



Single Stage Dominator Side Mount



Speedtech
5200 Whicham Circle
Tuscaloosa, AL 35405
205-758-7100

Component List

Part Number	Description	Quantity
100-2115	.115 Nitrous Solenoid	1
101-1157	.157 Large Body Fuel Solenoid	1
780-012	Dominator Single Stage Bracket w/out Fogger	1
621-001	Dominator 4 Hole Gasket	1
621-101	Dominator Open Center Gasket	1
413-016-RF	1/8" NPT Male X #6 Male Flare with Filter (Red)	1
413-214-BK	1/8" NPT Male X #4 Male Flare 90 Degree (Black)	1
413-026-BF	1/4" NPT Male X # 6 Male Flare with Filter (Blue)	1
413-014-BK	1/8" NPT Male X # 4 Male Flare (Black)	1
491-443-012-R	# 4 12" Long Steel Braided Hose # 4 - # 3 (Red)	1
491-443-012-B	# 4 12" Long Steel Braided Hose # 4 - # 3 (Blue)	1
702-103238SS	10/32" X 3/8 Stainless Steel Button Head	4
010-056	.056" Stainless Nitrous Jet	2
010-065	.065" Stainless Nitrous Jet	2
010-073	.073" Stainless Nitrous Jet	2
010-082	.082" Stainless Nitrous Jet	2
010-092	.092" Stainless Nitrous Jet	2
010-102	.102" Stainless Nitrous Jet	2
010-110	.110" Stainless Nitrous Jet	1

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How Nitrous Oxide Works

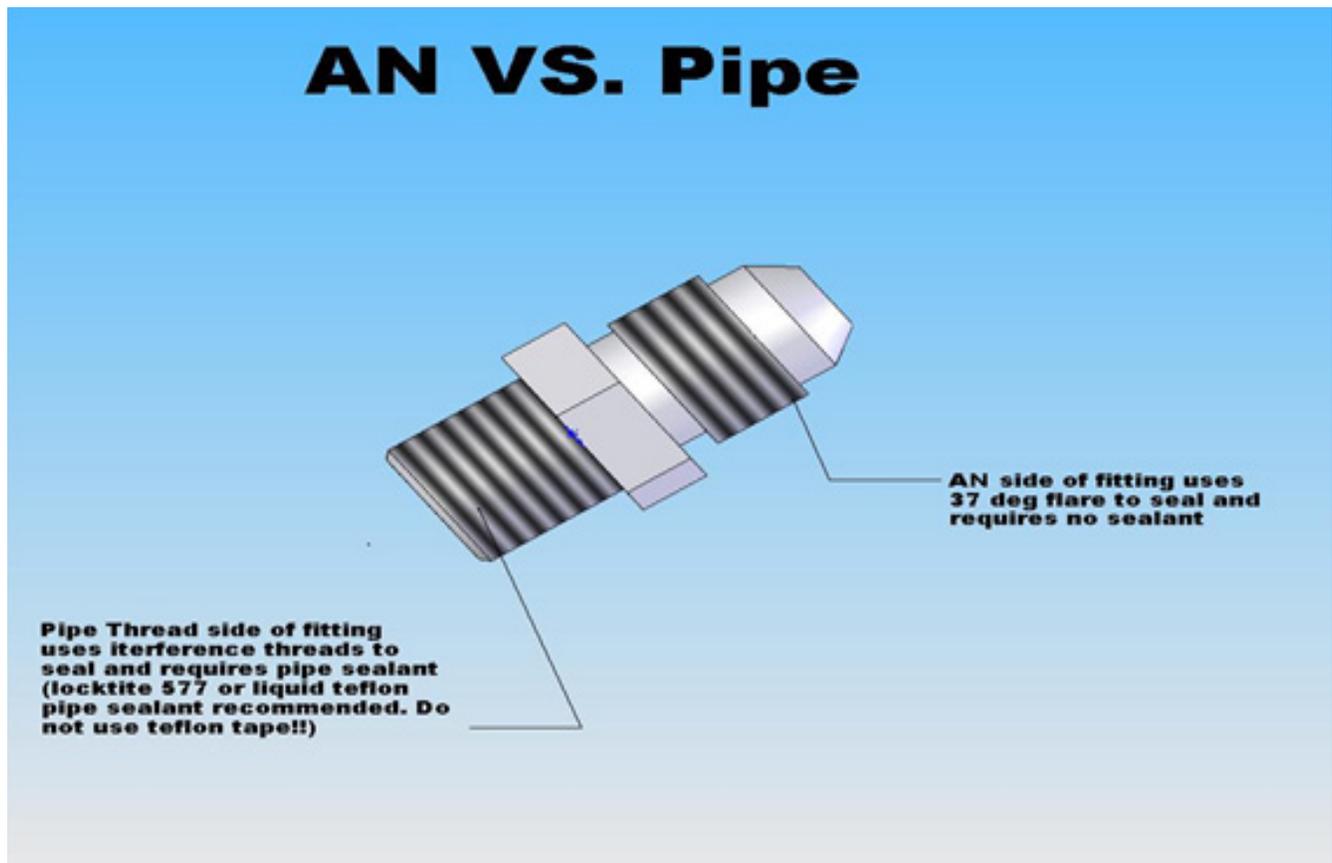
Nitrous Oxide is a molecule composed of two nitrogen atoms bonded to one oxygen atom. When compressed into a cylinder nitrous oxide takes on a liquid form. When exposed to the atmosphere or great pressure drop nitrous oxide phase changes in a gaseous state. People often think that the nitrous in cylinder is cold, when in fact the nitrous within the cylinder is at ambient temperature. Nitrous oxide only gets cold in its expanding state from liquid to gaseous form.

