



## OPERATIONS MANUAL and TUNING GUIDE



[HTTP://XTM.GLOBALHOBBY.COM](http://xtm.globalhobby.com)

### Features of Your New XTM Racing X-Factor2 RTR Nitro-Powered Monster Truck:

- Prebuilt and Ready-to-Run
- Powerful XTM Racing 24.7 Engine w/Dual-Output Exhaust Pipe
- Hitec Aggressor Radio Control System
- Powerful XTM Racing X-77 Steering Servo
- Threaded Shock Bodies w/Dust Boots
- Multi-Link Cantilever Suspension w/Optional Torsion Bars
- Telescoping Universals
- 3mm Anodized Aluminum Chassis
- 3-Shoe Clutch Assembly
- Anodized Aluminum Heat-Sink Engine Mounts
- Hardened Steel Spur Gear w/Adjustable Slipper Clutch
- Complete Ball-Bearing Set
- Prepainted Body and Die-Cut Decal Set
- Dual Disc Brakes
- Vented Clutch Bell
- Heavy-Duty "Y-Spoke" Wheels w/Chevron Tires
- Dustproof Receiver and Battery Boxes
- Silicone Dustproof Switch Cover
- Sponge Air Filter
- Convenient Carrying Handle

Thank you for purchasing the XTM Racing X-Factor2 RTR Nitro-Powered Monster Truck. This Operations Manual and Tuning Guide is provided to help you enjoy your new X-Factor2 RTR Nitro-Powered Monster Truck without any of the hassles you might expect. Please read through all of the literature that is provided in the box.

◆◆IMPORTANT◆◆ Before operating your new X-Factor2 RTR Nitro-Powered Monster Truck, please read and understand the warnings listed on the next page. Failure to do so could lead to bodily harm and/or injury. The XTM Racing X-Factor2 RTR Nitro-Powered Monster Truck is not intended for persons under 12 years of age, unless closely supervised by an adult.

The XTM Racing X-Factor2 RTR Nitro-Powered Monster Truck is distributed exclusively by Global Hobby Distributors  
18480 Bandilier Circle, Fountain Valley, CA 92708



All contents copyright © 2004, Global Hobby Distributors Version V1.0 February 2004

Kit Product # 145642

## FOR YOUR SAFETY - PLEASE READ THESE WARNINGS FIRST!

### ENGINE WARNINGS

- Never use any fuel in your engine other than glow fuels specifically designed for use in model car engines. Use of any other types of fuel can cause severe damage to your engine and/or personal injury. **NEVER USE GASOLINE OR DIESEL FUEL!**
- Never operate your model on any public streets. This could cause traffic accidents, personal injury or property damage.
- Glow fuel engines emit exhaust vapors that are poisonous and can be dangerous to your health. It is important that you operate your engine in a very well-ventilated area, preferably outdoors.
- Before starting your engine, make sure that the throttle trim is set to the idle position. Starting your engine at any setting above idle can cause the model to lurch out of your hands.
- When your engine is running, there are certain parts that rotate at high speeds. Be careful not to touch the drive shafts, gears, clutch assembly or any other moving parts. Otherwise, serious injury could result.
- It is normal for your engine and exhaust pipe to get very hot during operation. Never touch these parts while they are hot or you might be burned.
- Model car engines produce vibration when they are running. It is important to periodically check the engine mounting screws and other assemblies to ensure they are tight. Running your engine with the engine mounting screws loose can lead to severe engine and/or chassis damage.

### FUEL WARNINGS

- Glow fuels like those used in your X-Factor2 are poisonous. Follow all the precautions that are printed on the fuel manufacturer's container.
- Keep fuel out of the reach of children.
- Glow fuel is extremely flammable. Keep away from high heat, sparks and flame.

### GENERAL WARNINGS

- Under no circumstances should you operate your model in crowds of people. Serious injury could result.
- Never operate your model on busy streets or if there are cars around.
- Do not use your model to chase pets or other animals.
- The receiver and battery boxes are not waterproof; therefore, do not drive through water, wet grass, mud or snow.
- Because your model is operated by radio control, it is important to make sure you always are using fresh and/or fully charged batteries. Never allow the batteries to run low or you could lose control of the model.
- If your model becomes stuck, allow the engine to idle, then retrieve your model by hand.
- To prevent excessive r.p.m.'s from damaging your engine and/or drivetrain components, we suggest reducing throttle while in the air during jumps.

## FOR YOUR INFORMATION

If you should have trouble with any of the steps listed in this Operations Manual and Tuning Guide, we have provided an extensive troubleshooting guide beginning on page # 25. The troubleshooting guide is provided to help you find a quick and immediate resolution to a number of problems that might occur. If you cannot solve a problem using the troubleshooting guide, or if you have any other questions or concerns, please contact us at the address below:



**Global Services**  
18480 Bandilier Circle  
Fountain Valley CA 92708

Phone: (714) 963-0329

Fax: (714) 964-6236

**Visit Our Website**

<http://globalservices.globalhobby.com>

Email: [service@globalhobby.net](mailto:service@globalhobby.net)

**CHECK IT OUT!** We urge you to come check out our website at <http://globalservices.globalhobby.com>. There you will find public message boards frequented by other XTM Racing product owners and the XTM Racing support staff. This is a great place to learn about new XTM Racing products, get help and suggestions for your current XTM Racing products or just simply hang out and chat with people that share your same interests.

To allow us to serve your needs better, please include your email address with any correspondence you send to us. Your email address will be added to our Customer Service Database so you will automatically receive free updates and tech notices for your particular product. You will also receive repair status updates (if applicable) and other important information about your product as it becomes available.

### IMPORTANT INFORMATION ABOUT YOUR EMAIL ADDRESS

Global Hobby Distributors will not disclose the information it collects to outside parties. Global Hobby Distributors does not sell, trade, or rent your personal information to others. Your privacy is important to us.

## INTRODUCTION



Thank you for purchasing the XTM Racing X-Factor2 RTR Nitro-Powered Monster Truck. **This beast has no limits!** Tackle the toughest terrain with its fully articulating suspension, massive travel, and 1/8th scale threaded shocks. The brute force of the X-Factor2 explodes from the awesome XTM 24.7 power plant. The X-Factor2 handles this massive power with a steel spur gear, heavy-duty nylon and steel transmission gears and 1/8th scale differentials. This Operations Manual and Tuning Guide is designed to help you get your new X-Factor2 running as quickly as possible. The Tuning Guide included within this Operations Manual deals with different chassis setups and even has a special section for setting up your X-Factor2 for rock crawling - what the X-Factor2 is best at! We've also included how-to's on installing some of the most popular hop-ups that are available for your X-Factor2. These include a wheelie bar, tuned exhaust system, slider clutch and more.

## POPULAR HOP-UPS FOR THE X-FACTOR2

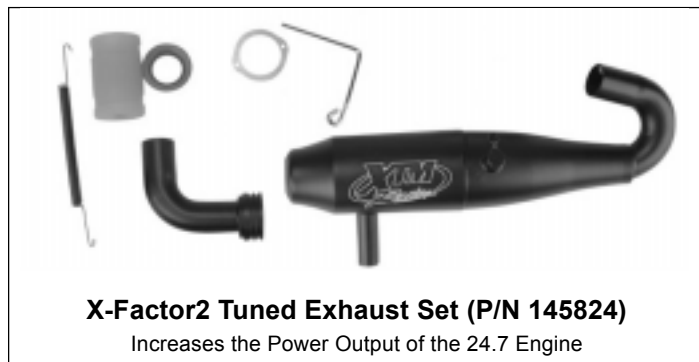
Listed below are some of the most popular hop-ups that are available for your X-Factor2. Beginning on page # 22, we even show you how to install these hop-ups should you decide to purchase them. These hop-ups, plus many more, such as shock springs, aluminum cantilever mounts, aluminum gear box mounts, aluminum cantilever bellcranks, and even roll cages are available. Go here to check them out:

**[HTTP://WWW.TEAMX-FACTOR.COM/](http://www.teamx-factor.com/)**



**X-Factor2 Wheelie Bar Set (P/N 149625)**

Prevents Your X-Factor2 from Flipping Backward



**X-Factor2 Tuned Exhaust Set (P/N 145824)**

Increases the Power Output of the 24.7 Engine



**1/8th Scale Sliding Clutch Kit (P/N 149596)**

Transmits More Efficient Power from the Engine to the Transmission



**X-Factor2 Axle Adapter Set (P/N 146110)**

Allows You to Use 14mm Hex-Style Wheels on Your X-Factor2

## SECTION 1: RECOMMENDED TOOLS AND SUPPLIES

This section lists the recommended tools and supplies that you need to purchase and have onhand to finish assembling and to run and maintain your new XTM Racing X-Factor2. We have tested these items extensively with the X-Factor2 and found that they offer the best in reliability and value.

### What Fuel Do I Use in My X-Factor2?

Fuel can make a big difference in the way your engine performs. For the break-in period you should use a fuel specifically designed for R/C car engines that contains no more than 20% nitromethane. Once the engine has been adequately broken in (about 45 minutes of run-time) you can switch to an R/C car fuel containing up to, but no more than, 30% nitromethane.

◆**WARNING**◆ We do not recommend using fuels designed for R/C airplane engine use. These fuels do not contain the proper amount of lubricants; therefore, they will cause the engine to overheat and severe damage to the engine will result.

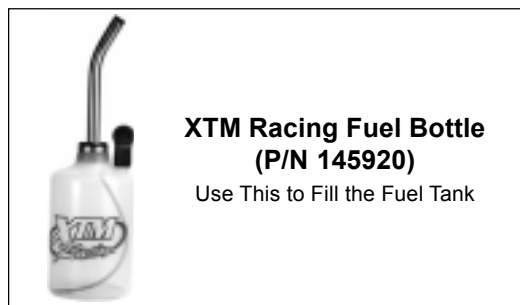
### Use the following fuels for the best performance:

- XTM Racing 20% Nitro Car Fuel - Part # 145850 (*use this fuel for break-in and normal use*)
- Trinity 30% Nitro Car Fuel - Part # 837832 (*use this fuel after break-in for more power*)



### XTM Racing 20% Nitro Car Fuel (P/N 145850)

Use For Break-In and For Normal Use



### XTM Racing Fuel Bottle (P/N 145920)

Use This to Fill the Fuel Tank

### Do I need to Use a Fuel Bottle?

Yes. Because fuel is packaged in quarts or gallons, you will need to use a smaller bottle with an extension wand to fill the fuel tank. Fueling using this method is much easier and a lot less messy. The XTM Racing 500cc Fuel Bottle is a good choice.

### How Do I Remove the Glow Plug?

A long reach glow plug wrench is necessary to easily and quickly remove and replace glow plugs. The XTM Racing 1/8th Scale 4-Way Wrench works great.



### XTM Racing 1/8th Scale 4-Way Wrench (P/N 146036)

Use This to Remove and Reinstall the Engine's Glow Plug



### XTM Racing Glow Starter (P/N 146045)

Use This to Ignite the Engine's Glow Plug

### What Do I Use to Ignite the Glow Plug?

A glow starter is a battery-operated device that, when attached to the glow plug, heats the glow plug so that the engine can start. The glow starter is then removed after the engine is running. The XTM Racing Glow Starter with Meter is a perfect choice. It comes complete with a battery, charger and a built-in meter to let you know if your glow plug is good.

### Do I Need to Purchase Extra Glow Plugs?

Yes. Even though your X-Factor2 comes with a glow plug already installed in the engine, glow plugs wear out, especially during the break-in period; therefore, it's a good idea to have a couple of spares handy. The glow plug can make a big difference in how your engine performs. We recommend using a "hot" type glow plug intended specifically for performance engines, like the **Thunderbolt # 3 (P/N 115559)** or the **McCoy MC-59 (P/N 690215)**, for the break-in period. After the break-in period you may want to use a medium to cold heat-range plug like the **Thunderbolt HD Long (P/N 115545)** or the **McCoy MC-8 (P/N 690205)**. Do not use glow plugs intended for four cycle airplane engines. Using the wrong type of glow plug will cause the engine to run erratically and make it difficult to tune properly.





