

**DURATRAX**<sup>®</sup>

# WARHEAD<sup>™</sup>

**DOMINATION<sup>™</sup>  
BY DESIGN.**



**POSI-SHIFT<sup>™</sup>**  
2-Speed, Reversing  
TRANSMISSION



## ASSEMBLY AND OPERATION MANUAL

[www.duratrax.com](http://www.duratrax.com)

[www.warheadmt.com](http://www.warheadmt.com)

# YOU WILL NEED



**SPARE GLOW PLUGS  
DTXG3005**



**AFTER RUN OIL  
HCAP3000**



**FUEL FILLER BOTTLE  
DTXP0150**



**20% O'DONNELL FUEL  
DTXP0720**



**GLOW STARTER  
DTXP3000**



**WRENCH  
DTXR1170**



**PHILLIPS HEAD SCREWDRIVER  
DTXR0124**



**ADDITIONAL  
AIR FILTER OIL  
DTXC2465**



**ENGINE TUNING SCREWDRIVER  
DTXR0185**



**AA X 12**

**ALKALINE  
BATTERIES**



**PLIERS  
DTXR0300**

# THINGS TO KNOW

## SAFETY PRECAUTIONS

When the safety precautions are followed, the Warhead 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 Warhead near people. Spectators should be behind the driver or at a safe distance away from the vehicle.
- Water can cause the electronics to short out and can cause permanent damage.
- Always turn on the transmitter before turning on the receiver.
- Fully extend the transmitter antenna before operating your vehicle.
- Before turning on your radio system, check to make sure that no one else is running on the same frequency.
- The engine and exhaust produce quite a bit of noise. 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 harmful fumes just like real vehicles. Do not operate this model indoors.
- 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.

## SPECIFICATION AND 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. Visit [www.duratrax.com](http://www.duratrax.com) for the latest updates and information for your model.

## 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 user assembly or material used for final user 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 Warhead for repairs covered under warranty you should send your truck 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](mailto:hobbyservices@hobbico.com)  
[www.hobbyservices.com](http://www.hobbyservices.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.**

## STRESS-TECH™ PARTS GUARANTEE

We have engineered the Warhead MT to take the rough and tumble abuse that makes R/C 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 Warhead 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 under the warranty on the left.

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

## REPAIR SERVICE

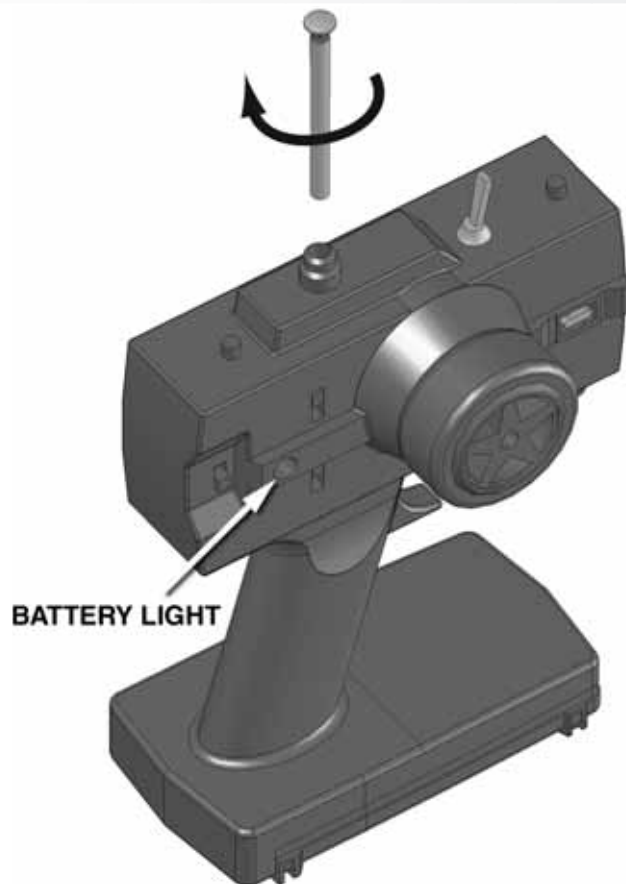
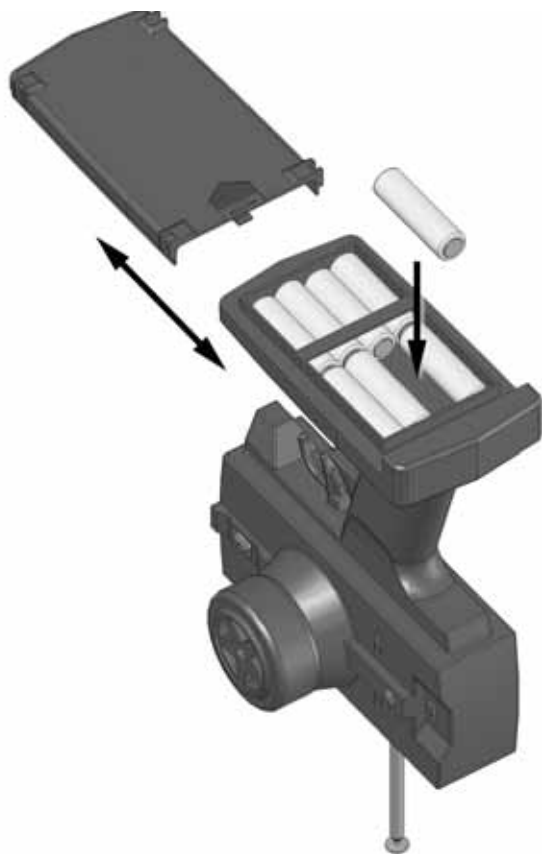
**Repair service is available anytime.**

- After the 90 day warranty, you can still have your Warhead repaired for a small charge by the experts at DuraTrax's authorized repair facility, Hobby Services.
- To speed up the repair process, please follow the instructions listed below.
- ☐ 1. Under most circumstances return the **ENTIRE** vehicle. The exception would be sending in a Stress-Tech part. See the instruction under the Stress-Tech Guarantee.
- ☐ 2. Make sure the transmitter is turned off, all of the batteries are removed and the fuel tank is completely empty.
- ☐ 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).



# FINISHING THE WARHEAD

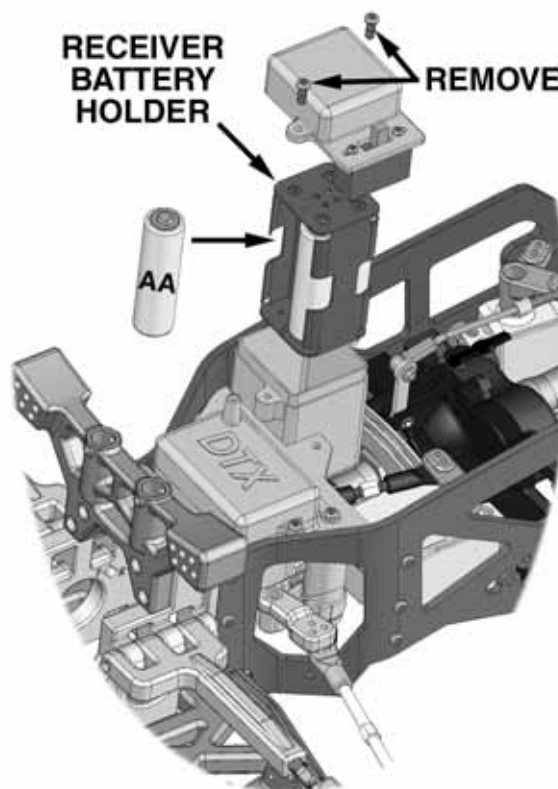
## TRANSMITTER PREPARATION



- Install eight “AA” batteries into transmitter.
- Insert the antenna into the top of the transmitter and tighten.
- Turn the transmitter on and check the battery light. If the red light glows steady, turn off the transmitter. If the red light blinks, the batteries are low and should be replaced.

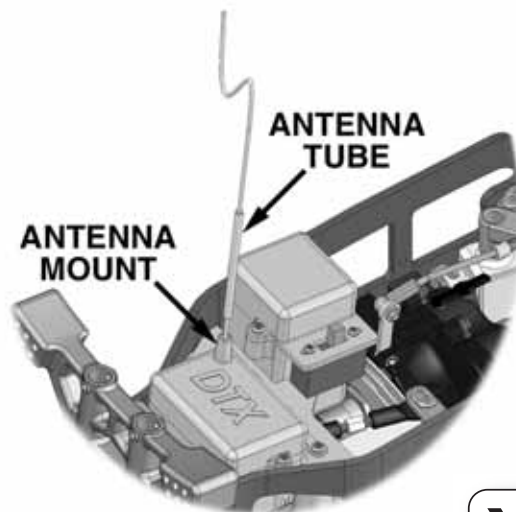
## RECEIVER BATTERY INSTALLATION

- Remove the receiver battery holder.
- Install (4) “AA” batteries.
- Reinstall the receiver battery holder and lid.