Nitrous Oxide itself does not increase an engine's horsepower capability. The nitrous increases the oxygen content in the combustion chamber allowing the engine to burn more fuel resulting in an increase in horsepower. Supplemental fuel is always necessary in a nitrous system whether it be "dry" or "wet". The difference between the two is that in a "wet" system the supplemental fuel is injected through the nitrous nozzle, and in a "dry" system the supplemental fuel is introduced through the vehicle fuel injectors via an increase in fuel pressure or a change in pulse width (the injectors amount of open time per cycle).

The introduction of the nitrous oxide and additional fuel into the cylinder increases the burn rate, heat, and cylinder pressure that the piston is exposed to resulting in an increase of horsepower. Retarding the ignition timing when the nitrous is activated is usually necessary to control the accelerated burn rate and rise of cylinder pressure in the combustion chamber. If this is not done pre-ignition and detonation will result, damaging very expensive engine components. All of Speedtech's tune ups provide a recommended timing retard for each horsepower level. Some of the newer fuel injected cars that have nitrous systems of 150 h.p. or less do not require ignition retard due to "knock" or detonation sensors that are wired into the engines management system. These sensors feed information back to the ECU if detonation is present and the ECU will automatically retard the timing to prevent engine damage while still maintaining peak performance.

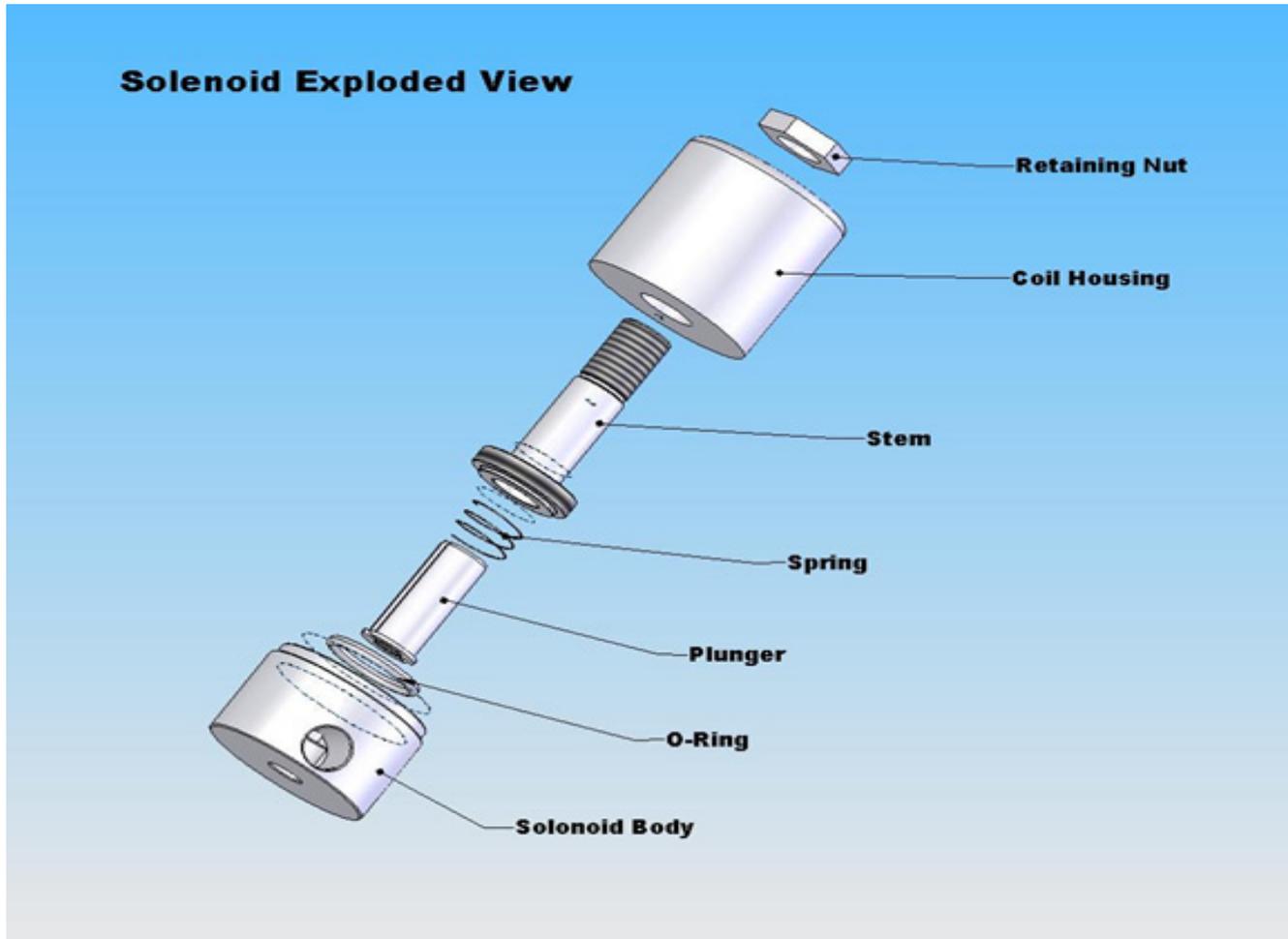
An engine's spark plugs are designed for the burn rate and temperatures that are present under normal driving conditions. It is always a good idea to install colder spark plugs in a nitrous application because the burn rate and temperatures are increased. This is also another way to keep pre-ignition and detonation under control. An engine's ignition system is designed to have enough power to arc the gap in the spark plug at the predetermined cylinder pressure under normal driving conditions. With the introduction of nitrous oxide and additional fuel the engines cylinder pressure is increased leaving the ignition system short of having the power to fire the spark plug. There are two ways to solve this problem one is to lessen the gap of the spark plug to .030-.035" stock is usually .045-.055". The second way to solve this problem is to install an aftermarket ignition system that has more power on hand to fire the spark plug. MSD ignition has several quality ignition systems for a vast amount of applications. On most street cars with 150 h.p. or less simply lessening the gap will solve the problem.

