or accessories will void your warranty and could be dangerous, or even fatal.

Nitrous Express Inc. instructions are as complete as possible, however every possibility cannot be covered in this instruction sheet, if you have any problem or question, STOP and call the NX tech line for help, 877-648-7687.

The installation procedures are divided into five sections, please pay particular attention to each one.

1. Mounting the Bottle.
2. Installing the nitrous nozzles.
3. Plumbing the fuel system.
4. Testing the system.
5. Tuning tips.

Before starting any installation steps, disconnect the negative battery terminal.

SECTION 1: MOUNTING THE BOTTLE

Accurate calibration of your system depends on the bottle temperature remaining constant. The best way to ensure adequate bottle pressure is to use an NX Power Sports Bottle Heater PN 15938. Be sure the location you choose is as far away from the engine and exhaust as the supply line length will allow. The bottle must be located where it is easily accessible for ease of removal and replacement. Under the seat, body or on the swing arm are the best positions. The bottle must be mounted as shown in "Illustration A".

ILLUSTRATION A

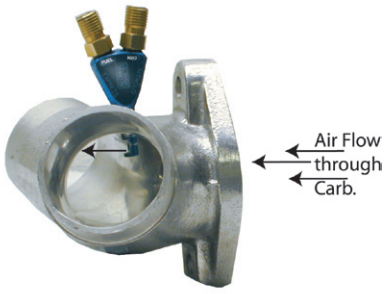
<<<<<DIRECTION OF TRAVEL<<<<<
Note Position of outlet fitting

SECTION 2: INSTALLING THE NOZZLE

1. Remove all parts necessary to gain access to the intake ports or allow removal of the intake manifold(s). Refer to the factory service manual if necessary.
2. Determine the best location for the nozzle(s) keeping in mind the following :
   - A The nozzle must be installed between the carb(s) or throttle bodies and the engine, the nozzle(s) CANNOT be in the air box
   - B The nozzle must be installed at a 90 degree angle to the air-flow through the port.
   - C You will need to be able to remove and install the braided hoses to the jet fittings on the nozzle.
   - D The nozzle(s) can be installed in the rubber boot between the carb(s) and the engine if the boot has enough space between the clamps.
   - E The nozzle(s) must be aimed to spray the nitrous and fuel into the engine

not against the side or wall of the port. (Exception: On single nozzle installation in V-twins the nozzle is aimed toward the center of the manifold, see Illustration B)

ILLUSTRATION B



F On multiple cylinder installations the nozzle locations only need to be similar, they do not have be exactly all the same. This will allow for clearance around cam chain tensioners, water outlets, etc. (see Illustration C)

3. Once the appropriate location is determined drill a 3/16" pilot hole to verify the location. Then drill the hole to ¼". If the nozzle is to be installed in the rubber intake you do not need to tap the hole, simply thread the nozzle into the hole and seal with a RTV type sealer. If you are installing the nozzle in the cylinder head make sure the cylinder you are working on is at TOP DEAD CENTER (check with service manual for any questions) then place a rag or rags in the port to prevent debris from entering the cylinder (if the rags) are coated with grease they will get almost all the fillings out of the port)

Carefully start the 1/16-npt tap (NOT INCLUDED IN THE SYSTEM) in the hole, making sure you are square to the hole (being careful not to cross thread the tap). Once the tap has started add a couple of drops of a light lubricant. Turn the tap about 2 full turns then go back about 1/3 of a turn, this will keep the tap from getting stuck on the removed material. Repeat the process until approximately 1/4" of the tap is exposed inside the port. Remove the tap and test fit a nozzle, when threading the nozzle in by hand it should stop approximately two turns from having the start of the threads flush with the surface of the port. If the nozzle will not go in far enough repeat the tapping until the nozzle is at the correct depth. Once the correct depth is achieved, remove the rags) and blow out the port with compressed air. Put clean rags back in the port and move on to the next port, repeating the procedure.

4. Select the horsepower increase you desire by viewing the chart found in the jet baggy. Select the indicated jets and insert the jets into the nozzle, the nozzle is marked "Nitrous" & "Fuel" for your convenience. Connect the stainless braided lines, RED FOR FUEL, BLUE FOR NITROUS, to the nozzle and route them to solenoids. Using the provided brackets, mount the solenoid in a central location that allows the proper routing of the braided lines.

5. **Do not use Teflon tape on any nitrous system component!!! Use Supplied NX Red Thread Sealer only!!!** No sealer is required on flare fittings; sealer is required on pipe style threads.

