

DURATRAX[®]

THUNDER QUAKE[™]



Patent Pending

ASSEMBLY AND OPERATION MANUAL

Warranty

- DuraTrax[™] will warranty this kit for 90 days after the purchase date from defects in materials or workmanship. DuraTrax will either repair or replace, at no charge, the incorrectly made part.
- Make sure you **save the receipt or invoice** you were given when you bought your model! It is your proof of purchase and we must see it before we can honor the warranty.
- To return your Thunder Quake for repairs covered under warranty you should send your truck to:

Hobby Services
1610 Interstate Drive
Champaign, Illinois 61822
Attn: Service Department
Phone: (217) 398-0007 9:00 am - 5:00 pm Central Time M-F
E-mail: hobbyservices@hobbico.com

Before Building:

We want the building and operating of this vehicle to be a success, so **BEFORE** removing any parts from the parts bags please read this manual thoroughly and watch the included video to familiarize yourself with the model. If for any reason you think this model is not for you, return it to your dealer immediately. **PLEASE NOTE:** Your hobby dealer cannot accept a return on any model after assembly has begun.

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INTRODUCTION

Thank you for purchasing the DuraTrax Thunder Quake. This manual contains the instructions you need to build, operate and maintain your new nitro R/C monster truck. Read over this manual thoroughly before building or operating the Thunder Quake.

SAFETY PRECAUTIONS

When the safety precautions are followed, the Thunder Quake will provide years of enjoyment. Use care and good sense at all times when operating this radio controlled monster truck. Failure to use this vehicle in a safe, sensible manner can result in injury or damage to property. You and you alone must insure that the instructions are carefully followed and all safety precautions are obeyed.

- Do not operate the Thunder Quake near people. Spectators should be behind the driver or at a safe distance away from the vehicle.
- The engine and exhaust produces quite a bit of noise. If you are disturbed by the amount of noise this truck produces, wear ear protection such as earplugs. Do not run this vehicle when or where it can disturb others.

- The engine and exhaust can become very hot. Avoid touching any of these parts during use and until they have cooled down.
- Model engine fuel is poisonous. Make sure you read and follow all of the precautions on the fuel container. Keep fuel out of the reach of children.
- Model engine fuel is flammable and when ignited has a flame that is difficult to see. Avoid sparks, flames, smoking, or any other ignition source when fuel is near.
- The engine emits carbon dioxide just like real cars. Do not operate this model indoors.
- Before turning on the transmitter, make sure that no one else is on your frequency.

HELPFUL HINTS

- Avoid working over a deep pile carpet. If you drop a small part or screw, it will be difficult to find.
- Place a mat or towel over your work surface. This will prevent parts from rolling off and will protect the work surface.
- Avoid running the truck in cold weather. The plastic and metal parts can become brittle at low temperatures. In addition, grease and oil become thick, causing premature wear and poor performance.
- Test fit all parts before attaching them permanently.

STRESS-TECH™ PARTS GUARANTEE

We have engineered the Thunder Quake to take the rough and tumble abuse that makes R/C monster trucks fun. We are so confident of the quality and durability of the Stress-Tech™ plastic parts that we will replace any Stress-Tech plastic part you break during the first year you own the truck. Just send in the part to us and we will send you a **Free** replacement. Please see the Thunder Quake parts list for the items covered under the Stress-Tech guarantee.

To receive your free replacement part please send the following to the Hobby Services address listed on the cover of this manual:

- The broken part must be included.
- The part number and description of the broken part.
- Dated copy of your invoice or purchase receipt.
- Your name, phone number and shipping address.

REPAIR SERVICE

Repair service is available anytime.

- After the 90 day warranty, you can still have your Thunder Quake repaired for a small charge by the experts at DuraTrax's authorized repair facility, Hobby Services, at the address listed on the front page of this manual.

To speed up the repair process, please follow the instructions listed below.

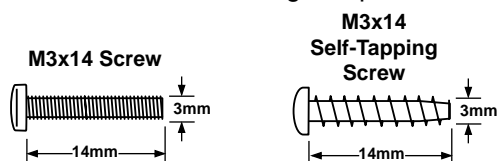
1. Under most circumstances return the **ENTIRE** system: truck and radio. The exception would be sending in a Stress-Tech part. See the instructions under Stress-Tech Guarantee.
2. Make sure the transmitter is turned off, all batteries are removed and fuel is drained from the tank.
3. Send written instructions which include: a list of all items returned, a **THOROUGH** explanation of the problem, the service needed and your phone number during the day. If you expect the repair to be covered under warranty, be sure to include a proof of date of purchase (your store receipt or purchase invoice).
4. Also be sure to include your full return address.

SPECIFICATION & DESCRIPTION CHANGES

All pictures, descriptions and specifications found in this instruction manual are subject to change without notice. DuraTrax maintains no responsibility for inadvertent errors in this manual.

SCREW INFORMATION

Do not use too much force when tightening self-tapping screws into plastic. Overtightening will cause the threads in the plastic to strip. We recommend that you stop turning a self-tapping screw when you feel some resistance as the head of the screw comes in contact with the plastic. Avoid using powered screwdrivers when assembling this kit. They tend to overtighten the screws. Do not use thread locking compound on any self-tapping screws. The thread locking compound may damage the plastic. **IMPORTANT:** Use thread lock on any fastener that is threaded into metal or fastened with a nut. Vibration from the engine will cause the screws to loosen if thread locking compound is not used.



REQUIRED ITEMS FOR COMPLETION

To operate the Thunder Quake these items are required:

- Fuel (DuraTrax Red Alert fuel - DTXP0520)
- Air Filter Oil (DTXC2465)
- It is also helpful to have a couple of extra glow plugs on hand (Duratrax Silver Sport - DTXG3001)



(All of these items are available in a Nitro Starter Pack from DuraTrax - DTXP0200).