## RECOMMENDED TOOLS AND SUPPLIES, CONTINUED....

In addition to the items listed on the previous page, the following tools and supplies will also be required to run and maintain your X-Factor2 RTR Nitro-Powered Monster Truck:

- Trinity "8 Pack" AA Alkaline batteries - Part # 837801
- Trinity "4 Pack" AA Alkaline batteries - Part # 837800
- Trinity "Final Solution" after-run oil - Part # 843744
- XTM Racing Air Filter Oil - Part # 149571
- Emerald Nitro Car Cleaner - Part # 340196
- Small, flat blade screwdriver to make engine adjustments
- # 2 Phillips head screwdriver and Assorted Metric Hex Wrenches
- Adjustable Open-End Wrench
- Assorted weights of silicone shock oil to tune the shocks and differentials (Optional)



## SECTION 2: BECOMING FAMILIAR WITH YOUR X-FACTOR2

Each radio system comes with stickers on the back of the transmitter and on the receiver showing which frequency the radio system operates on (either in the 27Mhz or 75Mhz band). No two radio systems can operate nearby each other if they are on the same frequency. You can purchase transmitter and receiver crystals separately and change them if you plan on running your X-Factor2 with other people. We have provided a list of the frequencies that are available for your radio system.



Channel #	Frequency	Part # (tx/rx)
01	16.995	
02	27.045	
03	27.095	67427xx/66427xx
04	27.145	
05	27.195	
06	27.255	
<b>27Mhz</b>		
61	75.410	67475xx/66475xx
↓	Through	
90	75.990	
<b>75Mhz</b>		

**Note that "xx" is the actual channel number you want to purchase.**

**Antenna:** Transmits the signal from the transmitter to the receiver. The antenna should be completely extended during use.

**Battery Cover:** This cover houses the 8 AA Alkaline batteries that power the transmitter.

**Crystal:** This is the frequency crystal of the transmitter. You can change crystals in both the transmitter and the receiver (in the chassis) so that you and your friends can drive at the same time. No two radio systems nearby can be operated on the same frequency.

**On/Off Switch:** Turns the transmitter on and off. Three L.E.D.s show the power status of the batteries.

**Servo Reversing Switches:** Allow you to quickly and easily change the direction the servos rotate by just flipping the switches on the top of the transmitter. The switches are located under the removable plastic cover.

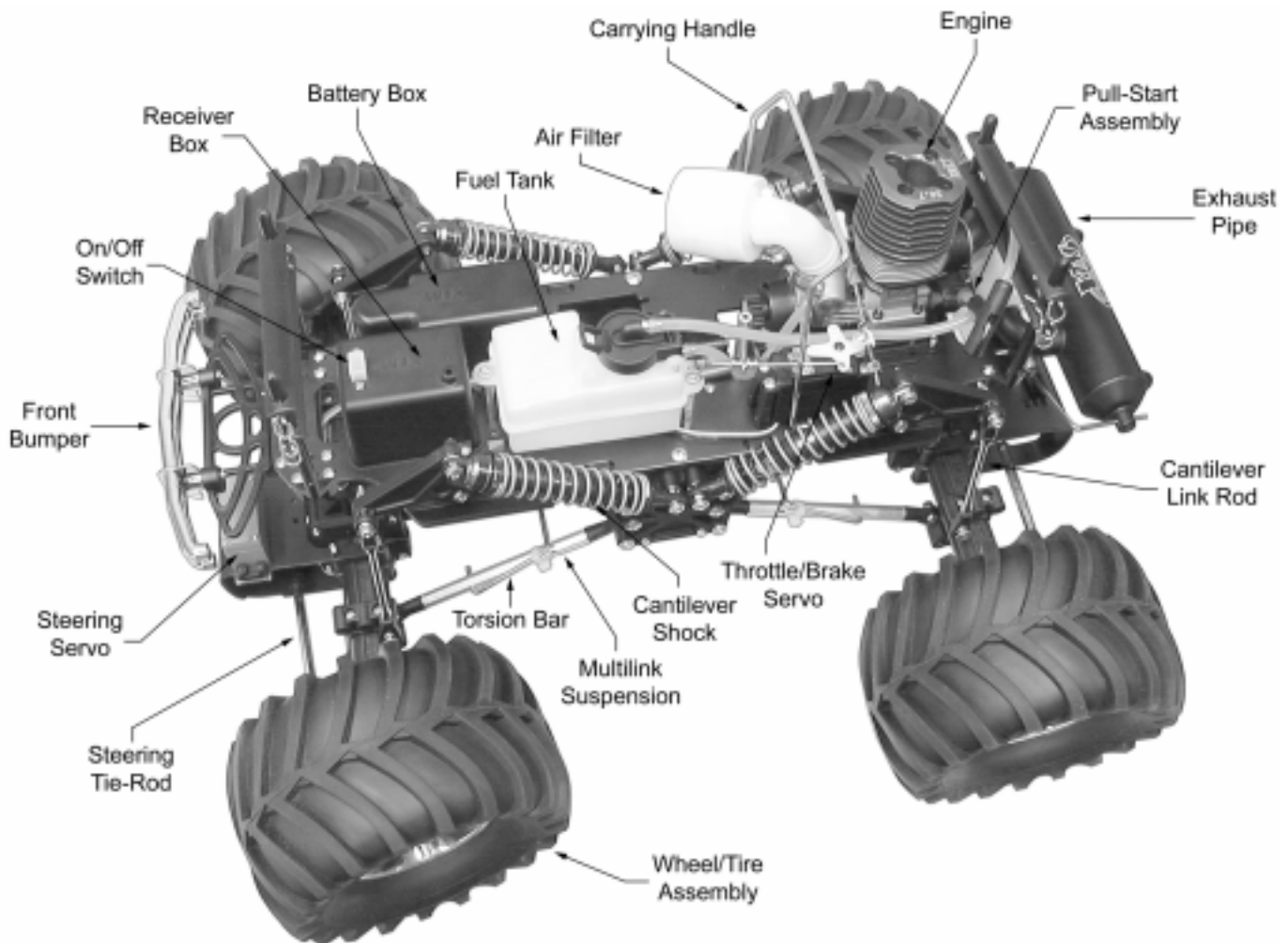
**Steering Wheel:** Controls the X-Factor2's steering. Turn the wheel to the right and the truck turns right. Turn the wheel to the left and the truck turns left.

**Steering Dual Rate Control Dial:** This dial adjusts the overall travel of the steering servo. Push the dial forward for maximum steering (125%). Pull the dial back to reduce steering travel (minimum 60%).

**Throttle/Brake Trigger:** Controls the speed and braking ability of your X-Factor2. Pull the trigger to accelerate, release the trigger to decelerate, and push the trigger to brake.

**Trim Dials:** These dials, one for steering and one for throttle/brake control, allow you to fine tune the servo's center by turning the dials on the transmitter back and forth.

## BECOMING FAMILIAR WITH YOUR X-FACTOR2, CONTINUED....



**Air Filter:** The air filter is made of foam and prevents dirt and debris from entering the engine through the carburetor.

**Battery Box:** This is where the receiver battery is mounted. The battery box protects the battery from dust, dirt and oil.

**Cantilever Link Rod:** The cantilever link rod actuates the cantilever shock.

**Cantilever Shock:** The shocks are oil-filled and use a spring that is well-suited for most off-road conditions. The shocks can be easily tuned for different driving conditions. These shocks are mounted at the optimum position to work directly with the cantilever suspension system.

**Multilink Suspension:** Our Multilink suspension features unreal suspension travel. This allows you to drive your X-Factor2 over the most difficult obstacles and the roughest terrain you can find.

**Engine:** The X-Factor2 includes the awesome XTM Racing 24.7 engine with pull-starter for ease of use and brute power.

**Exhaust Pipe:** The exhaust pipe is designed to guide the engine exhaust out the back of the truck. This helps keep the chassis cleaner.

**Front Bumper:** The bumper is molded from high-impact plastic to provide excellent dampening in case of a front-end crash.

**Fuel Tank:** The fuel tank holds the fuel that your engine uses. This fuel tank includes a fuel pressure nipple that connects to the exhaust pipe to pressurize the fuel system.

**On/Off Switch:** Turns the receiver on and off. The on/off switch is protected from dust, dirt and oil by a silicone cover.

**Pull-Start Assembly:** Used to start the engine in place of an electric starter.

**Receiver Box:** This is where the receiver is mounted. The receiver box protects the receiver from dust, dirt and oil.

**Steering Servo:** This servo controls the vehicle's steering. A "servo saver" is used to help prevent the servo gears from being stripped out.

**Steering Tie Rod:** The tie rod connects the steering linkage and the castor block. The tie rods are adjustable so you can make toe angle adjustments.

**Throttle/Brake Servo:** This servo controls both the engine's throttle and the vehicle's brakes.

**Torsion Bar:** The torsion bar prevents excessive chassis roll during cornering. The X-Factor2 includes two torsion bars which can be removed.

**Wheel/Tire Assembly:** The X-Factor2 includes molded rubber tires with a tread pattern that is good for most off-road applications. The wheels are molded in one piece from high-impact plastic for strength and are chrome-plated for good looks.

## SECTION 3: PREPARING TO RUN YOUR X-FACTOR2

Now that you are familiar with the major component parts of your X-Factor2, and with the functions of the Hitec Aggressor transmitter, it's time to prepare your X-Factor2 for its first run.

◆◆**IMPORTANT**◆◆ Before continuing, please double-check that you've read and understand the warnings printed on page # 2. It's important that you understand this information before preparing to run your X-Factor2. Also, remember, if you have any questions or encounter any problems, you can contact us using the information listed near the bottom of page # 2.

### Step 1: Final Assembly

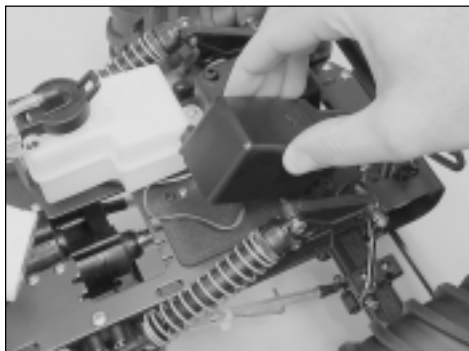


- Push the antenna down into the molded hole in the top of the transmitter.
- Thread the antenna (clockwise) into place and tighten it **gently** until it stops.

◆◆**IMPORTANT**◆◆ Do not force the antenna into place or tighten it too strongly. Doing so could cause damage to the antenna and/or transmitter.



- Remove the plastic battery cover from the bottom of the transmitter.
- Install 8 AA Alkaline batteries into the battery tray, double-checking to make sure that the polarity is correct.
- Reinstall the battery cover and set the transmitter aside for now.



- Using a #2 Phillips head screwdriver, remove the two screws that hold the battery box to the chassis, then remove the battery box.
- Remove the battery holder from the battery box.



- Install 4 AA Alkaline batteries into the battery holder, double-checking to make sure that the polarity is correct.

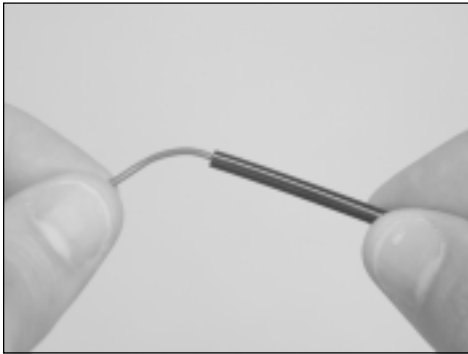
◆◆**IMPORTANT**◆◆ Make sure that the batteries are pushed firmly into place. They should not be loose. If for any reason the plug from the battery holder (male red plug) is not plugged into the switch plug (female red plug), plug them together now. The plugs can fit together only one way.

◆◆**PRO TIP**◆◆ If you would like to use a rechargeable receiver battery pack, instead of non-rechargeable AA Alkaline cells, please see the X-Factor2 Upgrade Tip at the top of the next page.

## X-FACTOR2 UPGRADE TIP

If you would like to upgrade to a rechargeable NiCD or NiMH battery pack, instead of using Alkaline dry cells, we suggest using the XTM Racing 5 cell 1000Mah NiMH RX Battery Pack (P/N 145801). Not only is this battery pack rechargeable, it will operate the servos at a higher power rating, because of the 5th battery cell. We also suggest upgrading the on/off switch to one that includes a separate charge cord. We suggest using the Cirrus On/Off Switch with Charge Cord (P/N 444733). This will allow you to charge the receiver battery pack without removing the battery box. When installing the switch, make sure that you leave the charge cord outside of the receiver box, but secured to the chassis, so it doesn't get damaged during use.

◆◆**WARNING**◆◆ Never attempt to recharge non-rechargeable batteries. The batteries could explode and cause serious injury.



- ❑ Slide the receiver antenna into one end of the plastic antenna tube and out the other end.

◆◆**IMPORTANT**◆◆ To make it easier to slide the antenna through the tube, first make sure there are no kinks or bends in the antenna wire, then wet the antenna wire with glass cleaner. The glass cleaner will make the antenna slide easily through the tube.