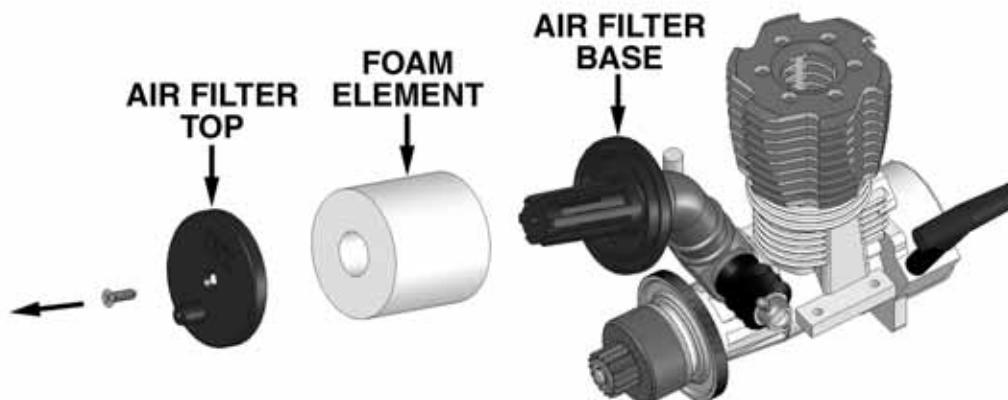
### RECEIVER ANTENNA INSTALLATION

- Uncoil and **straighten** the antenna wire.
- Route the receiver antenna wire through the antenna tube.
- Install the tube into the antenna mount.



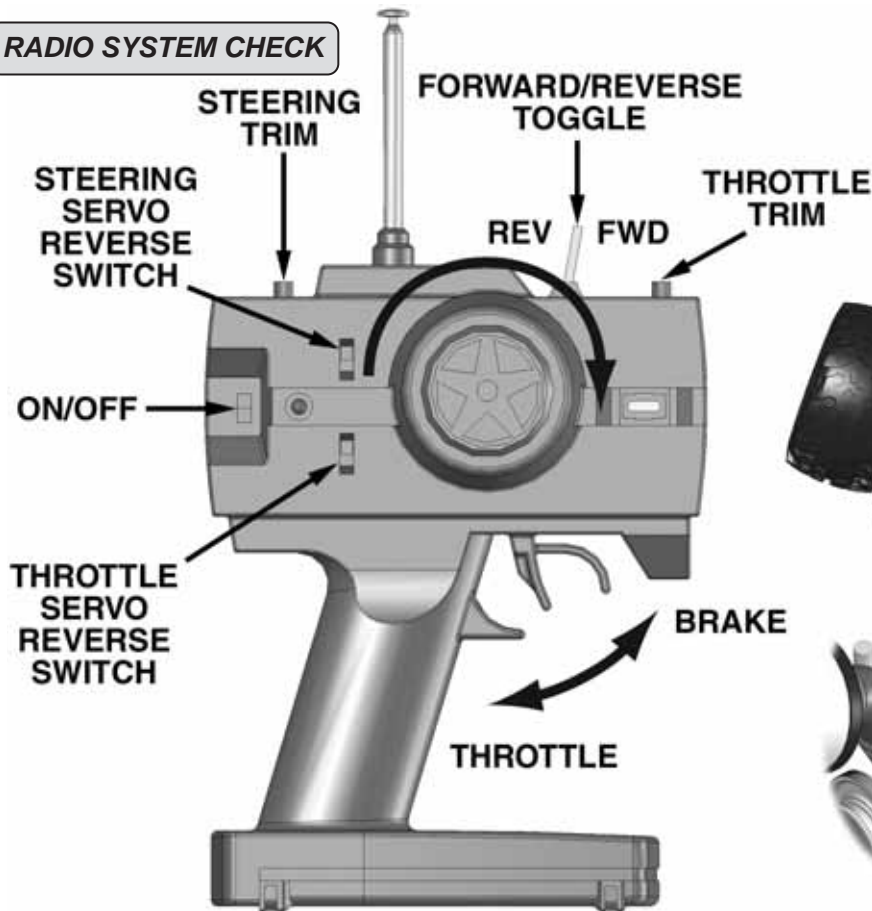
**X DO NOT CUT  
ANTENNA WIRE!**

### OIL THE AIR FILTER

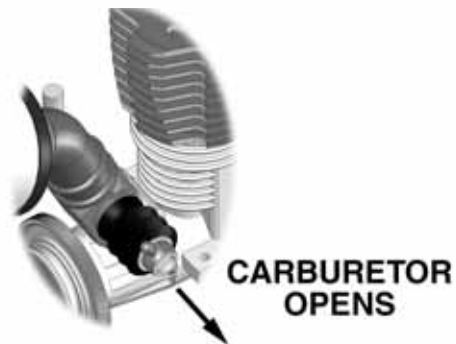


- Remove the air filter top and foam element.
- Apply both tubes of air filter oil onto the foam element, squeezing the element until it is completely coated with the oil. **TIP!** Placing the element in a plastic bag will help keep your hands clean.
- Remove any excess oil with a paper towel.
- Reinstall, making sure the filter is properly seated on the base.

### RADIO SYSTEM CHECK



**! CHECK THE RADIO SYSTEM FOR PROPER FUNCTION BEFORE EACH RUN**



- Turn the transmitter on, then turn the receiver on.
- Turn the transmitter wheel to the right—the front wheels should turn to the right. If not, move the steering servo reverse switch.
- When running, adjust the steering trim so the truck track straight.
- Pull the throttle trigger to make sure the carburetor opens fully and the throttle linkage functions properly without binding.
- Adjust the throttle trim so the carb closes completely at idle.
- Push the trigger and roll the truck to make sure the brakes are applied.
- To shift the Warhead from forward to reverse, flip the toggle switch to the opposite position.
- **IMPORTANT!** Before shifting from forward to reverse or reverse to forward, bring the truck to a complete stop.

### BODY INSTALLATION

- Decal the body to your liking. Use the photos on the box as a reference.
- Install the body onto the chassis using four body clips.

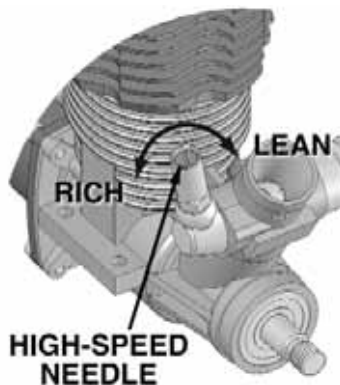


- **TIP!** Cut out the rear window for easy access to the rollbar/handle.
- **TIP!** Adjust your body mounts high to achieve that "monster" look.

# ENGINE TUNING GUIDE

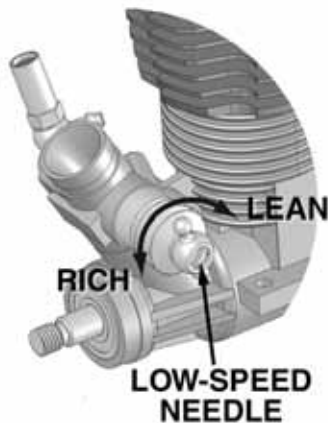
## HIGH-SPEED NEEDLE

The “high-speed” needle is sticking up from the carburetor. This controls the fuel to air mixture of the carburetor. **The needle is pre-set for break-in from the factory at 4 turns out from fully closed.** Once the engine is broken-in, the high-speed needle would typically run from 3-1/2 to 3-3/4 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.



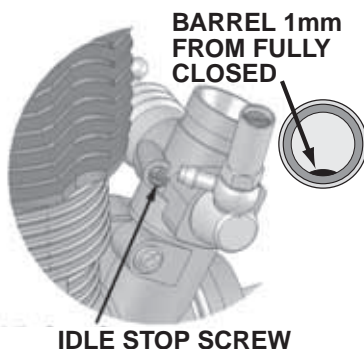
## LOW-SPEED NEEDLE

The “low-speed” needle is located on the side of the carburetor. It controls the fuel mixture at low throttle settings/idle and is preset from the factory at **14-1/2** turns from fully closed while holding the carburetor open. 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.



## IDLE STOP SCREW

The “idle stop” screw is located on the backside of the carburetor. This increases or decreases the idle speed without changing the fuel mixture. The barrel should be approximately 1mm from fully closed.



**IMPORTANT!** To insure long life and good performance from your 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 tanks of fuel.

# RUNNING THE ENGINE

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

## FUELING THE WARHEAD

**IMPORTANT!** The Warhead features a fuel tank that holds over 200cc of fuel! This will provide long runs between fill ups. The drawback to this large size is that the engine may flood due to the increased fuel pressure through the fuel lines (siphon effect). This makes starting very difficult when the tank is completely full. When getting ready to start the engine, **ONLY** fill the Warhead tank to the “starting fuel level” line (1/2-way). Once the engine is warmed up and running, fill the tank to the top.