AN vs Pipe



“ AN” stands for Army Navy which is a military spec type fitting. These fittings are sized by dash sizes not fractional sizes. AN fittings come in sizes ranging from -2 to -24. These fittings have a straight fine thread similar to a fine thread standard bolt, and use a 37 degree flare to do the sealing. The female side of the fitting that is connected these AN fittings have a reverse 37 degree flare that seals on the males flare much like a valve and valve seat. Thread sealant should not be used on the AN side of any fitting. Pipe threads use an interference fit tapered thread that get tighter the further it is run it to it female counterpart. These fittings require pipe sealant such as liquid Teflon or Loktite 577. Under no circumstances should you use Teflon tape anywhere on your nitrous systems fittings. The tape is notorious for clogging intricate passages in your nitrous system resulting in a catastrophic failure.

AN vs Pipe



The most important part of maintaining the proper function of a nitrous system is making sure that the solenoids are clean and the plungers are in good shape. Excessive nitrous pressure is the largest contributing factor to solenoid failure or premature plunger fatigue. There is a wrench included in your kit to disassemble the solenoids. Do this periodically to check the plungers if the plunger is beginning to form a nipple on the Teflon face it should be replaced to avoid a decrease in nitrous flow and poor system performance. The nitrous and fuel solenoids inlet fittings also contain small screen filters that should be cleaned periodically.