- ❑ Push the end of the antenna tube firmly into the molded hole in the top of the receiver box cover where the antenna exits.

◆◆**IMPORTANT**◆◆ Leave the excess antenna hanging from the top of the tube. Under no circumstances should you cut or shorten the antenna.



- ❑ Slide the transmitter's on-off switch up to turn on the transmitter. The green LED should glow brightly.

◆◆**IMPORTANT**◆◆ If the green LED does not glow or if the red LED is glowing, check the batteries in the transmitter and replace them if necessary.



- ❑ Slide the receiver's on-off switch to turn the receiver on. You should hear the servos move to their proper positions. Notice that the on-off positions are molded into the top of the switch cover.

◆◆**IMPORTANT**◆◆ Always turn on the transmitter first, followed by the receiver. After you're done, turn off the receiver first, then turn off the transmitter. This will prevent the possibility of a runaway truck or damage to the servos.



## Step 2: Range Checking the Radio Control System

To ensure that the radio control system is operating properly and prevent any chance of a runaway model, the radio control system should be range checked before the first run of the day and/or after a crash. To range check the radio control system, do the following:

- With the transmitter and receiver turned on, extend the transmitter antenna completely.

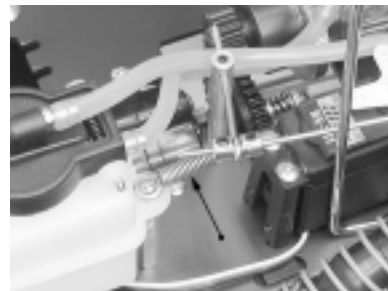
◆◆IMPORTANT◆◆Remember to always turn on the transmitter first, then turn on the receiver.

- With the X-Factor2 on the ground (without the engine running) walk away from it about 150 feet. Move the steering wheel while looking at the vehicle's wheels. The wheels should pivot back and forth as you rotate the steering wheel back and forth. Because of the X-Factor2's weight and large wheels, the steering won't operate perfectly smoothly unless you lift the front of the truck off the ground. This tendency goes away as soon as the truck is rolling.

◆◆IMPORTANT◆◆If the radio system does not operate properly, please refer to the troubleshooting guide starting on page # 25 before continuing further. Never attempt to operate your X-Factor2 if the radio control system is not functioning properly. Doing so could be harmful to others around you and/or to you or your truck.

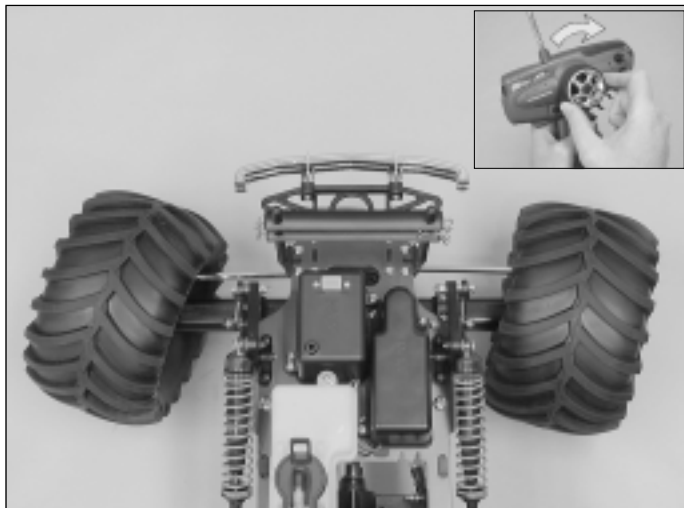
### X-FACTOR2 SAFETY TIP

Your X-Factor2 comes preassembled from the factory with a throttle return spring. This spring is connected from the brake linkage wire to the rear fuel tank mounting post. Do not remove this spring. If your radio control system fails for any reason, the spring will manually pull the throttle closed, preventing a runaway truck.



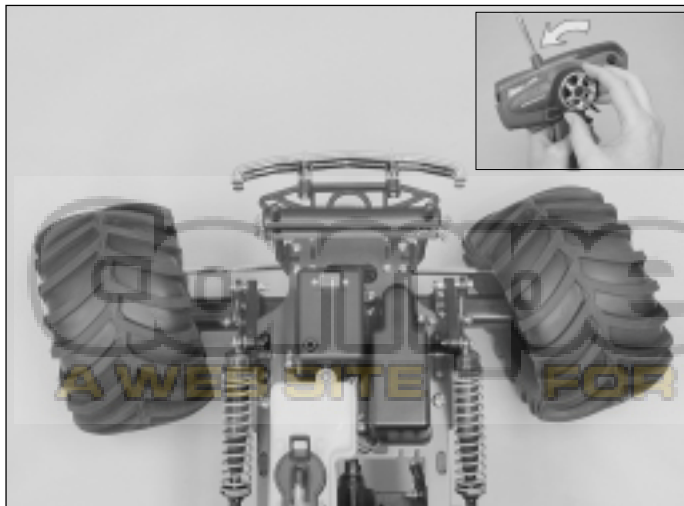
## Step 3: Double-Check the Steering and Throttle/Brake Controls

◆◆PRO TIP◆◆We suggest doing the steering tests while lifting the front of the truck off the ground. This will allow the steering system to operate perfectly smoothly, without any binding.



- With the transmitter and the receiver turned on, rotate the transmitter's wheel forward (to the right). The X-Factor2's front wheels should turn right.

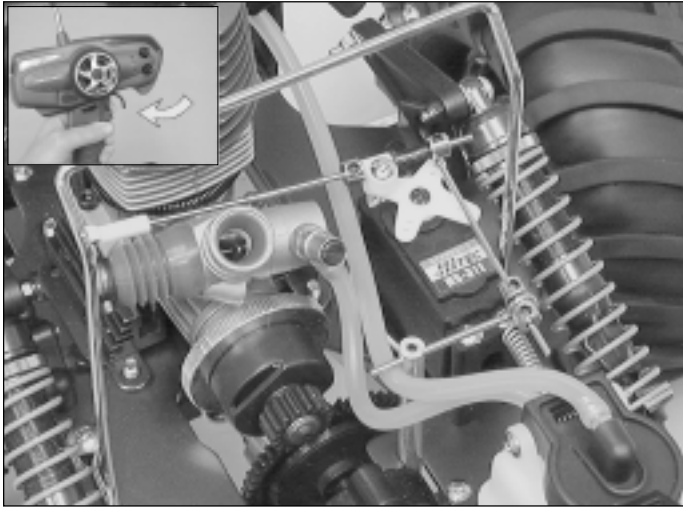
◆◆IMPORTANT◆◆ If the wheels don't turn right, flip the steering servo reversing switch on the top of the transmitter to change the direction that the front wheels turn. Refer to the transmitter photo on page # 4 if you don't remember how to use the servo reversing switches.



- Rotate the transmitter's wheel backward (to the left). The X-Factor2's front wheels should turn left.

- Let go of the transmitter wheel. The X-Factor2's wheels should return to center.

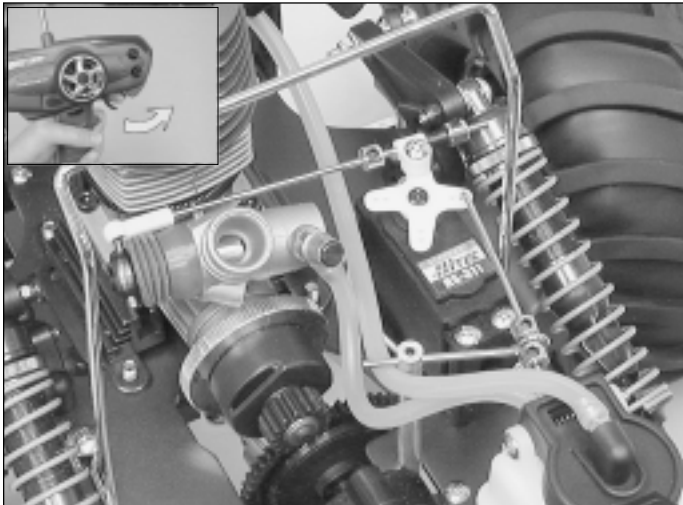
◆◆IMPORTANT◆◆If the wheels do not point straight ahead (center) after you return the transmitter wheel to center, turn the steering trim dial on the transmitter to adjust the wheels so that they point straight ahead. Refer to the transmitter photo on page # 4 if you don't remember how to use the servo trim dial.



- ❑ Carefully pull the air filter assembly off of the carburetor, so that you can see the carburetor barrel.
- ❑ Pull back on the throttle trigger. The carburetor barrel should open completely and the brakes should be disengaged (i.e., the truck should roll smoothly).
- ❑ Let go of the throttle trigger and the carburetor barrel should return to its idle position - open about 1/16". The brakes should still be disengaged, too.

◆◆**IMPORTANT**◆◆ If the carburetor barrel does not open when you pull back on the throttle trigger, flip the throttle servo reversing switch on the top of the transmitter to change the direction.

◆◆**PRO TIP**◆◆ If the carburetor barrel does not open completely, turn the throttle trim dial on the transmitter until the carburetor barrel opens completely when you pull back fully on the throttle trigger.



- ❑ Push the throttle trigger forward. The carburetor barrel should stay in the idle position (open about 1/16") and the brake linkage should move forward and engage the brakes (i.e., the truck will not be able to roll at all).
- ❑ Let go of the throttle trigger and the brakes should disengage.

◆◆**IMPORTANT**◆◆ If necessary, you can adjust the brake linkage by sliding the wheel collar (on the brake linkage wire, behind the brake lever) forward or back. See page # 18 "Adjusting the Brake Linkage" for more details.

- ❑ Turn off the transmitter and receiver for now and push the air filter back onto the carburetor.

◆◆**WARNING**◆◆ Under no circumstances should you operate the engine without the air filter installed on the carburetor. The air filter prevents dust and debris from entering the engine and damaging it. If you operate your engine at any time without the air filter installed, the engine will not be covered under warranty should it need repair.

#### Step 4: Wetting the Air Filter

To prevent damage to your engine, we strongly recommend "wetting" the air filter element, using a high-quality filter oil or after-run oil.



#### X-FACTOR2 UPGRADE TIP

If you will be running your X-Factor2 in extremely dusty conditions, we suggest using a prefilter sleeve over the air filter. Wet the main filter element as described below, then simply slide the prefilter sleeve over the main filter. It's not necessary, nor desirable, to wet the prefilter sleeve. We suggest using XTM Racing 1/8th Scale Prefilter Sleeves (P/N 149412).

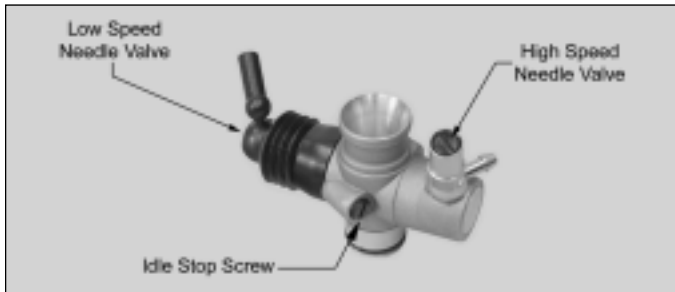


- ❑ To wet the air filter element, simply squeeze an ample amount of air filter oil or after-run oil onto the filter element and work it through the filter element, using your fingers. Use enough oil to completely saturate the filter element. The entire filter element should be oiled, but not so much that excess oil is dripping from it.

## SECTION 4: BECOMING FAMILIAR WITH THE XTM RACING 24.7 NITRO ENGINE

### WARNING!! PLEASE READ THIS INFORMATION BEFORE PROCEEDING!!

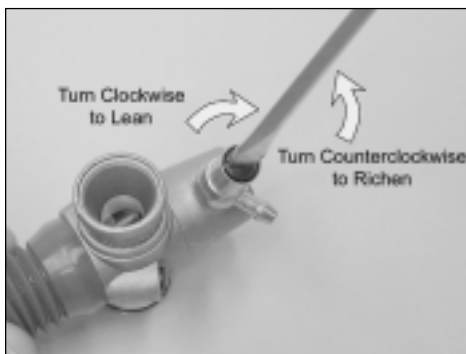
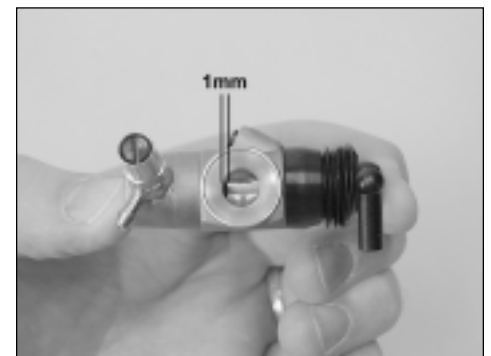
Your X-Factor2 comes equipped with the user-friendly and powerful XTM Racing 24.7 nitro engine. Before starting the engine for the first time, you **MUST** read this section very carefully. This section details the different parts of the engine's carburetor and how to adjust the carburetor's needle valves to tune the engine. Failure to read this information may result in your not knowing how to properly operate your new XTM Racing 24.7 engine.



