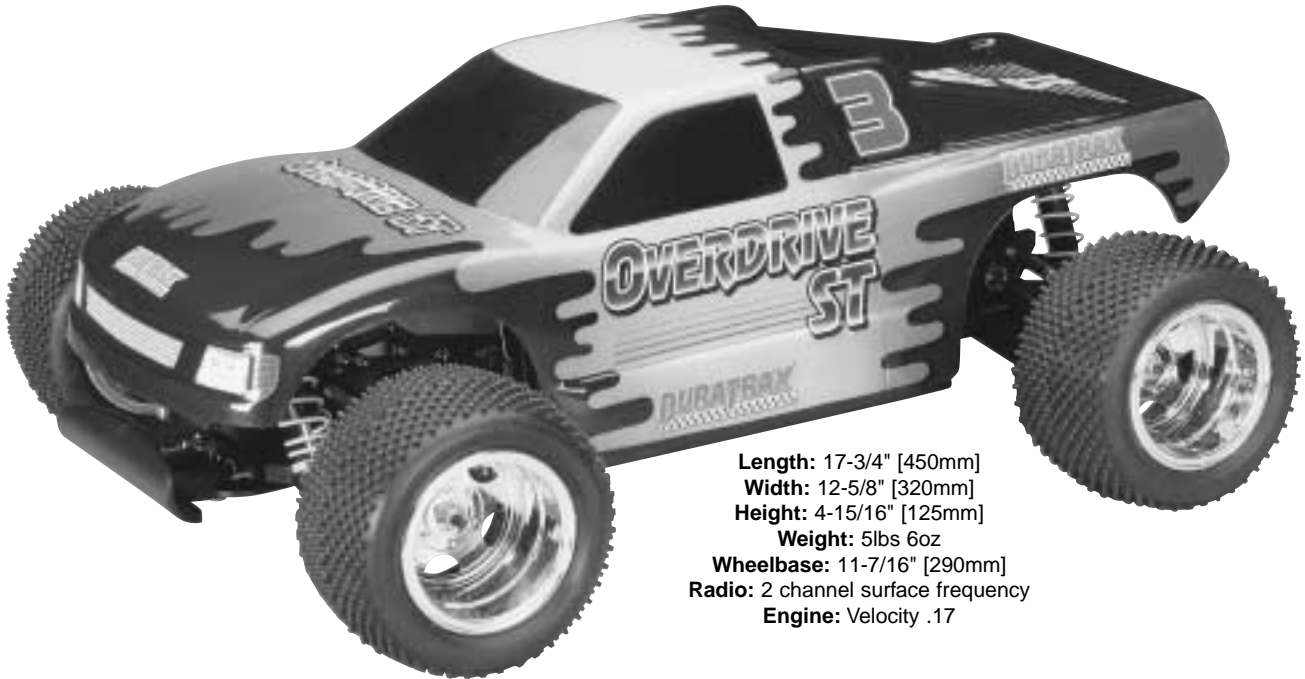


DURATRAX **OVERDRIVE ST™**



Length: 17-3/4" [450mm]
Width: 12-5/8" [320mm]
Height: 4-15/16" [125mm]
Weight: 5lbs 6oz
Wheelbase: 11-7/16" [290mm]
Radio: 2 channel surface frequency
Engine: Velocity .17

ASSEMBLY AND OPERATION MANUAL

WARRANTY

DuraTrax® guarantees this kit to be free from defects in both material and workmanship at the date of purchase. DuraTrax will warranty this kit for 90 days after the purchase date. DuraTrax will repair or replace, at no charge, any 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. Further, DuraTrax reserves the right to change or modify this warranty without notice.

To return your Overdrive ST 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

If the buyer is not prepared to accept the liability associated with the use of this product, the buyer is advised to return this kit immediately in new and unused condition to the place of purchase.

**READ THROUGH THIS MANUAL BEFORE STARTING.
IT CONTAINS IMPORTANT INSTRUCTIONS AND
WARNINGS CONCERNING THE ASSEMBLY AND USE
OF THIS MODEL.**



1610 Interstate Drive Champaign, IL 61822
(217) 398-8970, Ext. 2
carsupport@duratrax.com

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INTRODUCTION

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

SAFETY PRECAUTIONS

When the safety precautions are followed, the Overdrive ST will provide years of enjoyment. Use care and good sense at all times when operating this radio-controlled 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 Overdrive ST near people. Spectators should be behind the driver or at a safe distance away from the vehicle.
- Always turn on the transmitter before turning on the Overdrive ST.
- Before turning on your radio check to make sure that no one else is running on the same frequency as your Overdrive ST.

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 Overdrive ST to take the rough and tumble abuse that makes R/C stadium 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 12 months you own the truck. Just send in the part to us and we will send you a **FREE** replacement. Please see the Overdrive ST 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.

