

DURATRAX

FIREHAMMER™



Length: 28.1" [715mm]
Width: 16.5" [420mm]
Height: 11" [279mm]
Weight: 18.8 lb [8.5kg]
Wheelbase: 18.6" [472mm]

Technical Support Information

For technical assistance, contact:
DuraTrax Product Support
3002 N. Apollo Drive, Suite 1
Champaign, IL 61822
(217) 398-8970, Ext. 5
carsupport@duratrax.com

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, 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. Further, DuraTrax reserves the right to change or modify this warranty without notice.
- In that DuraTrax has no control over the final assembly or material used for final assembly, no liability shall be assumed nor accepted for any damage resulting from the use by the user of the final user-assembled product. By the act of using the user-assembled product, the user accepts all resulting liability.
- To return your FireHammer for repairs covered under warranty, you should send your buggy to:

Hobby Services
3002 N. Apollo Drive Suite 1
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.

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INTRODUCTION

Thank you for purchasing the DuraTrax FireHammer. This manual contains the instructions you need to build, operate and maintain your new, gas-powered R/C buggy. Read over this manual thoroughly before building or operating the FireHammer.

SAFETY PRECAUTIONS

When the safety precautions are followed, the FireHammer will provide years of enjoyment. Use care and good sense at all times when operating this radio controlled buggy. 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 FireHammer near people. Spectators should be behind the driver or at a safe distance away from the vehicle.
- Do not leave the charger unattended during charging. If the battery or charger becomes hot at any time, disconnect the battery from the charger immediately! Failure to do so may cause permanent damage to the charger and battery and may cause bodily harm.

- Do not allow the radio equipment to come into contact with moisture. Water can cause the electronics to short out and can cause permanent damage.
- Always turn on the transmitter before turning on the receiver. Before turning on your radio, check to make sure that no one else is running on the same frequency as your FireHammer.

ENGINE WARRANTY

The engine is under a limited warranty for 3 years. DuraTrax warrants this engine to be free from defects in materials and workmanship for a period of three years from the date of purchase. During that period, DuraTrax will, at its option, repair or replace without service charge any product deemed defective due to those causes. You will be required to provide proof of purchase date (receipt or invoice).

This warranty does not cover damage caused by crash, abuse, misuse, alterations or accident. Damaged caused by customer disassembly, tampering, use of substandard fuel, use of incorrect accessories (spark plug, etc) or any use of the engine for which it is not specifically intended will automatically void the warranty of the engine. If there is damage resulting from these causes within the stated warranty period, DuraTrax will, at its option, repair or replace it for a service charge not greater than 50% of the current retail list value. Be sure to include your daytime telephone number and e-mail address in case we need to contact you about your repair.

Under no circumstances will the purchaser be entitled to consequential or incidental damages. This warranty gives you specific legal rights and you may also have other rights, which vary from state to state.

If you attempt to disassemble or repair this unit yourself, it may void your warranty.

For service on your DuraTrax engine, either in or out of warranty, send it postage paid and insured to:

GAS ENGINE TIPS AND PRECAUTIONS

- Do not use silicone fuel tubing on the model. The gasoline will attack it. Use vinyl or neoprene rubber fuel line.
- Make sure the fuel line is not against the cylinder head. The heat from the head can damage the fuel tubing.
- The engine will be hot after being run. Allow the engine to thoroughly cool before touching it.
- Do not leave fuel in the tank or lines while transporting.

- If the vehicle is not going to be used for a month or so, the fuel should be drained from the tank and then the engine run until all excess fuel is used. Leaving fuel in the vehicle for extended periods of time can cause premature wear to parts.
- Do not operate the vehicle indoors or in an area with poor ventilation.
- Gasoline is extremely flammable. Keep it away from open flame, excessive heat or sparks. Do not smoke while operating the FireHammer.
- This engine was designed for R/C cars and should not be used for any other purpose.

