



## QUICK START GUIDE

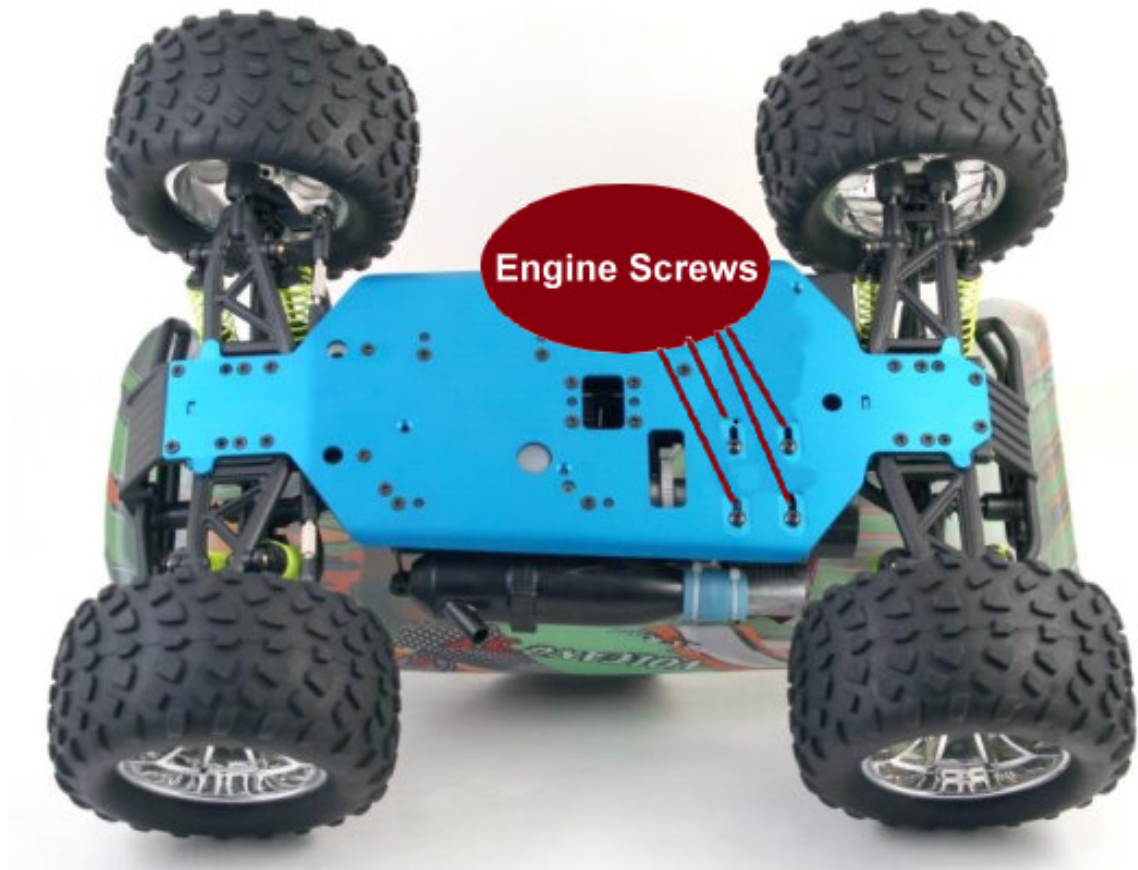
**Follow the steps outlined below prior to usage. These steps are needed in order to correctly operate and break in your vehicle and engine.**

### Required Tools & Equipment to Run This Model

				
Nitro Fuel	Fuel Bottle	Glow Plug Igniter With Charger or Battery	Cross Wrench	Foam Air Filter Oil
				
Hobby Knife	Small 1/8 Inch Flathead Screwdriver	Phillips Head Screwdriver	12 AA Alkaline Batteries 8 for Remote / 4 for Car	After-Run Oil