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

REPAIR SERVICE

Repair service is available anytime. After the 90 day warranty, you can still have your Overdrive ST 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, and all of the batteries are removed.

- 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.

REQUIRED ITEMS FOR OPERATION



The DuraTrax Nitro Starter Pack (DTXP0200) contains fuel, fuel bottle, glow plug starter, glow plug wrench and glow plug.

To operate the Overdrive ST the following items are required:

- 1. Fuel (DuraTrax Red Alert™ fuel-DTXP0520)
- 2. Extra Glow Plugs (DTXG3001)
- 3. Glow Plug Wrench (DTXR1170)

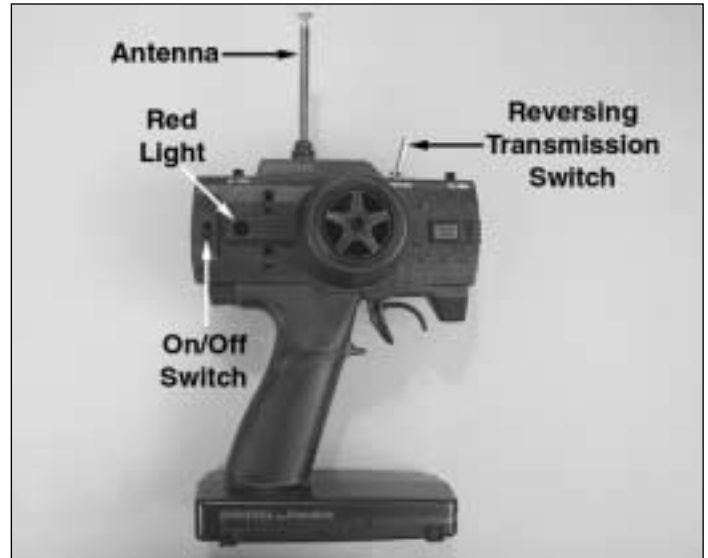
TOOLS NEEDED FOR COMPLETION

- 1. #2 Phillips head screwdriver (DTXR0124)
- 2. Flat blade screwdriver (DTXR0158)
- 3. Air Filter Oil (DTXC2465)

INCLUDED TOOLS FOR MAINTENANCE AND TUNING

- 1. Turnbuckle wrench
- 2. Nut driver (4-way)

PREPARING THE RADIO SYSTEM



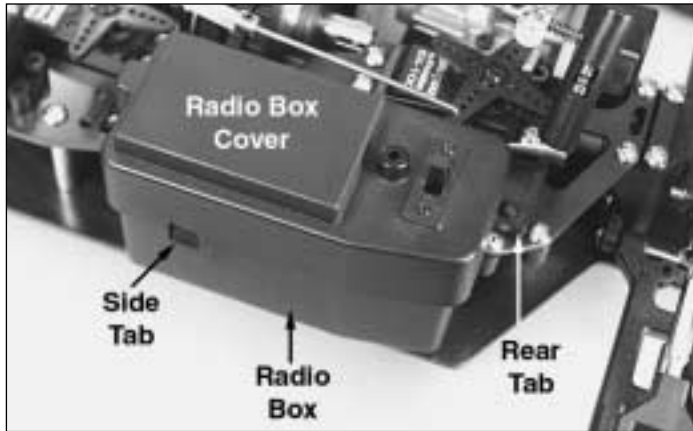
- 1. Install the transmitter antenna by screwing it into the hole on the top of the transmitter.



- 2. Slide open the battery door on the bottom of the transmitter. Place 8 "AA" batteries into the holder in the configuration molded into the plastic on the battery holder. Reinstall the battery door.

- 3. Turn on the transmitter using the switch on the side (see photo step 1). 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 metal contacts in the battery holder. Make sure the batteries are installed correctly. Turn the transmitter on and check for the red light. If the red light appears, turn off the transmitter. If the red light blinks, the batteries are low and should be replaced.

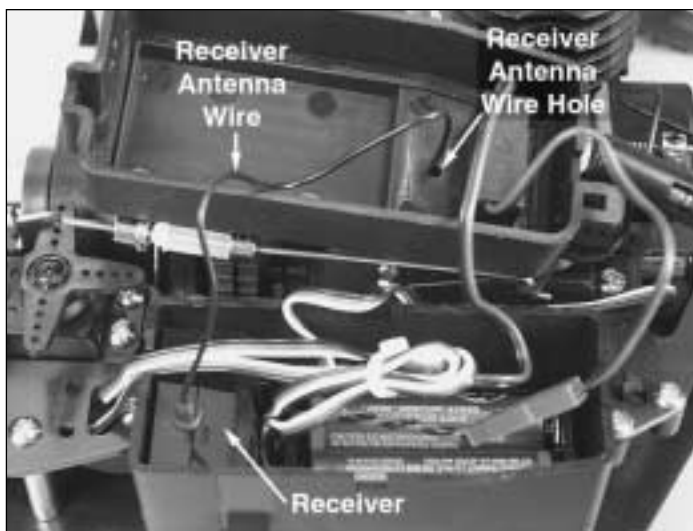
FINISHING THE OVERDRIVE ST



- ❑ 1. Remove the radio box cover by releasing the two tabs shown.