## STARTING THE ENGINE

**IMPORTANT!** Your radio system must **ALWAYS** be turned on and the transmitter antenna fully extended when running the engine!

1. Fill the tank to the “starting fuel level” line (half-full).
2. Prime the engine - while the engine is cool you can place your finger over the tuned pipe's exhaust hole and pull the recoil gently two times.
3. Attach the glow starter to the glow plug.
4. With the throttle at idle, start the engine by pulling the recoil using 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 with the throttle at idle.

Sometimes it is helpful to start the engine at around half throttle. When the engine starts, immediately return the throttle to idle. If this is not done the engine can over-rev and cause engine damage.

## FIXING A FLOODED ENGINE

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 truck 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.

## STOPPING THE ENGINE

Pinch the fuel line that runs to the carburetor. Pinching this line will restrict the fuel flow and the engine will quit within a few seconds. **Never place your finger over the exhaust to stop the engine. This could result in serious burns on your finger. It also causes fuel to back up in the engine, making it harder to start the next time you run your Warhead.**



# BREAK IN PROCEDURE

## 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 quickly.
6. Break-in puts stress on the glow plug and can burn it out. Make sure you have an extra plug or two on hand.
7. Do NOT overheat the engine (see page 9). You can check the head temperature by using one of the temperature gauges that are readily available (DuraTrax™ Flashpoint, DTXP3100).

### TANK 1

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

1. Open the high speed needle valve 4 turns from fully closed (counterclockwise). This is factory set already, but check it to make sure. When closing the high-speed needle, close until you feel some resistance. DO NOT overtighten or you will damage the engine.
2. Fill the tank to the "starting fuel level" line (half-full).
3. Start the engine. Once warm (about 1 minute, fill the tank to full.
4. Run the truck on a smooth surface with the body off.
5. Run back and forth at medium speeds, slowly accelerating and decelerating the truck. **NOTE:** It is normal for the two speed not to shift (see page 10).
6. Run the truck 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.
7. Stop the engine and allow it to cool. This normally takes around 10-15 minutes.

**TIP!** Think of a clock face: 1/12 turn = one hour increment.

### TANK 2

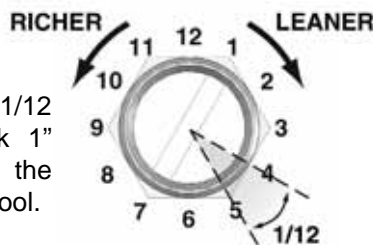
Lean the high-speed needle 1/12 turn (one hour) from "tank 1" setting. Run the truck for the complete tank and then let cool.

### TANK 3

Lean the high-speed needle another 1/12 turn from "tank 2" setting. Run the truck for the complete tank and then let cool.

### TANK 4

Lean the high-speed needle another 1/12 turn from "tank 3" setting. Run the truck for the complete tank and then let cool. You should notice the engine running much better at this point.



### TANK 5

Lean the high-speed needle another 1/12 turn from "tank 4" setting. Run the truck for the complete tank and then let cool.

**After the fifth tank, the engine is now ready to be tuned for best performance.**

## TUNING TIPS

After break-in, run the truck where you plan to do most of your driving (grass, street, track, etc). Tune the high speed needle so the engine makes good power without overheating. Using a temperature gauge, tune the engine so that it will consistently stay under 270° F (132° C). Keep in mind, RC engines usually take a minute or two to warm up. It is common not to reach full power right away. Never tune a cold engine!

If needed, tune the low speed needle so that the truck idles and accelerates smoothly and consistently. **Note:** If you lean the low speed needle, you may need to richen the high speed needle. The idle stop screw should be adjusted so that the wheels do not turn when you lift the truck.

## ENGINE CARE

Never store your Warhead with fuel in the tank. We recommend that after the final run of the day, you empty the fuel tank and then run the engine at idle until all the fuel is out of the fuel lines and engine. Remove the air filter and glow plug. Then place two drops of Hobbico® After Run Engine Oil (HCAP3000) in the carburetor and two into the cylinder to help prevent corrosion. Pull the recoil a few times to circulate the oil.

## 10 WAYS TO ENSURE LONG LIFE FROM YOUR ENGINE

1. Keep your engine and air filter clean. Dirt will act as insulation on an engine. It will not be able to shed heat as easily. Clean and re-oil the element 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 (see page 9).
5. Do not use a fuel with a low oil content. Make sure you use a model car fuel from a reputable manufacturer, such as O'Donnell Fuels.
6. Avoid using old fuels in the engine.
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 the Ultimate Flywheel Wrench (DTXR1105) to keep the crankshaft from moving.
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.



# GENERAL INFORMATION

## 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 lean your high-speed needle. 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. 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 Warhead. We recommend the DuraTrax Gold Plug (DTXG3005).



## AIR FILTER

Dirt can get into your carburetor and engine through the air filter. Ensure that your air filter has a good seal to the top of the carburetor. Periodically wash the air filter foam element (using dish soap and water) and re-oil the filter with filter oil (DTXC2465). Any air filter that has a torn element or a bad seal should be replaced immediately.

## FUEL

Use fuels that are specially formulated for car and truck engines like O'Donnell 20% RTR Fuel (DTXP0720).

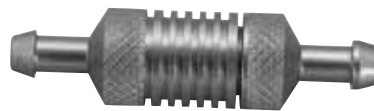


Fuel can go bad. The main ingredient in model fuel is methanol, which is basically alcohol. Alcohol will absorb water out of the air, so keep your fuel jug capped at all times. Store your fuel out of the sunlight and in a cool place, off the ground away from temperature extremes. Bad fuel is one of the 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 SYSTEM

The fuel line is susceptible to pinhole leaks. You usually 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 carburetor. It is basically leaning out the mixture.

To keep dirt out of the engine, we recommend that you use an inline fuel filter (Clean Flow Fuel Filter, DTXC2552) 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 carburetor, remove the needles and clean the carburetor with denatured alcohol or fuel. It can help to use compressed air to blow out the fuel passages as well.



## 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. The easiest way of checking the temperature of the cylinder head is by using one of the available temperature gauges (we recommend the DuraTrax Flashpoint Temperature Gauge, DTXP3100). This will give you a direct reading of the cylinder head temperature. Hold the temperature gauge directly on the cylinder head so the gauge is pointed directly at the glow plug. Do not let the head temperature exceed 270° Fahrenheit (132° Celsius).



## STARTER BOX

The Warhead is designed to fit onto standard 1/8-scale starter boxes. The DuraTrax Universal II (DTXP5600) starter box is recommended.

# MAINTENANCE TIPS

## BEFORE EACH RUN

1. **IMPORTANT:** Check to make sure that all screws are tight. Pay particular attention to the screw pins in the drive cups. Always use threadlock (DTXR2010) on screws going into metal.
2. Before running always check the condition of your radio system batteries and replace/recharge if necessary.
3. Check to make sure that all of the moving parts of the Warhead move freely and do not bind.
4. Check the fuel tank and fuel lines for leaks.
5. Before starting the engine, turn on the radio and make sure the servos move easily and in the proper direction.
6. Inspect the air filter for a torn or damaged element. Also look for dirt in the air cleaner element and wash it if necessary.
7. Check for broken or damaged parts. Replace any broken or damaged parts before running the Warhead. Running of the Warhead with broken or damaged parts could result in damage to other parts.
8. Check to make sure that all wires are properly connected.



## AFTER EACH RUN

1. Clean any large globs of dirt or debris from the chassis and moving parts.
2. Drain the fuel tank of any leftover fuel. **DO NOT** return the fuel to your fuel jug.
3. Check for any broken or damaged parts. This way parts may be replaced before the next run.
4. Put some after-run oil in the carburetor and cylinder 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.

## AFTER EVERY 10 RUNS

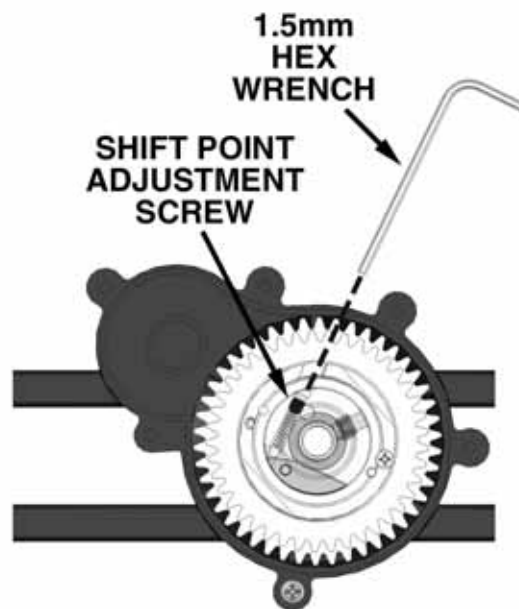
1. Check to make sure that the bearings are free of dirt and debris, and roll smoothly.
2. Check the shocks for oil leakage. If the shocks have leaked any shock fluid out, you should properly refill the shocks for best performance.
3. Make sure the servo saver is free moving and does not bind. This will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

# TUNING GUIDE

When tuning the Warhead 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.