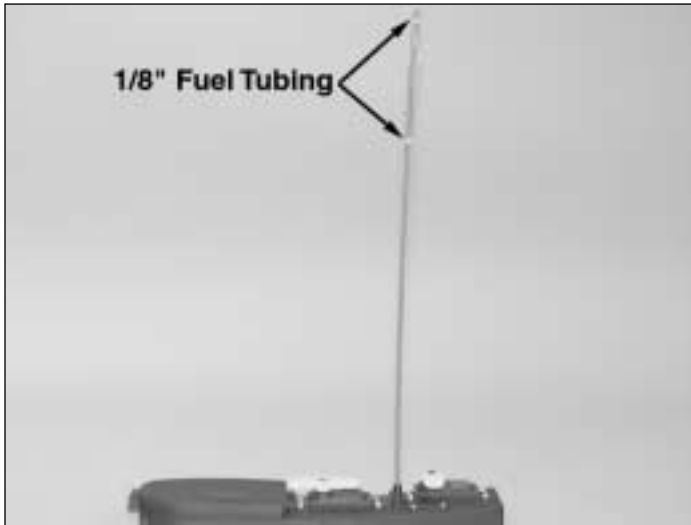
TOOLS YOU WILL NEED

- Phillips head screwdriver (DTXR0122)
- Needle-nose pliers (DTXR0300)
- Wire cutters or diagonal cutters (DTXR0302)

THUNDER QUAKE FINAL ASSEMBLY

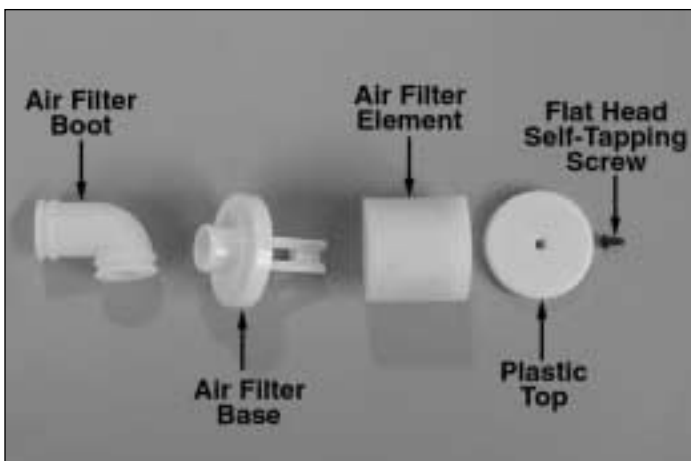
1. Remove the Thunder Quake, transmitter and parts from the box.

ANTENNA INSTALLATION



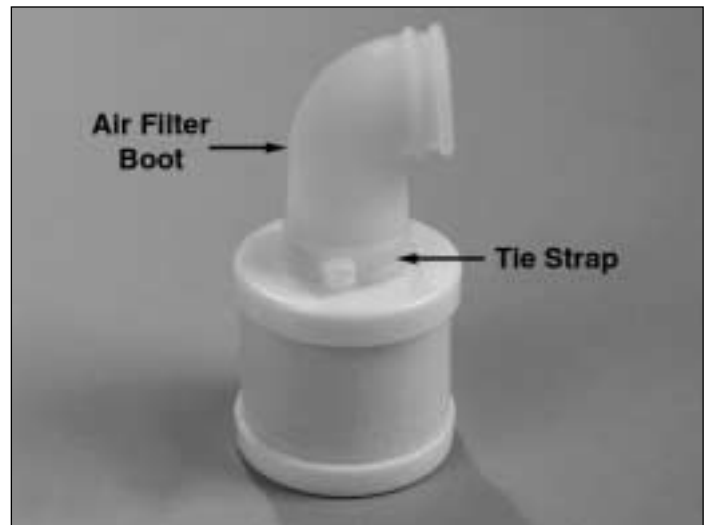
2. Remove the twist-tie from the receiver antenna wire. The receiver antenna wire is a bundled thin wire that is attached to the receiver. Run the length of the antenna wire through your fingers to help straighten the wire out, this will make it easier to get the wire through the tube. Remove the antenna tube from the decal bag. Slide the antenna wire through the antenna tube. **Do not coil or cut the antenna.** Cut two pieces of fuel tubing 1/8" wide and slide them over the outside of the antenna tube and wire. This is to help hold the antenna tube on and avoid getting the antenna wire cut in a roll over. Note the placement of the tubing on the antenna tube.

AIR FILTER INSTALLATION

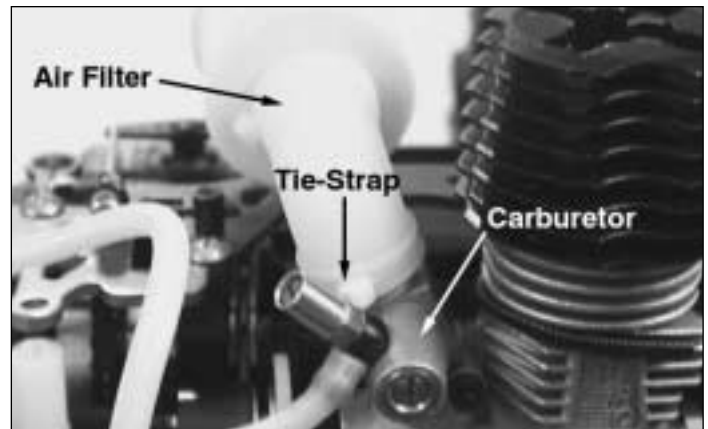


3. Remove the air filter parts from the parts pack. Remove the flat head self-tapping screw from the top of the

air filter and remove the plastic top. Remove the air filter element and thoroughly soak it in air filter oil, light machine oil, or (in a pinch) shock oil. Reinstall the air filter element, plastic top and flat head self-tapping screw.



4. Press the "L" shaped boot onto the bottom housing of the air filter. Using one of the included tie-straps, tightly secure the boot onto the bottom housing. Cut off the excess portion of the tie-strap.