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 buggy 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 FireHammer to take the rough and tumble abuse that makes gas-powered R/C vehicles 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 buggy. Just send in the part to us and we will send you a FREE replacement. Please see the FireHammer 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 FireHammer 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: buggy 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 COMPLETION

To operate the FireHammer the following items are required:

- 1. Gasoline
- 2. 2-Stroke engine oil (to add to the gasoline)
- 3. Air filter oil (DTXC2465)

TOOLS NEEDED FOR COMPLETION

A DuraTrax Spark Plug Wrench is included with this kit for maintenance and tuning. The following tools are required:

- 1. #2 Phillips head screwdriver (DTXR0124)
- 2. Needle nose pliers (DTXR0300)
- 3. Hobby knife HCAR0105
- 4. #11 Blades HCAR0211

FINISHING THE FIREHAMMER RTR



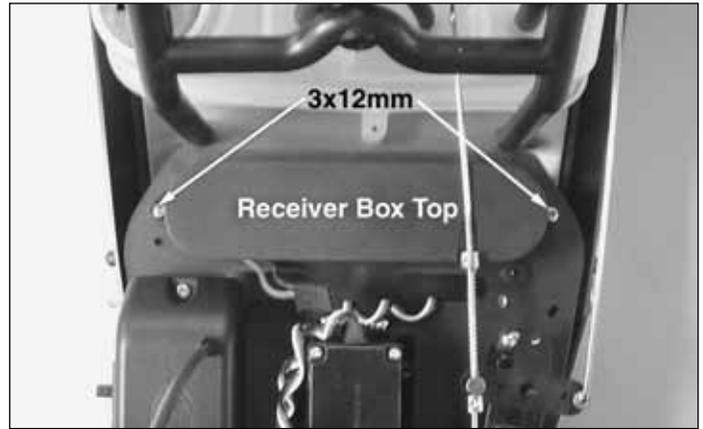
❑ 1. Install the transmitter antenna by screwing it into the hole on the top of the transmitter. **Note: After installing the antenna, give it a good tug to make sure it is properly installed.**



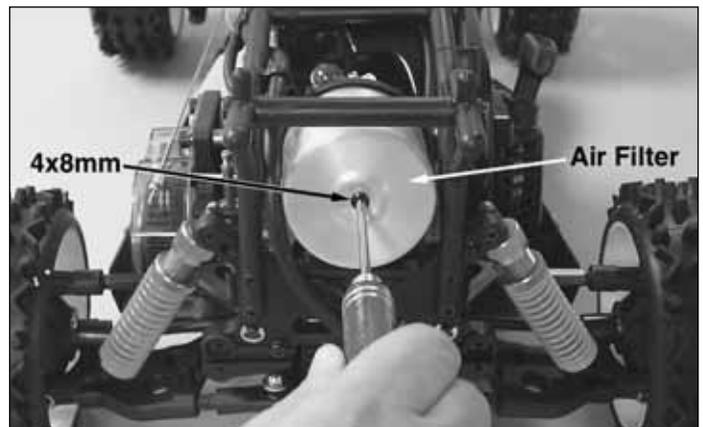
❑ 2. Slide open the battery door on the bottom of the transmitter. Install eight (8) "AA" batteries into the transmitter in the configuration molded into the plastic on the battery holder. Re-install the battery door.

❑ 3. Turn on the transmitter. The red and green LEDs 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.

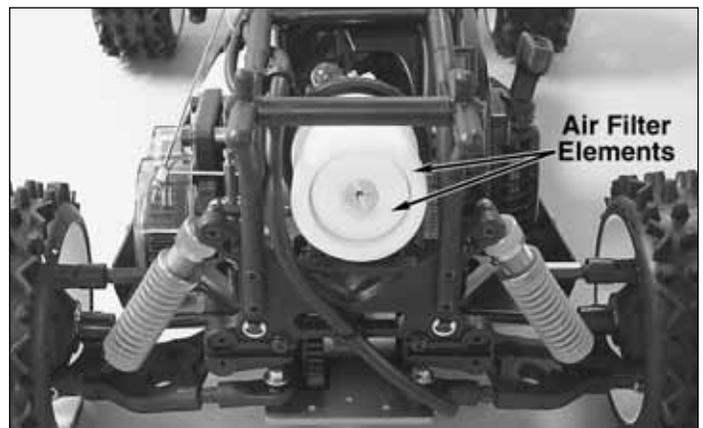
❑ 4. Remove the twist-tie from the receiver antenna. Locate the antenna tube and thread the receiver antenna through the antenna tube. The antenna will be longer than the antenna tube. **DO NOT CUT OR COIL THE ANTENNA WIRE.** Press fit the antenna tube into the hole in the chassis. **Tip: Run the antenna wire through your fingers to straighten out the kinks before running through the antenna tube. Also, applying a small amount of soap and water to the antenna wire will help lubricate the wire for threading into the antenna tube.**



