PREPARING YOUR TNG SCOOTER FOR WINTER STORAGE

Tech Tips
All Scooters

WINTERIZING

Overview
This is a guide for preparing your scooter for extended winter storage.

There are only a few climatic zones in North America where scooters can be ridden all months of the year. In most areas, scooters need to be put into storage in middle to late fall, and are often brought out of storage on that first really warm day of spring. Some scooters which were not properly prepared for storage, simply won't start. In many cases, even if the scooter does start, it runs very poorly.

Proper preparation of your scooter for winter storage will make it more likely that you will be able to get out and enjoy that first spring ride. This document covers five basic areas that should be considered when preparing to put your TNG Scooter into storage. The five areas of focus are:

1. Battery
2. Fuel System
3. Engine
4. Tires
5. Cover

1. Battery

Maintaining the state of charge of your scooter battery during an extended period of storage is essential to insure the maximum service life of the battery.

If at all possible, remove the battery from the vehicle. Clean the battery and terminals using a solution of baking soda and water, making sure that none of the solution enters the battery during cleaning. After the battery is cleaned, inspect it for any signs of damage or extraordinary wear that may have occurred while in service.

At this time you should also use a baking soda and water solution to clean the battery compartment of the vehicle to help neutralize any electrolyte that may be present. Rinse with clean water and dry thoroughly.

You may return the battery to the battery compartment, or you may store it separately. If it is put back into the battery compartment for storage it is best that you do not hook up the battery cables until you are ready to take the scooter out of storage.

Charge the battery to 100%. If the battery is stored at temperatures below 60°F, recharge to 100% every month. If stored in a warm area above 60°F, recharge the battery every two weeks.

Before you connect your charger to the battery, make sure that you know how your battery charger operates. Some chargers will not stop charging when the battery reaches 100%, while others will stop automatically. Some automatic chargers will begin charging again when the battery level drops, while others will not begin charging again until power to the charger has been disconnected and reconnected.

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If your charger is one that will continue to charge even after the battery reaches 100%, you must manually disconnect power to the charger when charging is complete or the battery may be damaged from overcharging. These chargers should normally be connected for only a few hours at a time.

If your charger is one that must be disconnected in order to reset it to charge, you must manually do so at the proper intervals. If you are using the battery charger supplied with your TNG Scooter, see our Tech Tip on Battery Charging at the end of this document.

CAUTION! *During charging of a small scooter battery, a low volume of hydrogen gas will be emitted. While opening a window in the room is not generally required, battery charging should always be done far away from any source of flame or electrical spark.*

2. Fuel System

Properly preparing the fuel system before putting your scooter into storage will reduce potential problems due to a plugged or corroded system. There are two ways this can be accomplished.

A. Dry Fuel System.

This technique is suitable if you are going to store your bike in a heated location where condensation due to temperature fluctuations is not a problem.

This requires you to fully drain the entire fuel system including the fuel tank and carburetor. Generally, you will need to remove the float bowl of the carburetor, then blow all of the fuel out of the jets with compressed air to ensure that everything is perfectly dry.

B. Wet Fuel System.

This technique is suitable if you are going to store your bike in either a heated or unheated location.

Purchase fuel stabilizer and add it to a nearly full tank of gasoline in the concentration indicated on the label for long-term storage. Opti-Mizer Fuel Stabilizer is the recommended additive. Opti-Mizer is available through your local TNG Dealer.

After adding the fuel stabilizer, run the engine for at least 10 minutes to allow the stable fuel to make its way through the entire fuel delivery system and into the carburetor.

Top off the tank with gasoline to vacate all of the air. This will reduce or eliminate chances of condensation due to temperature fluctuations.

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3. Tires

   It is best if the weight of the scooter can be kept off the tires so that a flat spot or cracked sidewall does not develop.

   With nearly all TNG Scooters, when the bike is on the center stand the front wheel is on the ground, while the rear wheel is slightly off the ground. At this point you may simply be able to lift the front wheel of the scooter off the ground and place something under the frame of the scooter and have both wheels off the ground. Make sure that the scooter is stable and cannot fall or be knocked over easily.

   In most cases it will require a little more work to get both wheels off the ground. Place a thick wooden plank or other object on the floor, making sure that the plank is long enough to easily accommodate the width of your center stand. Roll the scooter over the plank and put the bike on the center stand, with the stand sitting on top of the plank. Then lift the front wheel of the scooter off the ground and place something underneath the frame to support the front of the scooter. Make sure the scooter is stable and cannot fall or be knocked over easily.