5. Place the air filter onto the carburetor. Using the remaining included tie-strap, tightly secure the air filter to the carburetor. Cut the excess portion of the tie-strap off to avoid interference.

RADIO SETUP



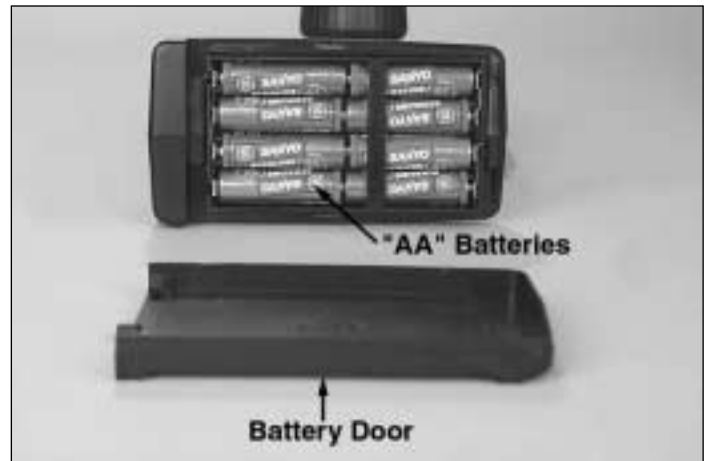
- ❑ 6. Remove the receiver battery holder from the radio box. Install (4) "AA" batteries (included) into the battery holder in the configuration molded into the battery holder.



- ❑ 7. Cut a piece of foam the size of the radio box and place it in the bottom for all of the equipment to set on. Re-install the receiver battery into the radio box. Note the placement of the receiver battery in the box. Make sure that the receiver switch is in the "off" position. Plug the connector on the receiver battery into the socket on the receiver switch. Wrap the receiver with the included foam rubber (if desired, secure with a rubber band, not included) to help reduce possible radio interference from vibration.



- ❑ 8. Remove the transmitter antenna from the holder and screw it into the hole on top of the transmitter. Give the transmitter antenna a light tug to make sure it is threaded on properly.

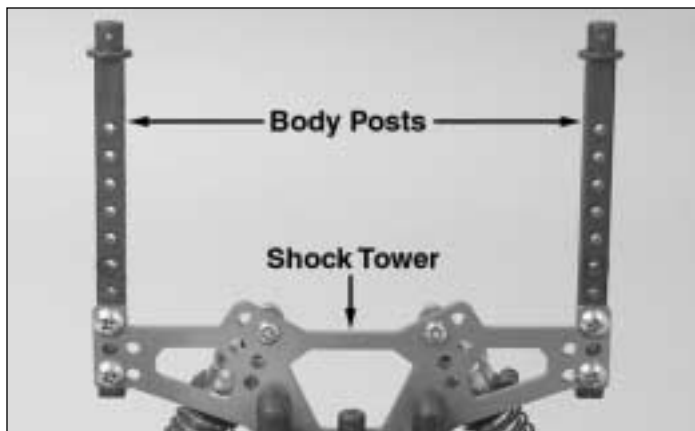


- ❑ 9. Slide open the battery door on the bottom of the transmitter. Place 8 "AA" batteries (included) into the holder in the configuration molded into the plastic on the battery holder. Re-install the battery door.

- ❑ 10. Turn on the transmitter using the switch on the side (see photo with step 8). The red light on the side of the transmitter should light up. If there is no light on, turn the transmitter off and check to ensure that the batteries are making contact with the contacts on the inside of the battery compartment. Make sure the batteries are installed correctly. Turn the transmitter on and check for the red indicator light. If the red light appears, turn off the transmitter. If the red light flashes, the batteries are low and need to be replaced.

- ❑ 11. Fine-tuning adjustments can be made to the throttle and steering by using the trim adjustment knobs located on the top of the radio. The trim adjustment knobs are used to center the steering and to adjust the idle/brake of the Thunder Quake. The servo reversing switches are used when the servo moves in the opposite direction desired when input is given to the transmitter. If you pull the throttle trigger back and the brakes are applied the throttle-reversing switch needs to be switched.

BODY



❑ 12. Remove the lower screw from each of the body posts so that the posts can be placed upright. Re-install the screw through the shock tower into the body post as shown. The height of the body can be adjusted by raising or lowering the posts on the shock tower.

❑ 13. Apply the decals to the body if desired.



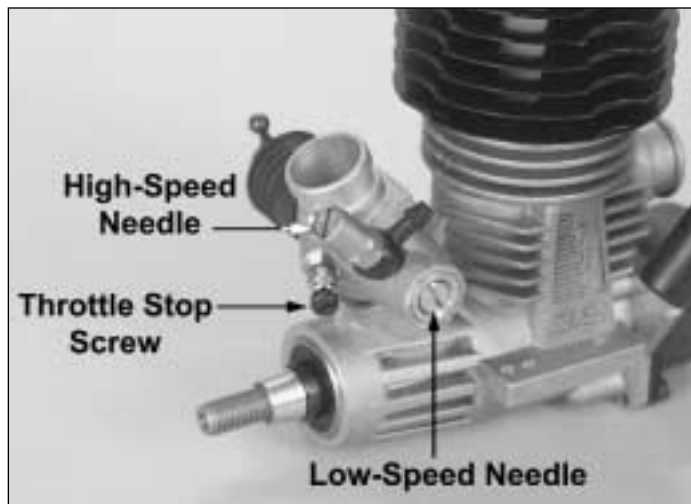
❑ 14. Remove the body clips from the parts bag. Place the body onto the body mounts. On each body mount place a body clip.

You are ready to go! Watch the video one more time and turn to page 16 for performance and maintenance tips.

FORWARD / REVERSE OPERATION

To shift the Thunder Quake from forward to reverse, simply bring the truck to a complete stop then flip the switch on the top of the radio to the REV position. The Thunder Quake should now be in reverse. To shift the truck back into forward, simply stop the vehicle and flip the switch to the FWD position. It should now be in the forward motion.

