

**MODELS 500/1000/1500  
NITROGEN INFLATION  
SYSTEMS**

Installation, Operation  
& Repair Parts  
Information



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## SAFETY INSTRUCTIONS

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- NEVER allow unauthorized personnel to operate this product.
- NEVER use this product for anything other than its intended use.
- THOROUGHLY train new employees in the proper use and care of this product.
- PROHIBIT unauthorized personnel from being in shop area while this product is in use.

## DEFINITIONS

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- **CAUTION:** Indicates a potentially hazardous situation, which if not avoided, may result in damage to property or minor personal injury.
- **HAZARD:** A source of potential injury to a person.
- **MAINTENANCE:** Those actions that preserve the correct and proper conditions under which the machine shall be used. This may include adjustment, replacement of wear items, lubrication and cleaning, but not modifications or repair of damage.
- **MAY:** This word is understood to be permissive.
- **MUST:** This word is understood to be mandatory.
- **OPERATION:** The correct and proper use of the machine as described in this manual.
- **SAFETY ALERT SYMBOL:** A symbol that indicates a potential personal safety hazard. It is composed of an equilateral triangle surrounding an exclamation point.
- **SHALL:** This word is understood to be mandatory.
- **SHOULD:** This word is understood to be advisory.
- **WARNING:** Indicates a potentially hazardous situation, which if not avoided, may result in death or serious personal injury.

## CAUTION

- ◆ Before using this product, read and fully understand the operating instructions and all decals on the product. This is necessary to prevent injury to the operator and damage to the product.
- ◆ Do not attempt to use this product for anything other than its intended purpose.
- ◆ Use of this product should be in a suitably ventilated shop.
- ◆ Operate valves slowly to prevent damage to coalescing filter.
- ◆ Use of this product is only permitted in places free from explosion or fire hazard.

### SPECIFICATIONS

Max Compressed Air Supply	175 psi (10.3 to 12.0 bar)
Dimensional data	19 x 19 x 72.50 in (48 x 48 x 184 cm)
Weight	Model 500      185 lbs (84 kgs)
	Model 1000     210 lbs (95 kgs)
	Model 1500     235 lbs (107 kgs)

Specifications shown below are at an air temperature of 75° F (24° C) and a supply air pressure of 160psi (11.0 bar). These specifications are intended to be a baseline to result in the production of 95% pure Nitrogen. The output flow of Nitrogen has been pre-set to 7.1 scfm (11.4 Nm<sup>3</sup>/hr) per membrane. Changes to air temperature, supply air pressure or supply air flow will change the result of Nitrogen purity.

Model #	Supply Air Pressure		Supply Air Flow		Maximum Output N <sub>2</sub> Flow		N <sub>2</sub> Purity
	psi	bar	scfm	Nm <sup>3</sup> /hr	scfm	Nm <sup>3</sup> /hr	
500	160	11.0	13.8	22.2	7.1	11.4	95%*
1000	160	11.0	27.6	44.4	14.2	22.8	95%*
1500	160	11.0	41.4	66.6	21.3	34.2	95%*

\* These are minimum settings. The purity can be increased by rotating the purity adjustment dial clockwise

Change	Note	Result
When supply air temperature increases	Supply air flow requirement will increase	Nitrogen Purity increases
When supply air pressure increases		
When supply air flow decreases	N <sub>2</sub> output flow will decrease	
When supply air temperature decreases		
When supply air pressure decreases	N <sub>2</sub> output flow will remain the same	Nitrogen Purity decreases
When supply air flow increases		
Rotating purity adjustment dial clockwise	N <sub>2</sub> output flow will decrease	Increase Purity
Rotating purity adjustment dial counter-clockwise	N <sub>2</sub> output flow will increase	Decrease Purity

## **INTENDED USE**

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The Nitrogen Inflation System is a pneumatic device designed to generate deoxygenated air for the purpose of inflating vehicle tires.

## **INSTALLATION INSTRUCTIONS**

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1. Unpack and remove unit from shipping carton and pallet.
2. Inspect the unit for any visible damage.
3. Make sure the installation location is free from explosion or fire hazard and is a suitably ventilated; otherwise, ventilate the area periodically during use of the equipment.
4. Make sure the plumbing from the air compressor to the Nitrogen Generator is made of an appropriately rated copper, steel or aluminum and is at least 30 ft. in length.
5. Install on a solid level floor.
6. Anchoring the unit to the floor is not required but is recommended. Utilize the two holes in the base plate to anchor the unit.
7. Connect the **air** supply line to the inlet on the back of the unit.
8. Connect the **nitrogen** supply line to the deoxygenated air outlet on either side of the unit.
9. Plug in the power cord to a 110/120 Volt outlet.
10. Slowly open ball valve at the inlet on the back of the unit.

