JWT NISSAN SINGLE FOGGER NITROUS OXIDE SYSTEM INSTALLATION INSTRUCTIONS

INTRODUCTION

This SYSTEM CONSISTS OF A CONVENTIONAL solenoid operated nitrous oxide spray nozzle. However the supplemental fuel is not added by a separate fuel spray nozzle, as with most conventional N2O systems. Older conventional systems sprayed supplemental fuel through the intake manifold along with the nitrous oxide, requiring the addition of a extra solenoid, line and fuel source. Most fuel injected engines have intake runners that are designed to run "dry" and will not distribute fuel droplets evenly, causing some cylinders to run dangerously lean during nitrous usage. Our system uses the original fuel injectors to deliver the additional fuel needed to run the system. A custom module inside the E.C.U. (engine control unit) has been installed that switches between two programs. Program #1 is our normal performance program, used when nitrous is not flowing. Program #2 is used for controlling the engine when the nitrous system is operating. This program is calibrated to deliver additional fuel and control ignition spark timing. Program #2 is activated only when the nitrous arming switch is on and the throttle has been fully depressed.
There are three new wires coming from the E.C.U.. One wire (top of the "T" plug) is 12 volt + supplied from the E.C.U. to power the relay and nitrous solenoid. The second wire (lower leg of the "T" plug) is the signal wire from the E.C.U. that operates the relay to turn on the nitrous solenoid. The third wire is a shielded wire pair with the arming switch on the end, this must not be modified and the shielding must remain bolted to the ECU as received.

1. Locate the **nitrous bottle** in trunk with the **valve forward and the outlet facing down**, fasten the bottle brackets securely to floor and **drill** a hole to pass the nitrous supply hose through (this hole should be drilled **from under the car** to insure it does not interfere with the suspension or brake lines) in the floor.

2. Run the **nitrous supply hose under the car** along with the brake lines under the plastic covers. Secure it with plastic ties so it won't abrade any other lines. Be careful to secure the line **away from the steering shaft** as it runs up the firewall in the engine compartment.

3. Connect the **nitrous supply hose to the nitrous solenoid** using the fitting with the filter screen in it, using Teflon thread tape, install it in the **port marked "IN" on the solenoid**. Mount the solenoid near the throttle.

4. Remove the rubber intake hose from the throttle chambers, and cover the open ends. **Using a D size drill and**

a 1/16" pipe tap, **drill and tap the nitrous nozzle hole**. The hole should be located **between the throttle valve plates** and the **edge of the rubber intake hoses**. **Also** the nozzle must be **located so it can't interfere with the hood or throttle motion**. This will allow for proper hood clearance and allow the throttle to open fully without hitting the nozzle inside. Install the nozzle using Teflon tape and **make sure the fan spray is pointing at the throttle plate**. **Clean any metal chips** from the inside of the throttle chamber and reinstall the rubber intake hoses.

5. Set the **nitrous flow restrictor jet** in the tops of the nozzle, and **install the short -3 nitrous hose to the nozzle**. Make sure the nozzle **does not change direction** when tightening the hoses. Install the **fitting** in the nitrous solenoid **"OUT" port** and fasten the other end of the -3 nitrous hoses to it.