CARBURETOR SETTINGS



The High-Speed Needle

The "high-speed" needle is sticking up from the side of the carb. It is located in the brass housing, just above the fuel inlet. It controls the fuel to air mixture of the carb. The needle is pre-set for break-in from the factory at 3 turns out from the fully closed position of the carb. Once the engine is broken-in, the high-speed needle would typically run from 2-1/2 to 3 turns out from closed, depending on the weather, humidity and altitude above sea level. To richen turn the needle counterclockwise, to lean turn the needle clockwise.

The Low-Speed Needle

The "low-speed" needle is the screw in the carb body, opposite the throttle arm. It controls the fuel to air mixture at low throttle settings. There is a simple way of adjusting the low-speed needle correctly called the "pinch test." With the engine at idle, pinch the fuel line and listen to how the engine speeds up or slows down. If the engine increases its speed for about 2 or 3 seconds and then loses speed, the needle is set correctly. If the engine loses RPM quickly, it is set too lean and the low-speed needle needs to be opened (**counterclockwise**) to richen the mixture. Pinch again to check the mixture. If the engine takes longer than 4 seconds to slow down, lean (**clockwise**) the low-speed needle and then pinch again to check the mixture. Typically, adjustments should be made in 1/8 turn increments.

The Throttle Stop Screw

On the front of the carburetor, there is a black screw. This is called the idle stop screw. This increases or decreases the idle RPM without changing the fuel to air mixture. The barrel should be approximately 1.5mm (between 1/32" and 1/16") from fully closed.

BREAKING IN THE ENGINE

To insure long life and good performance from your Torq .21 engine, you **MUST** break-in the engine. The break-in period is critical for long life of the internal parts of the engine. This should be done over the first 5 or 6 tanks of fuel. Be sure to watch the engine tuning video that came with this kit.

Some Things To Remember During Break-In:

1. Run with the body off. This will keep the engine cooler.
2. Keep the air cleaner on at ALL times
3. Run on a smooth, hard surface. An empty parking lot is perfect.
4. Use the same fuel that you will use for normal running.
5. Resist the urge to accelerate and decelerate the truck quickly.
6. Break-in puts stress on the glow plug and you can burn it out during break-in. Make sure you have an extra plug or two on hand.
7. Do NOT overheat the engine. You can check the head temperature by using one of the temperature gauges that are available or by putting a drop of water on the top of the cylinder head. If the water boils away immediately, shut off the engine and allow it to cool. If it takes more than 10 seconds to boil away, the engine is at proper running temperature for break-in.

RUNNING THE ENGINE

Before running the engine, read the manual and watch the engine video that came with this kit.

There are several simple steps to starting the engine:

1. Install a glow plug if one is not in your engine. This threads into the top of the cylinder head.
2. Fill the tank almost to the top. Leave a little air at the top of the tank.
3. Open the high speed needle valve exactly 3 turns out (**counterclockwise**) from fully closed. **The high-speed needle is sticking up from the carburetor inside the brass housing.** All of the carburetor settings are adjusted with a flat bladed screwdriver. If you have previously run the truck, keep the same needle valve setting that you used on your last run.
4. Prime the engine by pulling the recoil starter on the engine. Watch the fuel go through the line and when it gets to the carburetor, pull the recoil starter one more time.

5. Remove the battery door on the side of the glow starter by squeezing the indicated tab. Install the included "C" size battery with the negative end of the battery being placed against the spring. Re-install the battery door back onto the glow starter, making sure the tabs slide into place and the door securely locks into place.
6. Secure the glow plug starter onto the engine's glow plug.
7. Start the engine by pulling the recoil - Use short, quick pulls. **DO NOT** pull the recoil starter's string to the end. You only need 10 to 12 inches of pull to start the engine.

If the engine does not start after several pulls, sometimes it is helpful to start the engine at around half throttle. Have a friend pull back on the throttle some while you start the engine. This *may* be an indicator that the low speed needle setting needs to be adjusted. When the engine starts, immediately return the throttle to idle. If this is not done the engine can over-rev and cause engine damage. **If the engine is difficult to turn over with the recoil starter, especially if it is brand new, loosen the glow plug a half turn before starting the engine. This allows some compression to escape, but the engine will still start. Make sure you tighten the glow plug after the engine starts.** If the recoil starter is still difficult to pull, the engine is flooded – there is too much fuel inside the engine. Remove the glow plug and air cleaner, then turn the engine upside down and pull the recoil 5 or 6 times. This will clear the engine of fuel, and you will notice the recoil pulls easier. Replace the glow plug and repeat the starting procedure.

Fuels

Use fuels that are specially formulated for car and truck engines. DuraTrax Red Alert fuel is specially formulated for truck engines like the Torq .21.

How To Stop Your Engine

You may have been wondering how to stop the engine. All you have to do is pinch the fuel line that runs to the carburetor from the bottom of the fuel tank. Pinching this will restrict the fuel flow and the engine will quit within a few seconds. You can also touch the flywheel with the tip of your shoe through the hole in the bottom of the chassis.

The First Tank

Your first tank of fuel should be running the truck at a very rich high-speed needle valve setting. This allows the fuel to carry as much oil as possible into the engine to lubricate the internal parts during the break-in.

1. Open the needle valve 3 turns from fully closed (counterclockwise). This is factory set already, but check it to make sure. When closing the high-speed needle, close the needle until you feel some resistance. **DO NOT** overtighten or you will damage the engine.