ILLUSTRATION C

SECTION 3: PLUMBING THE FUEL SYSTEM

This is the most important section involved in the system installation. In all cases an adequate fuel supply must be furnished to the fuel pump. On a street system a stock petcock is usually adequate. On a competition system a Pingle dual outlet petcock is required. On all fuel injected applications, you must drill and tap the fuel tank for your fuel supply. **(Do not "T" off of the high pressure line leading to the fuel injectors!)**

This system is designed to be used with a Nitrous Express fuel pump (PN 15005). No fuel pressure regulator is required, however: if a high volume aftermarket pump is used, a regulator *is* required. Fuel filters are optional, however; the user must verify fuel purity!

1. Street systems are furnished with a "T" fitting that may be used to splice into the fuel line supplying the carburetor. Route a rubber fuel line from this "T" fitting or fuel outlet to the inlet side of the fuel pump, using the supplied hose and clamps. Run a line from the outlet side of the pump to the fuel solenoid using the supplied hose and clamps. (The inlet side of the pump is the metal end, the outlet is the black plastic side with the electrical connections.) Use extreme caution when cutting and installing the rubber line to prevent rubber debris from fouling the fuel solenoid or clogging the fuel jets. Do not allow either of these lines to come in contact with the exhaust system or any moving parts i.e. suspension.

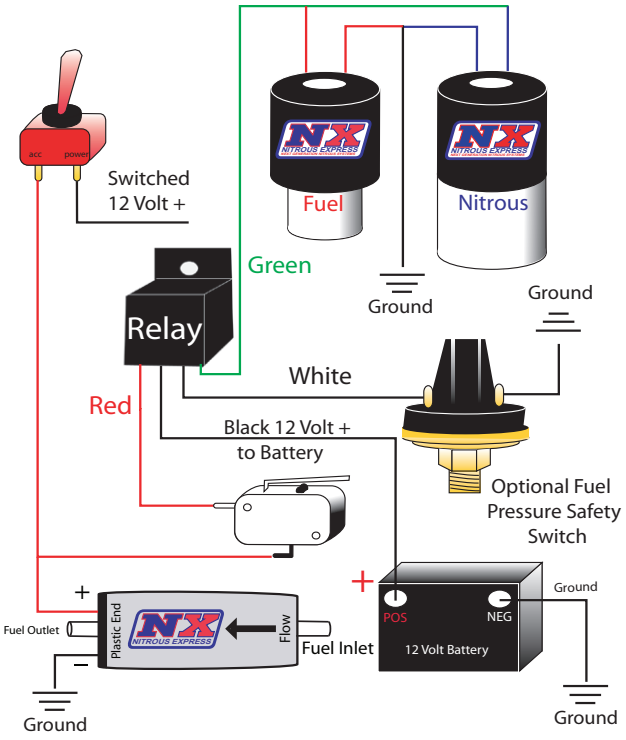
2. Competition bikes should route a line directly from the dual outlet petcock to the inlet side of the pump using the supplied fuel line and clamps.

3. For added safety and reliability, a fuel pressure safety switch should be used. (PN 15708). The switch should be plumbed between the fuel pump and the solenoid.

SECTION 4: WIRING THE SYSTEM

The triggering mechanism for all NX Power Sports systems is a wide-open throttle micro-switch. Follow the wiring diagram in "Illustration D". In all applications, always use the furnished relay, this will insure adequate voltage to the solenoids and take the high amperage load off of the trigger switch.

"ILLUSTRATION D"



SECTION 5: TESTING THE SYSTEM

After all components have been assembled on the motorcycle and each piece has been verified that it is installed properly, (call the factory tech line if you have any questions) it is time to test the system. Reconnect the negative battery cable. **Be sure the nitrous bottle is turned off and there is no pressure in the supply line!** Now arm the system by turning the toggle switch to the "ON" position. You should hear the fuel pump come on. Blip the wide-open throttle switch , you should hear the solenoids "click". Be sure both solenoids are operating. (Do not operate the system for prolonged time period with the engine off, fuel from the system will flood the engine.) Start the engine and let it warm to operating temperature. Choose a safe place to test ride your bike; **Always wear all appropriate safety equipment!** Switch the system to the "ON" position; DO NOT TURN ON THE NITROUS BOTTLE! Ride your bike using wide-open throttle, engaging the nitrous system several times or until the motor loses power and stumbles. This purges all air from the fuel circuit and insures it is working properly. If your nitrous system fails to produce this over rich stumble, STOP and recheck every detail of your installation. Once the problem has been located and corrected, rerun the procedure. Now it is time to turn on the bottle and have some real fun!!! Use *EXTREME CAUTION* when using your Nitrous Express Nitrous System; it is the most powerful system available anywhere!!! Using third gear at or above 3,000 RPM's go to wide-open throttle, engaging the system. An instant power surge should let you know the system is working. You are now ready for normal nitrous usage, have fun and be careful. No tuning is necessary, do not change the factory recommended jetting patterns, if you have a problem contact the factory tech line.