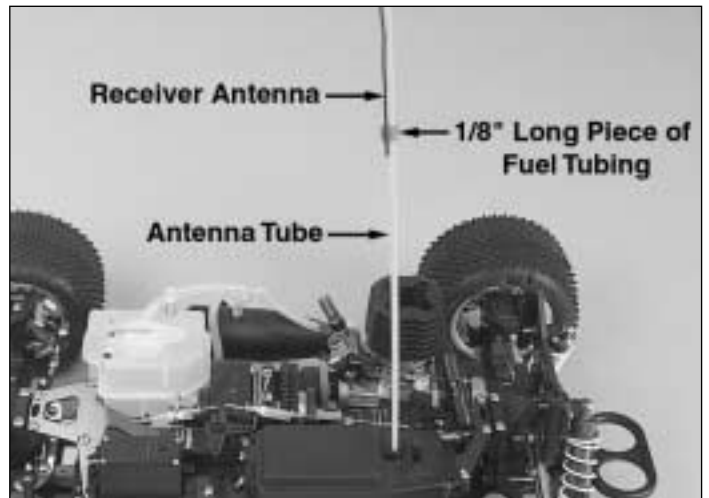


- ❑ 2. Remove the 4 cell receiver battery box from the radio box and install (4) "AA" included batteries into the battery holder. Follow the configuration molded into the battery holder. Re-install the receiver battery holder back into the radio box. Plug the connector on the receiver battery into the socket on the receiver switch wire. The receiver battery connector can only be plugged in one way. Tuck the wires into the groove in the radio box so that they do not get crimped under the radio box cover.

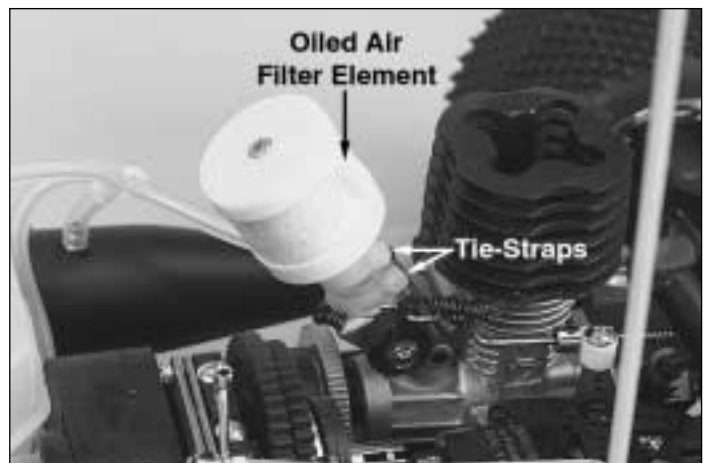


- ❑ 3. Remove the twist-tie from the receiver antenna. Thread the receiver antenna wire through the hole in the radio box cover.

- ❑ 4. Reinstall the radio box cover onto the receiver box. Secure the radio box cover with the two tabs on the radio box. Make sure the tabs lock into place.



- ❑ 5. Remove the antenna tube from the parts bag. Thread the receiver antenna through the antenna tube. The antenna will be longer than the antenna tube. **Do not coil or cut the receiver antenna.** Press fit the antenna tube through the hole in top of the radio box. Place a 1/8" long piece of fuel tubing over the antenna tube and wire to secure in place. **Tip: Run the antenna through your fingers to straighten out kinks before running through the antenna tube. Also, applying a small amount of soapy water to the antenna wire will allow the wire to slide through the tube easier.**



- ❑ 6. Thoroughly soak the air filter foam with air filter oil (not included) and then squeeze out the excess oil. DuraTrax Air Filter Oil (DTXC2465) is available from your local hobby dealer. Attach the adapter tube to the air filter base with one of the included tie straps. Place the air filter onto the carburetor and secure it in place with the other included tie strap. Cut the excess part off of both straps. **TIP: Shock oil or a light machine oil may be substituted for air filter oil.**

- ❑ 7. Remove the plastic protective cover from the outside of the body. Apply decals if desired. Place the body onto the body posts. Place an included body pin onto each of the body posts to secure the body to the chassis.