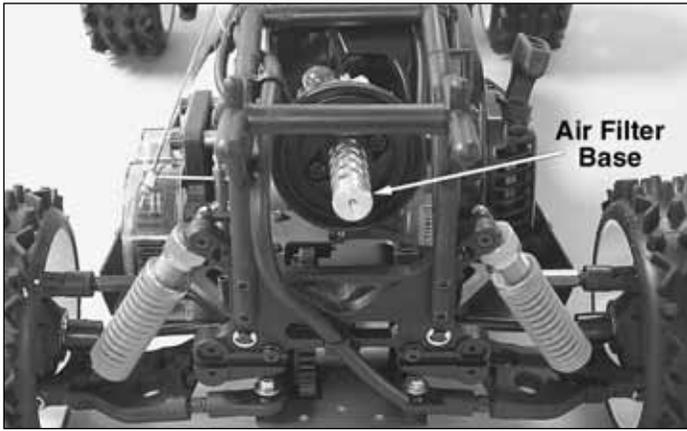
❑ 5. Remove the two 3x12mm (102) screws from the receiver battery box top (103). Remove the top (103) from the box bottom (104). Remove the receiver battery from the FireHammer and charge it using the included charger. Once the receiver battery is completely charged, re-install it back into the receiver battery box bottom (104). Secure the battery in place by re-installing the receiver battery top (103) and securing it in place with the 3x12mm screws (102). **(See Safety Precautions before charging.)**



❑ 6. Remove the 4x8mm screw (77) from the end of the air cleaner (243) and remove the aluminum cover (245) from the air filter.



❑ 7. Remove the air filter element (244) from the air filter base (243). Soak the air cleaner element with DuraTrax Air Filter Oil (DTXC2465) and wring out any excess oil from the element (244).



- 8. Re-install the air filter assembly back onto the air filter base.
- 9. Decal the body as shown on box.

PREPARE THE ENGINE

BEFORE OPERATION:

- Prepare only the amount of gasoline needed.
- If the engine was just run, make sure you allow enough time for it to cool down before you run it again. Also, wipe off any residue the engine may have blown on the FireHammer.
- Fuel the FireHammer with the adequate gasoline mix.

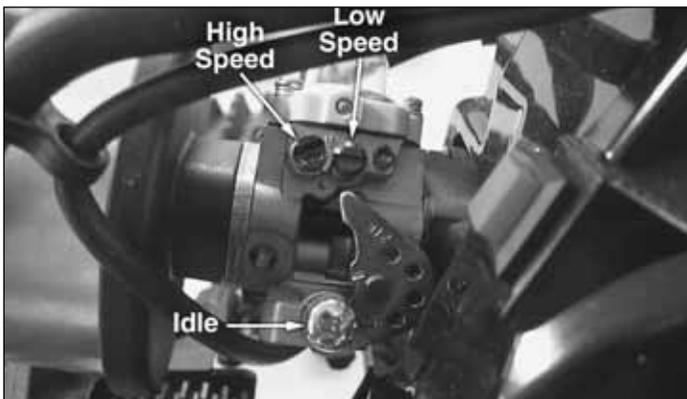
ENGINE BREAK IN:

- To break in your FireHammer engine, you need to run the engine for two tanks of fuel with a fuel mixture that contains a 25:1 (4%) fuel/oil ratio (5oz. per 1 gallon).
- Do not adjust the high-speed needle on the carburetor to break in the engine. If you do so, carbon will accumulate in the spark plug and making ignition difficult.
- Do not run at full power for extended periods of time while breaking in your engine.
- Run the FireHammer with the body off for break in.

RUNNING THE FIREHAMMER AFTER BREAK IN:

- Once the engine is broken in, use 40:1 (2.5%) fuel/oil mix (3.2oz. per 1 gallon).

ENGINE ADJUSTMENTS:



- Always make high and low speed needle adjustments with the engine shut off.

