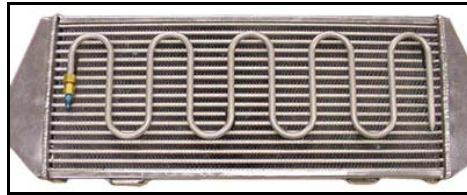




**NOS COBRA COOLER  
P/N 16034NOS**

**INSTALLATION INSTRUCTIONS  
199R10330**

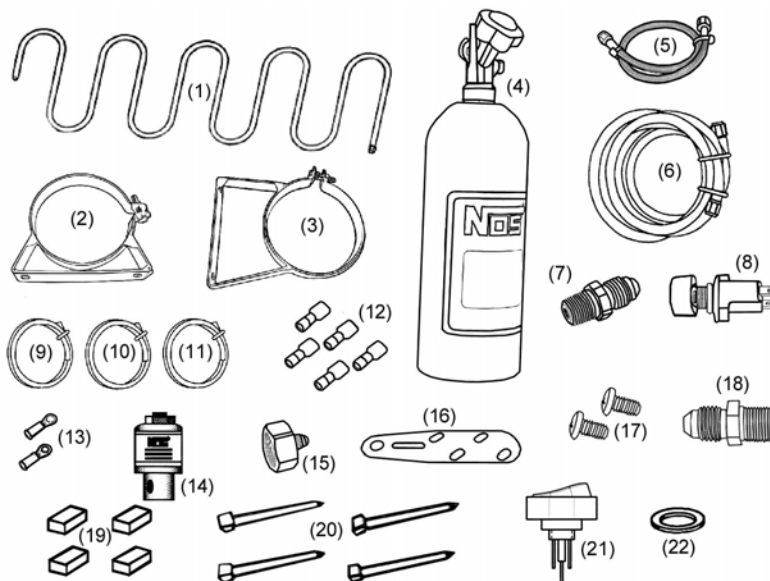


**INTRODUCTION:**

The NOS Cobra Cooler will super cool your intercooler to boost its ability to remove heat from your induction system and make considerably more horsepower than your standard intercooler setup. Spraying in the staging lanes will kill heat soak and spraying while making a pass will lower your ETs.

**PARTS LIST:**

Item	Description	Qty	NOS P/N
(1)	Cobra Cooler Spray Bar Kit	1	16035NOS
(2)	Short 5 lb. Bracket	1	14111-SNOS
(3)	Long 5 lb. Bracket	1	14112-SNOS
(4)	5 lb. Bottle	1	14730NOS
(5)	2 ft. 4AN hose	1	15230-SNOS
(6)	14 ft. 4AN hose	1	15295-SNOS
(7)	N2O Filter	1	15570-SNOS
(8)	Momentary Pushbutton	1	15610-SNOS
(9)	14 Gauge Blue Wire	1	15751-VSNOS
(10)	16 Gauge Red Wire	1	15755-VSNOS
(11)	14 Gauge Green Wire	1	15778-VSNOS
(12)	Blue Female Spade Connector	5	15885B-SNOS
(13)	1/4" Ring Terminal	2	15882-SNOS
(14)	N2O Powershot Solenoid	1	16020-SNOS
(15)	4AN -660 Bottle Nut Adapter	1	16220-SNOS
(16)	Base Bracket Assembly	1	16505-VSNOS
(17)	8-32x5/16 Phil Pan Screw	2	16506-SNOS
(18)	4AN-1/8 NPT Adapter	2	17960-SNOS
(19)	Foam Gasket	4	8R2270
(20)	Zip Ties 12"	4	36R1025
(21)	Arming Switch	1	15602NOS
(22)	Bottle Washer	1	16210NOS



## INSTALLATION:

### 1.0 BOTTLE MOUNTING INSTRUCTIONS

**NOTE:** Disconnect the battery ground before beginning installation.

#### 1.1 STREET VEHICLES

Quality operation of your NOS nitrous system depends on the bottle remaining at a stable temperature. 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 (an -8 neoprene lined 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.