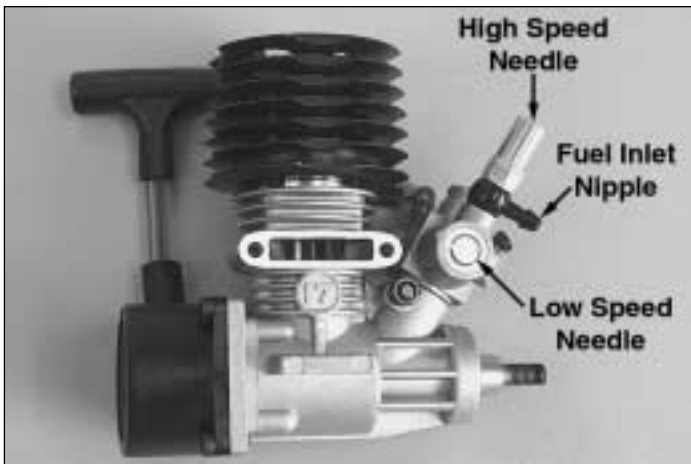
HIGH-SPEED NEEDLE



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 2-3/4 turns out from the fully closed position of the carb. Once the engine is broken-in, the high-speed needle would typically run 2 to 2-1/2 turns out from closed, depending on the weather, humidity and altitude above sea level. To richen the mixture turn the needle counterclockwise. To lean it turn the needle clockwise.

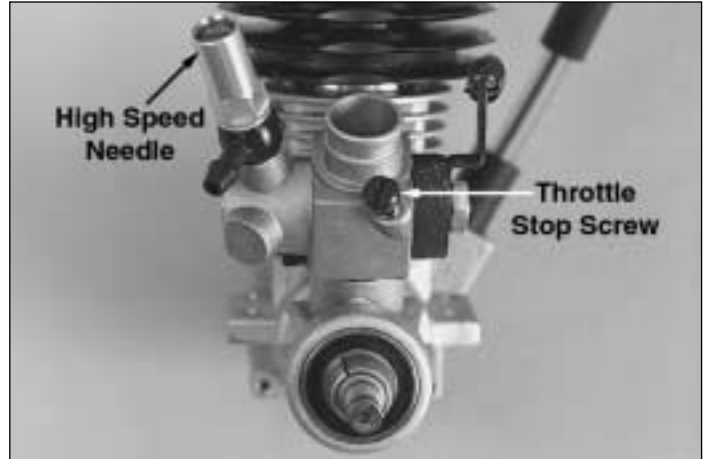
LOW-SPEED NEEDLE

The engine is factory set. Adjustments may need to be made to obtain optimum performance.



The "low-speed" needle is located on the side of the carburetor. 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.

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.

ENGINE BREAK-IN

To insure long life and good performance from your Velocity .17 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 4 or 5 tanks of fuel.

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 5 seconds to boil away, the engine is at proper running temperature for break-in.

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

STARTING THE ENGINE

- ❑ 1. Install a glow plug. This threads into the top of the cylinder head.
- ❑ 2. Fueling - Fill the tank almost to the top. Leave a little air at the top of the tank.
- ❑ 3. Prime the engine - Use the primer button on the fuel tank to force the fuel through the fuel line. Watch the fuel go through the line and when it gets to the carburetor, press the primer button once more to get fuel into the engine.
- ❑ 4. Open the high speed needle valve exactly 2-3/4 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.
- ❑ 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.
- ❑ 8. Your truck is equipped with a throttle return spring. It is installed between the cylinder head and the throttle arm on the carburetor. This will return the throttle to idle if there is a loss in power for the on-board radio equipment.

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, 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 (DTXP0520) fuel is specially formulated for truck engines like the Velocity .17.

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 line will restrict the fuel flow and the engine will quit within a few seconds.

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 high speed needle valve 2-3/4 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
- ❑ 5. After a minute or two of running back and forth at medium speeds, slowly accelerating and decelerating the truck, 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 immediately, 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.

TANKS 2-5

Turn in the high speed 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 high speed needle valve and restart. After the 5th tank, you should be near to the peak performance of the engine.

ENSURING ENGINE LIFE

10 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.
- ❑ 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 reinstalling 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 to get 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.

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, connect the plug to the glow starter 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 Overdrive ST (we recommend DuraTrax Silver Sport plugs, DTXG3001).

FUEL

Fuel can go bad. The main ingredient in model fuel is methanol, which is basically alcohol. Alcohol will 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.

The 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. A 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 (DTXG2551 Clean Flow fuel filter recommended) on the fuel line running from the fuel tank to the carburetor. 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 240° Fahrenheit (116° Celsius). Another way of checking the head temperature is to put a drop of water on the cylinder head. If it boils away immediately, the high-speed needle is set too lean. If the

water boils away in 3-5 seconds, the engine is within proper operating temperatures. If the water boils away longer than 5 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.

REVERSING TRANSMISSION

The Overdrive ST is equipped with a reversing two-speed transmission. To operate the reversing unit on the Overdrive ST simply bring the Overdrive ST to a stop and flip the switch located on the top of the transmitter. To switch the Overdrive ST back into forward motion, simply bring the Overdrive ST to a stop and flip the switch back.