- Always make small adjustment to the needles to prevent over-adjustment.
- To lean the engine, make a clockwise adjustment to the desired needle.
- It is not necessary to change the needle settings if the engine is running smoothly. Normally only the high speed needle will need adjustment from time to time, and only a small amount.

IDLE ADJUSTMENT:

Do not confuse the idle screw with the low speed needle. The idle screw physically adjusts how much the carburetor valve can close. The low speed needle adjusts the gasoline to air mixture when the engine is running at low rpm. If your engine appears to work correctly except that the low rpm are not as low as you want them to be, then adjust the idle screw. If your engine behaves erratically at low rpm, then adjust the low speed needle. When adjusting, turn the screw about 1/8th of a turn each time. A dirty plug will make it difficult to adjust the idle rpm.

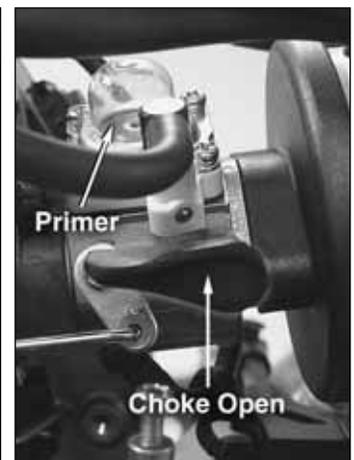
RUNNING THE FIREHAMMER

FUELING THE FIREHAMMER

- 1. Unscrew the fuel cap (110) from the fuel tank (116).
- 2. Pour the proper fuel mixture into the fuel tank.
- 3. Thread the fuel cap back into the fuel tank making sure that the fuel cap is thoroughly tightened.
- 4. Wipe off any fuel that may have spilled onto the FireHammer during the fueling process with an old towel.

STARTING THE FIREHAMMER

- 1. Turn on the transmitter and then the receiver.
- 2. Check the throttle and steering to make sure they are functioning properly.



- 3. Prime the engine. Push the primer button until you start to see fuel in it. **Note: Do not press the primer after you start to see fuel. This will flood the engine and cause it to be hard to start.**

- 4. Rotate the choke lever to the closed position.
- 5. Tug on the recoil until the engine starts. (The engine should start after a few pulls). It may be necessary to slightly open the throttle to get the engine to start.
- 6. Once the engine starts, return the throttle to neutral and open the choke back up. **Note: If you do not open the choke after the engine starts, it will probably die quickly.**

SHUTTING THE FIREHAMMER OFF

To stop the engine press the red shut off switch on the engine. We recommend that you familiarize yourself with the switch and what the easiest way is to get to it with the body on. This way you are not fumbling around to find it in case of an emergency.

FAIL SAFE SET-UP

The fail safe is designed with a signal failsafe and a battery failsafe. If the receiver loses contact with the transmitter, the failsafe will set the throttle to the designated position and the red LED will be constantly lit. If the battery goes below the preset voltage, the failsafe will set the throttle to the designated position and the red LED will be constant and the green LED will flash. If this occurs, shut the FireHammer off and recharge the receiver battery before running the model again.

The fail safe should be set from the factory, but we recommend that you double check it before running the FireHammer.

- 1. Check that the fail safe is functioning properly **before** starting the engine.
- 2. With the receiver on, advance your throttle on the transmitter. Then shut off the transmitter and see if the throttle servo moves to the desired position (idle).
- 3. Turn on the radio system and make sure the throttle is positioned at idle. Press and hold the "SET" button for 2 seconds.

SPARK PLUG

The recommended spark plug is a DuraTrax NGK CMR 7H Spark Plug (DTXG3100). To avoid improper operation or possible engine damage, do not use any other type of spark plugs. The plug gap should be .025" to .030" (if the plug gap is incorrect, adjust it with a spark plug gapping tool, wash it with gasoline and allow it to dry completely before you reinstall the plug into the engine).

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 FireHammer move freely and do not bind.
- 4. Check for broken or damaged parts. Replace any broken or damaged parts before running the FireHammer. Running of the FireHammer with broken or damaged parts could result in damage to other parts.
- 5. Check to make sure that all wires are properly connected and secure.

AFTER EACH RUN

- 1. Clean any large globs of dirt or debris from the chassis and moving parts.
- 2. Drain any remaining gas from the tank.
- 3. Check for any broken or damaged parts. This way parts may be replaced before the next run.

