



AFTERBURNER

NITRO POWERED FUNNY CAR

TM

OWNERS MANUAL



If you have questions about operating or installing your new Megatech product, or if you are missing parts... Please Call Megatech First!

DO NOT RETURN THIS PRODUCT TO THE STORE

Call our Customer Service Department at:

(201) 662-2800

10:30am - 4:30pm, EST Monday through Friday (except holidays)

Technical assistance is also available on-line at www.megatech.com
or by e-mail to info@megatech.com

Congratulations on your purchase of a Megatech® Nitro-Powered High-Speed Funny Car. Racing has never been more fun! Get ready to speed into a new world of racing excitement! Your new After Burner is so easy to prepare, within minutes of opening the box, it will be ready to race at speeds over 60 MPH.

Please read through these directions before you proceed any further. If for some reason you think the AfterBurner is not what you want, do not continue any further. Your hobby dealer absolutely cannot accept a AfterBurner for return or exchange after it has been run, or after any of the parts bags have been opened.

If you experience any problems, **DO NOT** take your AfterBurner back to the store! Call one of our MegaTechnicians at 1-201-662-2800 or send an e-mail to: info@megatech.com

TABLE OF CONTENTS

| | |
|--|----|
| Getting Acquainted with Your AfterBurner | 3 |
| Safety Warnings | 3 |
| The Radio System | 4 |
| Fuel & Preparations | 5 |
| Installing Antenna & Batteries | 6 |
| Steering Trim & Operation | 7 |
| Engine Break In | 8 |
| Starting Your Engine | 9 |
| Your First Run | 10 |
| Brakes & Throttle Trim | 11 |
| Maintenance | 12 |
| Limited Warranty | 13 |
| Exploded Parts View | 14 |
| Parts List | 16 |

Getting Acquainted with Your AfterBurner

Review the components of the AfterBurner to ensure that your kit is complete before you begin final assembly. (See **Figure 1**)



Figure 1 - AfterBurner Contents

Kit Contents:

- A. AfterBurner Nitro-Powered High-Speed Funny Car
- B. 2-Channel Radio Transmitter
- C. Body Washers and Clips
- D. Decal Sheet (*Not Shown*)

Make sure that you have received all parts shown.

If something is missing, call Megatech toll-free at 1-201-662-2800

Safety Warnings

This is a high-speed vehicle and should be treated with care and respect! Use extreme caution when operating your AfterBurner. Keep your hands, fingers and any article of clothing away from the wheels and gears.

Model engine fuel is almost invisible when it burns. Always keep a fire extinguisher nearby when using model engine fuel. This fuel is dangerous, poisonous, and highly flammable. Use a fuel dispenser with a fueling probe to fill the fuel tank. Do not pour fuel into the tank directly from a can or any other method which can spill raw fuel.

This vehicle is not a toy and must be operated by an adult who will handle this car safely and take responsibility to avoid any injury. This model is designed to be operated only in appropriate areas.

If all of the precautions are followed and your AfterBurner is operated in a safe and responsible manner, it is an exciting, safe and fun hobby for you and all who watch.

Required Running Equipment

To operate your AfterBurner, you will need the following items, which should be available from your local hobby shop.

1. 12 AA alkaline batteries: 8 “AA” alkaline batteries for the transmitter and 4 “AA” alkaline batteries for the receiver*
2. Glow plug ignitor*
3. Glow plug wrench*
4. Racing Fuel (We recommend Megatech’s High Velocity Racing Fuel)*
5. Fuel-filler bottle*
6. Flat head screw driver

* These items are available in Megatech’s Gas Car/Truck Completer Kit, #MTC 7500 (Pictured right).



Figure 2 - Completer Kit

The AfterBurner Radio System

The AfterBurner comes with a two-channel radio completely installed. The transmitter has one channel for digital proportional steering and one channel for digital proportional throttle control. The receiver and receiver batteries sit in the sealed radio box. Before running the vehicle, always turn on the transmitter first and then the receiver. When finished running your AfterBurner for the day, always turn the receiver off first, then the transmitter.