Please refer to the photo at left to familiarize yourself with your engine's carburetor. All of the carburetor settings come preset from the factory for initial starting, but you should have a small flat blade screwdriver handy to make adjustments to the carburetor during the break-in process which will be detailed in the next section.

#### Idle Stop Screw:

The idle stop screw adjusts the closure of the carburetor barrel. We recommend that the idle stop screw be adjusted so that the carburetor barrel stays open about 1/16". Turning the screw clockwise will cause the barrel to stay open more. Turning the screw counterclockwise will allow the barrel to close more. If the carburetor barrel stays open too far, the engine will idle very high and the clutch will never disengage. This will damage the clutch very quickly. If the idle stop screw is closed too far, the engine may die during idle. Ideally, the engine should idle smoothly, yet slow enough so that the clutch stays disengaged.

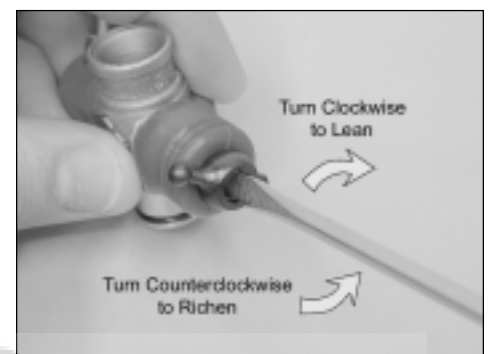


#### High Speed Needle Valve:

The high speed needle valve is preset from the factory for the initial starting procedure. Do not make adjustments to it at this time. The high speed needle valve is used to meter the air/fuel mixture at full throttle. Turn the needle valve clockwise to lean the mixture or turn the needle valve counterclockwise to richen the mixture. When you start the engine for the very first time, the high speed needle valve should be turned in completely, then backed out 3 turns. When you start the engine after that, leave the high speed needle valve in the same position it was in when you shut down the engine.

#### Low Speed Needle Valve:

The low speed needle valve is preset from the factory for the initial starting procedure. **Do not make adjustments to it at this time.** The low speed needle valve meters the air/fuel mixture at idle and during transition from idle to full throttle. Turn the low speed needle valve clockwise to lean the mixture. Turn the low speed needle valve counterclockwise to richen the mixture. The low speed needle valve is preset from the factory, but minor adjustments may need to be made to suit your application: fuel used, glow plug and environment all contribute to the setting. **Do not adjust the low speed needle valve until AFTER the engine has been broken in.**



### IMPORTANT TIP ABOUT READJUSTING THE LOW SPEED NEEDLE VALVE

If you need to reset the low speed needle valve to the factory setting, follow these simple procedures:

- Open the carburetor barrel completely.
- While holding the carburetor barrel open with your fingers, use a flat blade screwdriver to turn the low speed needle valve clockwise until it stops. From this point, turn the low speed needle valve counterclockwise 3 turns. This is the factory setting.

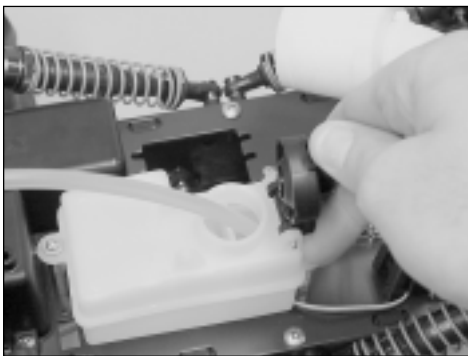
## SECTION 5: FUELING AND STARTING THE XTM RACING 24.7 NITRO ENGINE

### **WARNING!! PLEASE READ THIS BEFORE STARTING YOUR ENGINE FOR THE FIRST TIME!!**

If at any time the pull-starter becomes very tight or difficult to pull - **STOP!** The engine has become flooded and the excess fuel **must be removed from the engine** or damage to the pull-starter and/or engine could occur. To remove the excess fuel from the engine follow the procedures listed below:

- Completely close the high speed needle valve until it bottoms out. Do this gently. Don't force it!
- Remove the glow plug from the cylinder head.
- With a rag over the top of the engine, pull the pull-starter cord several times to expel the excess fuel from the engine.
- Check to make sure that the glow plug has not been fouled, then reinstall it.
- Reset the high speed needle valve 3 turns out from bottom.

◆◆**WARNING**◆◆ Under no circumstances should you operate the engine without the air filter installed on the carburetor. The air filter prevents dust and debris from entering the engine and damaging it. If you operate your engine at any time without the air filter installed, the engine will not be covered under warranty should it need repair. Also make sure that you "wet" the air filter as described on page # 10.



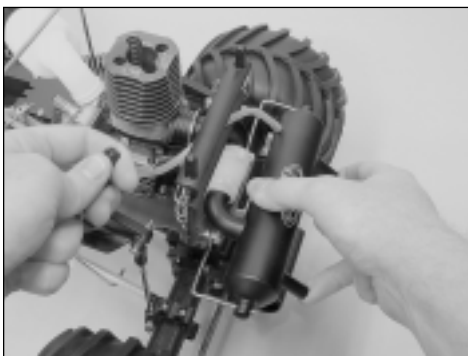
- ❑ Lift the fuel tank lid and carefully fill the fuel tank until the fuel level is just below the top of the fuel tank.

◆◆**WARNING**◆◆ Use fuel that is appropriate for nitro car and buggy engines. **Do not use gasoline or diesel fuel!**

- ❑ Using your glow plug wrench, verify that the glow plug is installed in the cylinder head and tight. If it's not already preinstalled, install it, using one copper gasket.

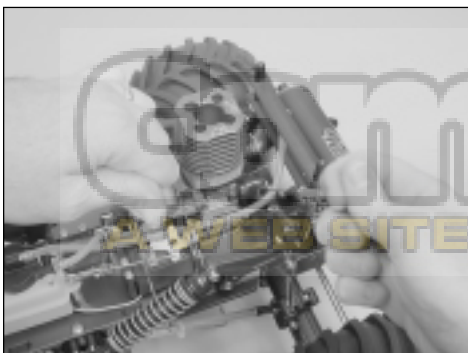
### IMPORTANT TIP ABOUT GLOW PLUGS

A Thunderbolt # 3 High Performance glow plug is included with your engine. We suggest having a couple of extra glow plugs handy, because it can be expected that glow plugs will wear out quickly during the engine's break-in process.



- ❑ Prime the engine by first opening the throttle completely and covering the exhaust openings in the exhaust pipe with your fingers, then pull the pull-starter cord several times until you see fuel just start to enter the carburetor through the fuel line.

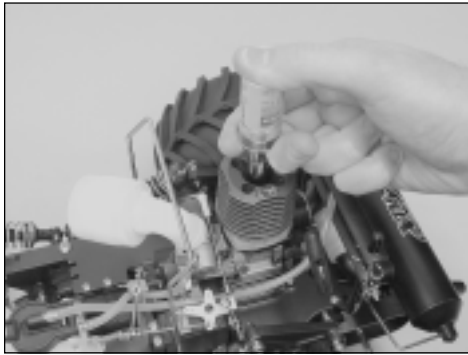
◆◆**IMPORTANT**◆◆ Do not pull the pull-starter cord all the way out or damage to the pull-starter will occur. Use a couple of short pulls - about 7 or 8 inches long.



- ❑ Remove your fingers from the exhaust openings in the exhaust pipe and close the throttle down to the idle position.
- ❑ While holding the truck firmly with one hand by the carrying handle, carefully pull on the pull-starter cord 3 times, using short, quick pulls.

◆◆**IMPORTANT**◆◆ If you can't turn the engine over using the pull-starter, don't force it. The engine is probably flooded. See the warning and resolution at the top of the page.

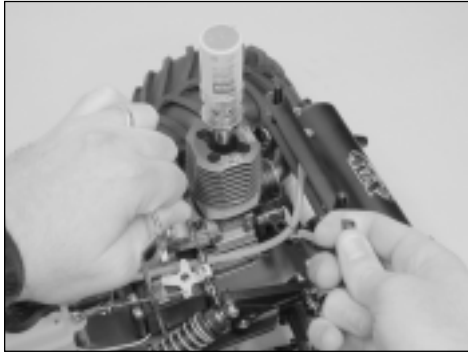




❑ Connect a fully charged glow starter to the top of the glow plug, making sure that the glow starter is locked firmly onto the top of the glow plug. You don't want it to fall off while you're trying to start the engine.

#### NEW ENGINE STARTING TIP

When the engine is new, it can sometimes be difficult to turn over using the pull-starter. You may find you need to pull the pull-starter harder than you expect. A trick to help this is to loosen the glow plug slightly, start the engine, then remove the glow starter and retighten the glow plug. This effectively lessens the engine's compression, making it easier to turn over with the pull-starter.



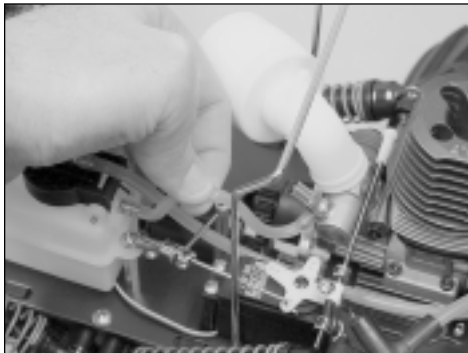
❑ With the throttle still in the idle position, hold the truck firmly with one hand by the carrying handle and carefully pull on the pull-starter cord, using short, quick pulls, until the engine starts.

❑ After the engine starts, release the pull-starter cord, allow the engine to run for about 10 seconds, then remove the glow starter from the glow plug.

◆◆**IMPORTANT**◆◆ If the engine does not start after a dozen pulls, refer to the troubleshooting guide starting on page # 25 before continuing.

#### WARNING ABOUT RUNNING YOUR ENGINE FOR THE FIRST TIME

Until you're actually ready to break-in the engine, do not run the engine for more than a few minutes. If you run the engine longer without doing the proper break-in procedures, damage to the engine can occur.



❑ To stop the engine, carefully pinch the fuel line with your fingers until the engine stops. Make sure to pinch the fuel pick-up line and not the fuel pressure line. The fuel pick-up line is the one connected to the carburetor.

◆◆**PRO TIP**◆◆ When you pinch the fuel line to stop the engine, you must pinch it hard and hold it. The engine will rev up quickly, then die. We suggest holding the truck by the carrying handle while doing this, so that it doesn't lurch out of your hands.

◆◆**WARNING**◆◆ Be careful not to touch any parts of the engine or the exhaust pipe because they will be hot.

### SECTION 6: BREAKING IN THE XTM RACING 24.7 NITRO ENGINE

The XTM Racing 24.7 engine is an ABC engine. The cylinder sleeve is tapered at the top, causing severe resistance when the piston moves through the top of the stroke. This is normal. When the engine heats up to operating temperature, this resistance will decrease and the proper clearance will be achieved. The break-in procedure will guide you through the steps necessary to properly break in your new engine. Please follow the steps closely.

#### Fuel Recommendation:

Fuel can make a big difference in the way your engine performs. For the break-in period you should use a fuel specifically designed for R/C car engines that contains no more than 20% nitromethane. Once the engine has been adequately broken in (about 45 minutes of run-time) you can switch to an R/C car fuel containing up to, but no more than, 30% nitromethane.

◆◆**WARNING**◆◆ We do not recommend using fuels designed for R/C airplane engine use. These fuels do not contain the proper amount of lubricants; therefore, they will cause the engine to overheat and severe damage to the engine will result.

#### ENGINE BREAK-IN TIP



To make sure that you're not leaning out the engine too much and overheating it during the break-in process, we suggest using a temp gun to monitor the engine's temperature. During break-in, the temperature of the engine should not surpass 230°.

