LED PURGE VALVE KITS
P/N 16028NOS (5 lb. bottle) & 16029NOS (10 lb. bottle)
Instruction Sheet P/N 199R10412

1.0 INTRODUCTION:

Purge Valve Kits, P/N 16028NOS & 16029NOS are intended for use on competition and street vehicles, without NOS nitrous oxide injection systems. The purpose of these kits is to provide the appearance that you have a nitrous system with the well known purge spray.

NOTE: A cloud of nitrous being purged from your vehicle gives the appearance and warning of nitrous injected power to the competition.

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.

16028NOS & 16029NOS PARTS LIST:

Item	Qty	Description	NOS P/N
1	1	Kit 16029NOS - Bracket, short Kit 16028NOS - Bracket, short	14126-SNOS 14111-SNOS
2	1	Kit 16029NOS - Bracket, long Kit 16028NOS - Bracket long	14127-SNOS 14112-SNOS
3	1	Kit 16029NOS - 10 lb. Bottle (electric blue) Kit 16028NOS – 5 lb. Bottle (electric blue)	14745NOS 14730NOS
4	1	16 ft. Hose – 4AN	15300-SNOS
5	1	Relay Wiring Harness	15604-SNOS
6	1	30 amp Relay Switch	15618-SNOS
7	1	2 Stage Wire Pack	15625-SNOS
8	1	14 gauge Blue Wire (8 ft.)	15751-VSNOS
9	1	14 gauge Red Wire (10 ft.)	15777-VSNOS
10	1	14 gauge Black Wire(10 ft.)	15779-VSNOS
11	1	Powershot Purge Solenoid	16025-SNOS
12	1	4 AN Bottle Nut	16220-SNOS
13	1	Bottle Nut Washer	16210-SNOS
14	1	1/8” x 12” Steel Tube	16300-SNOS
15	1	1/8 NPT x 1/8” Compression Tee (90°)	16434-SNOS
16	1	Powershot Solenoid Bracket	16505-VSNOS
17	2	8-32-5/16 Pan Head Screw	15606-SNOS
18	1	Instruction Sheet	199R10412
19	2	T-Tap	204R247
20	1	LED Purge Assembly Blue	34R1243A
21	1	Nitrous Filter -4AN - 1/8NPT	15570-SNOS

2.0 Bottle Mounting Instructions

NOTE: Disconnect the battery ground before beginning installation.

2.1 Street Vehicles

Mount the bottle away from heat sources, such as the engine compartment or exhaust system, and away from windows, where the bottle is exposed to direct sunlight.

NOS recommends that the bottle be environmentally separated from the driver's compartment. Because hatchback-type vehicles generally do not have a firewall between the trunk area and the driver's compartment, the safety pressure relief cap should be replaced with P/N 16166NOS and P/N 16160NOS should be added. P/N 16160NOS is an aluminum blow-down tube (a –8 neoprene-line braided hose can be substituted). The blow-down tube should be routed to the exterior of the vehicle (preferably under the vehicle). This procedure will prevent filling the driver's compartment with a cloud of nitrous oxide, if the safety pressure relief cap should happen to rupture for any reason.

2.2 Racing Vehicles

Before mounting a nitrous bottle in a racing vehicle intended for use in sanctioned events, check with the sanctioning association for any rules regarding this subject. Most associations require that the bottle be mounted within the confines of the safety roll cage with the safety pressure relief cap vented away from the driver's compartment.

Figure 1 Nitrous Bottle Siphon Tube Orientation

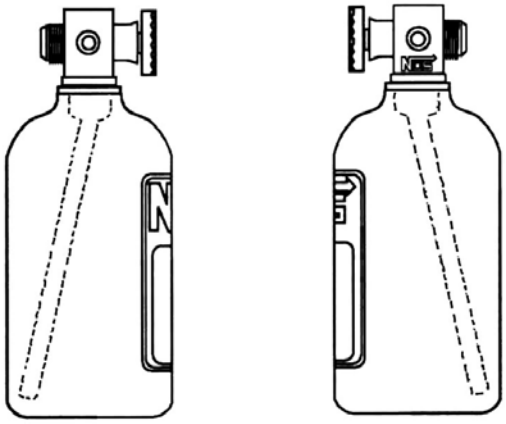
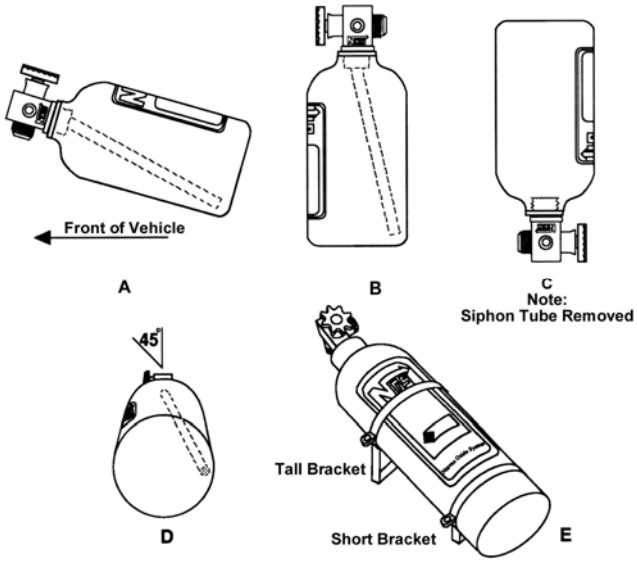