WARNING/CAUTION

THE TRANSMITTER IS ALWAYS THE *FIRST* TO BE SWITCHED ON AND THE *LAST* TO BE SWITCHED OFF. NEVER TURN THE TRANSMITTER OFF WHILE OPERATING THE CAR. THIS WILL CAUSE THE AfterBurner TO RUN OUT OF CONTROL AND CAUSE A DANGEROUS CONDITION.

Fuel

Fuel is the most critical component for making your engine perform properly. Improper fuels will cause hard starting, poor performance, and excessive wear on the engine. Fuel for your vehicle must contain a blend of BOTH synthetic oil and castor oil. Use a high-quality blended fuel. We only recommend Megatech's High Velocity Racing Fuel or another premium quality car/truck fuel with 25% Nitro content.

CAUTION: ALWAYS FOLLOW THE PRECAUTIONS PRINTED ON THE CONTAINER OF FUEL. KEEP IT AWAY FROM OPEN FLAMES AND CHILDREN. THE MIXTURE IS FLAMMABLE AND POISONOUS.

Your AfterBurner features a competition fuel tank and priming system. The tank uses a spring-loaded filler cap over a wide filler neck for fast, easy fueling. Simply pull open the lid and it will spring closed when you remove the nozzle. Remember to use a fuel filler bottle with an attached long nozzle that can be inserted into the filler neck. Never pour fuel from an open can into the tank or use a funnel.

Preparing to Race

Your AfterBurner comes fully assembled and nearly ready to race right from the box. Very little setup is required, however, proper preparation is crucial to maximizing the performance and enjoyment of your vehicle.

First we do recommend that you tighten down all of the bolts, as they may have come loose in transit. Be especially careful with the engine mounting bolts as shown in **Figure 3**. Because the engine has such high RPMs, it is important to make sure the bolts have not vibrated loose after every use.

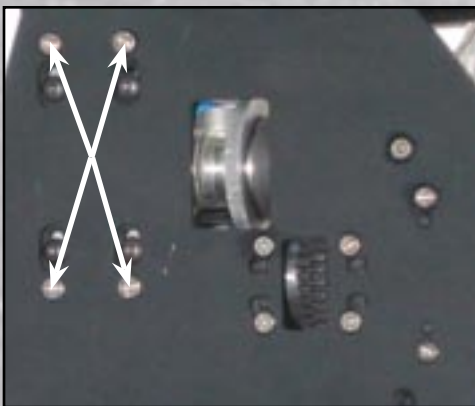


Figure 3 - Tighten engine mounting bolts



Figure 4 - Install Antenna

Installing the Antenna

Remove the antenna from the slot on top of the transmitter. Slide it into the hole on top of the transmitter and turn clockwise until snug. **Do not over-tighten.**

Installing the Batteries

- A. Be sure that both the transmitter and receiver switches are in the “off” position.
- B. Install 8 fresh “AA” alkaline dry cell batteries in the transmitter (see **Figure 5**) paying careful attention to proper “+” and “-” polarity. Turn the transmitter on to make sure the LED light glows green. Fresh batteries will provide 2 hours of power to the transmitter. When the red LED light glows, immediately install fresh batteries. Failure to do so will result in loss of control and (most likely) a crash.



Figure 5 - Transmitter Batteries



Figure 6 - Vehicle Batteries

- C. To install the receiver batteries, lift up on the clasp and gently lift the cover to the battery box. Then, lift out the battery guard and the battery case. Install 4 fresh “AA” alkaline dry cell batteries and carefully put everything back into the battery box (see **Figure 6**).
- D. Turn on the transmitter power switch, located inside the door on the back of the transmitter (see **Figure 7**). Next turn on the vehicle’s power switch and listen for the servos to move slightly. Move the steering control wheel and the throttle trigger on the transmitter, making sure that the steering control operates the front wheels and



Figure 7 - Power Switch

the throttle trigger operates the slide carburetor. If the servos do not respond, remove the batteries and make sure they are installed correctly.