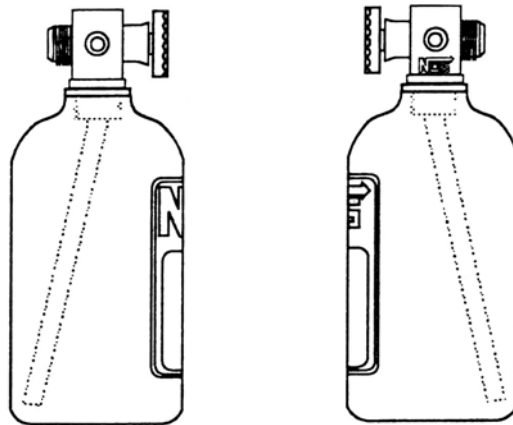
#### 1.2 RACING VEHICLES

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 the bottle to be mounted within the confines of the safety roll cage with the safety pressure relief cap vented away from the driver's compartment.

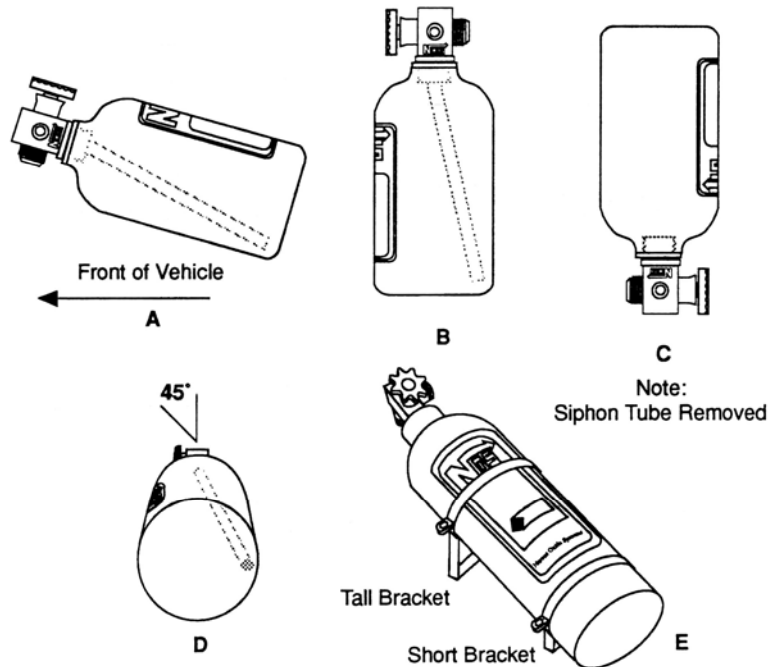
#### 1.3 BOTTLE ORIENTATION

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.



**Figure 1 Nitrous Bottle Siphon Tube Orientation**



**Figure 2 Nitrous Bottle Mounting Orientations**

**WARNING! DO NOT attempt to remove the siphon tube without completely emptying the bottle of all nitrous and pressure.**

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.

#### **1.4 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 7 shows the installation assembly for part number 16034NOS.

1. Install the bottle nut adapter (15) and washer (22) on the nitrous bottle (4), and tighten securely.
2. Loosely install the bottle mounting brackets (2 & 3) on the nitrous bottle.
3. Locate the bottle assembly in the desired mounting area, ensuring that the location will provide easy access to the bottle valve, hose connection, and bracket clamp bolts to facilitate bottle changing.

**WARNING! When drilling holes, be aware of electrical hardware, fuel system components, and any other items on the other side of your drilling surface.**

4. Use the assembled bottle/bracket unit as a pattern to mark for hole drilling. Drill four 5/16" holes for the bottle bracket bolts.
5. Mark the location for the Main N<sub>2</sub>O Feed Line (6) to pass through the floorpan of the vehicle to the underside. Drill a 3/4" hole at the marked location.
6. Mount the brackets securely to the surface (recommended minimum of 5/16" bolts or No. 12 sheet metal screws).
7. Tighten the bracket clamps on the bottle.