2. Start the engine.
3. Once the engine is started, open the high-speed needle valve around 1/8 turn at a time, finding the setting where the engine just barely runs. This may take a few times adjusting the needle, running the truck away from you and back, then adjusting the needle. The truck will perform sluggishly and stall from time to time - that is normal.
4. Run the truck back and forth at medium speeds, slowly accelerating and decelerating the truck.
5. After a minute or two of running, make sure the engine is not overheating by putting a drop of water on the cylinder head and watching it boil away. If it boils away within 10 seconds, stop the engine and allow it to cool. Open the high-speed needle around a 1/4 turn before starting again. This is a good habit to get into every time you run to ensure that the engine does not overheat during any run. Looking at the smoke that comes out the exhaust is also an indicator of how rich or lean the engine is running. If there is a good amount of smoke coming out of the exhaust, then chances are good that you are running rich.
6. Run the truck back and forth at a medium speed until the tank is almost out of fuel. Do not allow the tank to run out of fuel. This leans out the engine and can cause overheating (See **How To Stop Your Engine**).
7. Stop the engine and allow the engine to cool before the second tank. This normally takes around 10 minutes.
4. Do not overheat the engine. This goes along with keeping it clean and not over-leaning the engine.
5. Do not use a fuel with a low oil content. Make sure you use a fuel from a reputable manufacturer, such as DuraTrax Red Alert.
6. Avoid using old fuels in the engine. Always run all of the fuel out of the engine. After running for the day, use an after-run oil and work it into the engine by turning the flywheel or pulling the engine recoil slowly.
7. Do not use a fuel with a nitromethane (often called nitro) content over 20%.
8. Do not scratch the piston or cylinder sleeve. Avoid jamming something into the exhaust port when removing or re-installing the clutch or flywheel. Use a special tool called a crankshaft locking tool, which is installed in the glow plug hole.
9. Do not use silicone sealer on the engine joints. Silicone sealer contains acetic acid, which is corrosive if it gets inside your engine.
10. Do not allow any water inside the engine. This sounds easy, but temperature changes can cause condensation inside the engine. This is a good reason to use an after-run oil. Store your engine inside the house, not in a garage or shed where there will be temperature extremes.

If you are having problems with your engine consult the engine troubleshooting flow chart on the back cover. The following are some potential problems.

Tanks 2-6

Turn in the needle valve (clockwise) around 1/12 turn from the previous setting. Run the truck back and forth. You should notice that the truck will perform better during each run. Stop the truck periodically to check for overheating. If it is too hot, stop the engine. Wait for it to cool, then open up the needle valve and restart. After the 6th tank, you should be near to the peak performance of the engine.

ENGINE MAINTENANCE

Ten Ways To Ensure A Long Life From Your Engine:

1. Keep your engine clean. Dirt will act as insulation on an engine. It will not be able to shed heat as easily. Use a good air filter to keep dirt out of your engine and clean it often.
2. Do not over-lean your engine.
3. Do not run your engine with little or no load. Don't throttle up the engine to full throttle when the wheels are not in contact with the ground.

Glow Plug

The glow plug is an item that will wear out and need replacement from time to time. It is a good idea to remove the glow plug before your first run, heat it and see how well it glows. You should see a bright orange glow from the filament. If a coil or two will not glow or the plug will not glow at all, replace the plug. If the engine quits when you remove the glow starter, the plug might need to be changed, although this may be because you are running too rich and need to screw in your high-speed needle some. Look at the glow plug when you are running the engine. If you see some bubbles coming from around the plug, replace the glow plug (copper) gasket, or both the plug and gasket. The only real way to test a glow plug is to replace it. Make sure you have a spare plug or two on hand every time that you run the Thunder Quake.

Fuel

Fuel can go bad. The main ingredient in model fuel is methanol, which is basically an alcohol. Alcohols can absorb water out of the air, so keep your fuel jug capped at all times. Store your fuel out of the sunlight and in a cool place. Bad fuel is one of the most difficult problems to diagnose in engines. If you have tried everything you can think of to remedy an engine that is not running correctly, try using some fresh fuel.

Fuel line is susceptible to pinhole leaks. You cannot see the hole in the fuel line, but if you see air bubbles in the line going to the carburetor, replace the fuel line. Another symptom of a leak in the fuel line is a surging engine. The properly tuned engine will surge when the air bubbles hit the carb. It is basically leaning out the mixture.

To keep dirt out of the engine, we recommend that you use an inline fuel filter on the fuel line running from the fuel tank to the carburetor (Clean-Flow Fuel Filter - DTXC2551). Dirt can get caught in the needle seat and cause an inconsistent running engine. If you suspect that some dirt has lodged itself in the carb, remove the needles and clean the carb with denatured alcohol or fuel. It can help to use compressed air to blow out the fuel passages as well. Dirt can get into your carburetor and engine through the air filter. Ensure that your air cleaner has a good seal to the top of the carb. Periodically wash the air cleaner foam element and re-oil the filter. Any air cleaner that has a torn element or a bad seal should be replaced immediately.

Overheating

One of the worst things you can do to your engine is overheat it. The oils that lubricate the engine are carried in the fuel. If your engine is set too lean, there will not be enough oil in the engine to lubricate the internal parts. This will cause premature wear in the engine and cause damage. We have talked about overheating in other parts of this manual, but we want to stress the proper techniques to check for overheating. The easiest way of checking the temperature of the cylinder head is using one of the available temperature gauges. This will give you a direct reading of the cylinder head temperature. Do not let the head temperature exceed 220° Fahrenheit (104° Celsius). Another way of checking the head temperature is to put a drop of water on the cylinder head. If it boils away within 10 seconds, the high-speed needle is set too lean. If the water boils away in around 15 seconds, the engine is within proper operating temperatures. If the water boils away longer than 15 seconds, the mixture is set rich which is preferable when breaking in the engine. Otherwise lean the mixture some and retest after a minute of running.

