



**NITROFLATE**  
TOTAL VEHICLE TECHNOLOGY

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## **NFG2500 Series**

**NITROGEN GENERATOR TIRE INFLATION SYSTEM**

**Please read this Manual carefully prior to operation**

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# *Introduction*

## **Nitro-Flate 2500 Series**

M2K would like to congratulate you on purchasing the NFG2500s Nitrogen Tire Inflation System. We hope this manual will help you with assembly and operating functions of this user-friendly system. Although this unit is very simple to operate, the person operating it must handle this machine with caution.

**Easy step operation located at the front panel of machine.**

### **SPECIFICATIONS**

AC Power	120/60 Hz
DC Power	12 volt Deep Cycle Battery (22hrs per charge)
Temperature Range	0 to 160°F
Inlet Air Source	100 to 175 psi
Internal Storage Tank	20 Gallon Steel Tank (400 psi)
Nitrogen Gas Purity	98.5 to 99.8% (94% recommended minimum for tires)
Nitrogen Output	10 CFM
Tire Inflation System	6 Ports for Tire Inflation Hoses
Weight	181 lbs (With 4 Hoses)
Dimensions	23.5"(w) x 29"(l) x 48"(h)

### **NOTE**

Inflation time will vary depending on inlet air pressure source connected to the filter. Higher pressure results in faster inflation times. Maximum pressure - 175psi.

# ***Safety Warnings***

## Important Safety Instructions

### **Warning**

It is the operator's responsibility to take all safety precautions while operating this machine. You must read this manual thoroughly before operating the NFG2500 nitrogen tire inflation system. Always follow your shop's safety rules and regulations prior to operating any equipment.

**DO NOT USE** with faulty air hoses or damaged power cords.

To avoid personal injury **DO NOT** direct the air stream at any time to face or unprotected skin, especially to the eyes.

### **CAUTION**

Never exceed the maximum inlet pressure of 175psi. This could damage the unit.

# *Initial Set-Up*

## **Step # 1**

Upon receipt, verify there is no physical damage to the machine that might have occurred during shipping.

## **Step # 2**

Located at the back of the machine there is a white label pointing to a set of wires. Connect the two wires to the matting plugs. You should see a **GREEN LIGHT** through the opening on the battery charger.



## **Step # 3**

Plug-in the electrical cord to a 110 volt power source. This will start charging the battery or go into a full float maintenance charge. This battery can run on its own power for 22 hours before requiring recharging (recharge time will take 2 to 4 hours). You may still use the machine during a low battery charge by plugging in the machine to a 110 volt power source. (Your machine should arrive fully charged).

## **Step #4**

Connect 4 to 6 tire inflation hoses to the inlet couplers located at the front of the machine. Loop the hoses on hangers located on both sides of machine.

# Operating Instructions

## Routine Maintenance

- 1- Check daily for any signs of damage or wear to the tire inflation hoses.
- 2 - Make sure the inlet air pressure is at least 100 psi at the filter inlet.
- 3 - Check pressure gauges atop the control panel for any damage.
- 4 - Check electrical connections for any damage.

1 - Connect shop's air supply to air filter located on the side of the machine. Pressure must be between 100 and 175 psi (higher pressure results in faster inflation times). **DO NOT** exceed 175 psi.

2 - Plug in the 22 ft electrical cord into a 110 V power source. You may use the machine without power cord as long as the onboard battery is fully charged.

3 - Turn ON the Power Switch located at the top center of Face Panel. For 3 seconds, a series of numbers will appear in both the left and right windows. Afterwards, **CAL** will appear in the left window for 3 seconds.

A digital display with a black background and red text showing the word "CAL".

4 - If the word **bAt** should appear in the left window, this indicates the on board BATTERY is low. Please connect the electrical cord to a 110 watt power source to begin charging. You may continue to use machine while charging. Charging should take between 2 and 4 hours.

A digital display with a black background and red text showing the word "bAt".

5 - During the next 15 seconds, the machine is self-calibrating. You should see numbers between **78.1** and **78.4**. It may stop at **78.2**.

A digital display with a black background and red text showing the number "78.2".

6 - The word **CAL** will appear in the left window, then **-2500** will be showing in both windows. This will indicate that the machine is finished calibrating and you may continue on with service.

A digital display with a black background and red text showing "-25" in the left window and "00" in the right window.

## NOTE

If the word **CAL** appears in the left window and the letters **Er** in the right window, this indicates the machine failed the calibration process. A beeper will sound, you may push the pause button to stop the beeper, or turn the power off. (Open the lid of the machine and check the Yellow and White wire

A digital display with a black background and red text showing "CAL" in the left window and "Er" in the right window.

connections to the Oxygen sensor and ensure the sensor is screwed into manifold. Also, check the air hose supply to the inlet side of the regulator for loose connections). If all appears good, you may try again by turning the machine OFF and ON one more time. If the beeper sounds again, then the Oxygen Sensor must be replaced. Please contact M2K for a new Oxygen sensor. Please follow the procedures on Page 8 for replacing the Oxygen Sensor.

**IMPORTANT**, FOR BEST INFLATION TIMES, DO NOT start the service on a vehicle until you have a minimum of 80 psi in the tank pressure gauge. “Tank pressure gauge should always match shop inlet pressure, example: shop’s air 140 psi tank pressure gauge should reach 140 psi.