### Glow Plug Recommendation:

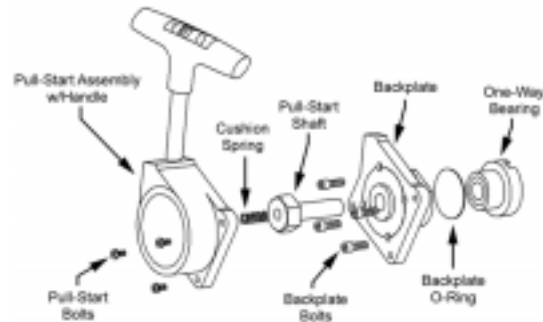
The glow plug can make a big difference in how your engine performs. We recommend using a "hot" heat-range glow plug intended specifically for performance engines like the Thunderbolt # 3 (P/N 115559) or the McCoy MC-59 (P/N 690215) during the break-in process. After the break-in period you may want to use a medium heat-range glow plug like the McCoy MC-8 (P/N 690205). Do not use glow plugs intended for four stroke airplane engines. Using the wrong type of glow plug will cause the engine to run erratically and make it difficult to tune properly.

### Air Filter:

The air filter is a very important part of your engine. Failure to use the air filter will damage the engine in a very short period of time. If you are driving your vehicle in very dusty conditions. Also make sure that you "wet" the air filter as described on page # 10.

### ENGINE BREAK-IN TIP "WHY IS MY PULL-STARTER SLIPPING?"

If, during the break-in process, the pull-starter assembly slips when you try to start the engine, the one-way bearing and pull-starter shaft may be coated with excess fuel oil. This can occur because the excess oil in the engine during the break-in process gets into the one-way bearing. To fix this, carefully remove the one-way bearing and the pull-starter shaft, clean them with rubbing alcohol and reassemble the parts. Use the engine exploded parts view to see how the parts are assembled. Also, be careful when removing the pull-starter assembly to ensure that the recoil spring does not uncoil and fly out.



### Step 1: Breaking In the Engine

◆◆WARNING◆◆ Do not adjust the low speed needle valve until after the engine has been broken-in. You can begin to adjust the low speed needle valve after you have broken in the engine and after you have read and understood Step 2: Fine Tuning the Engine on the next page. The high speed needle valve is preset from the factory for easy starting in most conditions for the break-in period. The high speed needle valve setting will differ on your engine because of different fuels used, glow plugs, temperature and outside air pressure. The needle valve settings given in Section # 4 are all-around good settings to start with should you get your settings too far out of adjustment.

- ❑ Follow the previous procedures in Section # 5 to fill the fuel tank and start the engine.
- ❑ Once the engine starts, keep the glow starter attached to the glow plug and let the engine run for about 10 seconds without giving it throttle. This will allow the engine to warm up. At this point the engine should be running very "rich" and the engine will also sound like it's running rough.
- ❑ After the engine has been running for about 10 seconds, remove the glow starter from the glow plug. Advance the throttle in short, quick bursts and drive the truck around for about 2-3 minutes. If the engine is running rich enough, you should notice white smoke coming from the exhaust pipe and the engine should sound like it's running very rough. Also, the truck will barely be moving because the engine is running so rich that it won't produce much power. This is what you want for now. If there is not white smoke coming from the exhaust pipe, richen the high speed needle valve. After 2-3 minutes stop the engine by pinching the fuel line to the carburetor.
- ❑ Let the engine cool for approximately 10 minutes, then restart it. Set the high speed needle valve mixture to a slightly leaner setting, about 1/8 turn more in. Repeat the procedure above then stop the engine and let it cool for approximately 10 minutes.
- ❑ Repeat the procedure above, while leaning the high speed needle valve slightly more each time. In all, you should run the engine a total of about 45 minutes. After 45 minutes of run-time the engine will be broken in. Run the engine with the high speed needle valve set slightly rich, but lean enough to power the truck adequately. At this point the engine should hold a good setting on the high speed needle valve and you can begin to fine tune the needle valve settings to increase performance.

◆◆IMPORTANT◆◆ It is of the utmost importance that the engine never be leaned out too much. When running the engine, you should always be able to see a trail of white smoke coming from the exhaust pipe. If you can't, stop the engine immediately and richen the high speed needle valve. You should also make sure there is plenty of air flowing over the cylinder head to keep the engine from overheating.

## Step 2: Fine Tuning the Engine

After your engine has been broken in, you can set the high and low speed needle valves for optimum engine performance.

◆◆**IMPORTANT**◆◆ Be careful to never lean out the engine too much. Remember that the lubricants for your engine are suspended in the fuel. If you lean out the fuel mixture too much you will also be lowering the amount of lubricant entering your engine. Less lubricant means more chance of your engine overheating and possible engine failure.

### Setting the High Speed Needle Valve:

- ❑ Start the engine and remove the glow starter from the glow plug, then allow the engine to warm up for about 10 seconds.
- ❑ After the engine has warmed up, drive the truck as you normally would. If the engine seems to be running rich, lean the high speed needle valve about 1/16 of a turn at a time until the desired setting is achieved. Always make sure you run the engine slightly rich - you want to be able to see a white exhaust trail at all times.

### Setting the Low Speed Needle Valve:

- ❑ Start the engine and lean out the high speed needle valve as per the previous procedures. Close the throttle until the engine slows down enough so that the clutch is disengaged and the wheels don't turn when the truck is lifted from the ground. Allow the engine to idle for about 10-15 seconds.
- ❑ While holding the truck off the ground (making sure to keep your fingers out of the moving parts) quickly open the throttle in a short burst. If the engine just stops running as soon as the throttle is advanced, the low speed needle valve is too lean. With the engine stopped, richen the low speed needle valve about 1/16 of a turn.
- ❑ Restart the engine and repeat the procedure above until the engine will transition smoothly and quickly. Very slight hesitation in the transition is normal.
- ❑ If you quickly advance the throttle and the engine seems to be very rich during transition (i.e., lots of white smoke coming from the exhaust pipe and very rough sounding), the low speed needle valve is too rich. With the engine stopped, lean the low speed needle valve about 1/16 of a turn.
- ❑ Restart the engine and repeat the procedure above until the engine will transition smoothly and quickly. Very slight hesitation in the transition is normal.
- ❑ Now drive the truck as you normally would for a while to get a feel for how the engine reacts to throttle. Now that you know the proper way to tune the engine, you can make slight adjustments to the carburetor until you are satisfied with the performance.

### 24.7 ENGINE UPGRADE TIP

To get more power from your engine you can use fuels containing up to 30% nitromethane. We must caution you, though, that once you run the engine with increased nitro you may not get satisfactory results if you decide to go back to a lower nitro content. Also, if you use fuels containing 30% nitro, we highly suggest adding a .10mm head gasket (# 148418) to lower the compression ratio. If you don't lower the compression ratio, overheating and erratic running will likely occur.



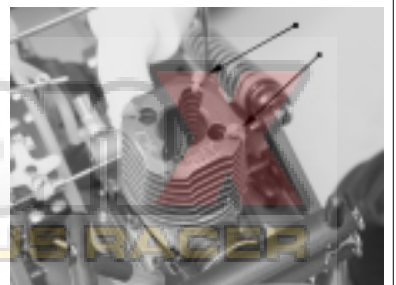
## Step 3: Basic Engine Maintenance

To keep your engine operating at peak performance there are some basic maintenance procedures that need to be performed on the engine on a regular basis:

- After you are finished running the engine for the day, pinch the fuel line to stop the engine. This will allow the engine to burn any excess fuel out of the crankcase.
- Remove the air filter element and wash it thoroughly in warm water and a small amount of liquid detergent. After it's clean, allow it to dry, then reoil it and install it back into the air filter housing.
- Remove the glow plug from the engine and squirt several drops of high-quality after-run oil into the glow plug hole. Pull the pull-start cord several times to distribute the oil throughout the engine, then reinstall the glow plug. The after-run oil will prevent the inside of the engine (especially the crankshaft bearings) from rusting.
- Clean the outside of the engine using a heavy brush and nitro car cleaner, then dry the engine, using a rag or compressed air.

### KEEP IT SMOOTH

Loop four nylon ZIP ties around the corners of the engine's cylinder head, making sure that the ratchet portion of the ties are up toward you. When your truck flips over, the ties will prevent the cylinder head from being scratched and gouged.



## SECTION 7: INSTALLING THE BODY

❑ Not much to installing the body. Begin by peeling away the thin plastic protective layer from the top of the body, then remove the decals from the protective backing and adhere them onto the body.



❑ Install the body onto the chassis, using four body clips to hold it in place.

◆◆IMPORTANT◆◆ The body mounts are adjustable and can be lowered or raised if you decide to purchase and install a different body.

❑ Double-check that the body does not interfere with the wheels, the suspension or the exhaust pipe. If it does, you will need to trim the body slightly.

◆◆PRO TIP◆◆ Always make sure that you install the body when driving your truck. If your truck flips over, the body will help protect the chassis and its components.

## SECTION 8: MAKING CHASSIS ADJUSTMENTS

Chassis alignment and geometry are important if you want your X-Factor2 to perform well. A good performing truck means a truck that is easier to drive, too. Follow our guidelines in this section to get the most out of your X-Factor2.

◆◆PRO TIP◆◆ If you're interested in rock crawling with your X-Factor2, don't forget to check out our rock crawling tips on page # 20.

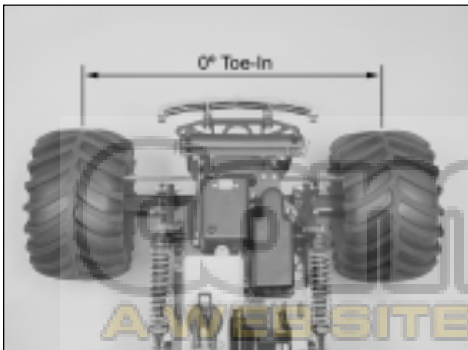
◆◆IMPORTANT◆◆ It's very important when making changes to the settings of your truck that you make the settings the same for each side. For example, if you change the spring tension on the right front shock, you should change the spring tension on the left front shock the same amount, etc.

Do not make any changes that are more than 3 degrees from the initial settings listed or the handling characteristics of your truck will become very poor.

### Step 1: Adjusting the Toe Angle

The toe angle is the angle of both front tires (or rear tires) to each other, when viewed from above. Toe-in is when the front of both tires point toward each other and toe-out is when the front of both tires point away from each other.

- For the front tires, toe-in will make your truck track straighter, but the steering will be more sensitive. Toe-out will desensitize the steering, making the truck a little more driver-friendly.
- For the rear tires, if you're running on a smooth surface, we suggest no toe-in. If you are running on a rough surface, we suggest about 1 - 2 degrees of toe-in. This will give the rear end a little more "bite."



#### RECOMMENDED INITIAL SETTINGS:

- 0 degrees toe-in on the front and rear for overall best 4WD driveability on most surfaces.
- ☞ Adding more than 3 degrees of toe-in or toe-out will result in excessive loss of speed and erratic handling.

◆◆IMPORTANT◆◆ For more precise toe-in adjustments, use the R.P.M. Toe-in Gauge part # 708049.

To adjust the toe-angle of the front and rear tires, turn the tie-rods (steel rods connecting each wheel to the steering arm on the front and to the chassis on the rear) in or out with an adjustable wrench.

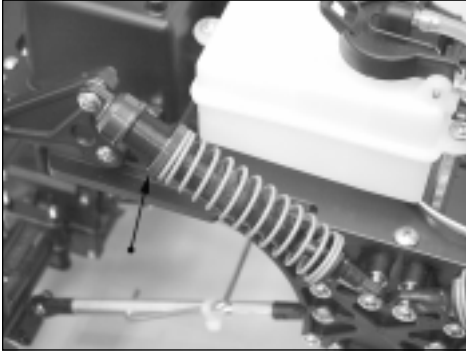


## Step 2: Adjusting Shock Spring Tension

By adjusting the spring tension of the shocks, you can increase steering sensitivity, increase the ride-height of your truck and fine-tune the dampening quality of the suspension system. How you drive your truck will dictate what settings you should be using. As an example, if you're using your truck off-road and going over lots of jumps, you may want to increase the spring tension of the front shocks to help prevent the front of the truck from bottoming out.

### RECOMMENDED INITIAL SETTINGS:

- We recommend initially leaving the adjustment rings in the factory locations.

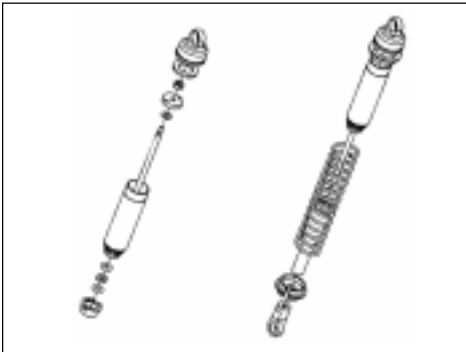


Increase or decrease spring tension by threading the adjustment ring up or down the shock body.