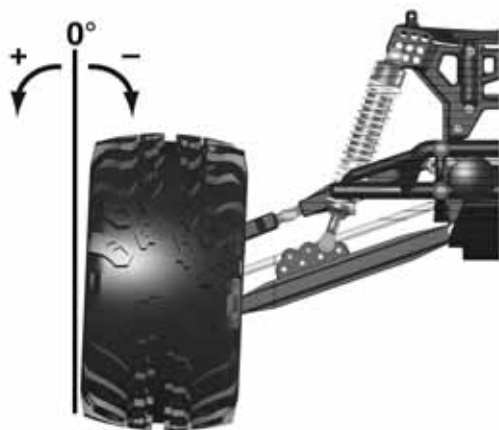
## 2-SPEED ADJUSTMENT

- Once the engine is fully broken-in, the truck should shift within 30-40 feet.
- There are a few things to remember when adjusting the two speed: During break-in the truck may not shift into second gear. This is normal. **DO NOT** adjust the two speed until after the engine is fully broken-in. Also, do not adjust the engine needles on the engine so the two speed shifts. Adjust the engine to its best tune first, and then adjust the two speed. Always make small adjustments.



- There are two set screws, the adjustment set screw is the one that is at an angle. The other set screw is the one that holds the shift hub to the reverser input shaft and is a different size.
- To locate the adjustment screw, remove the rubber plug and look into the access hole. Rotate the spur gear until you see the aluminum shift hub. Hold the spur and roll the truck until the correct (smaller) set screw comes into view.
- Use a 1.5mm hex wrench to adjust the two speed set screw:
  - To make the Warhead shift sooner, adjust the set screw 1/8th of a turn counter clockwise (looser).
  - To make the Warhead shift later, adjust the set screw 1/8th of a turn clockwise (tighter).
- Replace the rubber plug to keep dirt out of the transmission.

## CAMBER

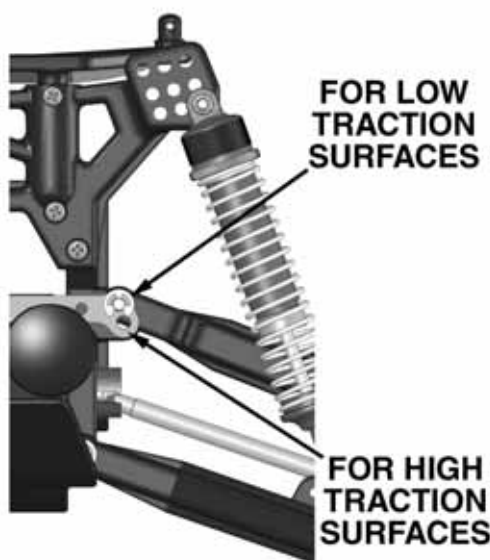


Camber refers to the angle at which the tire and wheel ride in relation to the ground when viewed from the front or rear. Negative camber is when the wheels lean inward and positive camber is when the wheels lean outward. Usually adding a small amount of negative camber ( $0^{\circ}$  to  $-2^{\circ}$ ) will increase traction. However, adding too much camber will decrease traction. The objective is to keep as much of the tire as possible in contact with the running surface. Never put in positive camber. Make sure that both sides are equal.

Use the DuraTrax Pit Tech™ Camber Gauge (DTXR1145) to accurately set up your Warhead.



## ROLL CENTER ADJUSTMENT

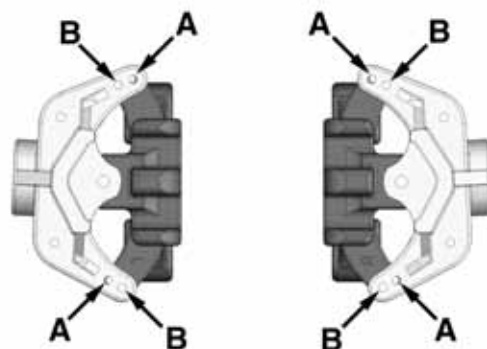


Install the inner upper arm in the lower position for high-traction surfaces and in the upper position for low-traction surfaces.

## TOE-IN AND TOE-OUT



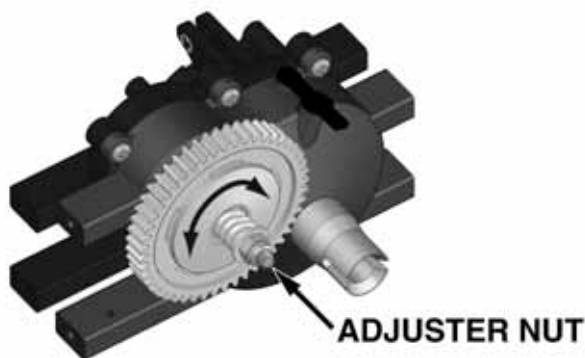
Toe-in is when the fronts of the tires point towards each other. Toe-in increases stability during acceleration and high speed. However, toe-in also decreases steering when entering a corner. Toe-out will increase steering into corners, but will decrease the overall stability during acceleration. The front typically is set-up with  $0$  to  $-2$  degrees of toe-in. Toe-out is when the fronts of the tires point away from each other.



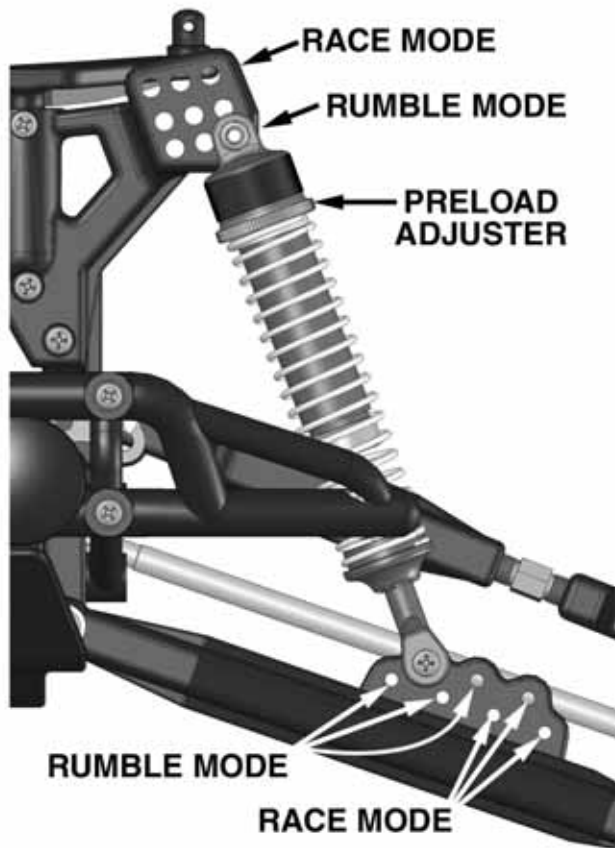
**A: USE THIS POSITION FOR  $2^{\circ}$**   
**B: USE THIS POSITION FOR  $3^{\circ}$**

Rear toe-in affects the traction of both the front and rear of the truck. Rear toe-in increases the amount of traction in the rear, but decreases steering. Decreasing rear toe-in will increase steering, but will give less rear traction. the Warhead can be set at  $2^{\circ}$  or  $3^{\circ}$  toe-in by repositioning the screws.

## SLIPPER ADJUSTMENT



The slipper clutch is designed to help prevent gear damage during jumping and to control traction when accelerating. To properly set, turn the nut until tight and then back off by  $1/8$  turn. Never loosen the adjuster nut more than  $1/2$  turn from fully tight. This can cause excessive heating of the slipper clutch and will melt the spur gear.



#### SHOCK PRELOAD/RIDE HEIGHT ADJUSTMENT

The Warhead shocks have threaded preload adjusters on them. This means by threading the collars down, you will change the ride height. By threading the collars up, you decrease the ride height. Make sure the preload is the same from one side to the other.

#### SHOCK POSITION (UP AND DOWN)

Position the shocks up or down to set the general ride height. For racing, it's best to have a low ride height. Use the upper holes in the tower and lower holes in the arms to lower the ride height for racing.

#### FRONT SHOCK ADJUSTMENT (IN AND OUT)

Moving the tops of the shocks out will increase steering resulting in quicker reaction. Moving the tops of the shocks in will result in slower steering reaction, but will be smoother over bumps. Mounting the bottoms of the shocks in the inside holes will give more slow speed steering but will take away some high speed steering.

#### REAR SHOCK ADJUSTMENT (IN AND OUT)

Moving the tops of the shocks in will result in more traction in the corners and will be smoother over the bumps. Moving the tops of the shocks out will give the truck more steering and handle large jumps better.