Figure 2 Nitrous Bottle Mounting Orientations



2.3 Bottle Orientation

Bottle placement is critical to the performance of your NOS 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. All NOS nitrous bottles are assembled so that the bottom of the siphon tube is at the bottom of the bottle and opposite the bottle label (**Figure 1**).

Whenever the bottle is mounted in a lay-down position, the valve handle must be towards the front of the vehicle with the label facing up (**Figure 2A**).

If the bottle is mounted vertically, the valve handle and label must face toward the front of the vehicle (**Figure 2B**). This orientation will position the siphon tube at the back of the bottle where the liquid N_2O will be during acceleration.

WARNING! DO NOT attempt to remove the siphon tube without completely emptying the bottle of all nitrous and pressure. Failure to completely empty the bottle will result in an explosive condition causing injury or death.

A bottle mounted upside-down must have the siphon tube removed before use (**Figure 2C**). Non-siphon bottles can be specially ordered from NOS.

If the bottle must be mounted parallel to the axles of the vehicle (sideways), the valve handle and label must be angled at approximately 45° toward the front of the vehicle (**Figure 2D**). This orientation will position the siphon tube toward the rear of the bottle.

NOTE: When using a bottle with a siphon tube, the tall bracket should be at the valve end of the bottle and the short bracket at the bottom (**Figure 2E**).

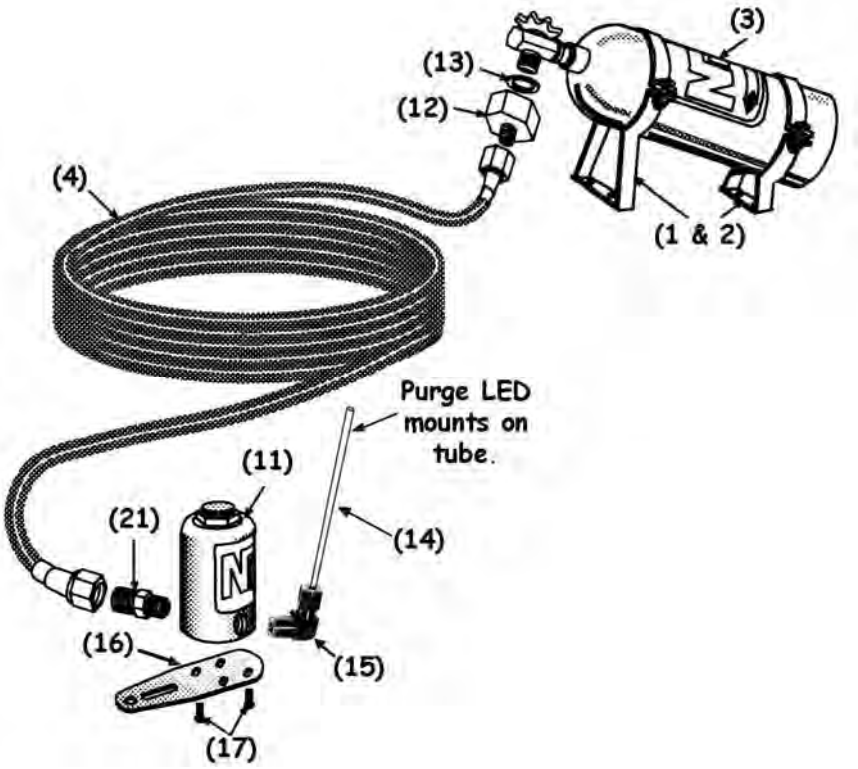
The most efficient mounting is the lay-down position (**Figure 2A**) with the valve handle toward the front of the vehicle. This position allows the greatest amount of liquid to be used before the siphon tube begins to pick up gaseous nitrous oxide.

