

# SNIPER

## SNIPER™ NITROUS SYSTEMS

P/N 07001NOS & 07004NOS



### INSTALLATION INSTRUCTIONS P/N A7001-SNOS

#### GENERAL INFORMATION

The Sniper™ System is intended for use on domestic V-6 and V-8 engines using a single 4V Holley or 4V "Rochester Quadrajets" carburetor. Horsepower and torque increases will vary with engine displacement and modification. Approximate power increase estimates can be made based on the mass flow of nitrous oxide into the engine. Three jetting kits are supplied with this system kit to allow you to vary your engine's power output. On a typical mildly modified 350 cubic inch engine, you can expect the following approximate power gains for each of the three jetting combinations:

Nitrous/Fuel Jetting	Approximate Power Gain	Approximate N <sub>2</sub> O Consumption Rate
47 / 53	100 HP	1.00 lbs. / 10 sec.
55 / 61	125 HP	1.25 lbs. / 10 sec.
63 / 71	150 HP	1.50 lbs. / 10 sec.

#### SNIPER™ KIT REQUIREMENTS

When used correctly, nitrous oxide elevates cylinder pressures and temperatures while increasing the combustion rate. These characteristics make the engine more sensitive to detonation. To ensure proper performance and engine life, the following are absolute musts:

##### Adequate Fuel Pressure and Delivery

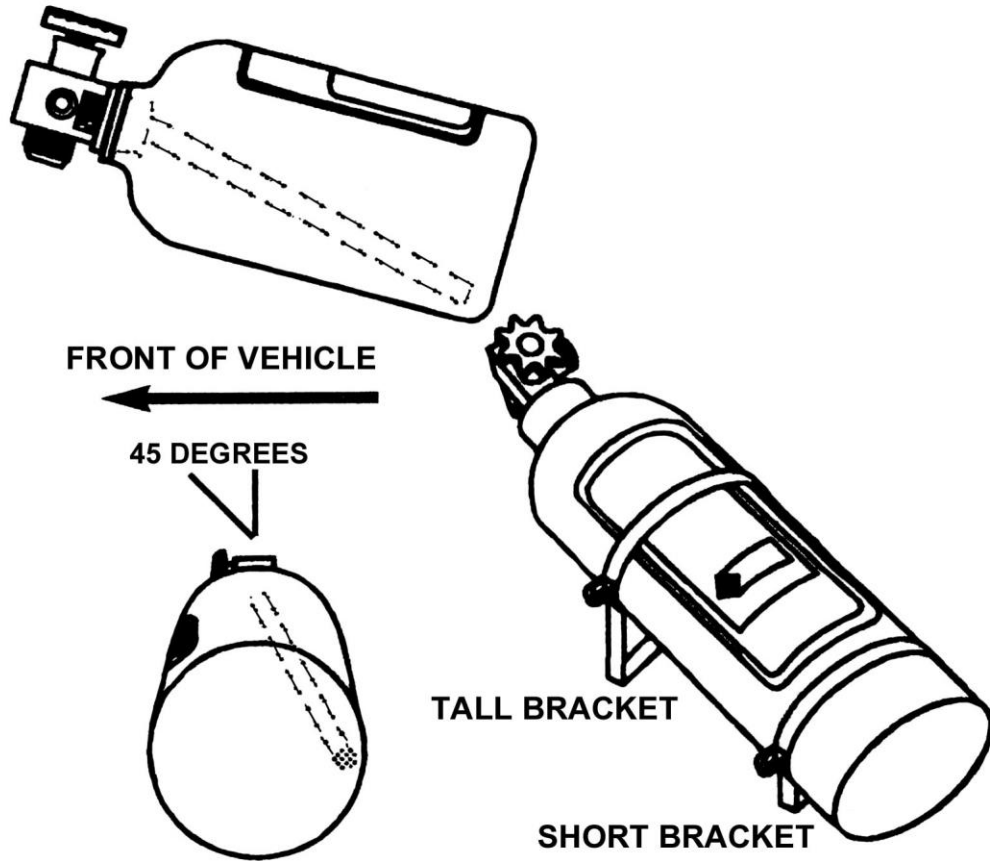
Most carburetor's are designed to operate at 5 psi to 10 psi. when purchasing your fuel system components, plan on your pumps and lines flowing at least 0.10 gallons per hour per horsepower at 5 psi.

**NOTE:** Most pumps are rated at free-flowing conditions - at 5 psi, their flow rates may be greatly reduced.

## BOTTLE ORIENTATION

Bottle placement is critical to the performance of your Sniper nitrous system. It is important to understand how the bottle valve and siphon tube are assembled to properly orient the bottle in your vehicle and ensure that it picks up liquid nitrous while undergoing acceleration. Whenever the bottle is mounted in a laydown position, the valve handle must be towards the front of the vehicle with the label facing up. If the bottle is mounted vertically, the valve handle and label must face toward the front of the vehicle. This orientation will position the siphon tube at the back of the bottle where the liquid  $N_2O$  will be during acceleration. See Figure 1.