#### 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 Warhead are that if the rear end is stiff it will give the truck more steering and have less rear traction. Stiffening the front will result in less steering and more rear traction. Changing the position of the threaded shock preload adjusters results in ride-height change only. It does **not** change the spring tension. Optional springs are available to tune your Warhead.

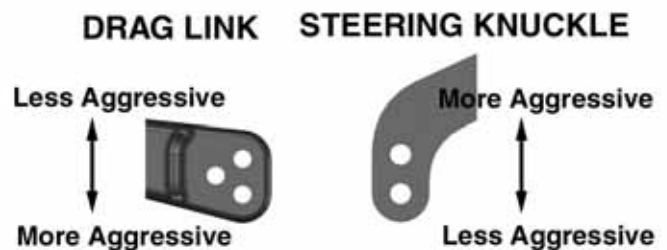
Thinner shock oil makes the shocks react faster which works well on rough tracks, but makes the truck less stable and may cause the truck to bottom out over large jumps. Thicker shock oil makes the truck smoother over large jumps and in straights, but less reactive over rough sections. The stock truck comes with 30 wt. oil.

#### DIFFERENTIAL OIL/GREASE

The Warhead comes with sealed differentials filled with medium grease. You can tune the truck by changing the oil/grease either heavier or lighter.

For loose track conditions, use a lighter oil/grease. For high traction conditions, use a thicker oil/grease.

#### ACKERMAN



There are two ways to adjust ackerman on the Warhead.

One way is by moving the steering tie rod on the knuckle. If you use the front hole, you will have more ackerman resulting in more initial turn in. By positioning the steering tie rod in the rear hole, you will have less ackerman and a more consistent feel.

The other way of adjusting ackerman is on the steering drag link. By positioning the steering tie rod forward on the drag link, you get less ackerman resulting in a smooth, consistent feel in the corners. By positioning the tie rod back, you get more ackerman resulting in more initial steering in the corners.

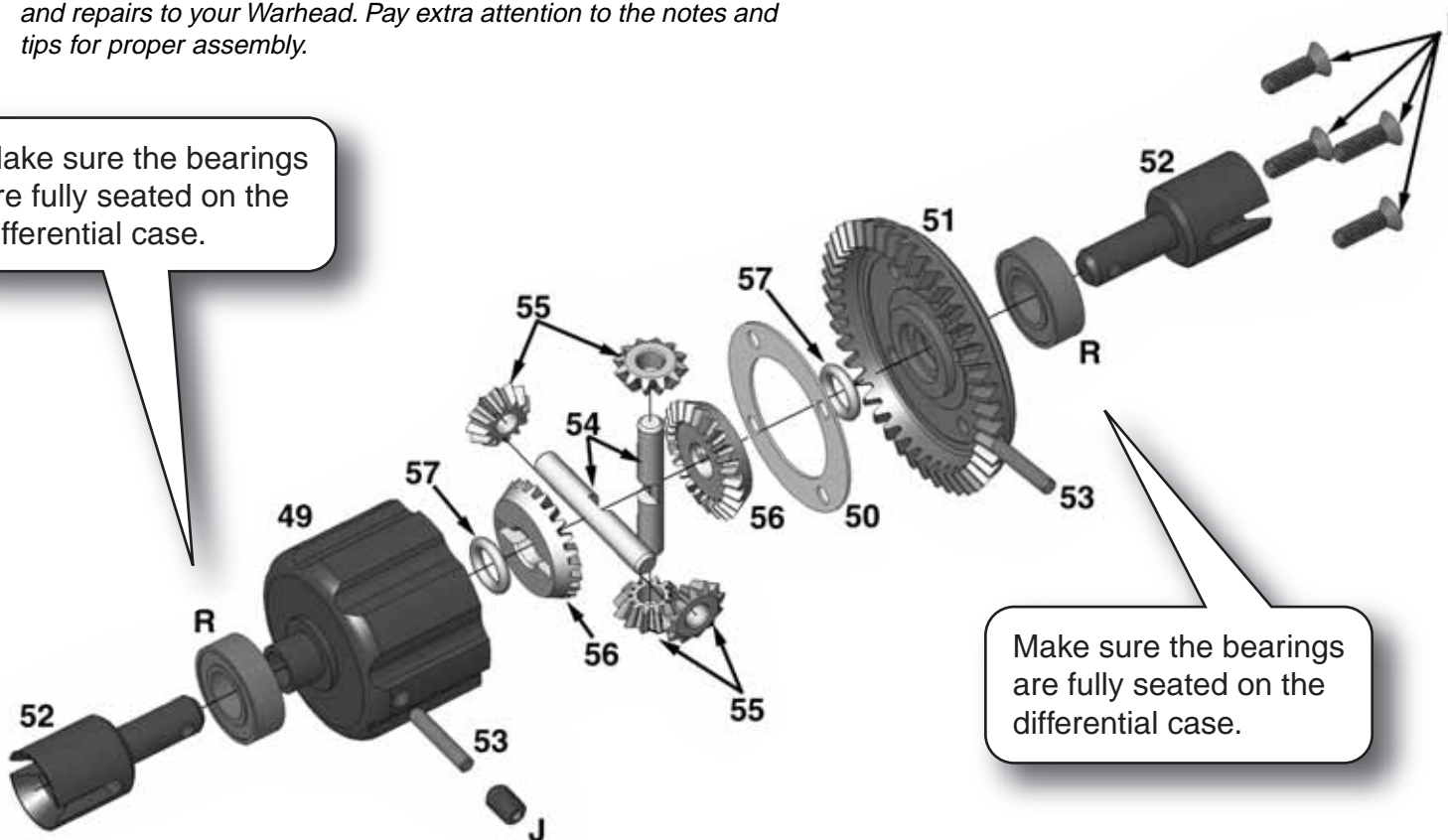


# MAINTENANCE GUIDE

The following section is provided to help you with maintenance and repairs to your Warhead. Pay extra attention to the notes and tips for proper assembly.

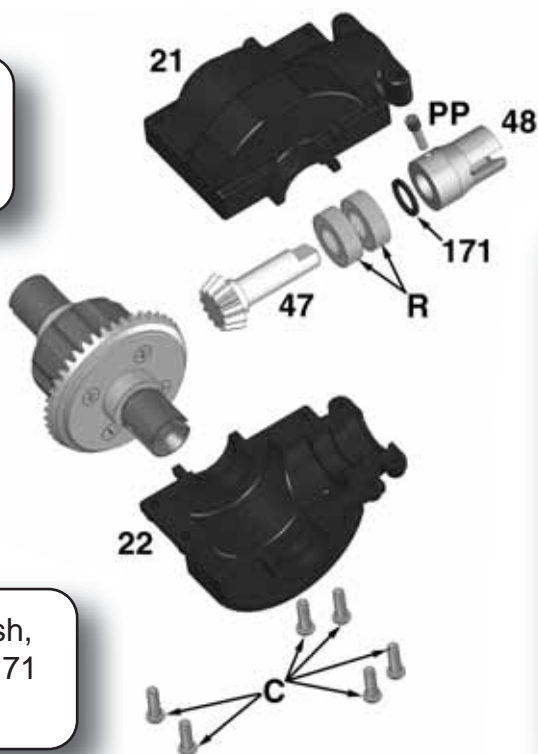
## DIFFERENTIAL

Make sure the bearings are fully seated on the differential case.



Make sure the bearings are fully seated on the differential case.

Be sure to use threadlock on all screw pins (PP).