## 2.0 SPRAY BAR INSTALLATION

1. The supplied distribution bars will accommodate intercoolers 20" and longer, if your intercooler is shorter than 20", the bar can be trimmed to fit! Whenever trimming the distribution bar, you must trim excess length from the open end (opposite the sealed end) of the tube. Cuts must be made in the straight regions of the bar in order to provide surface for the compression fitting to mount. **If trimming is necessary**, you must cut the spray bar in certain locations to avoid leakage around the compression fitting. With the ferrule centered between discharge holes, mark and cut tube 1/4" from ferrule edge (see figure 3). This will leave the additional length needed to bottom the tube out in the fitting body when the compression fitting is installed.

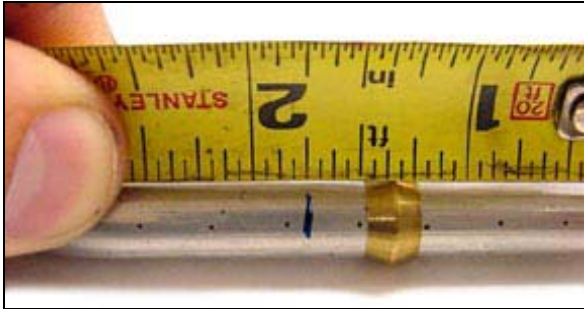


Figure 3



Figure 4

2. Slide the tube nut onto the tube and then slide the ferrule onto the tube (see figure 4). Insert the tube end into the fitting until it bottoms out, then slide ferrule and tube nut down to begin tightening. Tighten the tube nut to the fitting using a pair of wrenches ensuring that the fitting assembly remains in the proper location on the tube. The fitting should be tightened a 1/2 to 3/4 turn after finger tight.
3. Apply a small amount of Teflon thread sealant on the pipe threads of the NPT to AN fitting (18). Tighten into the female threads of the compression fitting (see figure 5).

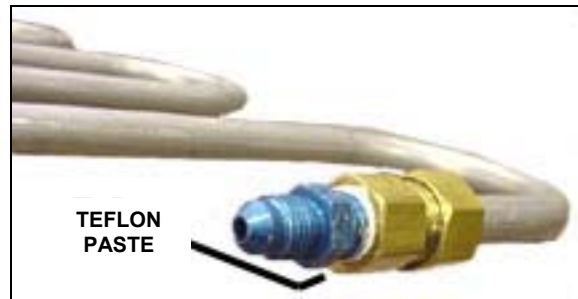


Figure 5

4. Select location on intercooler to install distribution bar (install so that the nitrous discharge holes face the intercooler core).
5. Place provided foam pads (19) under distribution bar and run provided zip ties (20) through intercooler core and secure bar to core (see figure 6). It is recommended to secure the bar in at least 2 locations.

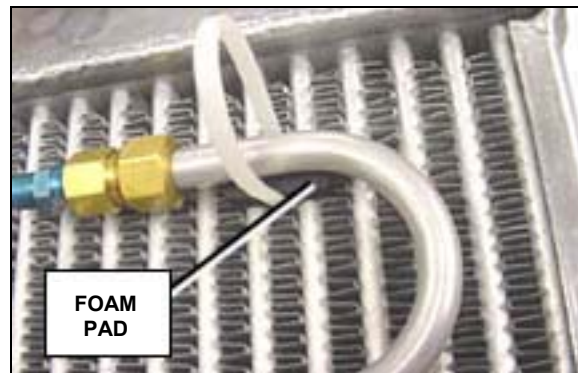


Figure 6

### 3.0 SOLENOID INSTALLATION

1. Clamp the solenoid (14) in a vice. Using a small amount of thread sealant, install the blue AN fitting with screen (nitrous filter 7) into the solenoid side labeled IN and the blue AN fitting without a screen in the OUT side.
2. Attach the solenoid to the mounting bracket (16) using the two supplied mounting screws.
3. Mount the solenoid in a discrete location within two feet of the supply side of intercooler spray bar so that the supply line can reach the supply fitting.
4. Install the supply hose (5) from the solenoid to the distribution bar.
5. Install the supply hose from the nitrous supply bottle to the solenoid. Use caution not to route the supply line near belts, fans, or other moving parts.