2-SPEED ADJUSTMENT

The shift point on the 2-speed transmission is factory set. However, 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 2mm 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 or 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 transmission 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 5.5 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 this 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 transmission is shifting.

MAINTENANCE TIPS

BEFORE EACH RUN:

- 1. Check to make sure that all screws are tight and there are not any screws missing.
- 2. Check to make sure that the transmitter and receiver batteries are not low.
- 3. Check to make sure that all of the moving parts of the Overdrive ST move freely and do not bind.
- 4. Check for broken or damaged parts. Replace any broken or damaged parts before running the Overdrive ST. Running of the Overdrive ST with broken or damaged parts could result in damage to other parts.
- 5. Inspect the air cleaner for a torn or damaged element. Also look for dirt in the air cleaner element and wash it if necessary. Then re-oil the filter and reinstall it.
- 6. Check the fuel tank and fuel lines for leaks.

AFTER EACH RUN:

- 1. Clean any large globs of dirt or debris from the chassis and moving parts.
- 2. Place a small amount of after run engine oil into the engine if the engine will be sitting for a long period of time before the next use.
- 3. Check for any broken or damaged parts. This way parts may be replaced before the next run.

AFTER EVERY 10 RUNS:

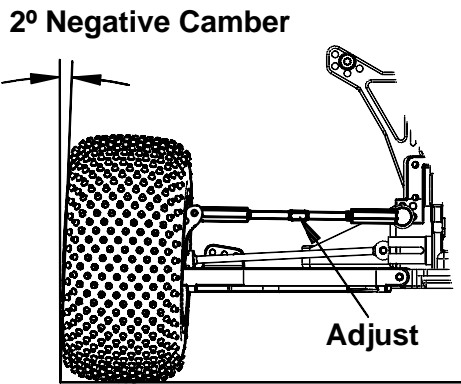
- 1. Check to make sure that the bearings are free of dirt and debris, and roll smoothly.
- 2. Check the shocks for oil leakage. If the shocks have leaked any shock fluid out, you should properly refill the shocks for best performance.

- ❑ 3. Make sure the servo saver is free moving and does not bind. This will help prevent stripping of the servo during running.
- ❑ 4. Check for smooth gear mesh between the spur and clutch bell gears.
- ❑ 5. 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.

TUNING GUIDE

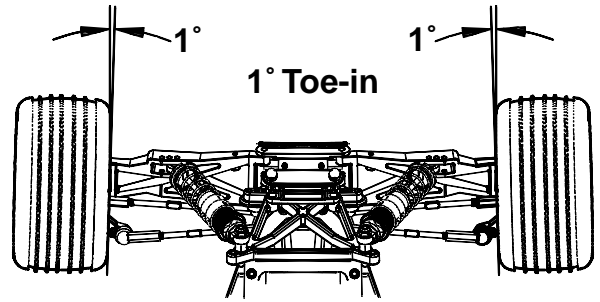
When tuning the Overdrive ST make sure that you have equal lengths from one side to the other on the shocks, camber rods and steering rods. Also, make sure to have the shock pre-load adjusters at the same setting from left to right. They do not have to be the same front to rear.

CAMBER



Camber refers to the angle at which the tire and wheel ride in relation to the ground when viewed from the front or rear. Negative camber is when the tire and wheel lean inward and positive camber is when the tire and wheel lean outward. Typically you want 0 to -2 degrees of camber. Never put in positive camber. Make sure that both sides are equal.

FRONT TOE-IN AND TOE-OUT



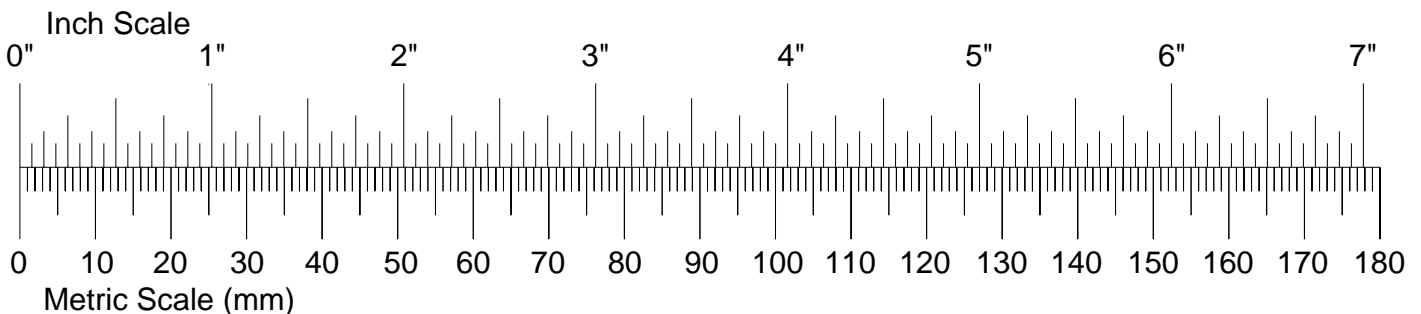
Front wheels pointed towards each other

Toe-in and toe-out refers to the angle at which the tire is at when viewed from above. Toe-in increases stability under acceleration. However, toe-in also decreases steering when entering a corner. Toe-out will increase steering into corners, but will decrease the overall stability during acceleration. The front typically is set-up with 0 to -2 degrees of toe-in.