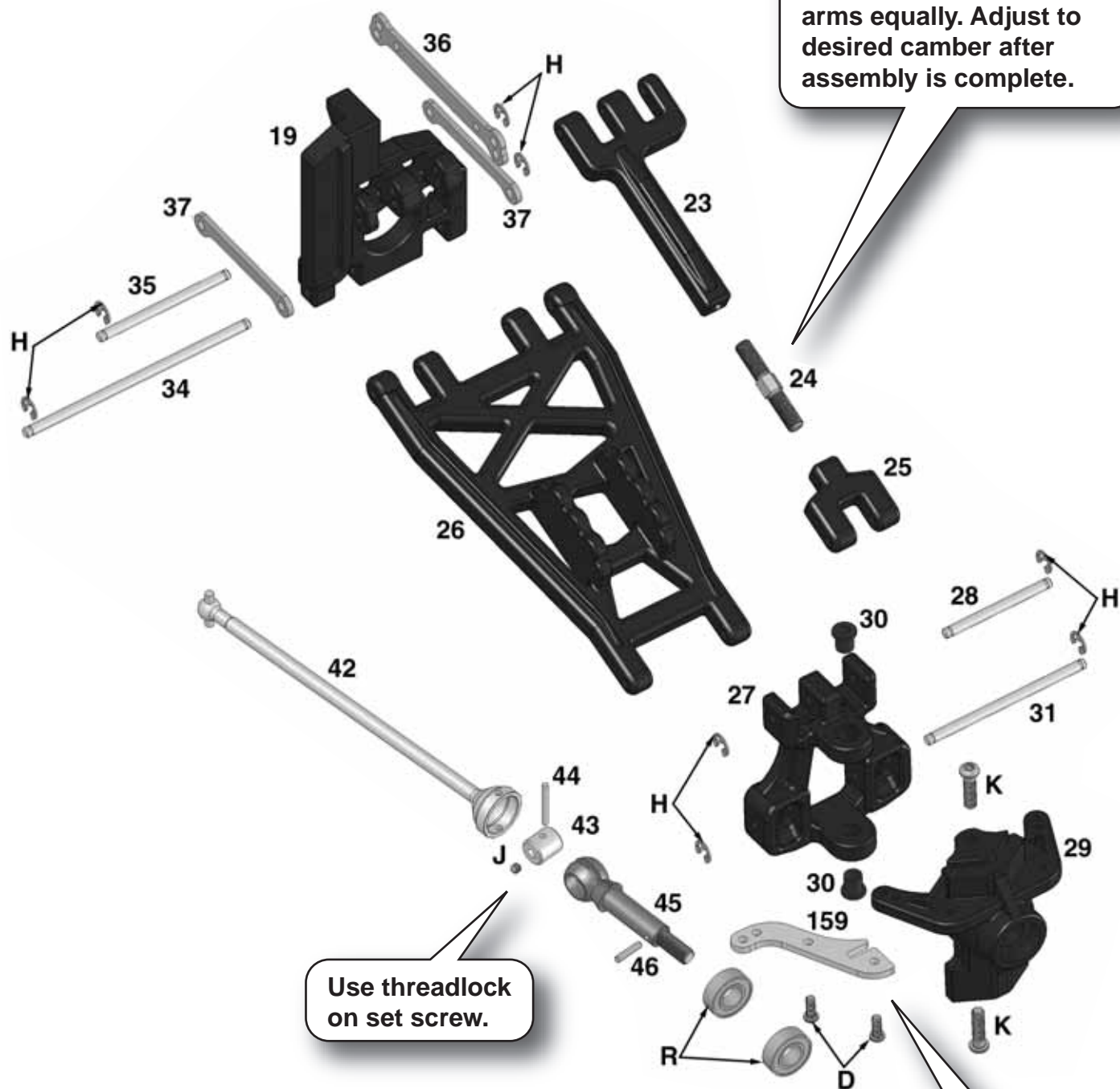
For proper gear mesh, make sure washer 171 is installed.

Fill the diff case with quality oil.

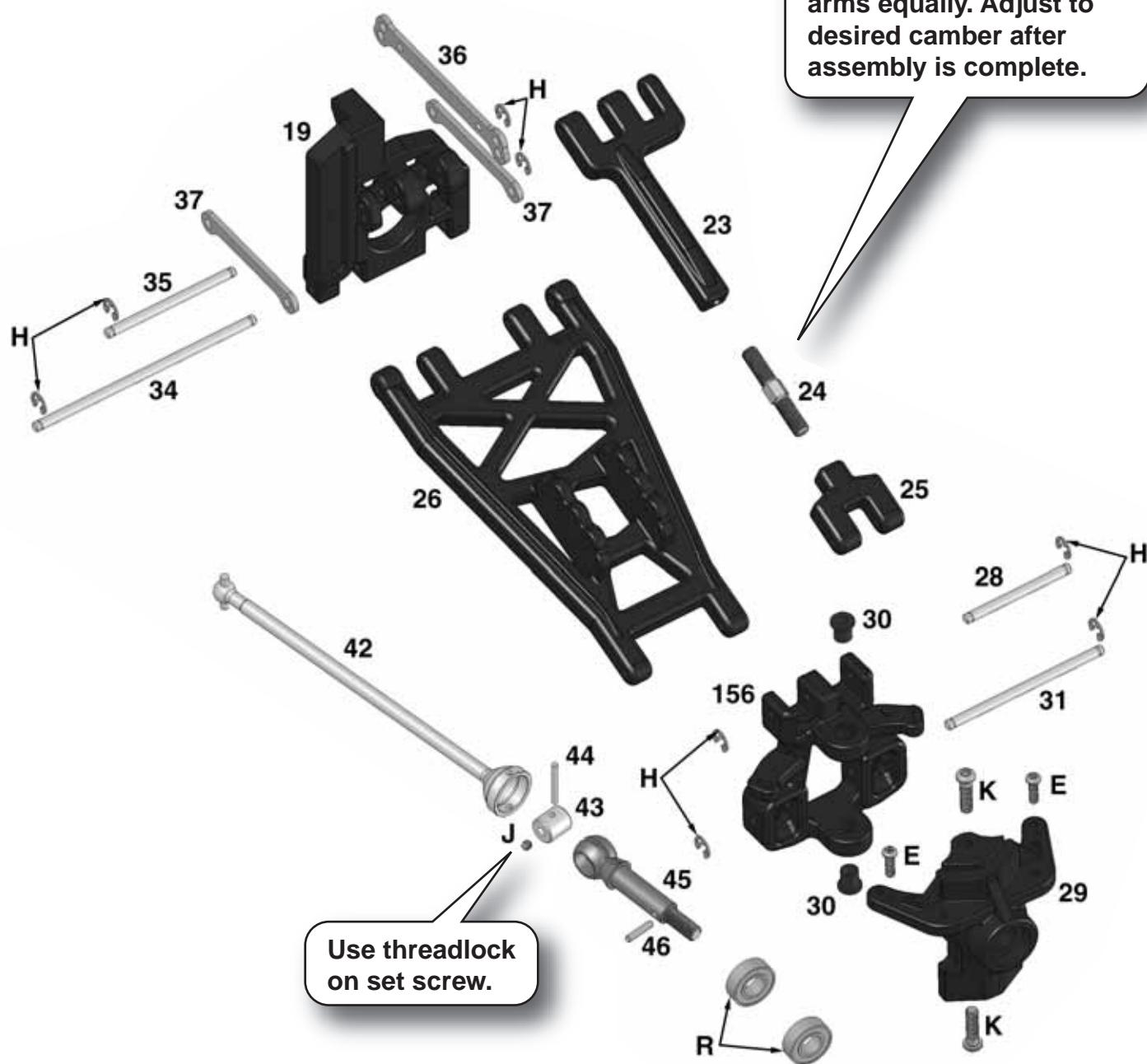
**NOTE:** Fill the case until the bevel gear shafts are covered. Filling the case higher will cause oil to spill out when the other side of the diff is installed.

There are several different viscosities of oil available, which allow you to tune your truck's handling to particular track conditions. Grease may be substituted if you don't have access to diff oil.

## FRONT SUSPENSION

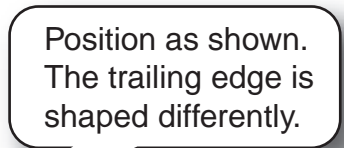


## REAR SUSPENSION



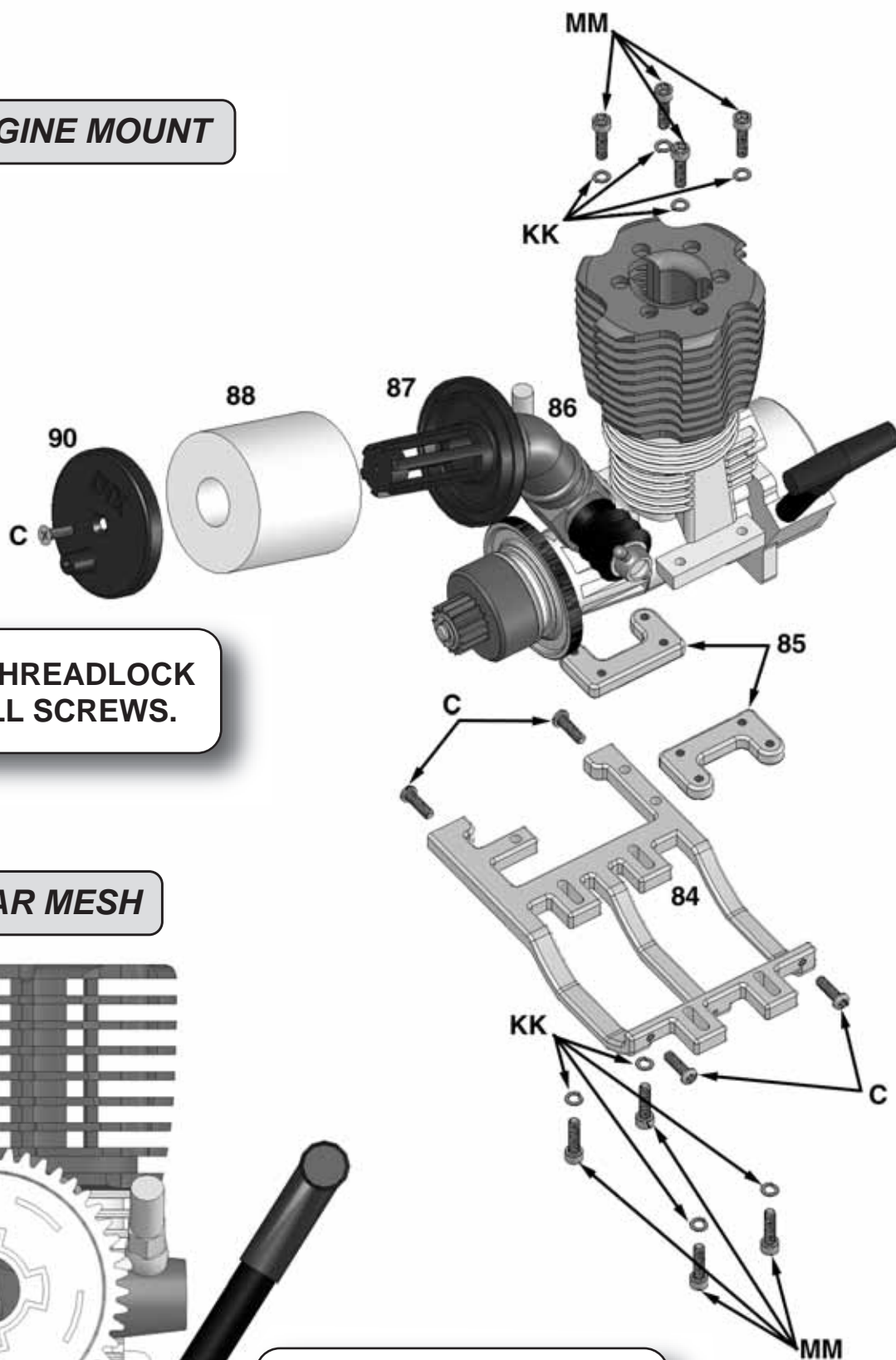
The turnbuckle has left- and right-hand threads. Be sure to note this during assembly and assemble so the turnbuckles are oriented the same on both sides of the truck.