Caution: The fuel pump furnished with this system is not rated for continuous duty; do not leave the nitrous system in the "ON" or "ARMED" mode for prolonged periods. Non-warranty pump damage will result.

TUNING TIPS

Nitrous oxide works well with all applications, 4 cycle, 2 cycle, diesel, and rotary engines. Each one has individual tuning characteristics and these tips apply generally to each one. Nitrous oxide is referred to as a "LIQUID SUPERCHARGER". THE BIGGEST ENEMY OF ALL SUPERCHARGED ENGINE IS DETONATION!!! Detonation can be caused by many things, lean fuel mixture, rich fuel mixtures, inadequate octane fuel, too much ignition timing, not enough ignition timing, or lugging the engine, just to mention a few!

1. Your motorcycle engine should be tuned to its maximum power prior to nitrous use.
2. Your ignition system should be at its maximum. A stock ignition will be adequate on most street systems, but for competition use, you must have the very best available ignition components.
3. The stock spark plugs on your bike are too hot to be used with nitrous. Usually 2 steps colder will be about right. On competition systems, use the coldest plug available. Do not use platinum tipped spark plugs, the spark kernel is to small for nitrous usage and cannot ignite the mixture at the cylinder pressures that nitrous creates. **Since manufacturers specifications on the plugs vary from make and model, call the tech line to find the right plug for your application.**
4. The NX system is so advanced that huge amounts of timing retard are not required. If adequate octane fuel is used only small amount of timing retard may be needed. Excessive timing retard in an internal combustion engine causes increased cylinder temperatures, engine overheating, and over rich fuel conditions.
5. The fuel system must be in top operating condition. Be sure the fuel filter is clean and there are no restrictions in the fuel supply line.

6. The engine should be at operating temperature before nitrous is used.

7. Never "LUG" the engine while using nitrous! Use the system at wide-open throttle only! Never engage the system below 3,000 RPM's. IF you do any of the above, a serious "BACKFIRE" condition may result in serious engine damage or physical injury.

8. **Do not attempt to drill or alter the jets or serious engine damage will result.** These items are engineered to their maximum capability. Any modifications you can make will decrease power and hurt engine parts.

9. All NX systems are designed to operate at 1,050 PSI bottle pressure. This is extremely important and cannot be stressed enough!!! If the pressure is below this, the system will be rich, if it is above this it will be lean! The bottle pressure can be monitored easily with our bottle pressure gauge (PN 15509). In cool weather a bottle heater is required (PN 15938). In extremely hot weather a wet towel or chamois may be placed over the bottle to reduce pressure.

10. A purge valve (PN 15600) is a must on all competition systems and a plus on the street systems, as well. A purge valve is worth about a tenth of a second on a 1/4 mile pass. The correct purging procedures of drag racing is: 1. Complete your burnout. 2. Light the pre-stage bulb. 3. Push the purge button three times, in one second increments. 4. Stage immediately, go fast!!!

11. If there is a question about the purity of your nitrous supply, a filter (PN 15607) should be used when refilling your nitrous bottle. Contaminated nitrous will cause serious damage to your system components.

12. Periodically check all fittings, connections, and mounting bolts for leaks and tightness.

13. Always turn the nitrous bottle off when not in use, even between runs.

14. Always start with the lowest power setting in your system. Start out small and work your way up, NX systems produce more "REAL" horsepower than any other on the market today!

15. If you run a 50+ HP system you must run the highest motor octane racing fuel available. Here are some tips to help you choose fuel for you bike:

A. The relevant number to look at when choosing a racing fuel is the "MOTOR" octane number or MON, the research octane number is not a reliable gauge of fuel octane level

B. Never store your fuel in a vented container; never store your fuel in white fuel jugs, or in direct sunlight. If you must use plastic, use only dark colors. Sunlight will oxidize the lead out of racing fuel. Lead is what makes it high octane. A steel "JERRY" can is the best.

C. Do not leave your racing fuel stored in the motorcycle tank. Keep it in a sealed, airtight container off the floor.

D. NEVER USE AVIATION GAS!!!!!

Instant engine damage will be the result! The specific gravity of avgas is very light and it is not formulated to operate in non-aircraft engines.

E. Never buy racing fuel from a vented container, or from an underground tank. Buy from a sealed drum only.

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IN CONCLUSION

This instruction sheet and power tuning tips are valid for NX systems only. If you have a kit from another manufacturer this information will not help you. The instruction sheet from another manufacturer's kit will not help you with the NX system! If you need help call your dealer or the factory tech line.

DO NOT MIX ANY COMPONENTS FROM ANY OTHER MANUFACTURER, THIS WILL VOID ALL WARRANTIES AND LIABILITIES!!!!!

If you follow the foregoing suggestions, your NX system will operate trouble free. Got a problem? Call the factory tech line 9AM to 5PM PST 877-648-7687.

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