2.4 Bottle Installation

After you have determined the location and orientation of the nitrous bottle, use the following procedure to install the bottle:

NOTE: Numbers in parentheses ( ) refer to the parts list / assembly drawing number for the component. **Figure 3** shows the installation assembly for the Ntimidator Purge Valve Kits w/ bottle.

Figure 3 Exploded View of Ntimidator Purge Valve Kit w/ bottle



1. Install the bottle nut adapter (12) and Teflon washer (13) on the nitrous bottle (3). Tighten securely.

2. Loosely install the bottle mounting brackets (1 & 2) on the nitrous bottle, as shown in **Figure 2E**.

3. Locate the bottle/bracket assembly in the desired mounting location, ensuring that the location will provide easy access to the bottle valve, hose connection, and bracket clamp bolts to facilitate bottle changing.

4. Use the assembled bottle/bracket unit as a pattern to mark and drill four 5/16” holes in the mounting surface.

CAUTION! When drilling or punching holes for these brackets, be aware what component, wires, or hoses are located or routed behind the general area to avoid vehicle or equipment malfunction.

5. Mount the brackets securely to the surface (recommended minimum of 5/16” bolts or No. 12 sheet metal screws).

6. Secure the nitrous bottle in the mounting brackets and tighten the bracket clamps.

3.0 Nitrous Feed Line Mounting

HINT: Most late model vehicles have access plugs in the trunk floor, which are convenient for nitrous 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 the path is clear of exhaust system, suspension, steering, wheels, electrical lines and components, and tires.

2. Feed the nitrous supply line (4) along the proposed route.

3. If it is necessary to support the nitrous supply line under the vehicle, use 1/2” Tinnerman clamps or nylon tie-wraps to support the line securely.

4. Attach the nitrous supply line to the 4AN bottle nut adapter (12) on the nitrous bottle.

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 and hold securely.
   B. Point the opening **away** from people.
   C. Briefly open the bottle valve.

6. Attach the nitrous supply line to the filter installed in the nitrous solenoid inlet port.

4.0 Purge Solenoid Mounting

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

1. Clamp the nitrous solenoid (11) in a bench vise.

2. Thread the 1/8" NPT x 4AN nitrous filter fitting (21) into the inlet port of the nitrous solenoid. Use Teflon paste to avoid leaks.

3. Attach the nitrous solenoid (11) to the solenoid mounting bracket (16).

4. Select the mounting location for the solenoid assembly. Ensure that the assembly and lines do not interfere with engine accessories or body parts, and that hoses reach the purge solenoid without being stretched or kinked (**Figure 4**).

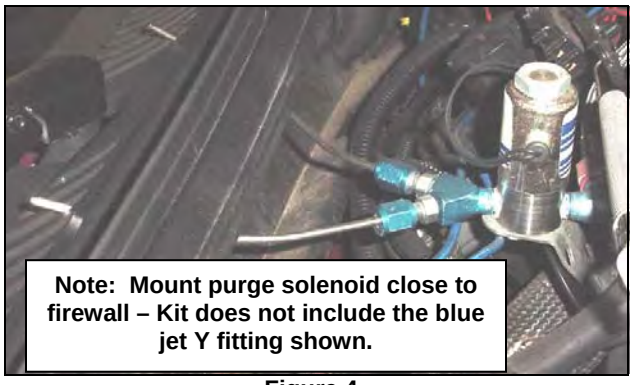


Figure 4

Figure 5

5. Securely mount the solenoid assembly.

6. Connect the main nitrous feed line (4) to the 1/8" NPT x 4AN nitrous filter fitting (22).

7. Install the 90° 1/8" NPT x 1/8" NPT fitting (15) in the N_2O purge solenoid outlet port.

8. Install the blow-down tube (14) in the outlet port of the 90° 1/8" NPT fitting (15). See **Figure 5**.

9. Route the blow-down tube, so that the outlet is not under the hood, but routed outside the car (**Figure 5**).

WARNING: The nitrous blow-down tube must be vented away from humans. Nitrous oxide can cause death, if inhaled. It can also cause severe frostbite, if allowed to contact skin.

4.1 Purge Solenoid Wiring

1. Install the purge switch (6) in a location convenient to the driver.

2. Mount the supplied relay to a solid mounting location (under the hood and close to the battery for orange wire to reach).

3. Connect the orange (fused) wire to the vehicle's (+) battery terminal.

4. Connect one solenoid lead to ground.

5. Connect the remaining solenoid lead to the blue wire from the relay, using a spade connector. (This will be your positive lead for LED installation).

6. Connect one end of the supplied red wire (using a spade connector) to one side of the purge switch. Cut to desired length and connect the other end of the wire to a switched 12V power source.