4. Engine (optional)

   If you are placing your scooter into storage in an unheated area, temperature fluctuations may cause condensation inside the cylinder of the engine. Condensation could cause rust and corrosion to the cylinder wall.

   To reduce the chance of getting rust or corrosion, perform the following steps:

   A. Remove the spark plug.

   B. Squirt 1 or 2 ounces of 2-cycle oil into the cylinder. (This applies to both 2-cycle and 4-cycle engines.)

   C. With the spark plug still out, turn the engine over a few times.

   D. Reinstall the spark plug.

5. Cover

   TNG Scooters come standard with a nylon weather cover. Placing the cover over the scooter while it is in storage will reduce the dirt and dust which would naturally accumulate on the scooter. This will make it easier to get ready for riding when you take it out of storage.

When taking your scooter out of winter storage, first remove the nylon weather cover. Check the tires for proper air pressure and add air if necessary. The correct inflation pressure for the tires on your scooter can be found on the sidewall of the tire. Some scooters use the same pressure on both the front and rear tires, while others may use slightly less pressure in the front tire. Take the scooter off the blocking.

If you drained all the gasoline from your fuel tank, refill with gasoline. Re-install the battery and attach the battery terminals. Using the electric starter, press start for 6 seconds, wait 10 to15 seconds, and press start again for 6 seconds. Repeat this procedure until your scooter is running.

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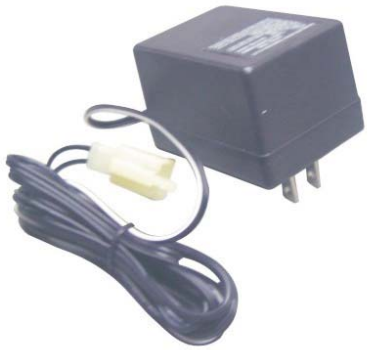
Battery Charging

Overview

This is a guide for proper use of the battery charger provided with your TNG scooter.

If the battery charger that came with your scooter looks like the charger in the picture below, you **do not** have a "smart" charger.

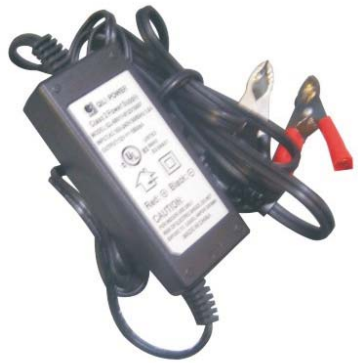


When plugged in to a 120VAC power source, this charger puts out a constant 12VDC at 0.5 Amps. As long as it this charger is connected to the battery of your scooter, the battery is being charged at a rate of 0.5 Amps, even after the battery is fully charged. This charger will not stop charging until it is unplugged from either the 120VAC power source or from the battery.

This type of charger must be monitored very closely to insure that the scooter battery does not get "over charged." The charger must be disconnected as soon as the battery is fully charged. Overcharging a battery will shorten the life of the battery.

When charging your battery, always connect the charger to the battery before plugging in to your 120VAC power supply. When your battery is fully charged, first unplug the charger from the 120VAC supply, then disconnect the charger from the battery.

If the battery charger that came with your scooter looks like the charger in the picture below, you probably **do not** have a "smart" charger.



When plugged in to a 120VAC power source, this charger puts out a constant 12VDC at 1.5 Amps. As long as it this charger is connected to the battery of your scooter, the battery is being charged at a rate of 1.5 Amps, even after the battery is fully charged. This charger will not stop charging until it is unplugged from either the 120VAC power source or from the battery.

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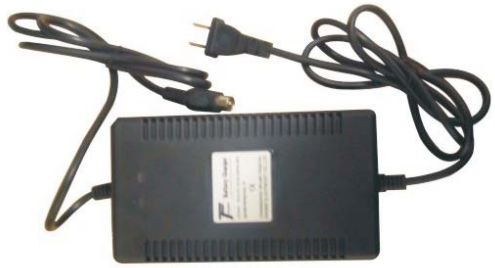
If the battery charger that came with your scooter looks like the charger in the picture below, you have a "smart" charger.



When plugged in to a 120VAC power source, a flashing red LED on this charger indicates that power is connected. The other LED on the charger will turn green approximately one hour before charging is complete.

This charger will automatically stop charging when the battery is fully charged.

Once the battery is fully charged, as long as the charger remains connected to the 120VAC power source and to the battery, it will not begin charging again. It will only begin charging again after it has been disconnected from the 120VAC power source and is then reconnected.

When your battery is fully charged, always unplug the charger from the 120VAC supply first, then disconnect the charger from the battery.