E. Turn off the power switch on the car and then on the transmitter.

Steering Trim

Although your AfterBurner comes factory-assembled, it is important to finely adjust the steering trim before operating.

1. Turn on the transmitter and then the receiver, but do not start the engine. Position the steering trim knob into the neutral (center) position (see **Figure 8**).
2. On a smooth, level, paved surface, roll the car forward a few feet at a time. Make sure it rolls straight, not veering left or right. If it does not roll straight, adjust the steering knob until the vehicle rolls straight on its own.
3. It's also a good idea to test the steering functions while you are checking the trim. Just like in a car, turning the wheel on the transmitter to the left makes the vehicles wheels turn left and vice versa.
4. **Range Check:** Turn on the transmitter and extend the antenna fully then switch on the model. walk about 150 feet away and make sure the vehicle responds reliably to the controls.

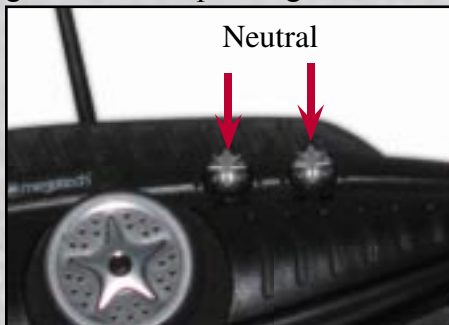


Figure 8 - Set Trim to Neutral

Operating your AfterBurner

Remember, the AfterBurner is a high-performance vehicle capable of reaching speeds of over 60 MPH. It is capable of causing serious injury or damage if not operated properly. Your AfterBurner is not a toy. It is designed for operation by or under close supervision of a responsible adult.

Finding the Right Location

Always drive your car in a wide open area, free from trees, cars and other obstructions. Do not operate this vehicle on highways or in large crowds of people. Never operate in heavy winds, rainy weather or after dark. Do not operate your AfterBurner at times or in locations where the engine's noise will be objectionable. Wear hearing protection if you are sensitive to engine noise. Never operate any Nitro- or gas-powered vehicle in dry bush, dry grass or dry leaves! This creates a very dangerous fire hazard.

Breaking In Your Engine

Important! For best performance, maximum enjoyment and longest service, your Q 1.6 HP engine must be properly broken in before you adjust it for maximum power. Breaking in your engine enables matching surfaces and parts to establish the correct running tolerances. Properly breaking in the engine during the first tanks of fuel will determine how well your engine will run for its entire life.

Breaking in simply requires you to run three tanks of fuel through the engine at reduced power. It's a great opportunity to get used to driving your AfterBurner before it reaches maximum speed. After the break in, you may adjust your engine for maximum power.

The engine is adjusted at the factory for the correct break in

settings. If your settings somehow get changed, simply close both the high speed and slow speed needle valves by turning them clockwise, then:

- open the high speed needle valve three complete turns counterclockwise
- open the slow speed needle valve four full turns

NOTE: Never force the needle valves closed . Only close them until you feel slight resistance.

Shutting Off Your Engine

Before you start the engine, it's important to know the correct way of shutting it off. To do this, carefully use needle nose pliers or your fingers to squeeze the fuel supply line closed. If you use your fingers to squeeze the tube, use care or you might get burned. You should wrap thick tape around the jaws of the pliers to prevent damaging the fuel line. Squeezing this tube closed for a few seconds is the only method you should use to stop the engine.



Figure 9 - Closing the high speed valve



Figure 10- slow speed valve



Figure 11- stop the engine

Starting Your Engine

NOTE: Read the “Shutting Off Your Engine” Section Before Continuing!

First, fully extend your antenna and turn the transmitter on. If the green light ever goes dark or the red light comes on, your transmitter batteries are low. You should replace them right away. Next turn on the car’s receiver.

After filling the fuel tank, prime the engine by pressing the priming button three times. Then pull the engine starter handle two or three times to circulate the fuel into the engine.



Figure 12- Priming the engine

Attach a fully charged 1.5 volt glow plug ignitor to the engine and wait three seconds to allow the glow plug to heat up (See Figure 13). During

break in, it may be necessary to leave the glow plug ignitor attached to the engine to keep it running while the air-fuel mixture is adjusted.