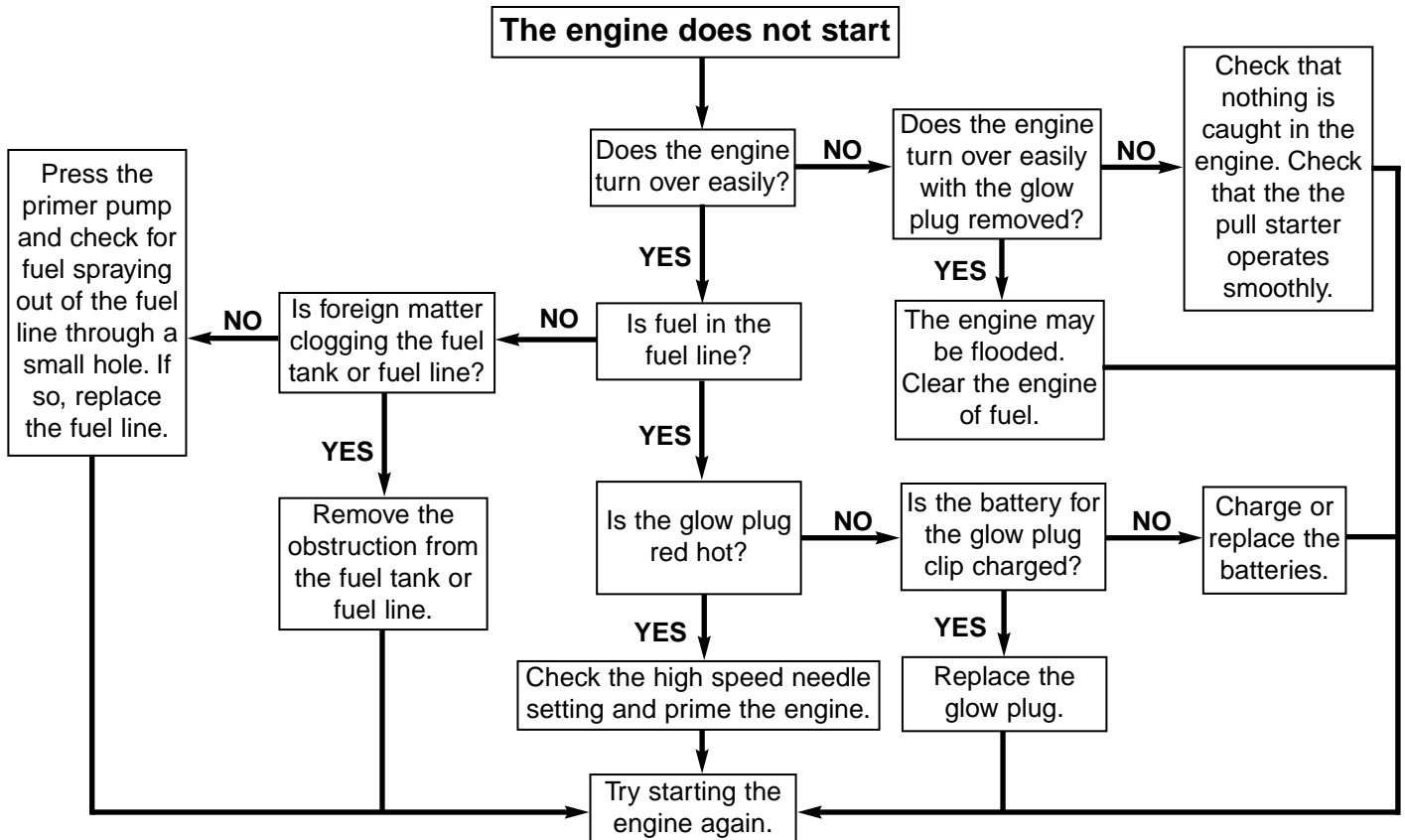
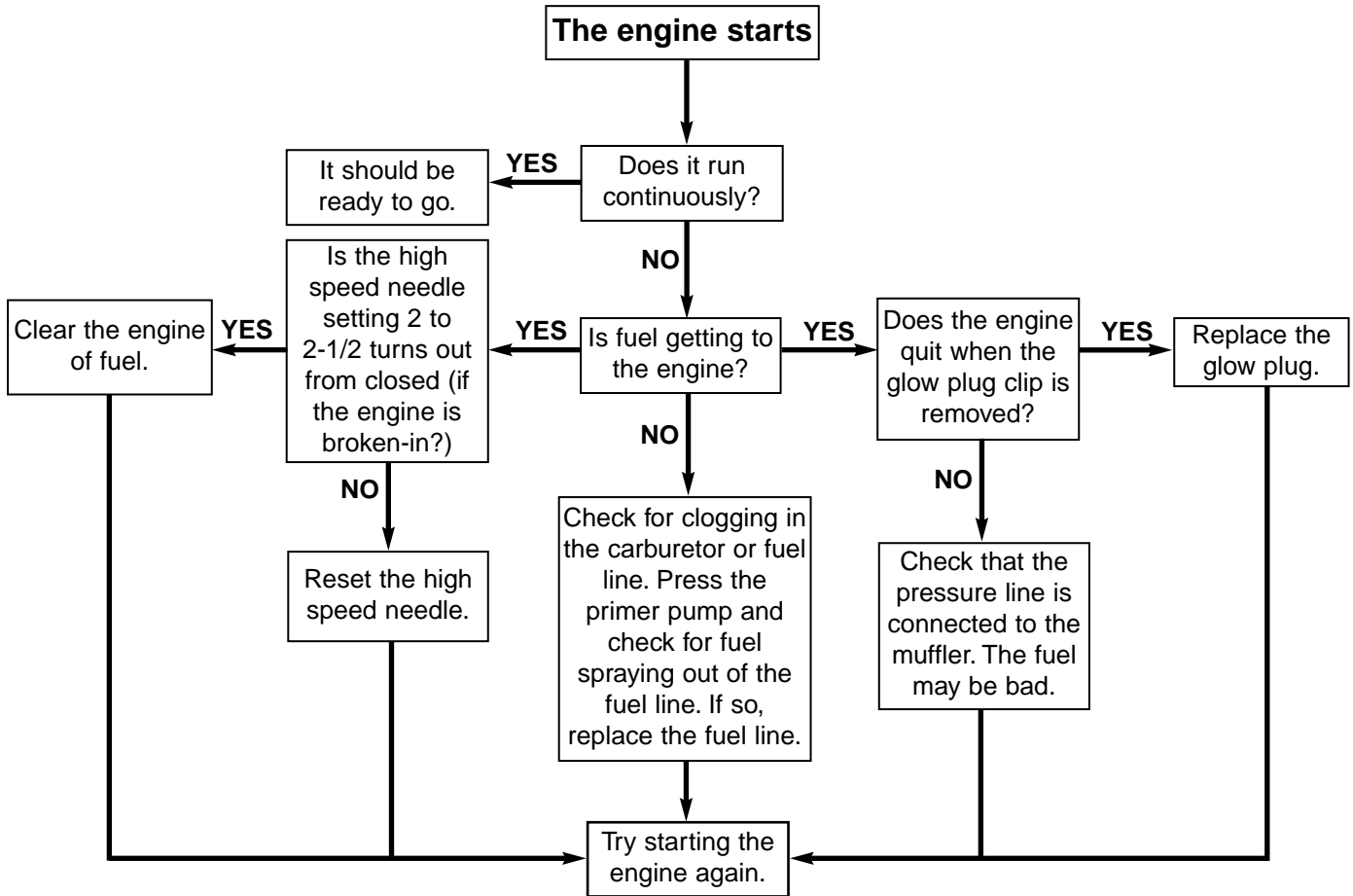
SHOCK OILS AND SHOCK SPRINGS

