EDELBROCK
NITROUS REFILL PUMP
#78001

Edelbrock Nitrous Systems
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Thank You....
...for purchasing an Edelbrock Nitrous Oxide Refill Pump.

Nitrous Oxide injection is one of the most exciting performance enhancements, for the dollar invested, on the market today. With the use of nitrous oxide come some important safety considerations. This manual has been written to help you during the installation and use of your Edelbrock Refill Pump. Please read it completely before you use your system. Please pay close attention to the safety information at the beginning of each section.

Please take the time to read and understand the following....

By setting up your Edelbrock Refill Pump, you indicate you have read this document and you agree with the terms stated below:

It is the responsibility of the purchaser to follow all installation instruction guidelines and safety procedures supplied with the Edelbrock Refill Pump.

Edelbrock Corporation assumes no responsibility for damages occurring from misuse, abuse, improper installation, improper operation, lack of responsible care, or all previously-stated reasons resulting from incompatibility with other manufacturer's products and/or systems.

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

Edelbrock Corporation assumes no responsibility for damages incurred by the use of products manufactured or sold by Edelbrock Corporation on vehicles used for competition or racing.

Edelbrock General Warranty

It is the constant endeavor of Edelbrock Corporation to give our customers the highest quality products obtainable. Edelbrock warrants each new product, except Performer Series Carburetors, Race Division Parts, Tubular Exhaust Systems, RPM Series Mufflers, Cat-Back Systems and Performer IAS Shock Absorbers which are warranted separately, to be free from defects in both workmanship and material for a period of one (1) year from the date of purchase, provided that the product is properly installed, subjected to normal use and service and that the product is not modified or changed in any way, negligence by customer or installer or used for racing or competition purposes.

Our warranty service and repair facility is located at 2700 California Street, Torrance, California 90503. Customers who believe they have a defective product should either return it to the dealer from which it was purchased or ship it directly to Edelbrock along with proof of purchase and a complete description of the problem. The product must be returned freight pre-paid. If a thorough inspection of the product by the factory indicates defects in workmanship or material, our sole obligation shall be to repair or replace the product. Warranty covers only the product itself and not the cost of installation or removal.

Edelbrock Corporation shall not be liable for any and all consequential damages occasioned by the breach of any written or implied warranty pertaining to this sale in excess of the purchase price of the product sold.

If you have any questions regarding a product or installation, please contact our Technical Department, toll free at 1-800-416-8628 from 7:00am to 5:00pm PST, Monday through Friday.

Thank you again for choosing Edelbrock Nitrous Systems.

What is Nitrous Oxide?

Nitrous Oxide is a cryogenic gas composed of nitrogen and oxygen molecules. It is stored as a "gas over a liquid" which means that both liquid and gaseous nitrous oxide is delivered into your engine. It is 36% oxygen by weight, which is what produces the added horsepower. By injecting more oxygen (and a corresponding fuel signal), we create the additional power much like a supercharger or a turbocharger does.

Nitrous Oxide is considered an "oxidizer" and not a fuel. Nitrous oxide is non-flammable by itself. Because nitrous oxide is a cryogenic, the same safety methods in handling dry ice apply to nitrous. Direct contact with the skin will cause a burn similar to contact with dry ice. The exception in using nitrous oxide comes from increased breathing hazards associated with the gaseous properties of nitrous oxide.

Nitrous Oxide is offered for sale in two common grades, which are U.S.P., and *Nytrous Plus*. U.S.P. nitrous oxide is medical grade nitrous oxide. Its common use is dental and veterinary anesthesia as well as use as a propellant in food such as canned whip cream. U.S.P. is not available to the public and would provide no advantage in the making of horsepower over the automotive grade nitrous oxide.

Nytrous Plus was specifically designed for automotive consumption and differs from U.S.P. in that it contains trace amounts of sulfur dioxide (100 parts per million or "PPM") added to prevent substance abuse. The Sulfur Dioxide is an irritant to all of your breathing passageways and will cause sore throats and sore nasal passages. *Nytrous Plus* was specifically created for automotive applications and is available for sale to the public at many speed shops across the USA.