Figure 13- Glow plug ignitor

Megatech’s MegaNitor rechargeable glow plug ignitor allows easy starting, and can be left on the engine to keep it running reliably during break in.

Important: Start the engine using short quick pulls on the starter handle straight away from the engine. Do not pull the handle all the way out or at an angle. Always let the starter handle back in slowly after each pull. Do not let the handle go and snap back into the engine.



Figure 14- Use short, quick pulls

Once the engine is running, make sure the throttle trigger is set at idle. If the speed is too high, open the low speed valve (counterclockwise) until the engine speed slows to a safe idle. If the engine stops or runs too rich (lots of smoke and liquid fuel droplets coming from the exhaust), then close the low speed needle valve (clockwise) until the engine reaches a reliable idle speed. Adjust the low speed needle valve so the engine idles as rich as possible while still running. If the engine will not keep running consistently at idle, turn the idle speed screw 1/4 turn clockwise to increase minimum speed.

Once you are able to keep the engine running (with the glow plug ignitor attached if necessary) at a reliable ultra-rich idle, run two full tanks of fuel through the engine at the rich idle setting.

If the cylinder head temperature gets too hot (260 degrees F), shut down the engine, let it cool completely and start again.

After you complete the break in, the low speed needle valve can now be adjusted for performance. Start by running the throttle at idle for 2 seconds. Then apply full throttle briefly and carefully listen to the engine. If it accelerates slowly with lots of smoke and liquid drops of fuel, your air-fuel mix is too rich and you should turn the low speed needle valve clockwise 1/8 of a turn at a time until the engine accelerates briskly and reliably. Retest the throttle after each adjustment.

After this is set correctly, slowly increase the engine speed to approximately 50% of full throttle. Adjust the high speed needle valve so the engine again runs as richly as possible. (You actually want it to be producing lots of oily smoke and spitting oil droplets from the exhaust).

Run your AfterBurner on a smooth surface at low to medium speed for another full tank of fuel. Be careful not to maneuver it too harshly or use any more than half throttle.

To adjust the high speed needle valve, carefully turn the high speed needle valve clockwise 1/8 of a turn at a time. This allows the engine to run faster and at a higher pitch sound. Your vehicle will now run faster and smoother.

Your First Run

Steering

When you begin operating your AfterBurner, it might be wise to hold the radio horizontal to the ground with the wheel side up. Then the wheel acts like a steering wheel in a car (see **Figure 15**). Turn the wheel right and the car goes right. Turn the wheel left and the car goes left. If you find your AfterBurner going to one direction or another without any steering input, you will need to adjust the steering trim. Simply turn the steering trim knob in the opposite direction that the AfterBurner is pulling (See Steering Trim on page 7). If the vehicle requires excessive amounts of trim, check for damage, loose parts or excessive wear in the steering parts.