**Step 1:**  
**CHECKING SCREWS AND GEAR MESH.**

1. **Check all screws on the car before starting, especially the engine screws as shown in the image below. Use blue thread lock on all metal to metal screws. (Thread lock will insure that the engine screws do not vibrate out during use. This is a very important step to keep your vehicle running properly for full enjoyment). Most automotive stores and hardware stores sell thread lock. Any brand is fine.**

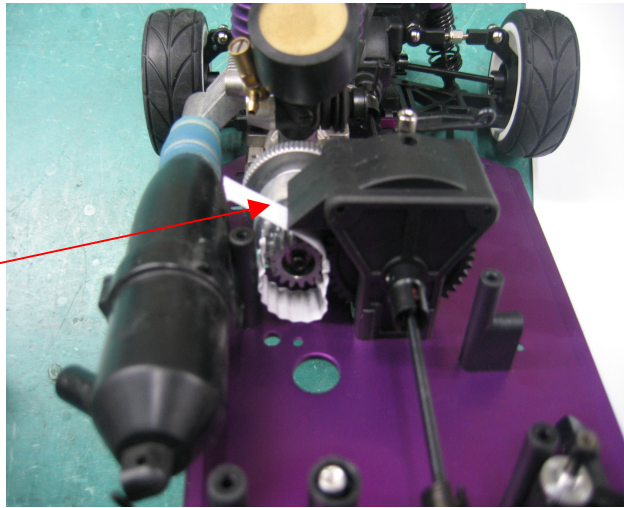


- 2. Check the mesh of your spur gear and clutchbell. Take a small piece of paper, cut it into a 1/2 inch wide by 6 in long strip as shown below. Loosen the 4 engine screws on the bottom of the car as shown above so the engine slides back and forth. Once you have the engine screws loose put the piece of paper between the clutch bell and spur gear. Push the engine into the spur gear and tighten the engine bolts. Pull the paper out and you are done.**

*Note: The clearance between the clutch bell and the Diff. gear must be approx. 0.1mm.*

*If the clearance is more than 0.2mm, normal performance of your spur gear may be affected.*

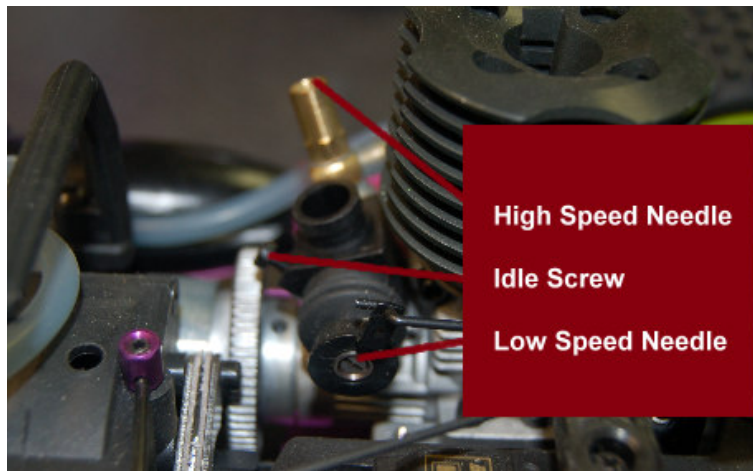
*Insert Paper Strip  
between the clutch bell  
and differential gear as  
shown.*