### **NOTE:**

The Nitrogen generator has a filter system that captures oil, water and other contaminants. However, if your air supply system generates an excessive amount of water, etc., it may be desirable to install an air dryer.

## **NOTICE:**

**The presence of any oil in the Nitrogen Membrane will void the manufacturer's warranty.**

## **OPERATING INSTRUCTIONS**

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### **Turning the Nitrogen Generator ON**

1. *Slowly* rotate ball valve at the back of the unit, from the closed position to the open position.
2. Rotate switch on the front of the unit, from the "OFF" position to the "ON" position.
3. When the N<sub>2</sub> storage tank pressure reaches 160 psi, an automatic shut-off valve will stop the flow of air to the nitrogen generator. *This is done to prevent unnecessary use of the air compressor.*
4. When the N<sub>2</sub> storage tank pressure drops to 145 psi, the automatic shut-off valve will open back up and allow air flow thru the nitrogen generator.
5. To sample the nitrogen purity the nitrogen generator is producing, use the optional nitrogen analyzer and check it at the N<sub>2</sub> sampling port (front panel) just as you would check a nitrogen filled tire.

**NOTE:** After the nitrogen line is pressurized or the N<sub>2</sub> storage tank is filled, vehicle tires can then be inflated.

### **Turning the Nitrogen Generator OFF**

1. *Slowly* rotate ball valve at the back of the unit, from the open position to the closed position.
2. Rotate switch on the front of the unit, from the "ON" position to the "OFF" position.

## **PURITY ADJUSTMENT INSTRUCTIONS**

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Your Nitrogen generator is equipped with a purity adjustment dial. Nitrogen purity is set to a minimum of 95%. To increase Nitrogen purity, rotate the purity adjustment dial clockwise. Maximum travel of the dial will be approximately 360°.

**NOTE: Increasing Nitrogen purity will decrease your Nitrogen flow.**

To decrease Nitrogen purity, rotate the purity adjustment dial counter-clockwise. The line on the face of the dial is the position indicator.

## **MAINTENANCE**

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**NOTE:** To avoid personal injury or damage to the Nitrogen Inflation System, permit only qualified personnel to perform maintenance. **When cleaning or replacing filter elements and automatic float drains, shut off the supply air by closing the ball valve at the back of the unit. Press the pressure relief button on the front panel to exhaust all trapped air. You can now service the filters.**

See repair parts breakdown for replacement parts.

**ALWAYS:**      **Keep Nitrogen Inflation System clean.**

**DAILY:**        **Check the automatic float drain on all filters for proper operation.**

If the automatic float drain should become stuck open or inoperable, shut off the air supply (see NOTE above). Before servicing let the pressure bleed off from the filter. Remove the bottom cap from the bottom of the filter. The drain can be cleaned in hot soapy water. DO NOT attempt to disassemble the drain. If the drain is still inoperable after cleaning, it will have to be replaced. When installing a new drain, make sure the o-ring is installed on the bottom stem before screwing it into the bottom cap. Finger tighten only.

**WEEKLY:**      **Clean the automatic float drain on both filters.**

See above.