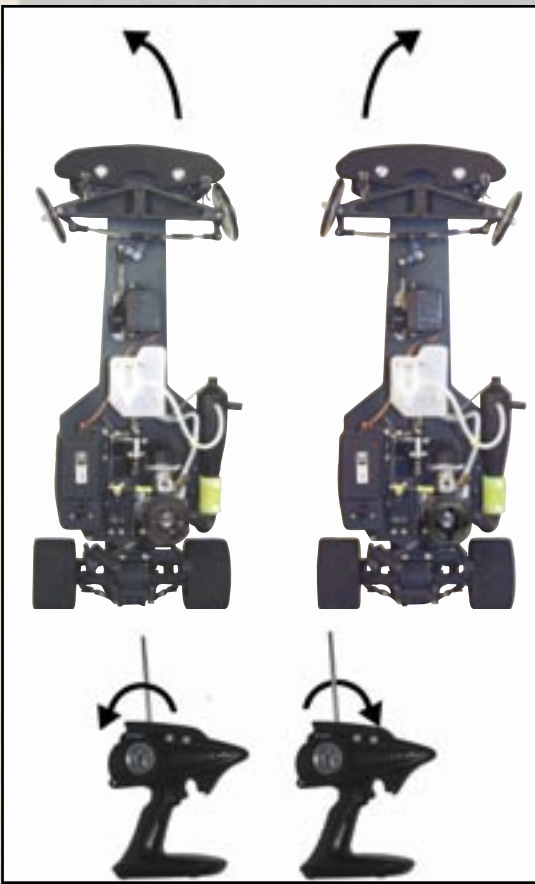


Figure 15- Turn the wheel right and the car goes right. Turn the wheel left and the car goes left.

The Brake System

Before running your AfterBurner, be sure to do a brake check. With the car running at idle, roll it forward. It should roll freely. Now roll the car forward again and push the throttle trigger forward. The car should come to a stop almost immediately. If it does not stop instantly, adjust the brake actuation rod to give more grip to the brake pads. If the vehicle does not roll freely, then adjust the rod in the opposite direction.



Figure 16- brake actuation rod

Adjusting the Throttle Trim

If your AfterBurner accelerates or stalls while in the neutral position, you will need to adjust the throttle trim control. The throttle trim adjusts the center point of the throttle servo, allowing you to fine tune the operation of the transmitter throttle trigger.