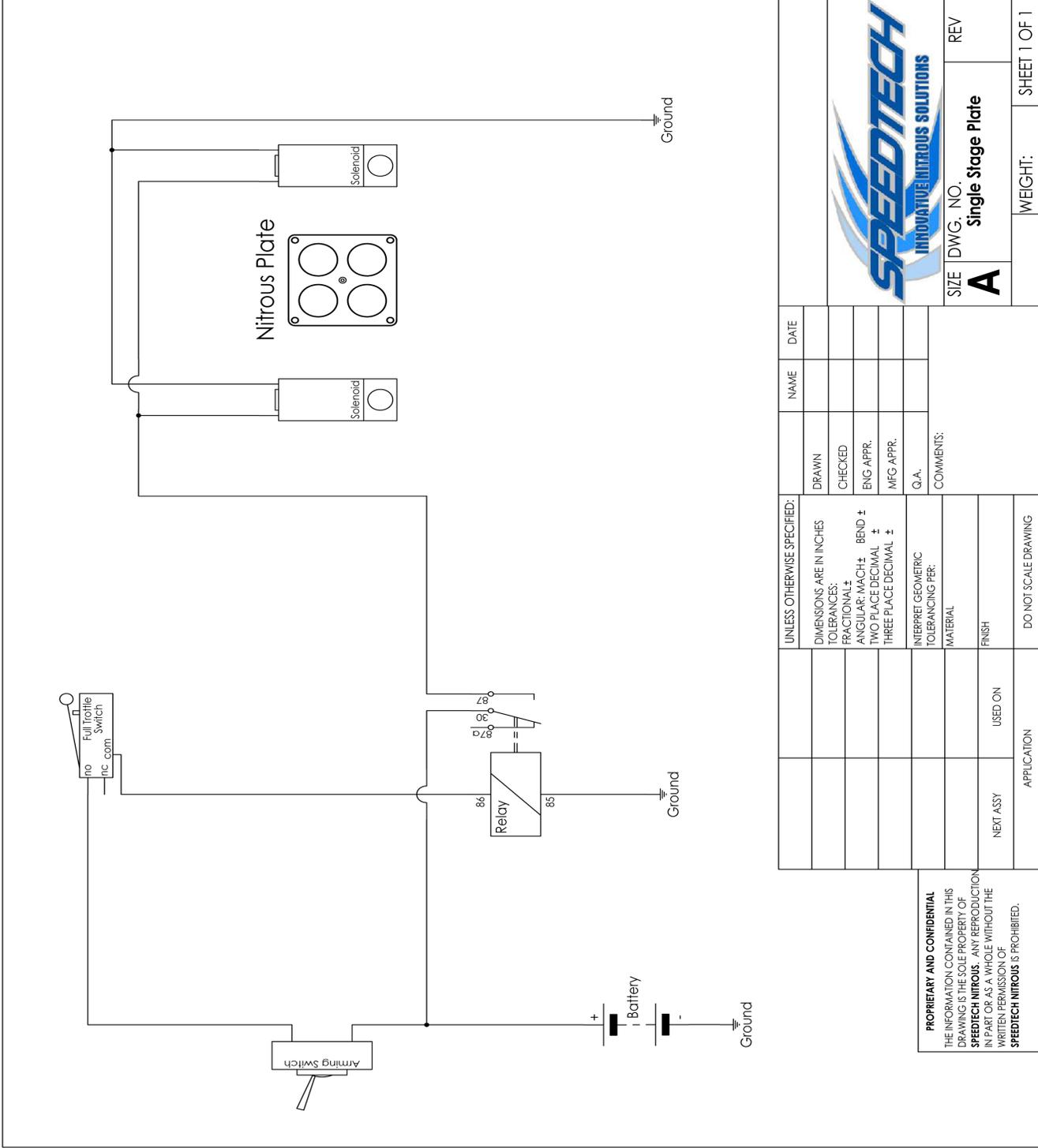
Tune-Up Information

Horsepower	Nitrous Jet	Fuel Jet	Timing Retard	Fuel PSI	Nitrous PSI
100	56	56	4.5	5.8	950-1000
150	65	65	6	5.8	950-1000
200	73	73	7.5	5.8	950-1000
250	82	82	9	6	950-1000
350	92	92	10.5	7.9	950-1000
450	102	102	13.5	12.6	950-1000
500	110	102	15	13.7	950-1000

Tune-Up Information

Rotor Phasing should be set at lowest timing the engine will see with all retards on. These timing recommendations are assuming that initial timing is set properly for your engine combinations. A quality nitrous specific fuel should be used for all race applications, contact your fuel supplier for their recommendations. The coldest spark plug available for your application is recommended.