**Figure 1 Nitrous Bottle Mounting Orientations**

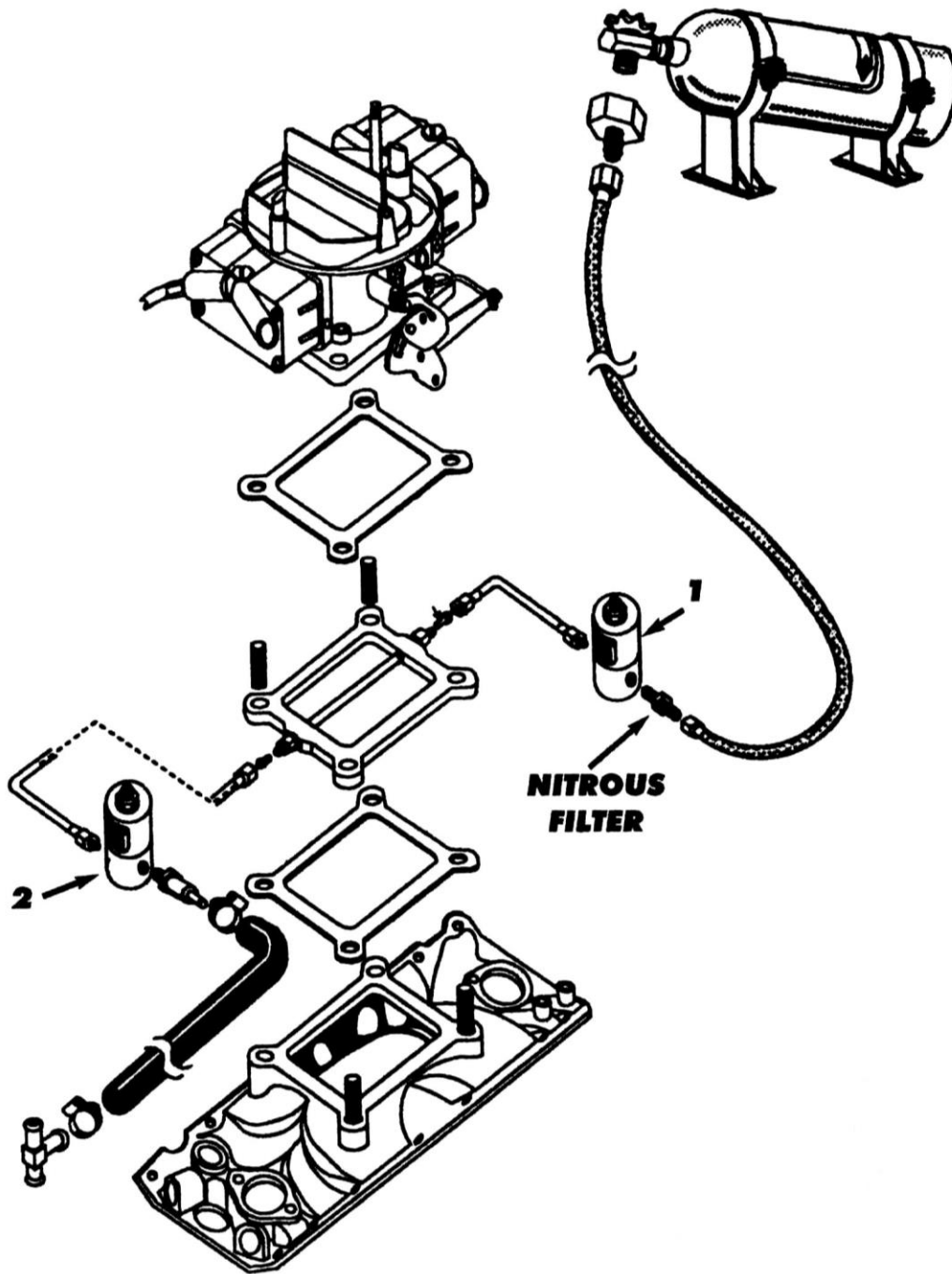


## INJECTOR PLATE MOUNTING

Use the following procedure to install injector plate:

1. Remove the carburetor inlet ducting and air cleaner.
2. Disconnect the throttle linkage from the carburetor.
3. Disconnect the fuel line from the carburetor.
4. Remove the carburetor.
5. Remove the stock carburetor studs.
6. Install the extended carburetor studs.
7. Install the injector plate and gaskets on the intake manifold with the NOS label facing up. See the assembly drawing (Figure 2) for an illustration of the part installation.
8. Install the carburetor.
9. Connect the throttle linkage.