**BI-YEARLY:**   **Clean particulate filter element and replace coalescing element.**

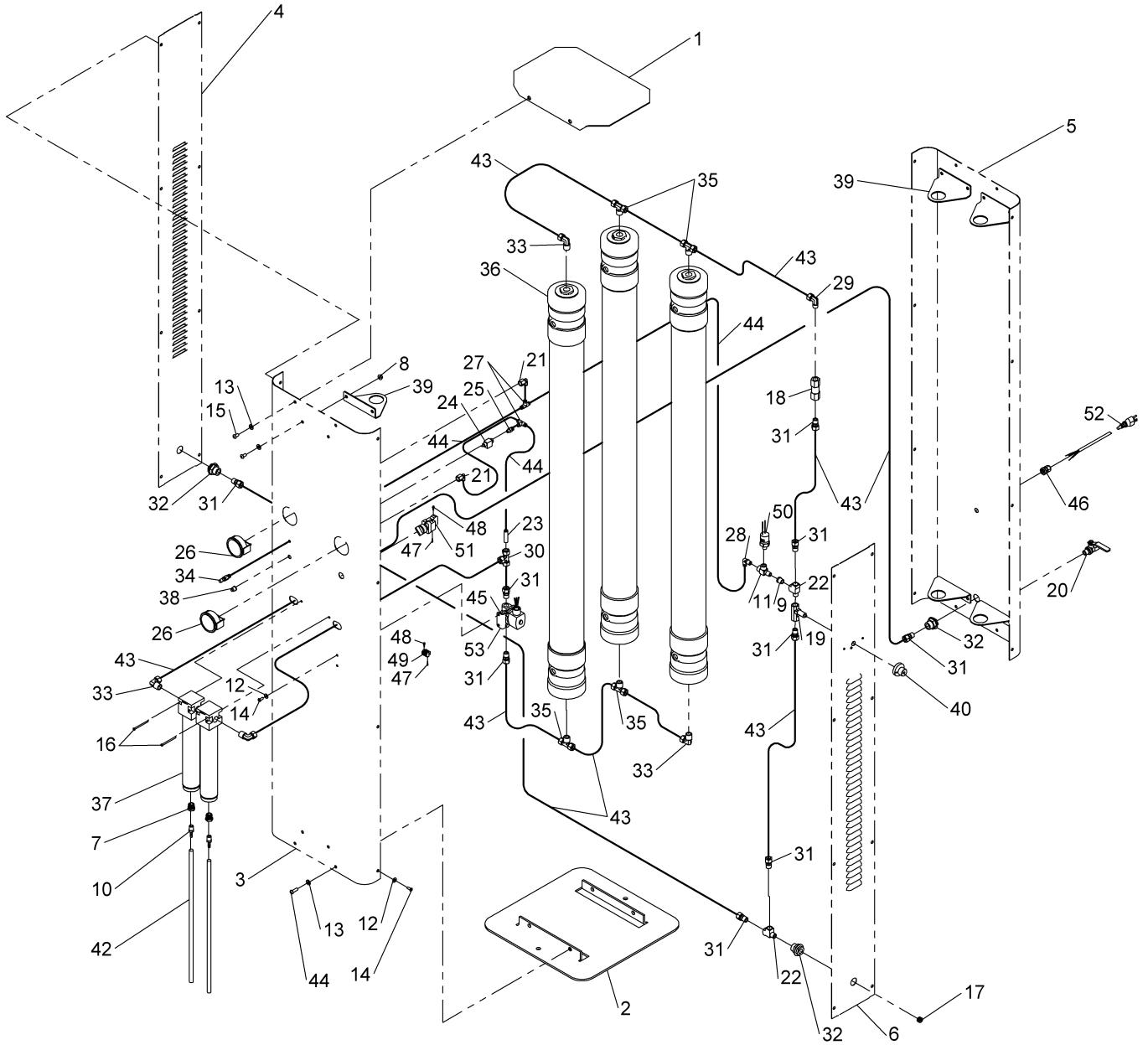
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### **OWNER'S RECORDS**

Date Installed: \_\_\_\_\_

Serial number                      \_\_\_\_\_ *Located on back panel*

# REPAIR PARTS



ITEM	QTY	PART NO.	DESCRIPTION
1	1	06-0007	END PANEL
2	1	06-0019	BASE
3	1	06-0020	FRONT PANEL
4	1	06-0021	SIDE PANEL-L
5	1	06-0022	BACK PANEL
6	1	06-0059	SIDE PANEL - R
7	2	039-008	1/2 TO 1/4 PIPE BUSHING
8	12	055-105	5/16-18 SF HEX LOCK NUT
9	1	096-039	3/8-1/4 PIPE BUSHING FITTING
10	2	096-192	1/4 MALE BARBED INSERT FITTING