## CHASSIS ASSEMBLY



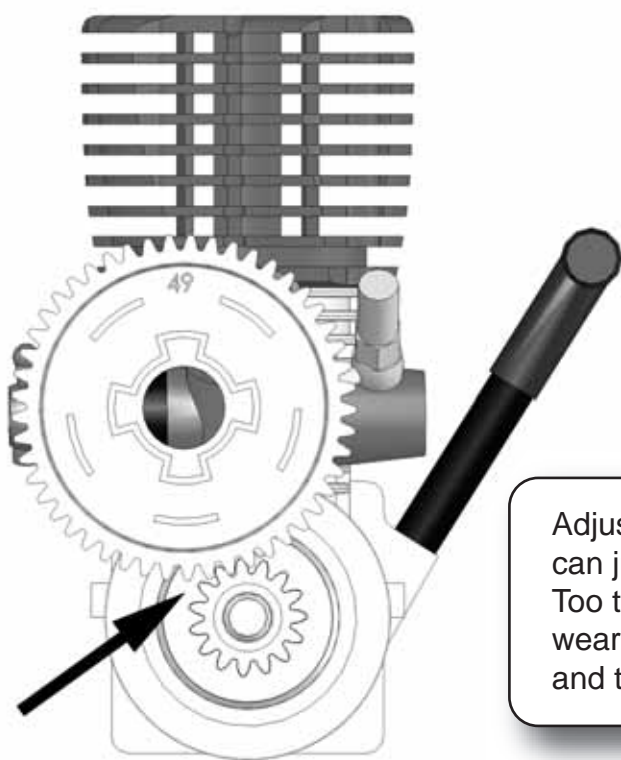


## ENGINE MOUNT



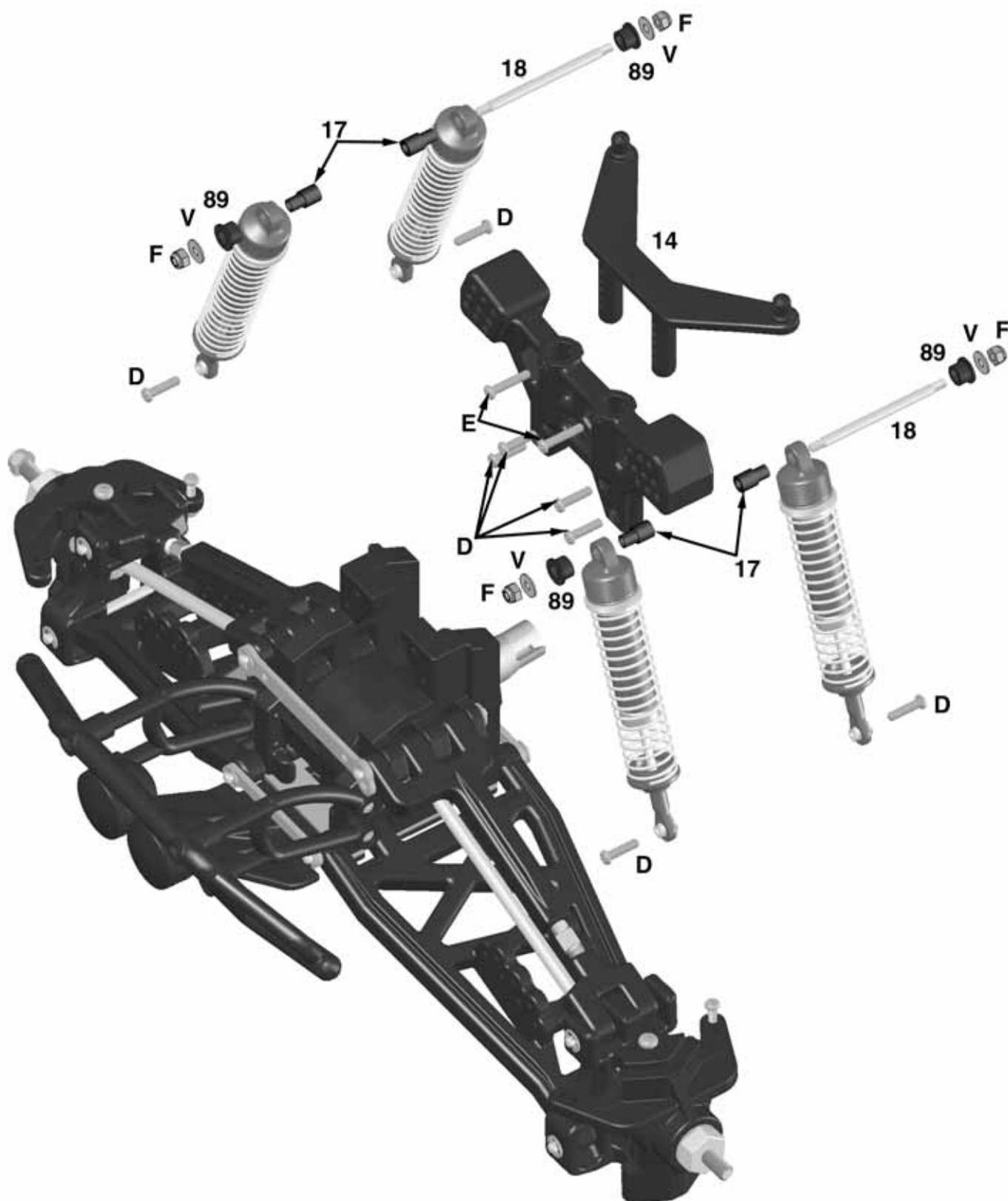
**! USE THREADLOCK ON ALL SCREWS.**

## GEAR MESH



Adjust the gear mesh so you can just feel a little bit of play. Too tight, and the gears will wear prematurely. Too loose, and the gears will strip.

## SHOCK TOWER & MOUNT



## SHOCKS

If the shock shaft is scratched, it will prematurely wear the shock shaft O-rings, causing leaks. Make sure not to thread the shock shaft ball end (110) too far onto the shock shaft.

Apply a small amount of shock oil to the O-rings before installing them into the shock body, being careful not to damage the O-ring. Make sure the O-rings are completely seated in the shock body.



Apply a generous amount of shock oil to the shock shaft assembly before installing into the O-ring assembly.

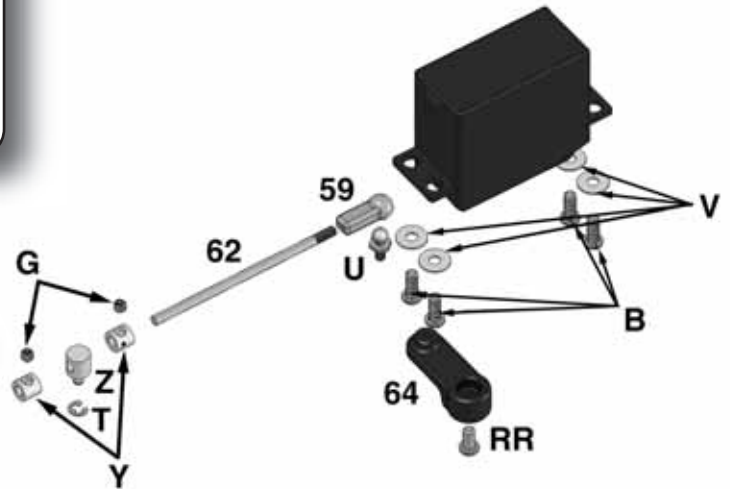
Completely fill the shock body (101) with shock oil. Slowly work the piston up and down to remove air bubbles. Do not push the piston out of the shock oil. Slowly tighten the shock cap (97) onto the shock body (101) to allow the remaining air to escape through the bleed hole in the cap.