Figure 2 Sniper™ Assembly Drawing



## SOLENOID MOUNTING

Use the following procedures to install the nitrous solenoid (1) and the fuel solenoid (2). See the assembly drawing (Figure 2) for an illustration of the part installation.

**NOTE:** Remember to use PTFE paste only on pipe threads.

## NITROUS SOLENOID INSTALLATION

**CAUTION:** Do not overtighten the vise in the following procedure or the solenoid will be damaged.

1. Clamp the nitrous solenoid base in a bench vise.
2. Install the nitrous filter fitting in the inlet port of the nitrous solenoid.
3. Install the proper nitrous jet in the blue end of the injector plate, with the beveled edge out.

4. Loosely install the formed blue solenoid extension tube to the injector plate.
5. Loosely install the nitrous solenoid on the blue solenoid extension tube.
6. Adjust the solenoid and extension tube for the desired solenoid location.
7. Tighten the solenoid/extension tube fitting and extension tube/injector plate fitting.

## FUEL SOLENOID INSTALLATION

**CAUTION:** Do not overtighten the vise in the following procedure or the solenoid will be damaged.

1. Clamp the fuel solenoid base in a bench vise.
2. Install the in-line fuel filter in the inlet port of the fuel solenoid.
3. Install the proper fuel jet in the red end of the injector plate, with the beveled edge out.
4. Loosely install the formed red solenoid extension tube to the injector plate.
5. Loosely install the fuel solenoid on the red solenoid extension tube.
6. Adjust the solenoid and extension tube for the desired solenoid location.
7. Tighten the solenoid/extension tube fitting and extension tube/injector plate fitting.

## NITROUS FEED LINE MOUNTING

**HINT:** Most late-model vehicles have access plugs in the trunk floor that are convenient for line routing. Following the fuel lines along the underbody, and entering the engine bay through the front fender well between the plastic inner fender panel and the body usually works well.

1. Determine the route for your nitrous feed line to follow. Ensure that the path is clear of exhaust system, suspension, steering, wheels, electrical lines and components, and tires.
2. Feed the nitrous supply line along the proposed route.
3. If it is necessary to support the nitrous supply line under the vehicle, use nylon tie wraps to support the line securely.
4. Attach the nitrous supply line to the nitrous bottle valve adapter.

**WARNING!** Nitrous oxide can cause death if inhaled. Severe frostbite can occur if allowed to contact the skin. Always point the nitrous line opening away from people when purging the line.

5. Purge the nitrous supply line:
  - A. Wrap the end of the nitrous line with a rag.
  - B. Point the opening away from people.
  - C. Briefly open the bottle valve.
6. Attach the nitrous supply line to the nitrous filter fitting installed in the nitrous solenoid inlet port

## AUXILIARY FUEL LINE INSTALLATION

Under most operating conditions, it is suggested that a separate 3/8-inch fuel line and pump be dedicated to the nitrous system. If you choose to use a single-line fuel system to feed both the engine and the nitrous system, follow these instructions, but remember that at higher power levels, this fuel system may be inadequate.

1. Choose a location where the primary fuel line is to be tapped.
2. Cut and deburr the primary fuel line.
3. Install the brass fuel-line TEE fitting in the primary fuel line.
4. Connect the brass TEE fitting to the fuel filter fitting installed in the inlet port of the fuel solenoid using the auxiliary fuel hose and fuel hose clamps.

## ELECTRICAL SYSTEM INSTALLATION

Refer to the wiring schematic (Figure 4) for the electrical system installation.

**WARNING!** Death or injury may occur from working on a charged electrical system.

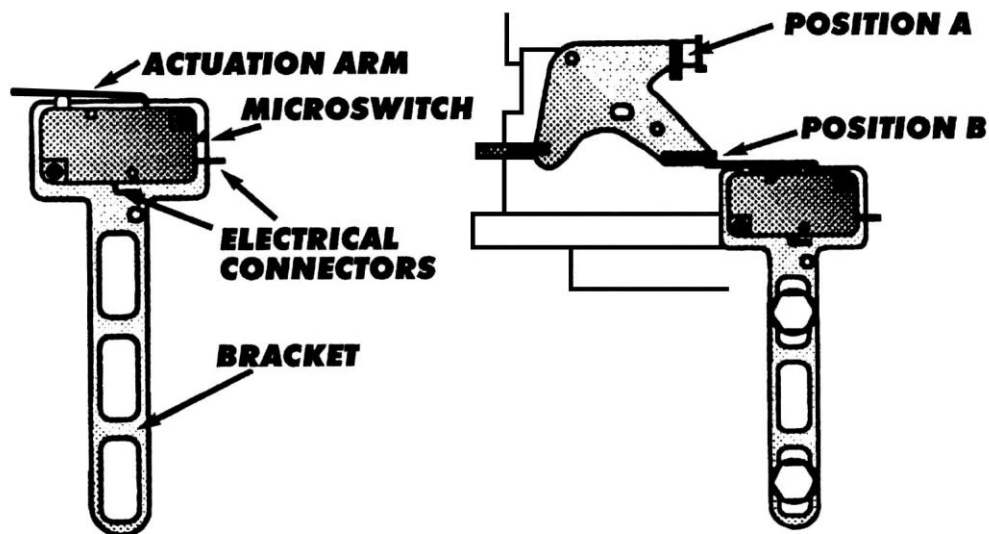
1. Disconnect the car battery.