Many different combinations can be used between the shock oils and shock springs. Some basic guidelines when setting up the Overdrive ST are that if the rear end is stiff it will give the truck more steering and have less rear traction. Hardening the front will result in less steering and more rear traction. (Changing the position of the threaded shock pre-load adjusters results in ride-height change. It does not change the spring tension). Thinner shock oils make the shocks react faster, but makes the truck less stable and may cause the truck to bottom out over large jumps. Thicker shock oil makes the truck smoother over large jumps and in straights, but less reactive over rough sections.

| Metric Conversions | | | | | |
|--------------------|--------|--------|---------|-------|----------|
| 1/64" = | .4 mm | 1/4" = | 6.4 mm | 3" = | 76.2 mm |
| 1/32" = | .8 mm | 3/8" = | 9.5 mm | 6" = | 152.4 mm |
| 1/16" = | 1.6 mm | 1/2" = | 12.7 mm | 12" = | 304.8 mm |
| 3/32" = | 2.4 mm | 5/8" = | 15.9 mm | 18" = | 457.2 mm |
| 1/8" = | 3.2 mm | 3/4" = | 19.0 mm | 21" = | 533.4 mm |
| 5/32" = | 4.0 mm | 1" = | 25.4 mm | 24" = | 609.6 mm |
| 3/16" = | 4.8 mm | 2" = | 50.8 mm | 30" = | 762.0 mm |
| | | | | 36" = | 914.4 mm |