Threading the ring down increases spring tension and the truck's ride height, and will stiffen the overall dampening characteristics of the suspension. Threading the ring up decreases spring tension and makes the dampening characteristics of the suspension softer.

👉 When adjusting the spring tension, make sure to adjust the right and left sides equally.

## Step 3: Adjusting Shock Dampening and Replacement Shock Springs



Changing the shock oil (the oil inside the shocks) will change the dampening characteristics of the shocks. Typically, if you are running on smooth surfaces, use a heavier weight oil. If you are running on rough surfaces, use a lighter weight oil.

◆◆**IMPORTANT**◆◆ We recommend using only 100% Silicone Shock Oil. Do not use motor oil. The shock oil in the X-Factor2 is 40Wt shock oil. This is better for all around use.

Shock springs are easy to change and can make a difference in the way your truck handles relative to the type of terrain you're running on. If you run your truck off-road, in a smooth, high-traction area, use stiffer springs to reduce body roll and weight shift. If the area where you run your truck is very bumpy, you might consider using softer springs to help absorb the bumps. If the area is bumpy and you use harder springs, the truck will have a tendency to jump and hop around. The shock springs included with the X-Factor2 are suitable for most general off-road applications, but experimentation with different shock springs may be necessary to find a setup that suits your particular driving style and location.

SHOCK SPRING UPGRADES		
149372	1.3mm Shock Spring (RED)	SOFT
149370	1.4mm Shock Spring (BLUE) - STOCK	
149366	1.5mm Shock Spring (WHITE)	
149363	1.6mm Shock Spring (YELLOW)	
149364	1.7mm Shock Spring (BLACK)	STIFF

## Step 4: Removing the Torsion Bars

The torsion bars located across the cantilever suspension arms are installed to give the truck more stability under typical driving conditions. These torsion bars stiffen the suspension, making the truck easier to drive at high speeds or on flat surfaces. For extreme off-road driving conditions where you would be driving slower but would want the suspension to have full articulation (such as rock crawling) you should remove both torsion bars. This will allow the cantilever suspension to articulate completely.

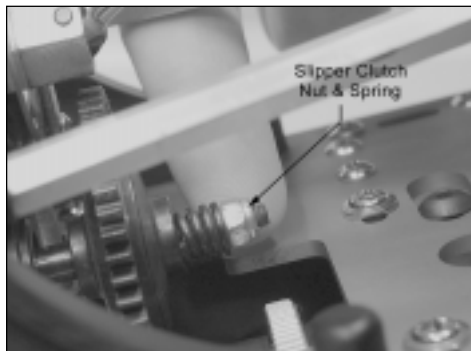
- Remove the torsion bars by simply cutting off the nylon cable ties and pulling the torsion bars out of the suspension arms. To reinstall the torsion bars, use new nylon cable ties to secure them into place.

◆◆**PRO TIP**◆◆ With the torsion bars removed, the X-Factor2 will be much more prone to rolling over at high speeds, especially during cornering.

## Step 5: Adjusting the Slipper Clutch

The slipper clutch is a traction control device that uses two metal plates and fiber pads to control how much power is transmitted from the engine to the gear box and drivetrain. Adjusting the slipper clutch allows you to fine tune how your truck reacts when giving it throttle. Driving the truck with the slipper clutch too tight will usually result in the truck doing wheelies or spinning out of control instead of accelerating. Driving the truck with the slipper clutch too loose will result in very poor or no acceleration at all.

- To adjust the slipper clutch simply turn the hex nut either clockwise to tighten the clutch (less slip) or counterclockwise to loosen the clutch (more slip). After making each adjustment, accelerate the truck for a short distance while carefully watching the slipper clutch. Ideally the clutch should slip for about the first foot under acceleration.



### RECOMMENDED INITIAL SETTINGS:

- The slipper clutch comes factory preset, so no initial adjustment should be necessary.

◆◆IMPORTANT◆◆ Running the slipper clutch too loose can cause the fiber pads to wear out very quickly and replacement under this circumstance will not be covered under warranty.

☞ If and when you adjust the slipper clutch, make adjustments in 1/4-turn increments until you are satisfied with the result.

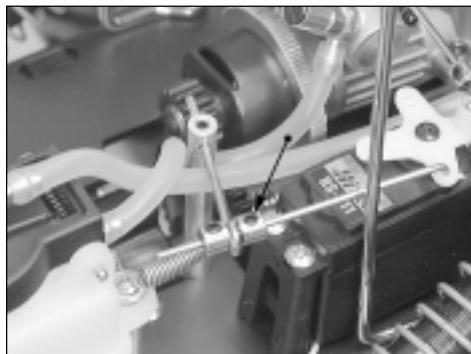
## RESETTING THE SLIPPER CLUTCH

If you need to reset the slipper clutch to the factory setting, follow these simple procedures:

- Hold the spur gear firmly, tighten the slipper clutch adjustment nut completely, then loosen the nut 2 full turns.

## Step 6: Adjusting the Brake Linkage

The brake linkage in your X-Factor2 is preset from the factory; however, after running the truck for awhile you may find that the brake linkage needs adjusting.



With the transmitter and receiver turned on, and the throttle/brake trim lever centered, the truck should roll smoothly (i.e., the brakes should be disengaged). If the brakes are dragging when the throttle trigger is at neutral, the brake discs will wear out very quickly. To ensure that the brakes are disengaged, always make sure that there is a 1/16" gap between the rear adjustment collar and the brake lever.

- To make adjustments to the brake linkage, simply loosen the grub screw in the adjustment collar behind the brake lever and reposition it, then retighten the grub screw. Moving the collar forward, toward the brake lever will result in the brakes coming on sooner and more forcefully.

## Step 7: Adjusting the Front and Rear Differentials

The X-Factor2 features front and rear gear differentials that each feature o-ring seals and cup-style housings. Both differentials are packed with differential grease that is good for most driving conditions.

You can make fine-tuned adjustments to each differential by removing the differentials from the chassis, opening them up and replacing the grease already inside the differentials with heavyweight silicone differential oil. Removal, disassembly and reinstallation of the differentials can be done using the exploded parts diagram included with your kit.

- Adding heavier silicone oil will tighten the differentials and adding lighter silicone oil will loosen the differentials. If your truck feels loose during turns, you can tighten the front differential or loosen the rear differential. If your truck is pushing during turns, you can loosen the front differential or tighten the rear differential. We recommend using silicone oil weights between 30,000 (30K) and 100,000 (100K).

◆◆WARNING◆◆ We don't recommend attempting to make adjustments to the differentials unless you have knowledge of how to remove, disassemble and reassemble gear differentials. If you don't reassemble the differentials properly, damage to the differentials will happen quickly and will not be covered by warranty.

## Step 8: Adjusting the 2-Speed Transmission Shift Point

The transmission shift point has been preset for you from the factory, but it is possible to fine tune the adjustment to suit your driving style. The shift point is the point at which the 2-speed transmission will shift from first gear to second gear.

- Adjust the shift point by turning the small grub screw in the aluminum 2-speed clutch housing, using a 1.5mm hex wrench. Turning the grub screw clockwise will make the transmission shift at a higher speed. Turning the grub screw counterclockwise will make the transmission shift at a lower speed.

### RECOMMENDED INITIAL SETTINGS:

- The 2-Speed transmission has been preset for you from the factory. No adjustments are necessary.



To adjust the 2-speed transmission, first remove the self-tapping screw that holds the nylon transmission cover plate in place, then remove the cover plate and set it aside.

With the truck upside down you must locate the small grub screw in the clutch housing. To locate the screw, slowly rotate the spur gear assembly until you can see the small grub screw through the milled access hole in the clutch housing. Once the small grub screw is visible, use a 1.5mm hex wrench to adjust the grub screw. To make the transmission shift at a higher speed, turn the grub screw clockwise 1/8th of a turn. To make the transmission shift at a lower speed, turn the grub screw counterclockwise 1/8th of a turn.

◆**WARNING**◆ We suggest making 1/8th of a turn adjustments at a time, testing the truck's shift point between each adjustment you make, until you are satisfied with how the truck shifts.

◆**IMPORTANT**◆ There are two screws in the 2-speed clutch housing. One is a grub screw that uses a 1.5mm hex wrench and the other is a steel socket-cap screw that uses a 2.5mm hex wrench. Do not attempt to adjust the larger screw. This screw holds the clutch housing onto the transmission shaft.

## RESETTING THE 2-SPEED TRANSMISSION SHIFT POINT

If you need to reset the 2-speed transmission shift point to the factory setting, follow these simple procedures:

- Carefully turn the grub screw (using a 1.5mm hex wrench) clockwise until it bottoms out, then turn the grub screw counterclockwise 7-3/4 turns (7 full turns plus 3/4 of a turn).

## Step 9: Adding Reverse to Your X-Factor2

The X-Factor2 does not come with a transmission that includes reverse, but a separate reversing kit is available from XTM Racing. This kit comes with everything you need (except a servo and 3 channel radio control system or R-Box Electronic Reverser for use with 2 channel radio control systems) to give your X-Factor2 reverse capability.



Install and set up your XTM Racing X-Factor2 Reversing Kit, using the instruction sheet included with the reversing kit. The easiest way to operate the reverse function is to use a 3 channel radio control system. If you don't want to purchase a 3 channel radio control system, you can simply purchase and install the XTM Racing R-Box Electronic Reverser. The XTM R-Box electronic reverser will shift the transmission from forward to reverse or from reverse to forward by simply using your transmitter's throttle trigger. The R-Box incorporates adjustable settings and the delayed response to switching transmission directions does not interfere with braking control.

**Please contact your local XTM Racing dealer or XTM Racing directly for pricing and availability of the X-Factor2 Reversing Kit and the R-Box Electronic Reverser.**

## Step 10: Adding 4 Wheel Steering to Your X-Factor2

Adding 4-Wheel steering to your X-Factor2 is easy. You'll need to purchase an extra XTM Racing X-77 servo (P/N 145765), one servo mount set (P/N 149471), one servo saver (P/N 149719) and one Y-Harness (444728). Install the servo and servo saver exactly as the front steering system is setup, plug both steering servos into the Y-Harness, then plug the Y-Harness into the steering channel slot in the receiver.

## SECTION 9: SETTING UP YOUR X-FACTOR2 FOR ROCK CRAWLING



One thing that a lot of people like to do with their X-Factor2 is rock crawling. Like full-size rock crawlers, the X-Factor2's suspension, drivetrain and overall chassis design make it perfect for rock crawling. In this section we'll list some of our proven setup tips that will transform your X-Factor2 into a rock crawling machine that knows no bounds!



We also suggest that you experiment with your own setups that may suit your particular rock crawling site. Most of all, have fun!

### OUR SETUP SUGGESTIONS FOR ROCK CRAWLING

- The toe angle of both the front and rear tires should be 0 degrees.
- The stock differentials are packed with lightweight differential grease. For rock crawling you want the differentials much tighter with very little "action". You can achieve this by disassembling both front and rear differentials and packing them tightly with heavy differential grease, or even better, clean out the stock differential grease and refill the differentials with heavy silicone differential oil, such as Associated 300,000Wt (300K) differential oil.
- Using softer compound tires will give your truck better grip over rock crawling surfaces than the firmer compound stock tires. The IMEX brand wheels and tires are popular among rock crawlers. These wheels and tires will also give your X-Factor2 a wider stance that make it more stable.



◆◆IMPORTANT◆◆ If you use IMEX wheels on your X-Factor2, the XTM Racing Axle Adapter Set (P/N 146110) must be used, too.

- The suspension should be set very soft. You might try using 40Wt shock oil in the shocks and either 1.4mm Blue shock springs or even softer 1.3mm Red shock springs.
- You should definitely remove the two torsion bars from the suspension, so that the suspension can articulate as much as possible.
- For better low-speed crawling, you may want to change the stock 15T clutch bell to the XTM Racing 13T clutch bell (P/N 149525).

◆◆IMPORTANT◆◆ If you use the XTM Racing 13T clutch bell listed above, you will also need to use these XTM Racing Flanged Ball Bearings (P/N 149559).

- You may want to tighten the slipper clutch slightly. It's important to get as much power to the wheels as possible.
- By removing the gear box rods and adding washers between the ends of the rods and the ball ends, you can extend the wheel base of the truck by almost 1/2". The extended wheel base will make the truck slightly more stable for rock crawling.