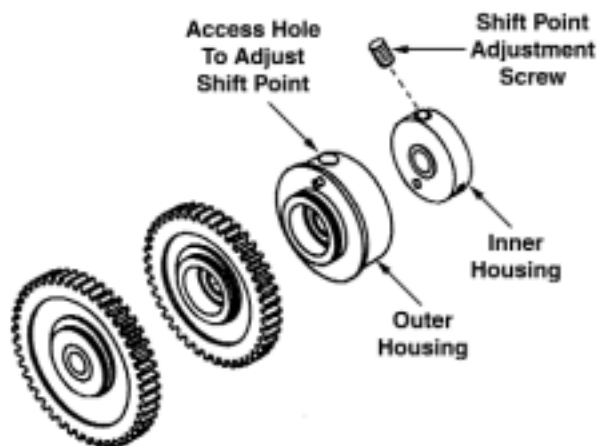
PERFORMANCE TUNING

2-Speed Shift Point Adjustments: The shift point on the 2-speed transmission is factory set. You can make adjustments to the shift point on the 2-speed transmission. When you make shift point adjustments, it is important that your engine has already been broken in, is properly tuned, and already at proper operating temperature.

To adjust the shift point use the following procedure:

1) Warm up the engine (run it for a minute or two) and then stop the engine (see How to Stop Your Engine on page 14.)

2) Rotate the 2-speed outer housing attached to the smaller spur gear so that the access hole is up.



3) Rotate the outer housing back and forth until you can see a small set screw on the inner housing. This set screw does not go straight down into the inner housing, it is set at an angle. This is the adjustment screw for the shift point.

4) Insert a 1.5mm allen wrench into the set screw.

5) To raise the shift point (make it shift later, when the engine develops more RPM), turn the screw clockwise 1/8 of a turn. Do not overtighten this screw you may damage the 2-speed transmission.

6) To lower the shift point (make it shift earlier) turn the screw 1/8 of a turn counter clockwise. Do not loosen this screw too much. The screw could fall out requiring disassembly of the entire 2-speed to repair.

7) Do not make adjustments more than 1/8 of a turn. After each adjustment, start the engine and test the shift point. If you have made adjustments to the shift point and want to return to the factory setting, it is 4 turns out from the point that the screw will not turn in any more without using excessive force.

It is possible to have the shift point too far in, in which case the inner clutch on the 2-speed is locked such that only the two inner gears (the gears for top speed) will be engaged during the run and the outer gears (the gears for good acceleration) will not be engaged at all. It is also possible to have the shift point too far out, which will mean that you are only running the acceleration gears. In either case you will not hear the car shift. Make sure that you listen carefully for the RPM change of the engine that signifies that the 2-speed is shifting.

Ride Height: This refers to the clearance between the ground and the chassis, both at the front and the back of the truck. The general rule is to have the suspension arms perfectly level when the car is at rest. To determine the ride

height, drop the truck from around 6"-12" above flat ground. Drop the truck, making sure it drops flat. Check where the suspension arms come to rest. You can adjust ride by moving the spring adjusters on the shock, which are at the top of each shock spring, until the arms are level after the drop test.

Toe-In/Toe-Out: This refers to the angle of the front tires when viewed from above when the suspension arms are level. If the fronts of the tires angle in, it is called "toe-in" and if the fronts of the tires angle out, it is called "toe-out." In front, this is adjusted by lengthening or shortening the steering rods - the rods that run between the front hub and the servo saver. The rear toe-in is adjusted by the large turnbuckles behind the rear suspension. Normally a small amount of toe-in is used to make the truck track straight at high speed. Too much toe-in will make the truck difficult to turn as well as reduce the overall top speed because of tire scrub. Sometimes a small amount of toe-out will be used to help the steering. As a general rule use a small amount of toe-in.

Shocks: Changes in shock oils, springs, and pre-load on the springs can dramatically change the way the car handles. A thicker shock oil will make the truck turn faster but reduces overall traction and handling over bumpy surfaces. Thinner oil will increase traction at the expense of steering response and the car will tend to roll more. In general, shock oils between 20 and 40 weight will be best for your truck. You should experiment some to see what oils work best for your track and driving style. Shock springs affect the rate that the suspension rebounds from a bump. We have supplied soft springs that work under most conditions. Pre-load on the springs means that the springs are already compressed some so that the suspension will rebound faster. Sometimes you will want to pre-load one side when the track has turns all or mostly in one direction, for instance an oval track. It will also increase the ride height.