Proper care and simple maintenance should keep your AfterBurner running well for a long time.

Make sure you thoroughly check your vehicle after each run to make sure no parts were bent or broken. Also check to make sure the screws, fasteners, bolts and hardware are secure and tight after each run. Should you find that any parts are bent, broken or show excessive wear, you must repair or replace them immediately before attempting to operate your AfterBurner again. See your local hobby dealer first for replacement parts. The list on page 3 provides a handy guide.

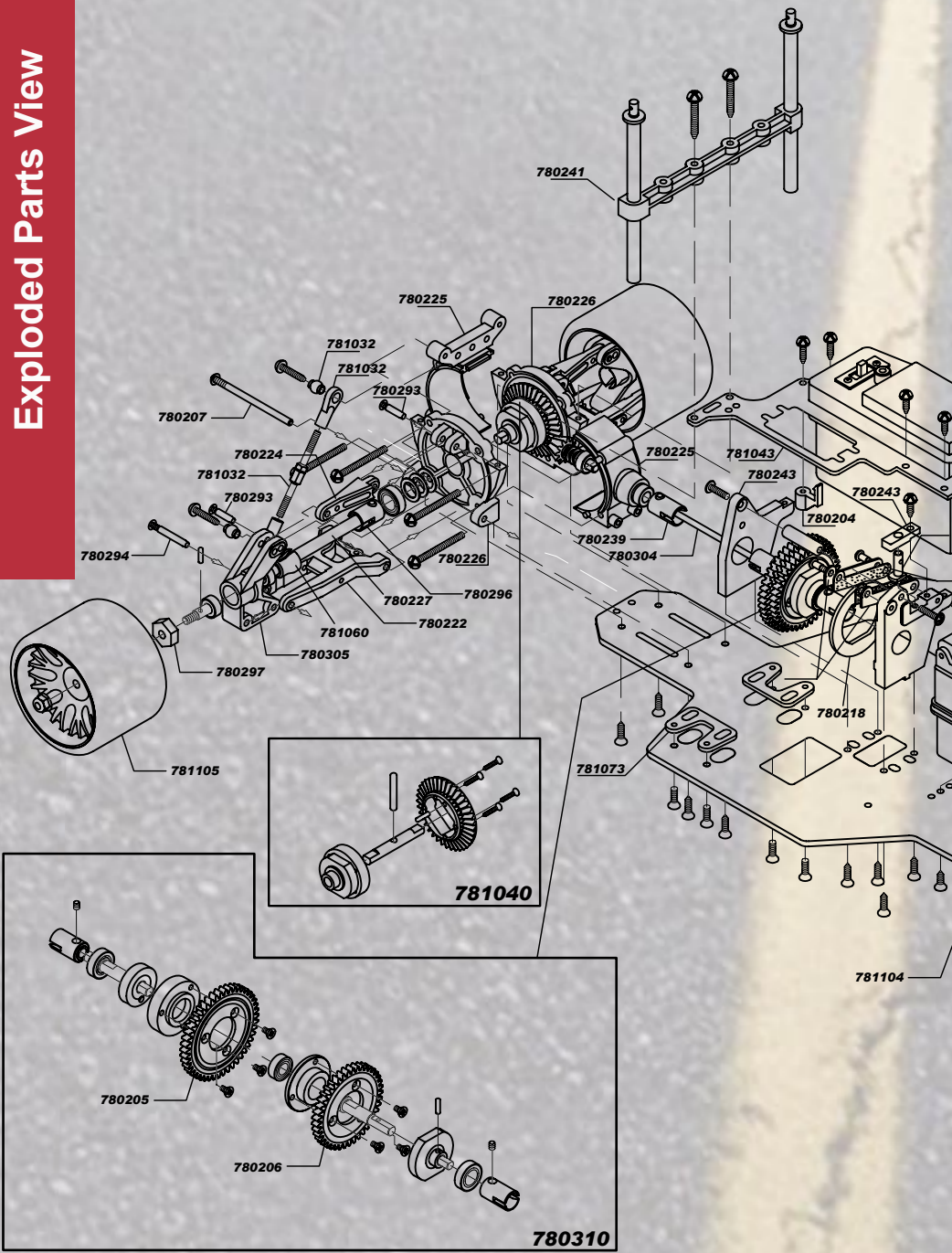
Thoroughly clean your AfterBurner after each run to remove oil, fuel and dirt. We recommend Megatech's MegaWash, a safe and effective spray cleaner.