Wiring Diagram

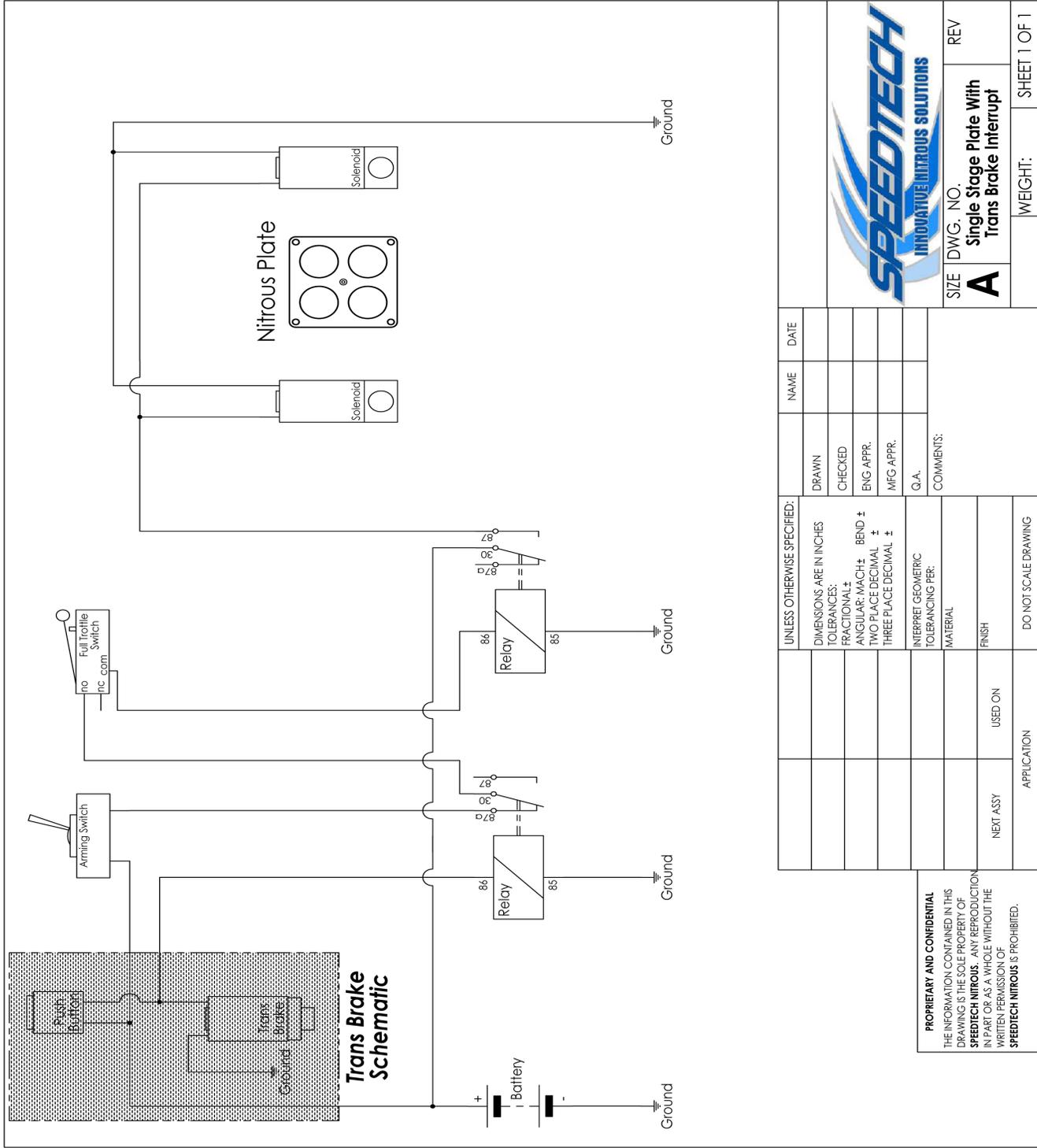


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UNLESS OTHERWISE SPECIFIED:	NAME	DATE
DIMENSIONS ARE IN INCHES		
TOLERANCES:	DRAWN	
FRACTIONAL ±	CHECKED	
ANGULAR: MACH ±	ENG. APPR.	
TWO PLACE DECIMAL ±	MFG. APPR.	
THREE PLACE DECIMAL ±	Q.A.	
INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:	
MATERIAL	SIZE DWG. NO. A Single Stage Plate	
FINISH	REV	
NEXT ASSY	WEIGHT:	
USED ON	SHEET 1 OF 1	
APPLICATION	1	
DO NOT SCALE DRAWING	2	
	3	
	4	
	5	