◆◆IMPORTANT◆◆ If you extend the length of the gear box rods, make sure you extend them equally in sets (i.e., extend all four rear gear box rods and/or all four front gear box rods equally. This way, you ensure that you keep the chassis square.



- By removing the solid cantilever link rods and replacing them with shocks, the ride height of the truck will be increased and the suspension will articulate even more. Overall, the suspension will be softer, too. Even better for rock crawling. We suggest purchasing the same set of shocks that are already installed on the truck. They are a perfect fit.



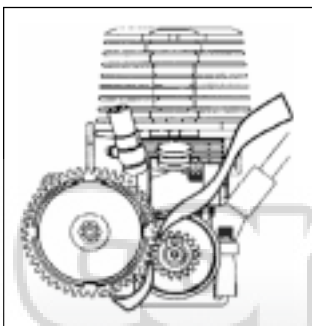
## SECTION 10: MAINTAINING YOUR X-FACTOR2

Following a simple maintenance schedule will ensure that your X-Factor2, 24.7 engine and radio system operate in top condition every time you use them. It is strongly suggested.

- Check the foam air filter element for dirt blockage. If the foam is dirty, remove it from the filter housing and wash it in liquid soap and warm water. Dry the foam element with a paper towel, reinstall it and "wet" it with after-run oil. See page # 10 for more info.
- Check the chassis for any loose screws, especially the engine, outdrive cup mounting screws, and drive shaft grub screws. Tighten them if necessary.
- Any screws that are threaded directly into metal should be secured into place with Blue Lock-Tite. This will prevent the screws from loosening during use. Screws threaded into nylon or composite material do not require Lock-Tite.
- Check the steering linkage and the throttle/brake linkage for any signs of wear or misalignment. Tighten and/or readjust them if necessary.
- Once in a while, remove the wheels and clean the wheel bearings, using a bearing cleaner. This will remove any dust and grit that may, over time, damage the bearings. After cleaning the bearings, reoil them using a good quality bearing oil. Never run the bearings dry or damage to the bearings will result.
- Check the fuel system, including the fuel tank and fuel tubing, for any signs of cracking or looseness. Replace any fuel tubing you suspect may be damaged.
- Check the condition of the transmitter and receiver batteries after each run. If you think they might be low, replace them with a fresh set.
- When you clean the wheel bearings as described above, also remove, clean and reoil the clutch bell bearings.



- After a period of time the chassis will accumulate a lot of dirt and debris, especially around the engine area. This buildup should be cleaned off using a high-powered spray cleaner like Emerald Nitro Car Cleaner. Some nitro car cleaners will damage anodized and/or plated parts. Test on an inconspicuous area first.
- After cleaning the chassis and engine with Nitro Car Cleaner you should oil the moving parts of the chassis. Do not oil the clutch bell, spur gears or the brake discs.
- Always use new fuel and keep the cap on the fuel tightly closed. As fuel ages it absorbs water, which degrades the fuels performance and will cause erratic engine operation.
- After you have finished using the engine for the day, remove the glow plug from the engine and squirt several drops of high-quality after-run oil into the glow plug hole. Pull the pull-start cord several times to distribute the oil throughout the engine, then reinstall the glow plug. This will prevent corrosion inside the engine.
- Never leave unused fuel in the fuel tank for more than a couple of days. The nitromethane and methanol in the fuel will evaporate, leaving the oil behind. This will eventually turn into a thick sludge that will require replacement of the fuel tank to fix.



- If you need to remove the engine to clean it or change the clutch bell, etc., it's important that you set the gear mesh between the clutch bell and spur gear properly when reinstalling the engine, otherwise, the spur gear may be damaged or the gears may bind. To set the gear mesh, first start by having the engine mount assembly temporarily in place, then slide the engine back within the mounts until the teeth on the clutch bell are even with the spur gear. When satisfied with the alignment, tighten the four socket-cap screws to secure the engine to the engine mounts. This will ensure that the clutch bell is lined up with the spur gear. Next, place a piece of notebook paper between the clutch bell and the spur gear and push the engine toward the spur gear firmly, so that the notebook paper crinkles. When set properly, there should be very slight play between the gears. If the gears are too tight they will bind and if they are too loose they will strip out. When satisfied with the alignment, tighten the four hex screws on the bottom of the chassis. With the wheels off the ground, you should be able to spin the clutch bell with your finger. The clutch bell should rotate the spur gear and other drivetrain components rather easily. If it's difficult to rotate the clutch bell, your gear mesh is likely too tight. Readjust the gear mesh, making sure to use a piece of notebook paper between the gears. When set properly, the paper should be tightly crinkled, but not ripped or punctured.

## SECTION 11: HOP-UPS INSTALLATION



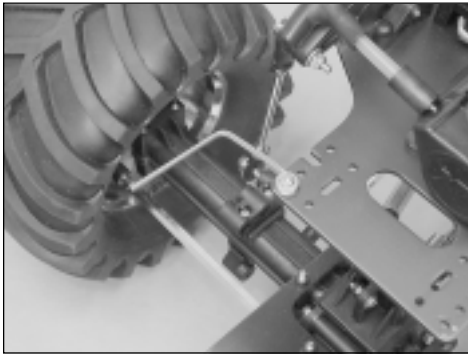
This section describes the installation of a few of the more popular hop-ups that are available for your X-Factor2. These hop-ups include:

- Tuned Exhaust Pipe Set (P/N 145824)
- Wheelie Bar Set (P/N 149625)
- Axle Adapter Set (P/N 146110)
- Sliding Clutch Kit (P/N 149596)

### Installing the Tuned Exhaust Pipe Set

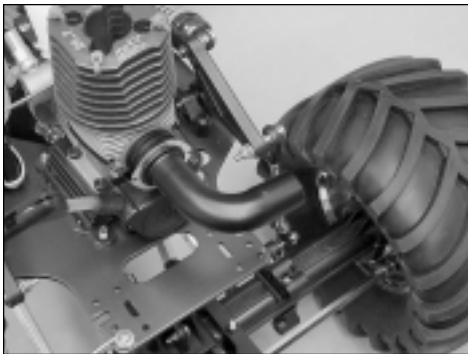
- Installing the tuned exhaust pipe set is a good, inexpensive upgrade to get more power from your engine. It's easy to install, too.
  - ❑ Begin by removing the stock exhaust pipe. To do that, first loosen the two grub screws in the ends of the exhaust pipe, cut the two nylon cable ties around the silicone coupler, then pull the exhaust pipe off the chassis.
  - ❑ Remove the two body mounting posts by removing the four self-tapping screws on top of the chassis.
  - ❑ Carefully remove the retaining spring from the exhaust header, pull the exhaust header off of the engine, then remove the two wire exhaust pipe hangers from the chassis.

To install the new tuned exhaust pipe set, do the following:



- ❑ Install the new tuned exhaust pipe wire hanger onto the left side of the chassis, using the machine screw and nut from one of the old hangers that you removed previously.

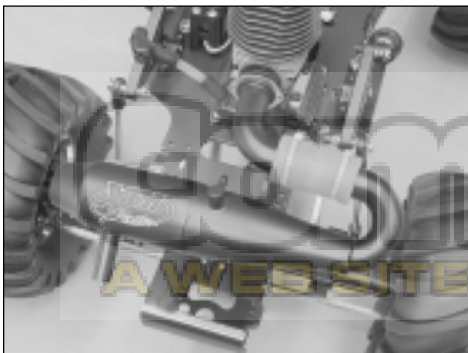
◆◆IMPORTANT◆◆ Notice that the new hanger is bent at an angle. When installed, make sure that the bend is pointing down toward the ground.



- ❑ Install the new exhaust header onto the engine by firmly sliding it over the silicone gasket. Use the new gasket provided if the old one is damaged.

☞ Wet the silicone gasket with a thin film of oil to make it easier to slide the exhaust header into place.

- ❑ With the exhaust header orientated toward the right side of the chassis, slide the metal retaining ring into place and secure the exhaust header to the engine, using the retaining spring.



- ❑ Slide the new silicone coupler onto the exhaust header, then slide the tuned pipe into the silicone coupler. Once that's done, slide the tuned pipe mount over the wire hanger.

- ❑ Line up the tuned pipe and tighten the grub screw in the end of the tuned pipe mount, then secure the silicone coupler into place, using two new nylon cable ties.

- ❑ Connect the pressure line to the pressure nipple on the tuned pipe, then reinstall the body mounting posts.

## Installing the Wheelie Bar Set

- Installing the wheelie bar set will prevent your X-Factor2 from flipping over backwards. This will help prevent the exhaust pipe and the back of the chassis and body from being damaged. This wheelie bar set can be used with both the stock exhaust pipe or the hop-up tuned exhaust pipe set.



- Install the two wheels onto the back of the two wheelie bars, using the drawing that comes with the wheelie bar set as a guide. Make sure to make one right and one left wheelie bar assembly.

◆◆IMPORTANT◆◆ The threaded axle screws are held in place using two hex nuts. The two wheels are held in place using two lock nuts. Be careful not to get them mixed up. When tightening the lock nuts, make sure that the wheels can still spin freely.



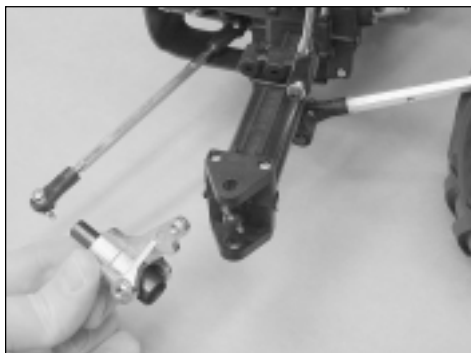
- Install the two wheelie bar assemblies onto the back of the chassis, using the drawing that comes with the wheelie bar set as a guide.

◆◆IMPORTANT◆◆ Make sure to install the wheelie bars with the wheels toward the outside of the chassis.

## Installing the Axle Adapter Set

- Installing the axle adapter set will allow you use 14mm hex-style wheels on your X-Factor2. Each axle adapter set comes with two axle adapters, so you'll need two sets to do all four wheels.

- Working with one wheel for now, remove the steel retaining bolt that holds the wheel in place, then firmly pull the wheel off the axle.



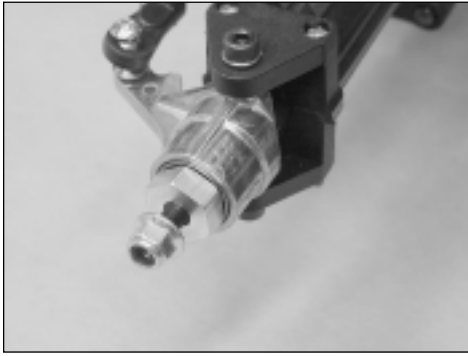
- Remove the steering tie rod from the steering knuckle by removing the single retaining bolt.

- Remove the steering knuckle assembly by first removing the two steel retaining screws (one on the top and one on the bottom), then twist the steering knuckle and pull it out.



- Slide a screwdriver or something similar through the slots in the axle cup to prevent the axle cup from turning. Now, loosen the grub screw inside the axle so that the steel pin can be removed.

- Remove the steel pin, then slide the axle cup assembly out of the steering knuckle.



- ❑ Slide the new axle adapter into the steering knuckle, then reinstall the steering knuckle. Installation is the reverse of disassembly.

◆◆IMPORTANT◆◆ You must use Blue Lock-Tite when reinstalling the two steel screws and the steering tie-rod bolt. This will ensure that the screws don't loosen during use.

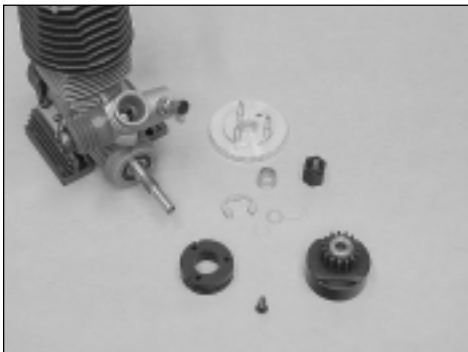
- ❑ Slide the new steel pin through the hole in the axle, then slide the hex-style adapter onto the axle and over the steel pin.

- ❑ Repeat the process for the remaining three axles. Now you can now install your new hex-style wheels and secure them into place, using the lock nuts included with the adapter set.