ENGINE TROUBLESHOOTING



ACCESSORIES AND OPTIONAL PARTS



DuraTrax Nitro Starter Set

This set includes everything you need to start racing. 5-way glow plug wrench, 1 qt. of Red Alert fuel, Rapid Heat® glow starter w/charger, fuel bottle and glow plug. **DTXP0200**



DuraTrax Crankshaft Locking Tool

Remove your engine's clutch safely with this easy to use, anodized metal tool. Works with all .10 to .21 car and truck engines. **DTXR1100**



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**



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**



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)**



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**



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**



Pit Tech™ Deluxe Car Stand

The sturdy stand disassembles easily and stores flat. The plate rotates for all-sides access, and built-in holes keep shocks handy when rebuilding. Molded rubber inserts grip chassis securely, and the dropped center accommodates models with uneven chassis bottoms. **DTXC2370**



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**

ACCESSORIES AND OPTIONAL PARTS



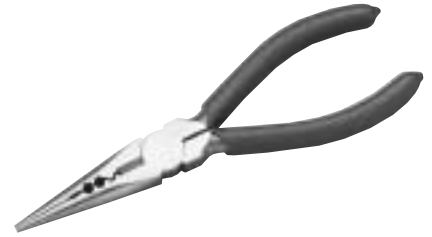
DuraTrax Standard Screwdriver Set

This set contains five screwdrivers -- two slotted (5x100mm & 6x100mm) and three Phillips (#0x75mm, #1x75mm & #2x100mm). All have hardened chrome vanadium steel shafts and heat-treated tips and come in a durable nylon pouch. **DTXR0140**



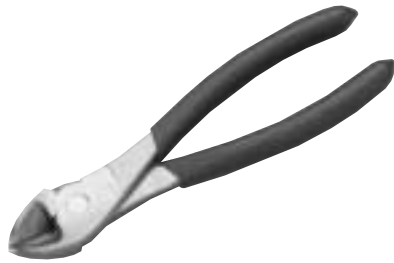
DuraTrax Precision Car Tool Set Metric

Organized in a free, durable tool roll-up, this set features ten essential tools: 2.5 and 3.0 slotted screwdrivers; #0 and #1 Phillips screwdrivers; 1.5mm, 2.0mm and 2.5mm ball hex drivers; and 4.0mm, 6.0mm and 7.0mm nut drivers. **DTXR0375**



DuraTrax Long Nose Pliers 6"

The serrated jaws provide a firm grip while bending...the needle-like nose makes it easy to handle small or delicate parts in tight spaces. Chromed alloy steel construction adds lasting strength and rust-resistance. **DTXR0300**



DuraTrax Heavy Duty Diagonal Cutter

Like the pliers, DuraTrax Cutters feature chromed alloy steel and rubberized handles. But the induction-hardened cutting edge is larger for heavy cutting jobs, including: 2-56 and 4-40 pushrods; 1/16" (1.5mm) and 1/8" (3mm) music wire; and 1/8" (3mm) braided cable. **DTXR0302**



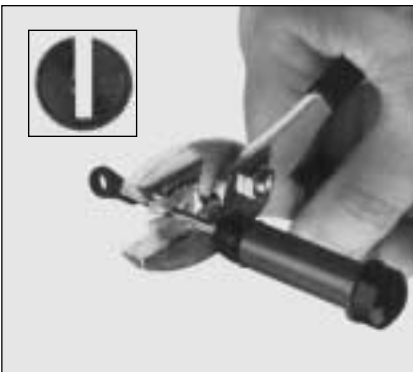
DuraTrax Metric Phillips Head Screw Set

Includes 200 pieces, organized in a clear, compact, 10-compartment plastic case: 2mm Self-Tapping (4), 2.6mm Self-Tapping (8), 3mm Self-Tapping (50), 2.6mm Machine (20), 3mm Machine (36), 4mm Machine (12), 3mm Nuts (30), 4mm Nuts (10), Washers (30). **DTXQ0100**



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 Shock Shaft Tool

Use with pliers (not included) to hold shock shafts for easy ball end installation without scratching or damage. The pocket-sized tool is made of machined brass, with grooved sides for gripping. **DTXR1140**



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.



DuraTrax Kwik Ramp™ Portable Jump

Durable corrugated plastic ramp is hinged to form an angle; wire supports hold it in place. Supports can be repositioned to vary the jump angle. Unlike bulky plywood ramps, it folds flat to 4' x 2' for easy storage, and sets up in just minutes. **DTXC2375**