Wiring Diagram

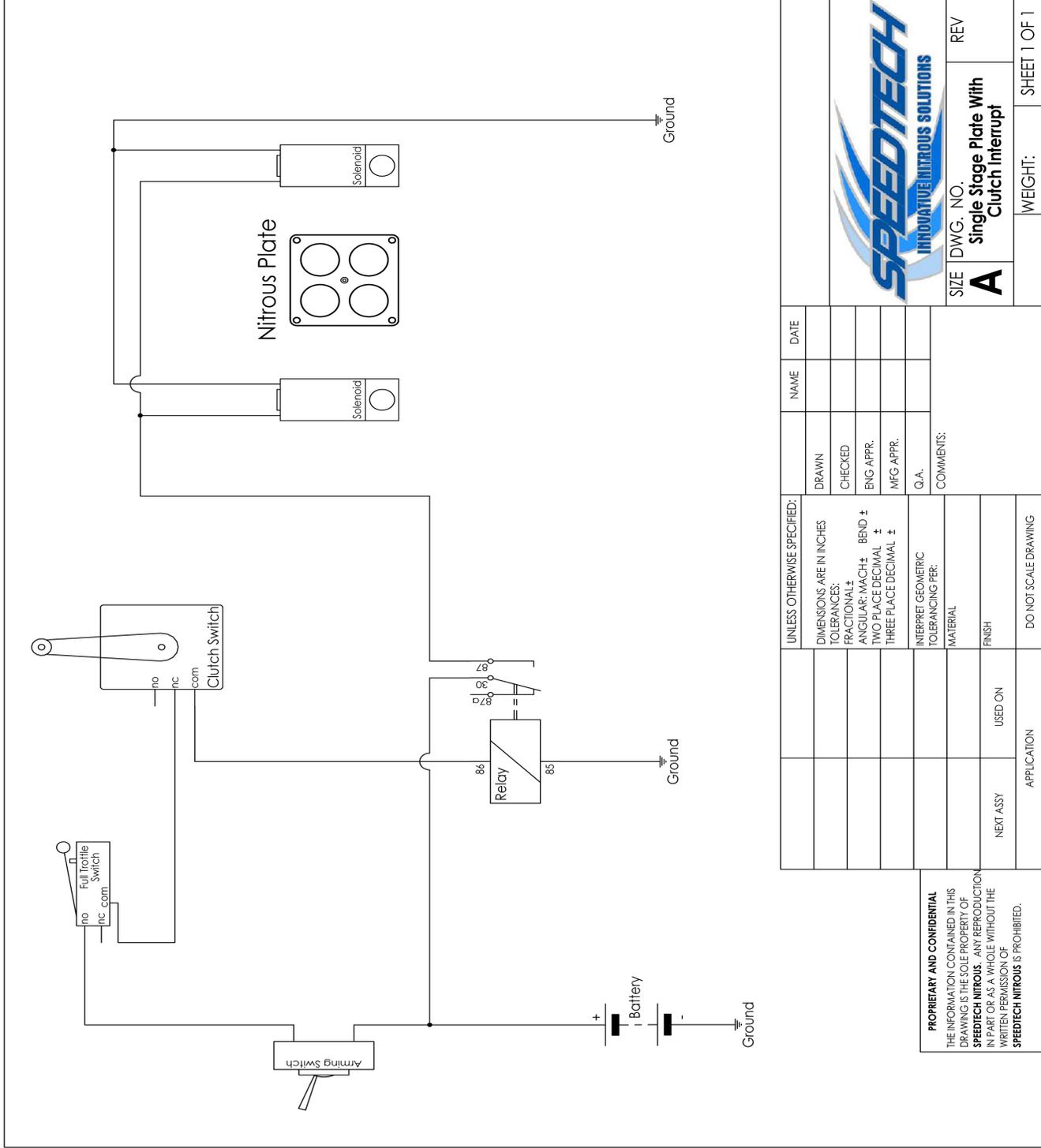


SIZE	DWG. NO.	REV
A	Single Stage Plate With Trans Brake Interrupt	
WEIGHT:		SHEET 1 OF 1

UNLESS OTHERWISE SPECIFIED:	NAME	DATE
DIMENSIONS ARE IN INCHES		
TOLERANCES:	DRAWN	
FRACTIONAL ±	CHECKED	
ANGULAR: MACH ±	ENG APPR.	
TWO PLACE DECIMAL ±	MFG APPR.	
THREE PLACE DECIMAL ±	Q.A.	
INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:	
MATERIAL		
FINISH		
NEXT ASSY	USED ON	
APPLICATION	DO NOT SCALE DRAWING	

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Wiring Diagram



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UNLESS OTHERWISE SPECIFIED:		NAME	DATE
DIMENSIONS ARE IN INCHES			
TOLERANCES:			
FRACTIONAL: ±			
ANGULAR: MACH ±			
BEND ±			
TWO PLACE DECIMAL ±			
THREE PLACE DECIMAL ±			
INTERPRET GEOMETRIC TOLERANCING PER:			
MATERIAL			
FINISH			
NEXT ASSY		USED ON	
APPLICATION			
DO NOT SCALE DRAWING			
COMMENTS:			
Q.A.			
ENG. APPR.			
MFG. APPR.			
DRAWN			
CHECKED			



SIZE	DWG. NO.	REV
A	Single Stage Plate With Clutch Interrupt	
WEIGHT:	SHEET 1 OF 1	