## Installing the Sliding Clutch Kit

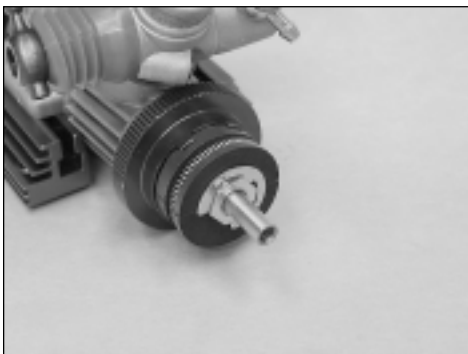
- Installing the sliding clutch kit will result in more aggressive engagement of the clutch, resulting in the clutch slipping less and more power to the wheels.

- ❑ Begin by removing the engine from the truck. The easiest way to do this is to remove the four steel hex screws from the bottom of the chassis that hold the engine mounts to the chassis. After removing the four screws, simply pull the engine out of the truck, with the engine mounts still attached to the engine.



- ❑ The next step is to remove the stock clutch assembly from the engine. To do this, do the following: remove the steel hex screw from the end of the crankshaft, then remove the shims and pull the clutch bell off. Next, use a screwdriver to pry the large C-clip off of the crankshaft, then pull the clutch shoe assembly off. Lastly, remove the clutch nut and carefully pull the fly wheel and collet off of the crankshaft.

◆◆IMPORTANT◆◆ Save the brass collet, shims, clutch bell and steel hex screw. You'll need them to install the new sliding clutch assembly.



- ❑ Install the new flywheel onto the crankshaft, using the old collet and the new clutch nut. When installing the clutch nut, make sure that the groove in the clutch nut is toward the front of the crankshaft.

- ❑ Carefully slide the new clutch shoe assembly onto the flywheel, making sure that the milled grooves in the back of the clutch shoe assembly fit over the machined counterparts in the flywheel.

- ❑ Using a pair of needle nose pliers, carefully install the new C-clip to hold the clutch shoe assembly in place.



- ❑ Slide the clutch bell onto the crankshaft, followed by two shims. Install and tighten the hex screw, then double-check that the clutch bell spins freely with minimal front to back play.

◆◆IMPORTANT◆◆ Apply Blue Lock-Tite to the hex screw before installing it. Also, you may or may not need two shims. Use as many shims as necessary to prevent front to back play while still allowing the clutch bell to spin freely. Slight front to back play (1/32" - 1/16") is okay.

- ❑ Reinstall the engine into the truck, making sure to apply Blue Lock-Tite to the four steel hex screws before installing them. Use the information at the bottom of page # 21 to adjust the gear mesh when reinstalling your engine. **This is important!**



## SECTION 12: TROUBLESHOOTING GUIDE

This troubleshooting guide has been provided to help you diagnose and solve most problems that you may encounter with your X-Factor2 RTR Nitro-Powered Monster Truck. Most problems encountered can be solved by carefully following the problem-cause-solution sections. If you cannot solve the problem using this troubleshooting guide, please feel free to contact us at the address, phone number or email address shown on page # 2 of this Operations Manual and Tuning Guide.

### IF YOU'RE HAVING A PROBLEM WITH THE HITEC LYNX SPORT RADIO SYSTEM:

PROBLEM	CAUSE	SOLUTION
1) Radio system does not operate	A) Transmitter and/or receiver batteries are low B) Batteries are installed incorrectly C) Receiver battery connector is loose	A) Replace transmitter and/or receiver batteries B) Check that the polarity of the batteries is correct C) Check that receiver battery connector is plugged in and tight
2) Operating range is short	A) Transmitter antenna is retracted B) Receiver antenna is not extended C) Receiver antenna is cut D) Transmitter and/or receiver batteries are low	A) Extended transmitter antenna completely B) Extend receiver antenna completely C) Return receiver to Hitec/RCD for repair D) Replace transmitter and/or receiver batteries
3) Servos do not operate normally	A) Transmitter and/or receiver batteries are low B) Servo gear stripped or otherwise damaged	A) Replace transmitter and/or receiver batteries B) Replace with new gear set
4) When engine is running, radio system operates erratically	A) Receiver crystal is loose B) Receiver battery connector is loose C) Damage to receiver after a crash	A) Remove and reinstall the receiver crystal B) Check that receiver battery connector is tight C) Return to Hitec/RCD for repair

### IF YOU'RE HAVING A PROBLEM WITH THE XTM RACING 24.7 ENGINE:

PROBLEM	CAUSE	SOLUTION
1) Engine does not start	A) Failed glow plug B) Glow Starter not charged and/or faulty C) Idle mixture screw set too lean D) Old or contaminated fuel E) Engine flooded with too much fuel F) Air leak in fuel system and/or engine	A) Replace glow plug with new one B) Fully charge glow starter and/or replace C) Reset idle mixture to factory setting (P11) D) Replace with new fuel E) Remove glow plug and expel fuel from cylinder (P12) F) Replace fuel lines and/or tighten all engine bolts
2) Engine does not draw fuel	A) Air leak in fuel system and/or engine B) High speed needle valve fully closed C) Idle mixture screw set too lean D) Fuel lines kinked E) Defective fuel tank	A) Replace fuel lines and/or tighten all engine bolts B) Reset high speed needle valve to factory setting (P11) C) Reset idle mixture to factory setting (P11) D) Check and straighten fuel lines E) Replace fuel tank
3) Engine does not transition	A) Failed and/or wrong type glow plug B) Old and/or wrong type fuel C) High speed needle valve set too rich D) Idle mixture set too lean E) Idle mixture set too rich F) Air leak in fuel system and/or engine	A) Replace with new recommended glow plug (P4) B) Replace with new recommended fuel (P4) C) Reset high speed needle valve to leaner setting (P15) D) Set idle mixture richer (P15) E) Set idle mixture leaner (P15) F) Replace fuel lines and/or tighten all engine bolts
4) Engine overheats	A) Engine running too lean B) Body too Restrictive C) Wrong type of fuel used D) Engine not fully broken in	A) Richen high speed needle valve (P15) B) Open larger vents in body to allow air to enter and exit C) Use fuel recommended only for R/C cars (P4) D) Allow engine further break-in time (P15)
5) Engine vibrates excessively	A) Engine and/or engine mounts loose	A) Tighten all engine and engine mounting bolts
6) Engine does not idle down	A) Idle stop screw out of adjustment B) Engine has developed an air leak C) One or more carburetor O-rings damaged	A) Adjust idle stop screw to factory setting (P11) B) Check and tighten all engine screws C) Replace carburetor O-rings
7) Pull-Start Assembly Slips	A) One-way bearing coated with oil	A) Clean one-way bearing using rubbing alcohol (P14)

**IF YOU'RE HAVING A PROBLEM WITH THE X-FACTOR2 CHASSIS:**

<b>PROBLEM</b>	<b>CAUSE</b>	<b>SOLUTION</b>
1) Truck pulls to one side	A) Steering trim out of adjustment B) Toe angle out of adjustment C) One wheel is hanging or has damaged bearing	A) Readjust trim to center both wheels (P9) B) Readjust toe angle (P16) C) Remove wheel and clean bearing. Replace if necessary
2) Brakes seem ineffective	A) Brake linkage out of adjustment B) Brake disc(s) worn	A) Readjust brake linkage (P18) B) Replace affected brake disc(s)
3) Clutch does not engage	A) Clutch shoes damaged or worn B) Clutch bell damaged or worn C) Clutch shoes glazed	A) Replace clutch shoes B) Replace clutch bell C) Remove glaze using fine sandpaper and reinstall
4) Clutch does not disengage	A) Clutch spring worn or damaged	A) Replace clutch spring
5) Truck does not "go"	A) Stripped or damaged spur gear B) Stripped differential gear(s) C) Driveshaft(s) slipping and/or broken D) Outdrive cups slipping E) Clutch not engaging F) Slipper clutch too loose G) Carburetor set too rich	A) Replace spur gear B) Replace differential gear(s) C) Tighten grub screw and/or replace drive shaft(s) D) Tighten grub screw in outdrive cups E) Check clutch assembly and repair or replace F) Tighten slipper clutch (P18) G) Lean high speed needle valve (P15)
6) Suspension not smooth or free	A) One or more shocks sticking B) Bent shock shaft C) Bent or otherwise damaged hinge pin	A) Clean and/or rebuild the affected shock B) Rebuild affected shock C) Replace hinge pin
7) Shocks leaking oil	A) Shock seals worn B) Bent shock shaft	A) Replace shock seals B) Rebuild affected shock
8) Truck flips backward when giving throttle	A) Slipper clutch set too tight	A) Set slipper clutch looser or add wheelie bar (P18)
9) 2-speed transmission shifts at too low a speed	A) Shift point not adjusted properly	A) Readjust shift point to shift at a higher speed (P19)
10) 2-speed transmission shifts at too high a speed	A) Shift point not adjusted properly	A) Readjust shift point to shift at a lower speed (P19)
11) Screws loosen and/or fall out during use	A) Vibration under normal use	A) Clean screw(s) and/or replace and use Blue Lock-Tite to secure them into place

**FOR MORE TIPS AND TROUBLESHOOTING SOLUTIONS, CHECK OUT THE ONLINE X-FACTOR2 FORUM AT:**

**[HTTP://GLOBALSERVICES.GLOBALHOBBY.COM/GLOBALFORUM/INDEX.PHP](http://globalservices.globalhobby.com/globalforum/index.php)**

**OR AT:**

**[WWW.TEAMX-FACTOR.COM](http://www.teamx-factor.com)**



# CompetitionX

A WEB SITE FOR THE SERIOUS RACER

## IMPORTANT WARRANTY INFORMATION - PLEASE READ!

Your XTM Racing X-Factor2 RTR Nitro-Powered Monster Truck is warranted against manufacturer defects in materials and workmanship for a period of 90 days from the date of purchase. Warranty service will be provided within 90 days of the date of purchase only if you are able to provide the original or a copy of the original dated sales receipt.

### SPECIAL NOTICE

The radio control system preinstalled in your XTM Racing X-Factor2 RTR Nitro-Powered Monster Truck is manufactured and warranted by Hitec/RCD North America. This includes the transmitter, receiver, throttle servo (excludes steering servo which is warranted by XTM Racing), battery box and on/off switch. Do not return the radio system to Global Services. It must be removed from the truck and returned to Hitec/RCD at the address shown:

**Hitec/RCD, Inc.**  
**Attn: Customer Service Center**  
**12115 Paine Street**  
**Poway, CA 92064**

## IMPORTANT WARRANTY SERVICE INFORMATION

Before returning your X-Factor2 for warranty consideration, the status of the unit must be within the guarantee as stated above. Do not return your X-Factor2 to the place of purchase. They are not authorized or equipped to perform warranty work on XTM Racing products. When requesting warranty service, please observe the following:

- Crash damage will not be covered under warranty. Do not request warranty service for a crash-damaged product.
- If you are requesting warranty on anything other than just the radio control system, always send your vehicle complete with the transmitter. Please unplug and/or remove the batteries both from the transmitter and the vehicle before returning it. We like to have the vehicle complete so it can be thoroughly tested before returning it to you.
- If you are requesting warranty service for only the radio system do not send the radio system or the vehicle to us. Remove the radio system from the vehicle and return it to Hitec/RCD for warranty consideration. **See Special Notice above.**
- Include a note detailing the problem or service you are requesting. Service cannot be provided without this information. Include your daytime phone number, shipping address and/or email address in the event we need more details pertaining to the service requested.
- If your vehicle is out of the warranty period you may request an estimate of services at the time you return your vehicle for service. An omission of this request implies permission for Global Services to service your vehicle at our discretion.
- Include a method of payment for any service charges.
- Send the unit to us by United Parcel Service, Federal Express or by Insured Mail. Postage is nonrefundable. Send your package to:



**Global Services**  
**18480 Bandilier Circle**  
**Fountain Valley CA 92708**

**Phone: (714) 963-0329**

**Fax: (714) 964-6236**

**Visit Our Website**

**<http://globalservices.globalhobby.com>**

**Email: [service@globalhobby.net](mailto:service@globalhobby.net)**

**[WWW.TEAMX-FACTOR.COM](http://WWW.TEAMX-FACTOR.COM)**

## PURCHASING REPLACEMENT PARTS

Included with your X-Factor2 RTR Nitro-Powered Monster Truck is a separate listing of available replacement parts. The part numbers for each part are provided for ordering convenience. Replacement parts are available through your local authorized XTM Racing dealer or directly from us.

To locate the dealer nearest you, please call us at (714) 963-0133 or visit our dealer directory on the Internet at [www.globalhobby.com/where2buy.htm](http://www.globalhobby.com/where2buy.htm)

**or Order Directly From Us at the Address, Phone Number or Web Site Shown Above**