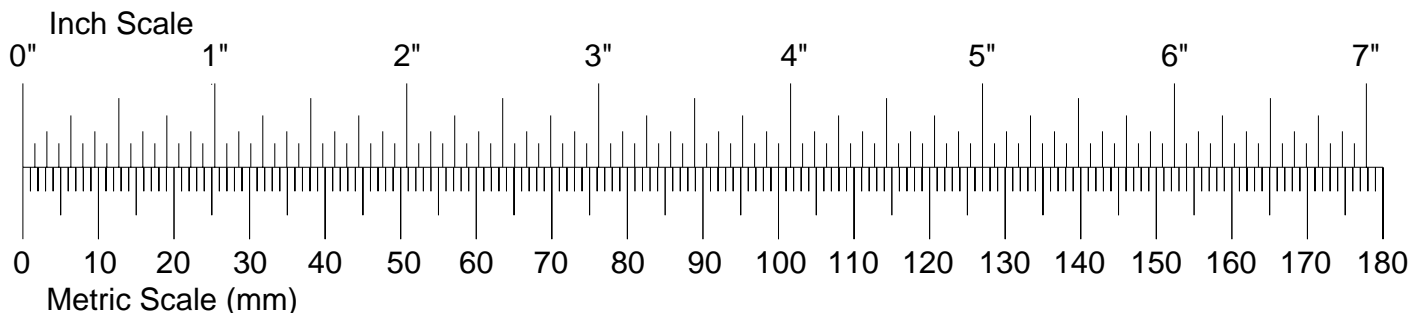
MAINTENANCE TIPS

Before Each Run

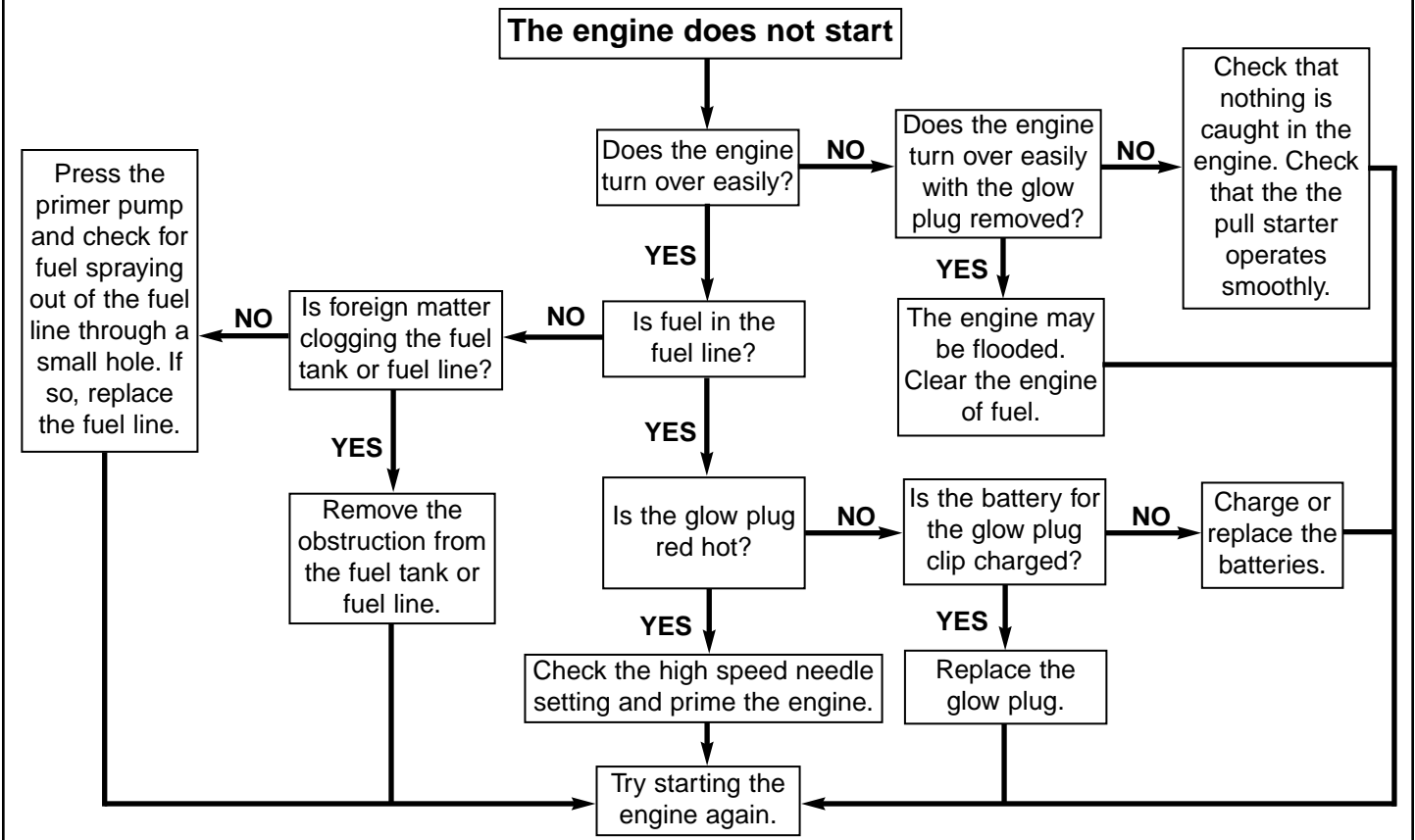
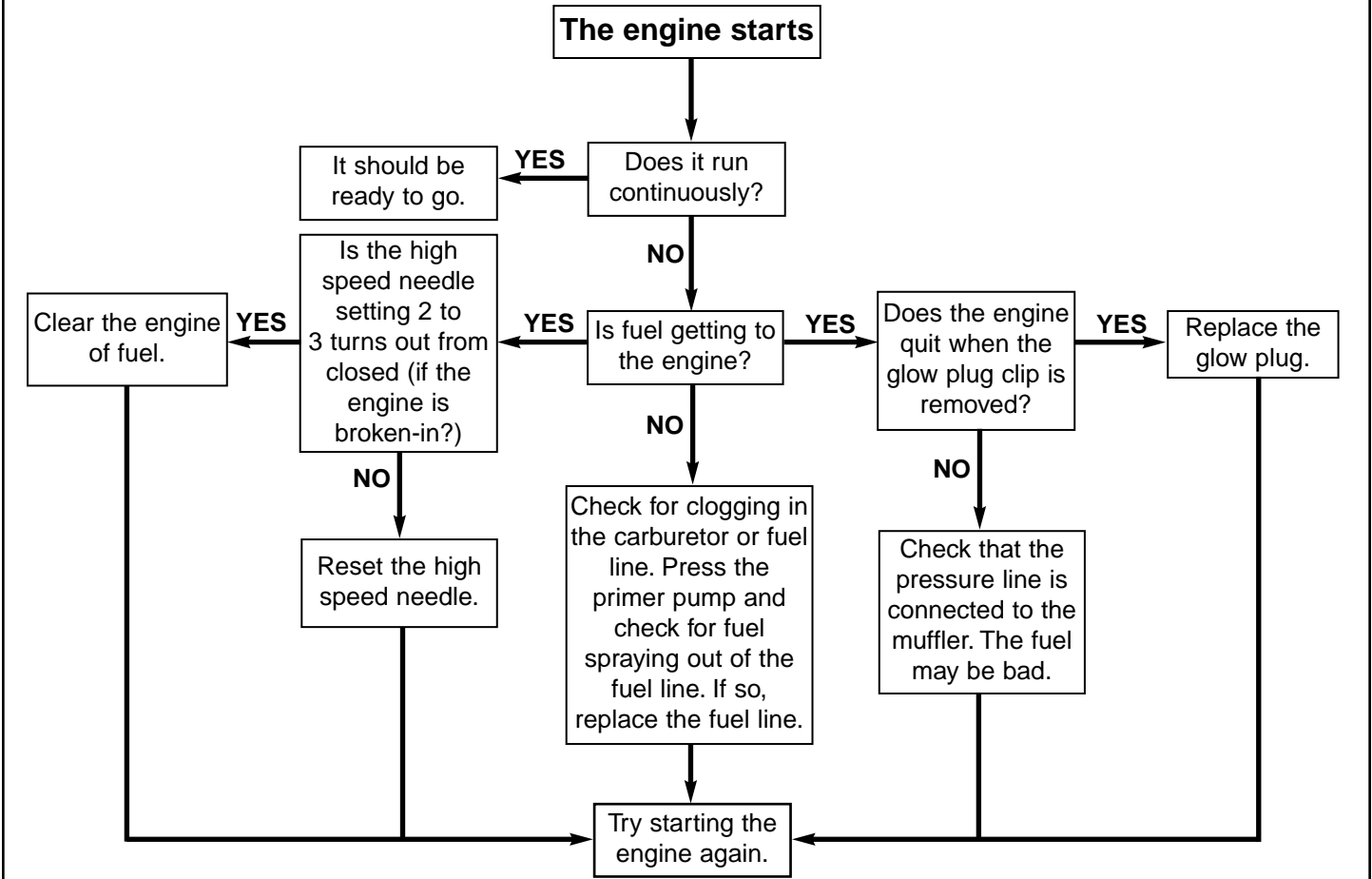
- Check for loosened screws on the truck. Engine vibration will loosen some of the screws, particularly in the engine mount area. Use thread lock on screws that thread into metal parts or use a metal nut.
- Inspect the air cleaner for a torn or damaged element. Also look for dirt in the air cleaner element and wash it if necessary.
- Check the suspension and drive train for binding.
- Inspect all of the wires for damage. Also check the connectors to make sure all of them are tight and in the proper place.
- Check the fuel tank and fuel lines for leaks.
- Before starting the engine, turn on the radio and make sure the servos move easily and in the right direction.
- Before running always check the condition of your radio system batteries and replace/recharge if necessary.