Important: Never leave any fuel in the vehicle's fuel tank or engine. The Nitro fuels used in these high-performance vehicles may cause corrosion and damage your engine. Whenever possible, use up the fuel in the engine by running the vehicle until it quits, leaving no fuel in the tank, fuel tube or engine.

Always remove the used batteries from the transmitter and the receiver box if the vehicle is going to be stored for more than a few days. Also place two drops of Mega Metal-Guard (after-run oil) down the carburetor and two drops down the glow plug hole and turn the engine over by pulling on the pull-starter a few times.

Parts Listing

| Part# | Description | | |
|--------|----------------------------------|----------------------------------|--|
| | | 781026 | Rear Wing |
| 1685 | 5*8*2.5 Premium Bearing (2 Pack) | 781027 | Tuned Pipe |
| 16109 | Side Exhaust Header | 781029 | Front Axle |
| 780201 | Air Filter | 781030 | Steering Servo Mount (2) |
| 780203 | Flywheel | 781031 | Tie Rod Set (2) |
| 780204 | Radio Box | 781033 | Front Steering Knuckles (2) |
| 780205 | 2-speed Spur Gear 42t | 781035 | Front Coil Spring |
| 780206 | 2-speed Spur Gear 38t | 781040 | Center Ring Gear & Pinion |
| 780207 | Suspension Hinge Pins (50mm) | 781043 | Radio Tray |
| 780215 | Brake Pads (Pr) | 781044 | King Pin (2) |
| 780218 | Brake Disc | 781045 | Front Suspension Arms |
| 780222 | Suspension Arms | 781046 | Front Tire O-ring (2) |
| 780224 | Upper Arms (Pr.) | 781048 | Servo Saver |
| 780225 | Gearbox Shell | 781053 | 2 Speed Clutch Bell |
| 780226 | Gear Case Sides | 781060 | Rear Axle Shafts (2) |
| 780227 | Drive Shafts (45mm) | 781072 | Radio Plate Stabilizer (2) |
| 780234 | 100cc Quick-fill Fuel Tank | 781073 | Engine Mount Spacer Plates (2) |
| 780238 | Adjustable Engine Mount | 781101 | Aluminum Front Rims (2-chrome) |
| 780239 | Center Diff Drive Joints | 781102 | Front Bumper |
| 780241 | Rear Body Mount Set | 781103 | Front Body Mount Set |
| 780242 | Clutch Spring | 781104 | Main Chassis |
| 780243 | Center Diff Mounts W/ Brake Cam | 781105 | Rear Rim/tire Set |
| 780245 | Servo Mount Set | 781106 | Servo Linkage Rod Set |
| 780248 | 2-speed One-way Bearing | 781107 | AfterBurner Body Unpainted (w/ Decals) |
| 780279 | 2-speed Clutch Assembly | 781107 | AfterBurner Body Painted (w/ Decals) |
| 780293 | Suspension Hinge Pins 13.5mm (4) | 7802100 | Clutch Shoes (3) |
| 780294 | Suspension Hinge Pins 23mm (4) | AfterBurner Upgrade Parts | |
| 780296 | Inner Diff Joints F/R Gearbox | 781080 | 42t 2-speed Steel Spur Gear |
| 780297 | Hex Drive Washers (4) | 781081 | 38t 2-speed Steel Spur Gear |
| 780299 | 3mm Copper Ball (4) | 781082 | 16t Pinion Gear |
| 780301 | Brake Actuator Cam | 781083 | 17t Pinion Gear |
| 780304 | Center Drive Shafts (2) | 781084 | 18t Pinion Gear |
| 780305 | Rear Hubs (2) | 781085 | 19t Pinion Gear |
| 780310 | 2 Speed Transmition | 781086 | 20t Pinion Gear |
| 781013 | Muffler Gasket (2) | 781087 | 21t Pinion Gear |
| 781014 | Clutch Nut | 781088 | 22t Pinion Gear |
| 781018 | Air Filter Refill | 781089 | 43t 2 Speed Main Gear |
| 781019 | Ball End (8) | 781090 | 43t Steel 2-speed Main Gear |
| 781021 | Aluminum Brake Spacer | | |



Limited Warranty

Megatech Product Support

If you have questions about your model, or you're having a problem with your model simply call us at 1-201-662-2800. Our customer support team is available from 10:30am to 4:30pm eastern standard time to answer your questions. You can also e-mail us at support@megatech.com anytime. We stand behind our products 100% and will do our best to make sure you are satisfied with this product.

Warranty

This product is warranted to be free from defects in materials and workmanship for a period of thirty (30) days from the date of purchase.

No warranties are expressed or implied that cover damage caused by normal use or wear, or cover or imply how long any part will last before requiring replacement due to wear. Parts will wear from use and occasionally require replacement. Components are only covered against manufacturer's defects in materials, workmanship or assembly when they are new and unused.

If any component is found to be defective, incorrectly made, or incorrectly assembled within the warranty coverage time period, it will be repaired or replaced at Megatech's discretion.

Limitations

Any and all warranty coverage does not cover replacement of parts and components damaged by abuse, neglect, improper or unreasonable use, crash damage, water or excessive moisture, chemical damage, improper or infrequent maintenance, accident, unauthorized alteration or modification, use of improper fuels, or items that are considered consumable.

All warranty claims are handled directly by Megatech. The place of purchase can assist you in contacting Megatech and determining which components might be defective, but he is under no obligation to provide free replacement parts or service. Megatech does not authorize over-the-counter exchanges or refunds for Megatech products that have been used. Megatech will make the sole and final determination if a product or component can be covered under warranty.

Megatech will NOT pay for the cost of shipping or transportation of a defective component from you to us.

Limitations of Liability

Megatech makes no other warranties expressed or implied. Megatech shall not be liable for any special, indirect, incidental or consequential damages arising out of the assembly, installation, or use of their products or any accessory or chemical required to use their products. By the act of operating/using the product, the user accepts all the resulting liability. In no case shall Megatech's liability exceed the actual purchase price paid for the product. All warranty claims will be handled directly by Megatech. The Megatech warranty gives the customer specific legal rights and possibly other rights that vary from

state to state. Megatech is not obligated to provide upgraded products at a reduced rate when a previous product's production cycle has ended. Megatech reserves the right to modify warranty provisions without notice.