ITEM	QTY	PART NO.	DESCRIPTION	
11	1	096-155	1/4 NPT TEE FITTING	
12	16	108-110	1/4 SAE FLAT WASHER	
13	20	108-123	5/16 SAE WASHER	
14	16	50-0125	1/4-20 X 5/8 SOC BTN HC SCREW	
15	16	50-0126	5/16-18 X 5/8 SOC BTN HC SCREW	
16	2	50-0137	#8-32 X 2-1/2" PPHM SCREW	
17	1	60-0074	PLUG	
18	1	60-0114	CHECK VALVE	
19	1	60-0115	FLOW CONTROL VALVE	
20	1	60-0116	BALL VALVE	
21	2	60-0124	1/4NPT FEM X 1/4 TUBE EL	
22	2	60-0132	3/8 NPT STREET TEE	
23	1	60-0139	REDUCER	
24	1	60-0140	2-WAY VALVE	
25	1	60-0146	1/8" NPT MALE	
26	2	60-0167	300 PSI GAUGE	
27	2	60-0171	1/4 UNION TEE	
28	1	60-0172	1/4 X 1/4 NPT M SWVL ELB	
29	1	60-0175	1/2 TUBE TO 3/8 NPT M ELB	
30	1	60-0176	1/2 TUBE UNION TEE	
31	9	60-0177	1/2 TUBE X 3/8 NPT M CONN	
32	3	60-0178	3/8 NPT X 1-14 STR BHD CPLG	
33	4	60-0181	1/2 TUBE TO 1/2 NPT M ELB FITTING	
34	1	60-0196	1/4 BLKHD VALVE	
35	4	60-0202	1/2 NPT X 1/2" BR TEE	
36	3	64-0033	SEPARATOR	
37	1	64-0016	SEPERATOR/COALESCER FILTER	
38	1	69-0029	CAPTIVATED PUSH BUTTON	
39	6	72-0140	MEMBRANE BRACKET	
40	1	73-1100	PURITY ADJUSTMENT DIAL	
41		D20-002	1/4 OD (GREEN) TUBE	
42		D20-011	1/4 ID X 1/8 WALL PVC TUBE	
43		D20-031	1/2 OD (BLACK) TUBE	
44	4	50-0154	5/16-18 X 1 SOC BTN HC SCREW	
45	2	055-160	NYLON LOCK NUT	
46	1	40-0083	POWER CORD GRIP	
47	8	40-0084	18 AWG WIRE FERRILE	
48	2	40-0085	18 AWG 2-WIRE FERRILE	
49	1	40-0086	STRIP CONNECTOR	
50	1	41-0040	PRESSURE SWITCH WITH HARNESS	
51	1	41-0041	SELECTOR SWITCH	
52	1	42-0026	POWER CORD	
53	1	60-0326	SOLENOID VALVE	
54	1	64-0017	FILTER ELEMENT	*
55	1	64-0021	MESH FILTER ELEMENT	*
56	1	69-0020	AUTO FLOAT DRAIN	*
<i>Quantities shown are for the Model 1500 Nitrogen Tire Inflation System.</i>				

\* Items not shown

**ANS America, Inc.**  
**Nitrogen Products**  
**COMMERCIAL WARRANTY**  
**(Non-Transferrable)**

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This product is warranted by ANS AMERICA, INC. to the original user-owner against defective materials or workmanship. During the warranty period, if ANS America, Inc determines the product or components to be defective, it will be repaired or replaced (at ANS America, Inc's option).

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**Warranty Period**

<b>Labor:</b>	12 months from the date of delivery.
<b>Parts:</b>	12 months from the date of delivery.
<b>Nitrogen Membranes:</b>	84 months from the date of delivery for models 465, 475, 485, 675, 685 from water and oil. Proper pre-filter maintenance must be followed as stated in this manual including changing filters every six (6) months, and using ONLY filters purchased through ANS America, Inc. Not doing so will void the seven year warranty. <b>Connecting to an airline with an oiler, or an unmaintained compressor will void the seven year warranty.</b> In order for a membrane to be considered for warranty replacement, it must be returned for inspection.  All other models (250, 350, 450, 650, 500, 1000, 1500, Dakota 8, Dakota 12) carry a 60 month warranty from the date of delivery. Proper pre-filter maintenance must be followed as stated in this manual including changing filters every six (6) months, and using ONLY filters purchased through ANS America, Inc. Not doing so will void the five year warranty. Contamination in the membrane including water, oil, solvents, particles, and other contaminants will void the warranty. <b>Connecting to an airline with an oiler, or an unmaintained compressor will void the five year warranty.</b> In order for a membrane to be considered for warranty replacement, it must be returned for inspection.
<b>Service or Repair:</b>	Warranty service or repairs must be performed by a ANS America, Inc designated service company. Membranes replaced under warranty will remain under warranty for the remaining portion of the original warranty period.

This warranty does not cover damage to the product caused by abuse, misuse, overloading, accident (including shipping damage), improper maintenance, alteration, or any other cause not the result of defective materials or workmanship.

Replacement is the exclusive remedy for defective product under this warranty. This warranty is expressly in lieu of all other warranties, including any implied warranty of merchantability or any implied warranty of fitness for a particular purpose of this product. ANS America, Inc. shall not be liable for any consequential or incidental damages.

ANS AMERICA, INC reserves the right to make changes in the design or construction of our products without obligation to incorporate such changes in products already sold and without notice.

Service parts, warranty, and regular repair service for **Nitrogen products** are available Monday through Friday, 8:00am to 5:00pm EST.

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