After Each Run

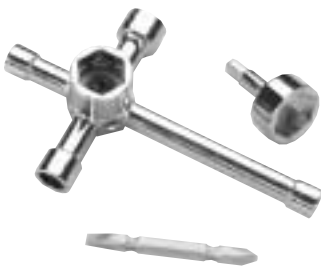
- Drain the fuel tank of any leftover fuel. **DO NOT** return it to your fuel jug.
- Put some after-run oil in the carb and turn the flywheel several times to work the oil into the engine. This will protect the engine from rusting, especially when stored for a long period of time.
- Check again for loosened screws.
- **CLEAN** the truck. Wipe off any oils that have collected on the chassis, engine end exhaust. Oils will attract dirt on the next run.



ENGINE TROUBLE SHOOTING



ACCESSORIES AND OPTIONAL PARTS



DuraTrax Ultimate Car Wrench

This chromed, cast metal wrench has threaded holes for storing up to 4 glow plugs; a combination slotted/Phillips screwdriver bit; and seven socket head sizes. Bits fit into a 6mm hex shank inside both the long 8mm socket (for easy access) and the 12mm socket (for more torque). **DTXR1175**



Engine Tuning Screwdriver

Now you don't need separate drivers for adjusting high- and low-speed needles and throttle stop screws — just this one! The hardened chrome vanadium steel shaft is 120mm long and plenty tough, and the 3.2mm wide tip is magnetized for added convenience. **DTXR0185**



DuraTrax XL Deluxe Field Bag

Keep your gear loaded and race ready with the XL Deluxe Field Bag. Heavy duty black nylon bag with red trim and white logo. **DTXP2010**



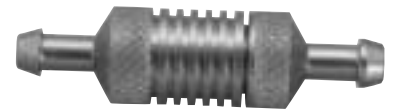
DuraTrax Red Alert™ 20% Racing Fuel

To make your Velocity™ 17 engine run faster, better and longer, you need the unique formula of DuraTrax Red Alert. Red Alert contains 20% nitro plus a carefully race-tested blend of castor and synthetic oils. **DTXP0600 (Gallon), DTXP0530 (Quart)**



Transmitter Nicd Conversion Kit

Save by powering your transmitter with rechargeable NiCds! This kit includes eight "AA" Sanyo® NiCd cells and a 110V AC wall charger. Connect it to the radio's charge jack, and you can recharge the batteries in just 2-3 hours — without removing them from the transmitter. **DTXP4010**



DuraTrax Clean Flow Fuel Filter

Ideal for every application, the blue-anodized, machined aluminum Clean-Flow in-line fuel filter features a tubular design to avoid restricting fuel flow; a fine-mesh nylon micro screen; and O-ring seal to prevent leaks. **DTXC2551**



DuraTrax Air Filter Oil

Treating foam air filter elements with oil greatly increases their filtering capacity and extends engine life. This handy 3 fl. oz. bottle provides oil for lots of applications, and is still small enough to fit easily in a field bag or tool box. **DTXC2465**



DTXG3001
Silver Sport Plug



DTXG3003
Carbon Speed Plug



DTXG3005
Gold Racing Plug

DuraTrax Glow Plugs

All are hand-assembled, with solid coils of heat-resistant metal. Choose from hot **Silver Sport** for low nitro applications; medium-heat **Carbon Speed** for sport use; and cold **Gold Racing** for competition and high-nitro fuels.



Rapid Heat™ Glow Starter w/ Charger

Rapid Heat's 1500mAh Sanyo® NiCd sends power to a 1-3/4" socket with the distinctive Twist-and-Lock tip. Made of durable metal, with a vinyl cap to protect the tip from fouling. A 110V AC charger is included for overnight recharging. **DTXP0150**