7. Connect one end of the supplied red wire (using a spade connector) to the remaining side of the purge switch. Connect the other end to the red wire on the relay (using a spade connector).

8. Connect the remaining green relay wire to ground.

WARNING! Never point the LED assembly directly towards your face. The brightness of the LED assembly can potentially cause damage to your eyes. NOS recommends mounting the LED on the passenger's side to not interfere with the driver's view.

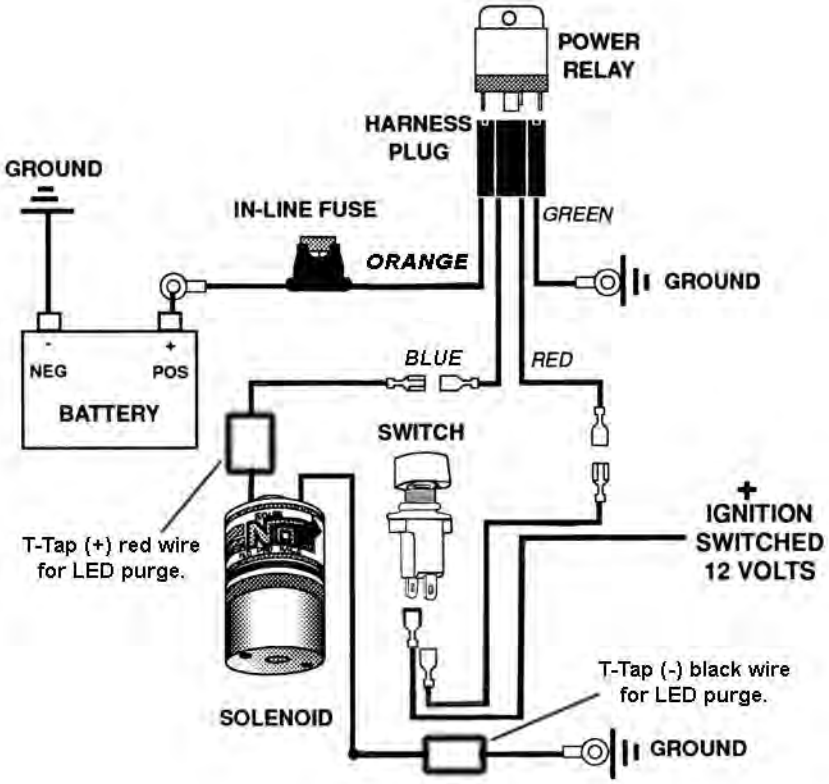


Figure 6

5.0 LED INSTALLATION:

1. Slip the LED over the end of the purge tube through the center hole. (NOTE: The LED must be mounted at an angle to avoid moisture build up in the LED assembly).

2. Place the LED so the top of the purge tube and the top of the LED are approximately even.

3. Using a 1/16 Allen wrench snug the set screw on the LED assembly **(Figure 7)**.

5.1 LED Wiring

1. Route the LED wires to the purge solenoid in the engine compartment. **(Figure 8)**.

WARNING! Avoid any potential objects that could damage the LED wires.

2. Crimp one of the supplied spade connectors (7 - in 2 stage wire pack) on each of the LED wires.

3. Install the supplied T-Tap connectors (20) one each on the purge solenoid wires **(Figure 9 & 10)**.

4. Connect the Red wire from the LED to the positive wire of the purge valve **(Noted in step 3)**.

5. Connect the black wire from the LED to the ground wire of the Purge solenoid. **(This is the wire connected in step 2)**.

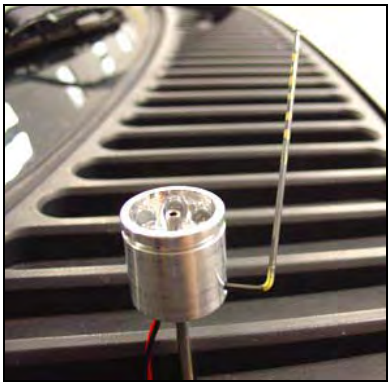


Figure 7 (Tighten set screw)

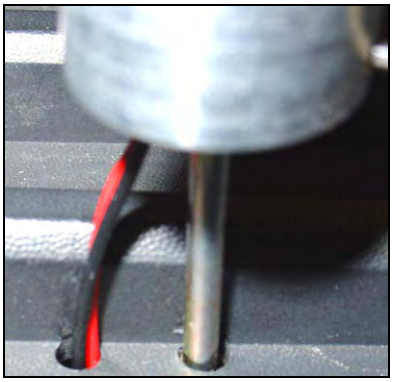


Figure 8 (LED wire routing)

Figure 9 (T-Tap connector installation)

Figure 10 (Close T-Tap connector)

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