AFTER EVERY 10 RUNS

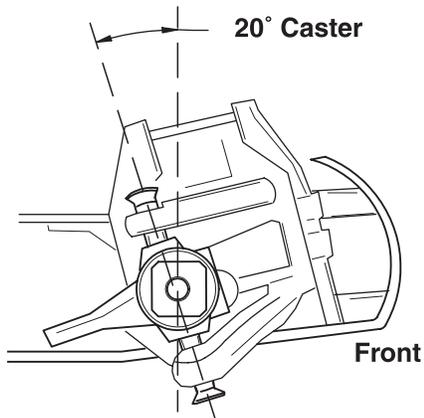
- 1. Check to make sure that the bearings are free of dirt and debris and roll smoothly.
- 2. Check the shocks for oil leakage. If the shocks have leaked any shock fluid out, you should properly refill the shocks for best performance.
- 3. Make sure the servo saver is free-moving and does not bind. This will help prevent stripping of the servo during running. Clean as needed.
- 4. Check for proper gear mesh between the spur and pinion gear.

TUNING GUIDE

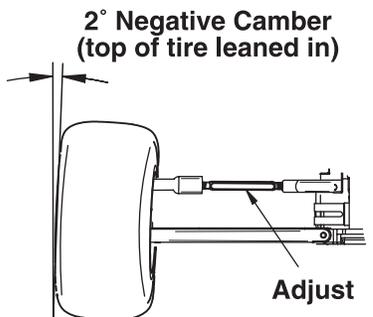
When tuning the FireHammer, make sure that you have equal lengths from one side to the other on the shocks, camber rods and steering rods. Also, make sure to have the shock pre-load adjusters at the same setting from left to right. They do not have to be the same front to rear.

CASTER

Caster refers to the angle at which the kingpin is at in relation to the surface when viewed from the side. 0-degrees of caster means that the kingpin is straight up and down.

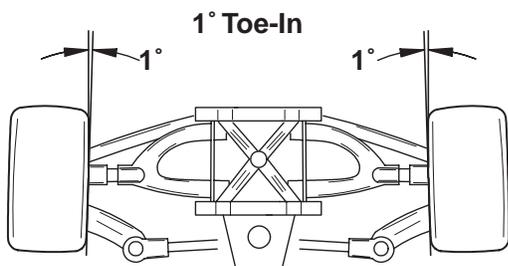


CAMBER



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 AND REAR TOE-IN AND TOE-OUT



Wheels pointed towards each other

Toe-in and toe-out refers to the angle at which the tire is at when view 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.

RIDE HEIGHT

The ride height of the FireHammer affects how it jumps and handles. The ride height of the FireHammer is adjustable through the threaded pre-load adjusters on the shock bodies. To measure the ride height of the FireHammer, set the buggy up as if you are ready to run. Push the front of the buggy down all of the way and release it. When the buggy returns the front arms should be parallel with the surface. The rear ride height is set up the same except that the drive shafts are parallel with the surface. Lowering the front ride height will increase steering response due to more weight on the front wheels. Lowering the rear ride height will increase rear traction and reduce steering response due to more weight on the rear wheels.

FRONT SHOCK ADJUSTMENT

Moving the tops of the shocks out will increase steering and quicken reaction. Moving the tops of the shocks in will result in slower steering reaction, but will be smoother over bumps.

REAR SHOCK ADJUSTMENT

Moving the tops of the shocks in will result in more traction in the corners and smoother handling over the bumps. Moving the tops of the shocks out will give the buggy more steering and better ability to handle large jumps.

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 FireHammer are that if the rear end is stiff it will give the buggy more steering and 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 oil makes the shock react faster, but makes the buggy less stable and may cause the buggy to bottom out over large jumps. Thicker shock oil makes the buggy smoother over large jumps and in straights, but less reactive over rough sections.

Other Accessories Available From DuraTrax



FlashPoint Infrared Temperature Gauge
DTXP3100



Ultimate Hex Driver Set
DTXR0292



Air Filter Oil
DTXC2465



Ultimate Ball Driver Set
DTXR0297



Standard Screwdriver Set with Pouch
DTXR0140



Transmitter Bag
DTXP2015



Transmitter NiCd Conversion Kit
DTXP4010