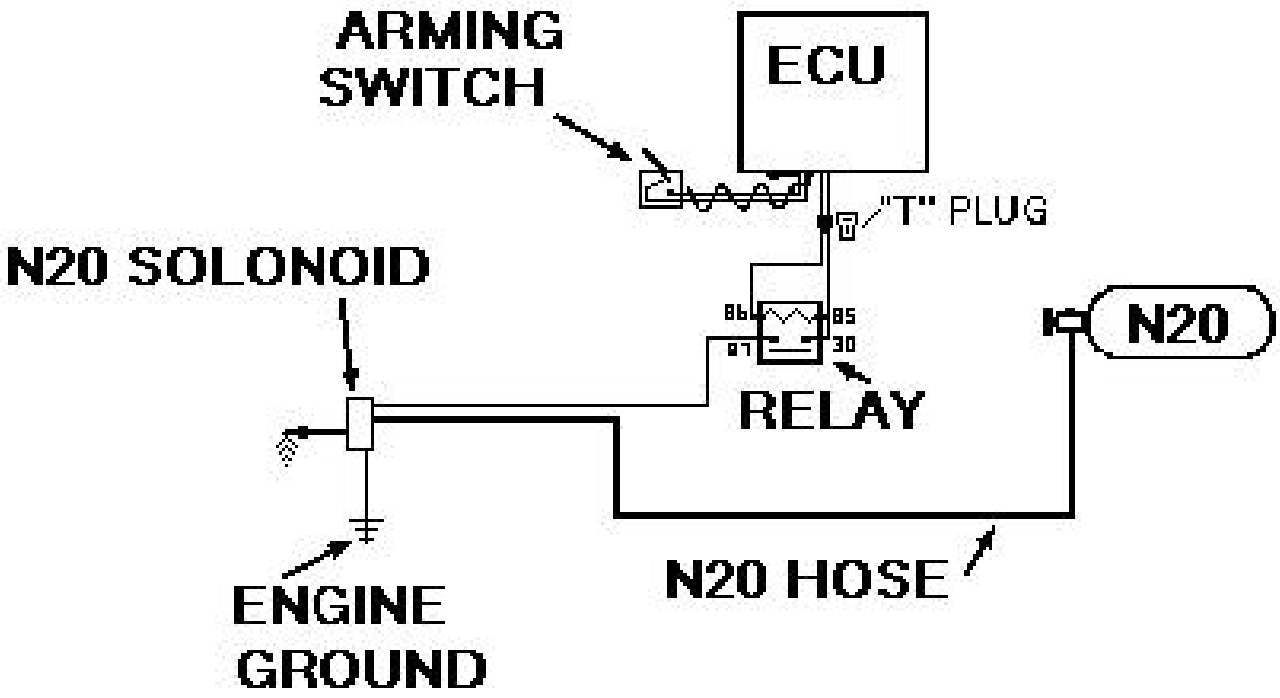
6. Bolt one of the two nitrous solenoid wires to a **good ground on the engine** and run the other to **the wire from pin #87 on the relay**.

7. Connect the **"tee"** shaped plug between the ECU and the relay**.**

8. The remaining wire (with **arming switch** attached) should be installed so that the driver can arm the system. The **armed** position will be **opposite** the wires on the back of the switch.

9. When the system has been successfully pre-tested and all wires and hoses are safely installed (check for free throttle movement, wires not rubbing, nitrous lines tight and fastened so they won't wear through other parts, etc.) drive the car to a safe test area. With the **nitrous bottle valve still closed**, **turn on the arming switch**. To confirm that program #2 (nitrous program) is being switched, **briefly accelerate using full throttle**. You should see the **"check engine" light come on at full throttle (this is built into program #2 and indicates it is correctly switched)**, also since the nitrous is not opened the car will act rich and lazy.

10. The final step will be to **purge the nitrous lines**. First **open the bottle** and **leave the arming switch on**. With the car moving at a **slow speed (15 to 25 MPH)** move the **throttle to the floor (engine light should come on)** and the engine may hesitate until the nitrous flows from the bottle to the nozzles. By **repeating this a few times** the system will be safely purged. **Do not try to purge the system by revving the engine while not moving or while engine is not running with key on. Both methods can damage the motor**



CAUTIONS:

- **IGNITION TIMING SHOULD NEVER BE MORE THAN STOCK** -CHECK IT BEFORE RUNNING N20.
- OCTANE SHOULD ALWAYS BE **92+** R+M/2 - USE OCTANE BOOSTER OR RACE GAS DURING RACE CONDITIONS.
- THE FUEL PUMP MUST BE ABLE TO SUPPLY A **MINIMUM OF 43 P.S.I.** DURING OPERATION OF THE N2O SYSTEM. THIS CAN BE CHECKED WITH A FUEL PRESSURE GUAGE ON YOUR INITIAL TEST DRIVE. IF IT CAN'T HOLD THIS PRESSURE, DO NOT RUN THE N20 SYSTEM UNTIL THIS IS CORRECTED.
- **BOTTLE PRESSURE SHOULD NOT EXCEED 950 PSI.**