☑ Safety Steps For Working With Nitrous Oxide

1. **Never** inhale *Nytrous Plus* (Nitrous oxide (N_2O) for vehicular use) as continued exposure can cause **death**. *Nytrous Plus* has a maximum of 100 parts per million (ppm) of sulfur dioxide and will cause irritation to nose and throat passageways.
2. When working around any high-pressure gas including nitrous oxide, take all precautions to ensure that exposure to nitrous oxide is minimized.
3. **Do not** vent nitrous oxide to atmosphere in confined spaces. Only vent nitrous oxide in well-ventilated and open areas.
4. Liquid nitrous oxide can **cause burns to human flesh** so protect all skin in and around your hands, arms and face. Wear safety glasses and rubber gloves to protect from liquid nitrous oxide splatter.
5. When venting down the nitrous system, vent the line down closest to the nitrous bottle.
6. **Do not** use any form of Teflon tape as sealant on fitting connections. **Use only Teflon paste**.
7. When washing components, ensure the clean components are completely dry, free of oils, and solvents. Failure to remove all liquids could cause component or system failure.
8. Always turn the bottle off before making any repairs to the nitrous delivery system.
9. To safely release nitrous oxide in a pressurized line:
    a. Position vehicle in a well-ventilated, unconfined space.
    b. Turn bottle off.
    c. Slowly loosen the nitrous feed line at the bottle until you hear a light hissing noise.
    d. Allow the entire nitrous pressure to vent from the line.
    e. Perform your work on the system.
    f. Tighten the nitrous line to the bottle.
    g. Slowly open the nitrous bottle valve, listening for leaks.
    h. Perform leak checks on all affected fittings and the bottle fitting.

Pump Warnings

1. **Always** use Teflon pipe sealant on all pipe (NPT) fittings. It is recommended to use a Teflon paste sealant instead of Teflon tape to ensure no blockages in your system commonly caused by the use of Teflon tape.
2. Loose connections of both feed air and nitrous oxide can cause serious injury or death.
3. **Always** pump nitrous oxide through a nitrous filter. Never pump unfiltered nitrous oxide.
4. **Do not** exceed 100 psi for driving air pressure. Pressures in excess of 100 psi can cause equipment damage and/or catastrophic failure of equipment. Serious injury or death can result. A high quality regulator/filter system should be used to assure no damage occur to air-driven pump used in the nitrous refill station.
5. For the maximum pump life, driving air should be filtered to 10 microns.
6. **Always** use an inline water separator between air compressor and Refill pump. Failure to do so may result in shortened pump life, corrosion, and pump failure.

☑Safety Tips for the Refill Station

1. **Always** chain your "mother" bottle securely to a wall or solid work station to protect the bottle from falling.
2. Place the station away from high foot traffic area. This will prevent exposure to residual nitrous oxide vapors and tripping dangers associated with the "mother" bottle stand.
3. Positively mount the pump to a solid work surface. **Do not** attempt to fill nitrous bottles without mounting the pump. The pumping process is cyclical and therefore the pump will vibrate during the pumping process. This will cause the pump to move and possibly fall over if not mounted properly.
4. The cyclical nature of the pumping process will cause minor whipping of the nitrous feed lines. Take care to not bind or restrict the movement of the nitrous feed lines.
5. Place your refill station in a well-ventilated area away from any open flame which would included heated devices such as hot tanks, water heaters and any area in close proximity to such equipment as welders.
6. **Always** completely remove the bottle that you plan to fill from the vehicle or motorcycle that it is installed.
7. **Always** verify the cylinder that you are filling has a current hydro test date. The month and date (mm*yy format) are stamped into the neck of the bottle. **Never** fill a bottle that is more than five years past its test date. These bottles should be sent for re-certification. This can be done through most welding or scuba supply shops for a minimal charge.
8. **Never** fill a bottle that has been altered, modified, dented, or appears to be heated by a open flame.
9. **Always** verify that a pressure release device is installed on the bottle valve. It is illegal to fill a bottle in which the PRD has been removed or modified in any way.
10. **Never** drive the pump with any gas other than clean dry air or vapor CO_2 regulated at no more than 100 psi. Use of 100 psi or more driven air can damage nitrous refill pump.

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