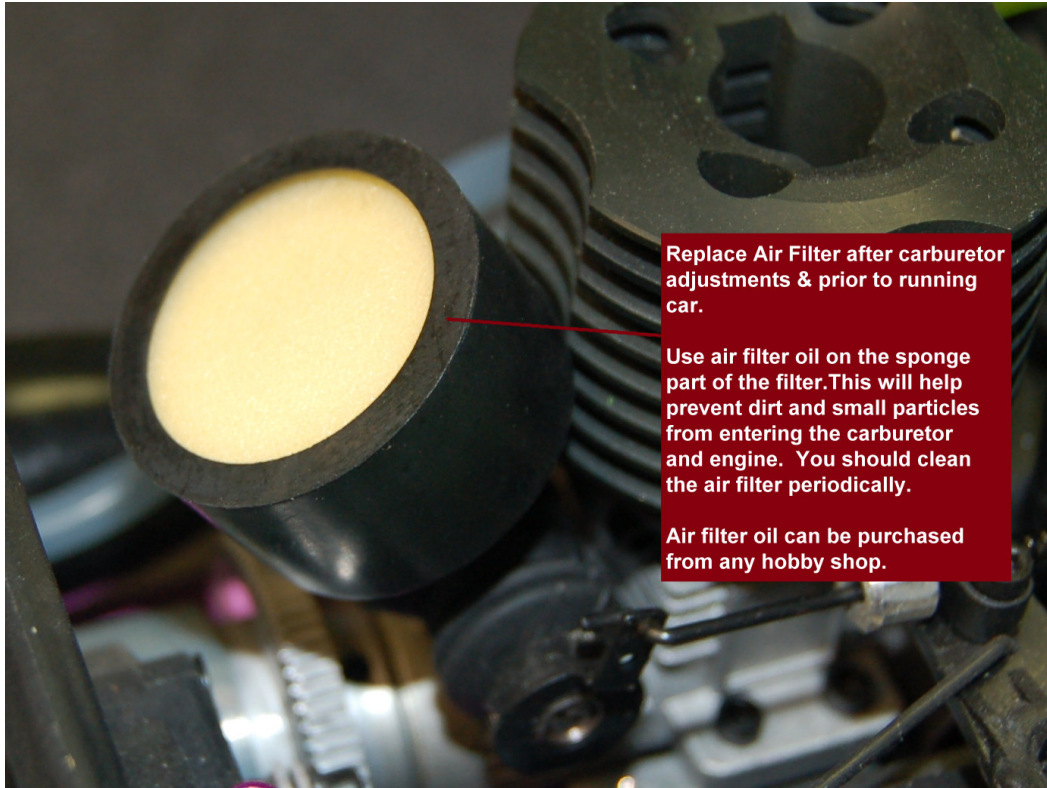
**To check if you have the proper mesh, keep your finger on the spur gear and check if you have a little play between the gears. Roll the car back and forth, it should roll freely. Make sure the engine screws are tight and have enough threadlock on them.**

## Step 2 Getting Ready to Break in the Engine

**1. Get to know your engine. There are 3 screw settings on the engine; the high-speed needle; the low speed needed; the idle screw. (Image below)**



- 2. The high-speed needle controls the amount of fuel that flows into the carburetor. The low speed needle controls the amount of fuel flowing into the carburetor at idle and acceleration. The idle screw controls the RPM's (revolutions per minute) of the engine at idle.**
- 3. It is a good idea to learn the following terms: Rich means more fuel; Lean means less fuel. Rich is opening the screw or turning counterclockwise. Leaning is closing the screw or turning clockwise.**
- 4. Make sure your engine is set for break in. Close the high-speed needle until its snug. Turn the high-speed needle counterclockwise 3 full turns. Close the low speed needle and open until the throttle until it is even with the silver collar around it**
- 5. Check to see if the idle is close to the correct setting. Turn your transmitter and car on. Make sure the trim dials (small dials on the transmitter) are set to the center. Take off the air cleaner and see if there is a 1mm opening. If not, make the opening wider (faster idle) or counterclockwise to make the opening smaller (slower idle). It is very important that you replace the air filter before you start the engine to keep dirt out of your carburetor. You will also need to oil the air filter using air filter oil. You can get this from most hobby shops or automotive stores.**



**6. Make sure your glow plug igniter is fully charged.**



**There are many different types of glow plug igniters. If you received one with your vehicle, it must be charged for at least 10 hours prior to use. Hobby Shops and online stores offer igniters that use standard alkaline or rechargeable batteries and may not include an AC adapter.**

- 7. Fill the fuel tank with fuel. 20% Nitro Fuel is recommended and can be purchased from most hobby shops.**
- 8. Hold your finger on the exhaust pipe opening and pull the pull starter until you see fuel traveling through the fuel line. Stop when the fuel gets to the carburetor. Remove the air filter and put 2 drops of fuel in the carburetor to**

