

Nitrogen Business Case Calculator

Auto Dealer - New Car Sales

7	HOW MANY DEALERSHIPS
0%	TRAFFIC BUILDER ASSUMPTIONS
3%	ANNUAL GROWTH ASSUMPTIONS
120	NEW CARS SOLD PER MONTH PER DEALERSHIP
\$50	CHARGE PER NEW CAR SALE
100%	NITROGEN SUCCESS RATE

Service Station

7	HOW MANY LOCATIONS
5%	TRAFFIC BUILDER ASSUMPTIONS
3%	ANNUAL GROWTH ASSUMPTIONS
600	SERVICE CUSTOMERS PER MONTH PER STORE
\$ 19.95	CHARGE PER CAR
68%	NITROGEN SUCCESS RATE

Auto Dealer

	FY 01	FY 02	FY 03	FY 04	FY 05	TOTALS
NITROGEN OPPORTUNITIES	120	123.6	127	131	135	
WITH GROWTH PROJECTIONS	123.6	127	131	135	139	
TOTAL CUSTOMERS PURCHASING N2	124	127	131	135	139	
MONTHLY INCOME PER STORE	\$ 6,180	\$ 6,365	\$ 6,556	\$ 6,753	\$ 6,956	
GROSS ANNUAL PROFIT	\$ 74,160	\$ 76,385	\$ 78,676	\$ 81,037	\$ 83,468	\$ 393,726
TOTAL COST OF OWNERSHIP PER UNIT	\$ 6,000	\$ 100	\$ 100	\$ 100	\$ 100	\$ 6,400
ANNUAL NET PROFIT PER STORE	\$ 68,160	\$ 76,285	\$ 78,576	\$ 80,937	\$ 83,368	\$ 387,326
ANNUAL CORPORATE PROFIT	\$ 477,120	\$ 533,994	\$ 550,034	\$ 566,556	\$ 583,574	\$ 2,711,279

MONTHS TO PAY OFF SOLUTION

1.0 MONTHS

Service Station

	FY 01	FY 02	FY 03	FY 04	FY 05	TOTALS
NITROGEN OPPORTUNITIES	600	648	700	756	816	
WITH GROWTH PROJECTIONS	648	700	756	816	882	
TOTAL CUSTOMERS PURCHASING N2	441	476	514	555	599	
MONTHLY INCOME PER STORE	\$ 8,791	\$ 9,494	\$ 10,254	\$ 11,074	\$ 11,960	
GROSS ANNUAL PROFIT	\$ 105,489	\$ 113,928	\$ 123,043	\$ 132,886	\$ 143,517	\$ 618,863
TOTAL COST OF OWNERSHIP PER UNIT	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
ANNUAL NET PROFIT PER STORE	\$ 105,489	\$ 113,928	\$ 123,043	\$ 132,886	\$ 143,517	\$ 618,863
ANNUAL CORPORATE PROFIT	\$ 738,425	\$ 797,498	\$ 861,298	\$ 930,202	\$ 1,004,618	\$ 4,332,042

MONTHS TO PAY OFF SOLUTION

Cost included MONTHS



A Gardner Denver Product

March 20, 2006

Volume in a 60 gal. Tank @ 160 psi

225/60R16 @ 35 psi: 21 tires*
 265/70R16 @ 35 psi: 11 tires*
 11R22.5 @ 105 psi: 1 tire*

Volume in a 80 gal. Tank @ 160 psi

225/60R16 @ 35 psi: 28 tires*
 265/70R16 @ 35 psi: 15 tires*
 11R22.5 @ 105 psi: 1 tire*

* The volume is based on a tank pressure of 160 psi without any flow coming from the generator.

<u>Tire Size</u>	<u>Type</u>	<u>Volume (ft³)</u>	<u>PSI</u>	<u>Nitrogen Atmospheres</u>	<u>Nitrogen Volume (ft³) needed @ PSI</u>
225/60R16	Passenger Tire	1.32	35	2.38	3.14
265/70R16	SUV Tire	2.49	35	2.38	5.93
11R22.5	Truck Tire	3.89	105	7.14	27.79

These numbers are based on an atmospheric pressure of 14.7 psi (sea level).
 Gauge pressure = 0 psi (sea level).

SCFM: standard cubic feet per min

Volume: cubic feet inside tire

N2 Atmospheres: Take the pressure (gauge pressure) inside the tire and divide by the atmospheric pressure $35/14.7 =$ amount of nitrogen required in atmospheres. (1 atmosphere = difference between absolute 0 and what it is around us. 14.7 at sea level. Decreases as altitude increases.)

Nitrogen Volume: Volume * Atmospheres

What is the capacity of the unit?

Specifically, it depends on the tire size and the inflation pressure. For example:

<u>TIRE SIZE</u>	<u>PSI</u>	<u>TIRES PER HOUR</u>	<u>TIRES PER HOUR</u>		
		<u>Per SCFM</u>	<u>NA4-60</u>	<u>NA7-80</u>	<u>NA14-80</u>
225/60R16	35	19	82	135	270
265/70R16	35	10	43	71	142
11R22.5	105	2	9	15	30

In the real world, these figures will vary from realistic averages and do not take into consideration flow drops, labor time, etc.

<u>MODEL</u>	<u>AIR INPUT</u>	<u>N2 OUTPUT</u>
NA4-60	8.4 scfm	4.3 scfm
NA7-80	13.8 scfm	7.1 scfm
NA14-80	27.6 scfm	14.2 scfm

This is based on 160 psi input pressure at 75°F.

All calculations are based on a nitrogen purity level of 95%.

A 240 gal. tank has the capacity to inflate 3-5 average commercial truck tires.