Obtaining Warranty and Repair Service

Call us first! Before you begin the process of obtaining warranty or repair service, please call us at 1-201-662-2800 and speak with one of our friendly and knowledgeable Support Team Technicians. Often a product might appear defective, or to malfunction, only because it is being used improperly or requires a simple adjustment. One phone call to our experienced support team just might get you back and running!

If any component is found to be defective, it will be repaired or replaced and returned. Any needed repairs that are not covered under warranty will be estimated on an individual basis, prior to any work being done.

The package shipped to Megatech Service Department should be insured to cover the value of a new replacement. Megatech will not be responsible for items lost in transit to us.

When you return a product to Megatech, please provide the following:

- Return address (No PO Boxes)
- Note describing the problem
- Proof of purchase indicating the date of purchase

Shipping to Service Department Guidelines

- Remove all batteries from the model including NiCd packs and AA batteries.
- If the transmitter is being returned, remove the AA batteries.
- **DO NOT SEND** fuel, batteries, chargers, glow plug igniters, instructions manuals, bodies or any other accessories you use to run your model. This will save shipping cost and prevent the possibility of those items becoming lost. Megatech will not be liable for accessory items lost during the repair process.
- If your model is equipped with aftermarket accessories and has a replacement value higher than a stock new model, consider removing the accessories prior to shipment. In case of loss during transit from Megatech to you, Megatech can only be responsible for the replacement cost of a new stock model.
- Package the product in the most efficient size box possible. Loose product in oversize boxes can increase the risk of loss or additional damage in route to Megatech.
- Include a note with a brief description of the problem
- Include a daytime and evening phone number or e-mail address that the service department may use to contact you with questions or estimates regarding the repair.
- Include a return shipping address. We cannot ship to Post Office boxes.

**Ship Items Freight prepaid to:
Megatech International
Attn: Service Department
8300 Tonnelle Avenue
North Bergen NJ 07047**

LOOK FOR THESE OTHER FINE MEGATECH PRODUCTS



**MTC7810
DARK THUNDER NITRO POWERED
HIGH SPEED DRAGSTER**



**MTC7501
CHRIS CHIANELLI SIGNATURE
Q-SERIES COMPLETER PACK
FOR AUTO START VEHICLES**



**MTC16161
CHRIS CHIANELLI SIGNATURE SERIES
MEGANITOR DELUXE GLOW PLUG
IGNITOR W/ METER AND AC ADAPTOR**



**MTC7502
CHRIS CHIANELLI SIGNATURE
Q-SERIES COMPLETER PACK
FOR PULL START VEHICLES**

**MTC16192
CHRIS CHIANELLI
SIGNATURE SERIES
Q-SERIES OFF-ROAD
GLOW PLUG**





**MTC7805
TEMPEST GLADIATOR
4WD RTR TRUCK W/
RADIO AND M16 ENGINE**



**MTC5720 PINT
MTC5721 QUART
MTC5722 GALLON
AIR POWER 15%
AIRPLANE FUEL**



**MTC510 PINT
MTC511 QUART
MTC512 GALLON
Q-SERIES 20%
OFF-ROAD FUEL**



**MTC502 PINT
MTC503 QUART
MTC504 GALLON
HIGH VELOCITY 25%
RACING FUEL**



**MTC6802
WICKED ANGEL 2
NITRO SPEED BOAT**



megatech®

HIGH PERFORMANCE PRODUCTS

Megatech International - 8300 Tonnelles Avenue
North Bergen NJ 07047 - (201) 662-2800

www.megatech.com

Download from www.Somanuals.com. All Manuals Search And Download.

Free Manuals Download Website

<http://myh66.com>

<http://usermanuals.us>

<http://www.somanuals.com>

<http://www.4manuals.cc>

<http://www.manual-lib.com>

<http://www.404manual.com>

<http://www.luxmanual.com>

<http://aubethermostatmanual.com>

Golf course search by state

<http://golfingnear.com>

Email search by domain

<http://emailbydomain.com>

Auto manuals search

<http://auto.somanuals.com>

TV manuals search

<http://tv.somanuals.com>