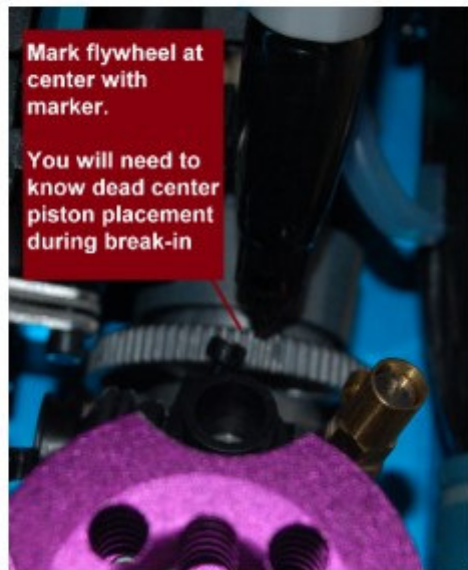
**prime the engine. Put your glow plug igniter on the glow plug and pull the starter using a short quick motion. (Do not force or pull the pull cord all the way out as this can damage the engine and pull start mechanism) The engine should start in a few pulls. Adjust idle as needed to the point where the wheels are not spinning.**



- 9. If engine feels very hard to pull it may be hydro locked. This is when there is too much fuel in the engine meaning the engine is flooded. To fix this, take the glow plug out with a cross wrench, turn the car upside down and pull the starter a few times to get the excess fuel out of the engine. Put the glow plug back in, put the igniter back on the plug and try to start again.**

### Step 3 Breaking in the Engine

There are many different options to break in but this is the easiest and will give you the best results. It is a good idea to take the glow plug out and pull the starter easily until the piston reaches the bottom of the stroke (place where piston is before it starts to return to the top of the head) and make a mark on the flywheel so you know where bottom dead center is because when you put the glow plug back into the engine you need a reference point. Be sure to fill the tank with fuel before each step of the break in process.



**Prior to step 1 you must place the vehicle on something so that the wheels are not touching the ground and so that the wheels can spin freely. This is to prevent the vehicle from moving during break-in. Please read below carefully as proper break-in required.**

- 1. Turn on the remote control and “ON” switch located on the battery box. Start the car and let the first tank of fuel run out. You may need to adjust the idle slightly so the car stays running. The engine should be revving smoothly and wheels should **NOT** be spinning. If wheels are spinning you must adjust the idle to the point that the wheels do not spin. It is normal for fuel to drip from the exhaust during break in. Wait for the engine to cool once the first tank is finished and make sure the piston is at bottom dead center before moving to step 2.**

**During step 1 of the break in process you must check to make sure your controller is working properly. Have someone stand by the vehicle while you walk at least 50 feet away with the powered on remote control unit. Each 10 feet you should check the steering to make sure it is operating correctly. Make sure that when you turn left and right that wheels turn in the correct direction. Continue to do this until you reach approximately 50 feet. This is an important step so that when you run the vehicle during step 2 you will have full control.**

- 2. Start the car with the second tank of fuel. This time run the car in a figure 8 patterns being careful not to use more than  $\frac{1}{4}$  throttle. When the fuel runs out, return the piston to bottom dead center and let it cool.**
- 3. Fill the fuel tank and star the car. Run the same as you did in step 2. Make sure to let the engine cool with piston at bottom dead center when done.**
- 4. Fill the fuel tank and start the car. Drive the car in figure 8 patters again this time using no more than  $\frac{1}{2}$  throttle. You may notice that the idle is becoming faster. You may need to lower it since the engine is starting to break in and has less resistance. Run until fuel is gone and return piston to bottom dead center.**
- 5. Your 5<sup>th</sup> tank of fuel is your final step in breaking in the engine. Start the car and drive straight lines this time going from idle to  $\frac{3}{4}$  throttle then back to idle again. Do this until the tank runs out of fuel, and return the piston to bottom dead center.**
- 6. You have successfully broken in your engine. You may now run the car normally.**