### 4.0 ELECTRICAL INSTALLATION

1. Disconnect the battery ground cable.
2. Mount the arming switch (21) and pushbutton (8) within easy reaching distance in the driver's compartment.
3. On the arming switch, connect the terminal on the LED side to ground, connect the center terminal to your pushbutton, and connect the wire away from the LED to switched 12V power (NOTE: SYSTEM MAY DRAW UP TO 9 AMPS).
4. On the pushbutton, connect one terminal to the center terminal of the arming switch (if not already done) and the other wire to either solenoid wire.
5. Connect the remaining wire of the solenoid to ground using the supplied ring terminal (13).
6. With the nitrous bottle disconnected or bottle valve closed with line pressure bled off, arm the system (rocker switch) and quickly depress the pushbutton. You should hear the solenoid click. If there is no solenoid activation, refer to wiring diagram for troubleshooting.

Figure 7 & 8 WIRING SCHEMATICS:

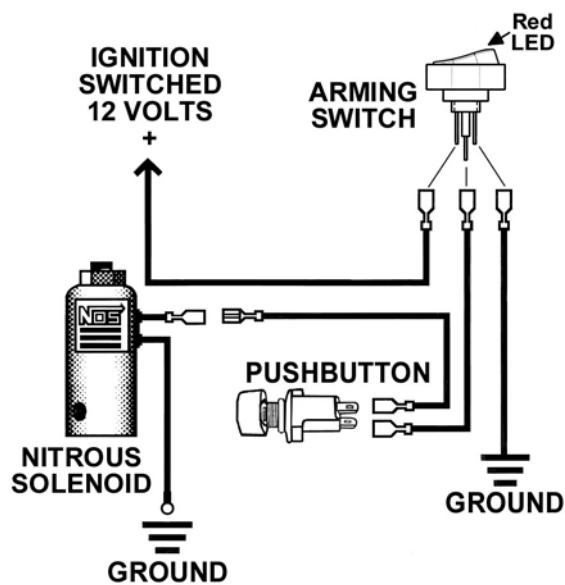


Figure 7

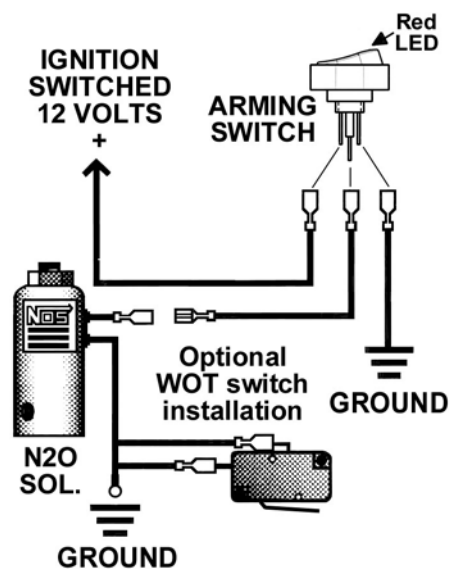


Figure 8

NOTE: Optional WOT switch available under NOS P/N 15640NOS.

**NOS Technical Support  
Toll-Free Phone: 1-866-GOHOLLEY  
Phone: 1-270-781-9741  
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**For online help, please refer to the Tech Service section of our website: [www.holley.com](http://www.holley.com)  
For bottle refill information: 1-800-99-REFILL**

**199R10330  
Date: 9-27-04**