8 - Connect all 4 air hoses or optional 6 hoses to the outlet couplers located in the front of the machine. **WARNING**: Before connecting any of the air hoses to the vehicle’s tires you must make sure vehicle is not resting on any of its valve stems located at bottom of vehicle’s tires. **This is very important**, when tires are deflated this could cause damage to the TPMS Monitoring System.

9 - Now connect the 15 foot air hoses to the front of the vehicle tires and the 25 foot hoses to the rear tires. Each hose has a heavy-duty valve stem Chuck to keep the hose securely on the valve stem.

10 - Now one by one remove the air hose from the outlet coupling located at the front panel of machine and listen for air flowing out of tire. (This will ensure that the valve stem is not damaged. Replace each hose).

11 - Select your PSI tire pressure in the right hand window by pushing the arrows up or down. We suggest you use the manufacturer’s suggested tire pressure for each vehicle -- located on the doorjamb.

12 - The NFG2500Series performs 2 deflates and 2 fill cycles with a built –in safety feature on the selection of the psi which will not deflate lower than 4 psi in any vehicle tire. This is so the bead does not break from the tire and rim.

13 - Push the START SERVICE button and you will hear air deflating from the vehicle’s tires (takes one quick look around the vehicle and make sure all 4 or 6 tires are deflating).

14 – In a few short minutes you will hear the buzzer sound, the service is complete. You may silence the buzzer by pushing the pause button. In the left window, the nitrogen percentage in

**the tires will display on the left window, you may now disconnect the hoses from vehicle and store onto unit.**

**15 - The Manual Fill Button at top center of face panel is for topping off customer's tires when needed. Just connect the air hose from the machine to the tire and turn on machine. Press the button for several seconds, then release and view the pressure gauge until proper pressure is achieved. Make sure you have a greater volume of psi in storage tank than what you need to top off the tire.**

# Replacement of Oxygen Sensor

## Oxygen Sensor- Part Number R-22A

The Oxygen sensor should be replaced about every 2 years. You will find a date written in marker on the O<sub>2</sub> Sensor. If you notice that the system is taking a longer time to produce Nitrogen in the storage tank (11 minutes or more), then the Oxygen sensor should be replaced. Follow **Steps 1 – 6**.

### Step 1:

Disconnect the air supply from the external air filter located on the left side of the machine. Turn OFF the machine.

### Step 2:

Using a flat head screwdriver, unlock the lid of machine.

### Step 3:

Lift the lid. Locate the Oxygen Sensor in the left hand side of the lid. It is screwed into the manifold.

### Step 4:

Carefully unplug the Yellow and White wires by pulling on the plug. **DO NOT** pull directly on the wires as this could damage them.

### Step 5:

Unscrew the old Oxygen sensor from the manifold.

### Step 6:

Screw new oxygen sensor into the manifold. Reconnect the Yellow and White wires, lower and lock lid.



# Maintenance

**IMPORTANT:** Replace filter element every 6 months or whenever the filter window turns **RED**. Use only factory filter element.  
Part number: 100-12BXF-410

## Instructions for Replacing the Filter

### Step 1:

Place both hands on the lower portion of the filter housing and twist counter-clockwise a quarter of turn. You will feel the bowl release from the O-ring seal. Continue lowering filter housing straight down so you don't damage the filter element. Drain off any oil or water in the housing into a suitable container.

### Step 2:

You will see a blue thin plastic nut at bottom of the filter. Unscrew until element can be completely removed.

### Step 3:

Dispose of old element in a suitable container.

### Step 4:

Replace with new element with appropriate part number. Reattach locking nut and then screw on filter housing until you feel it lock into place.



# ***Troubleshooting***

## **No power to Control Panel:**

First check the fuse by following the steps on Page 12.

If the fuse is still good then follow the steps on page - 7 to learn how to open the lid of machine and then look for any loose wires on the PC Board or at the Power switch. Also check for damaged Power Cord (110 volt) outlet.

## **Battery Not Charging:**

First check the fuse by following the steps on Page 12.

If the fuse is still good, remove the back cover of the machine and check for any loose wires or damaged Power Cord (110 volt) outlet. Look inside the back cover of machine at the charger for a green or yellow light. If no light is on, the fuse might need to be replaced. (If the machine lost power unexpectedly, check the fuse).

## **Charging Nitrogen Time:**

### **When to Replace Oxygen Sensor**

If the system is taking longer than 11 minutes to charge internal storage tank with nitrogen to 100 psi, follow the steps on Page 9 to replace the oxygen sensor.

**If any of these Trouble-Shooting steps do not solve your problem, please consult M2K directly at +1 (949) 333-3800.**

**CAUTION: Exercise extreme caution when dealing with electrical components.**

## Checking Fuse (10 AMP 250 Volt)

### Step 1:

Unplug the power cord from shop's power source and unplug the power cord from the machine.

### Step 2:

Use a flat head screwdriver to remove the fuse holder. Inside you will see a fuse attached in the clip holder. Use the spare fuse in the fuse box of the clip holder to replace blown fuse.

### Step 3:

Plug the power cord back into the socket of the machine. This completes changing the fuse.



# Parts List

**25ftntah-A**



**15ftntah-A**



**HT-CH3062**



**HSF202A**



**External Filter Element BF100-12-BX**



**HPF602**



**Oxygen Sensor-R22-A**



**NFGPC22**



**NFGPCFB**



**NFGOFSDPDT**



**NFGMPB**



**NFGRS20160**



**NFGRS20200**



**NFGPT**