**WARNING!** Binding or dragging of the throttle linkage will create a potentially dangerous stuck-throttle condition. Ensure that the microswitch does not interfere with normal throttle linkage operation.

**NOTE:** The microswitch may be mounted to the bracket in a variety of positions or on either side of the bracket. The bracket may be bent to suit the application.

2. Install the throttle microswitch as follows:
  - A. Mount the microswitch on the carburetor, so that the microswitch is triggered by throttle linkage movement.
  - B. Adjust the microswitch to trigger at wide-open throttle by adjusting the microswitch's position to ensure that the actuation arm of the microswitch "clicks" at the same point your throttle linkage reaches wide-open against the throttle stop, (position A).
  - C. Ensure that the microswitch is activated by the accelerator pedal. Slowly press the throttle to the floor, while you listen for the "click" of the microswitch, (position B).

Figure 3 Throttle Microswitch Installation



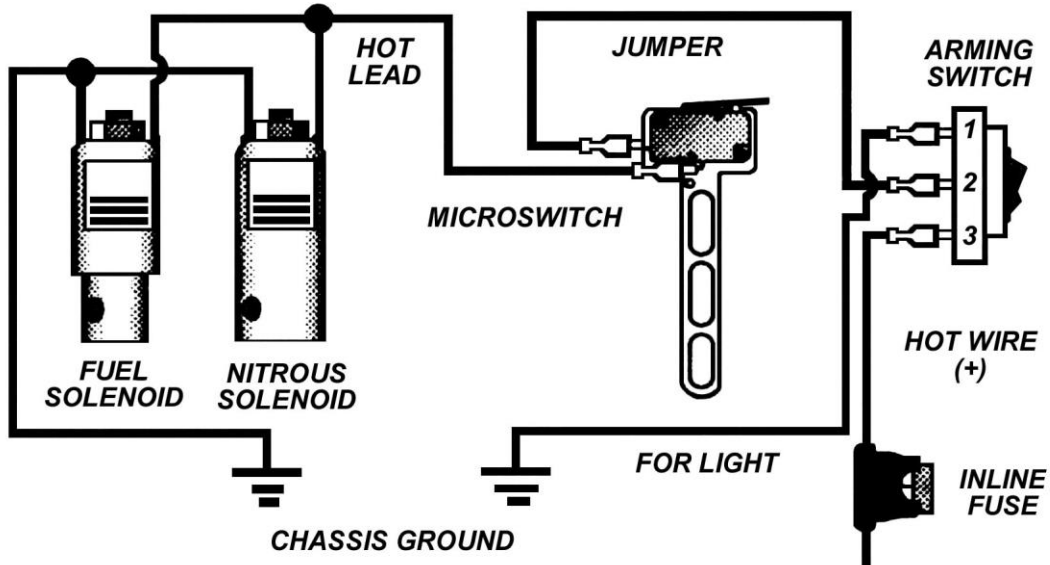
3. Install the arming switch within easy reach of the driver.
4. Connect terminal #3 on the arming switch to an ignition switched +12V source, using the fused red wire provided.

**NOTE:** When selecting an ignition switched +12V source, ensure that your source is capable of handling the amperage of the fuse provided.

5. Connect terminal #2 of the arming switch to one post of the throttle microswitch (either post will do), with the blue wire provided.
6. Connect terminal #1 of the arming switch to ground. (You may elect to skip this step. If you do so, the light in the arming switch will not illuminate when the system is armed).
7. Connect the open post of the microswitch to one wire from each solenoid (either wire will do, the solenoids are not polarized), using the blue wire provided.
8. Connect the open wire from each solenoid to ground.

Figure 4 Wiring Schematic

### WIRING SCHEMATIC



## NOS Technical Support

**Toll-Free Phone: 1-866-464-6553**

**Phone: 1-270-781-9741**

**For online help, please refer to the Tech Service section of our website:**

**[www.holley.com](http://www.holley.com)**

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