## RADIO GEAR

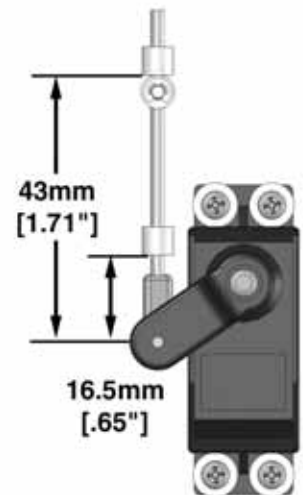
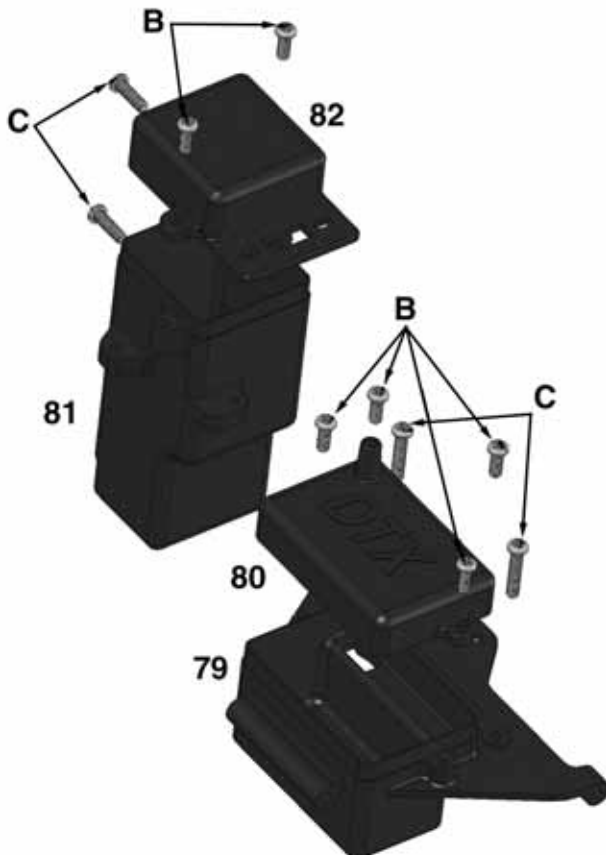
When adjusting the shift linkage, make sure the shift lever will move completely in and out. Roll the wheels to be sure you have full engagement. The truck should roll smoothly without any "clicking" noise.

**! USE THREADLOCK ON ALL SET SCREWS.**

## SHIFT SERVO



## RECEIVER AND BATTERY BOX



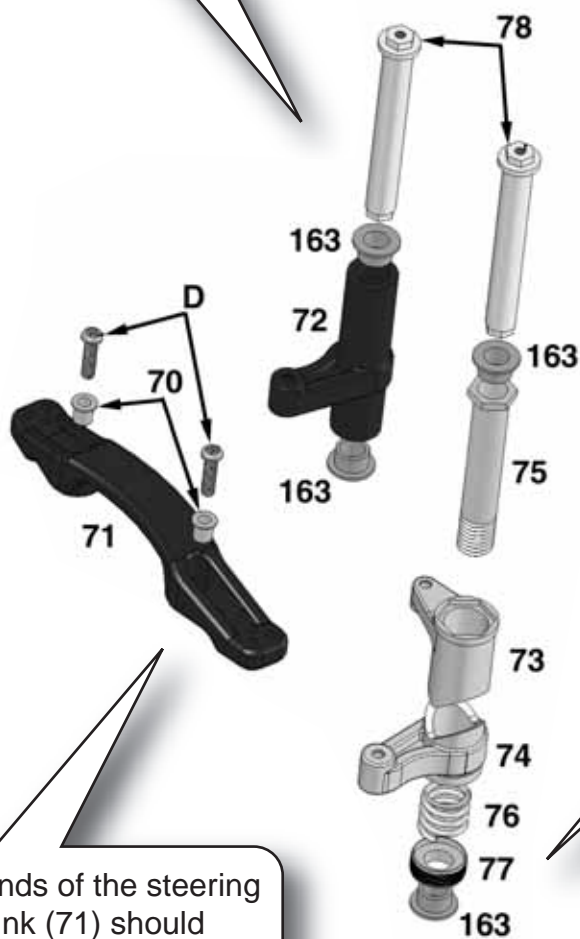
The Warhead battery box was designed to accept the optional 5-cell rechargeable battery pack (DTXM2030).



## THROTTLE/BRAKE SERVO

## BELLCRANKS/SERVO SAVER

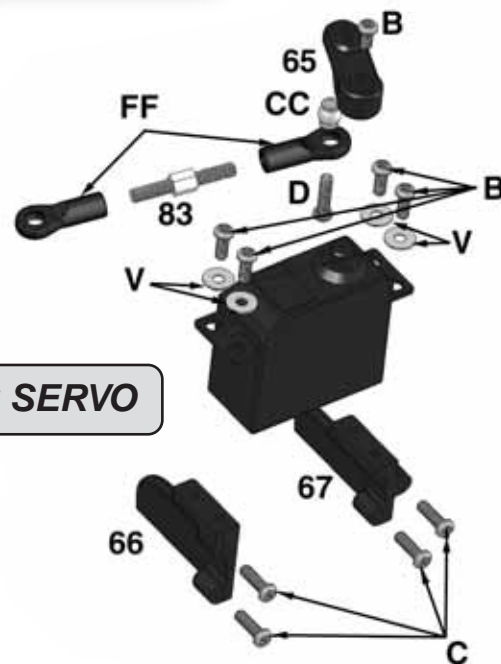
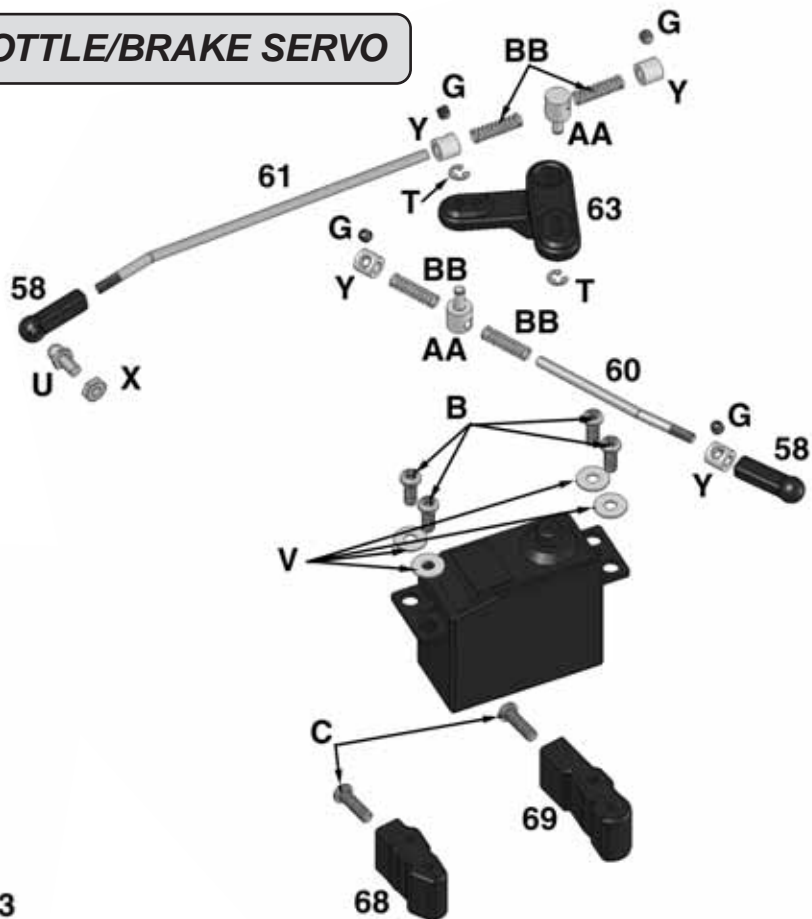
Make sure the bellcrank tubes (78) key into the radio box (79) and skid plate (5).



The ends of the steering drag link (71) should sweep rearward.

To prevent servo damage, do not overtighten. If in doubt, set it loose.

## STEERING SERVO



# TRANSMISSION

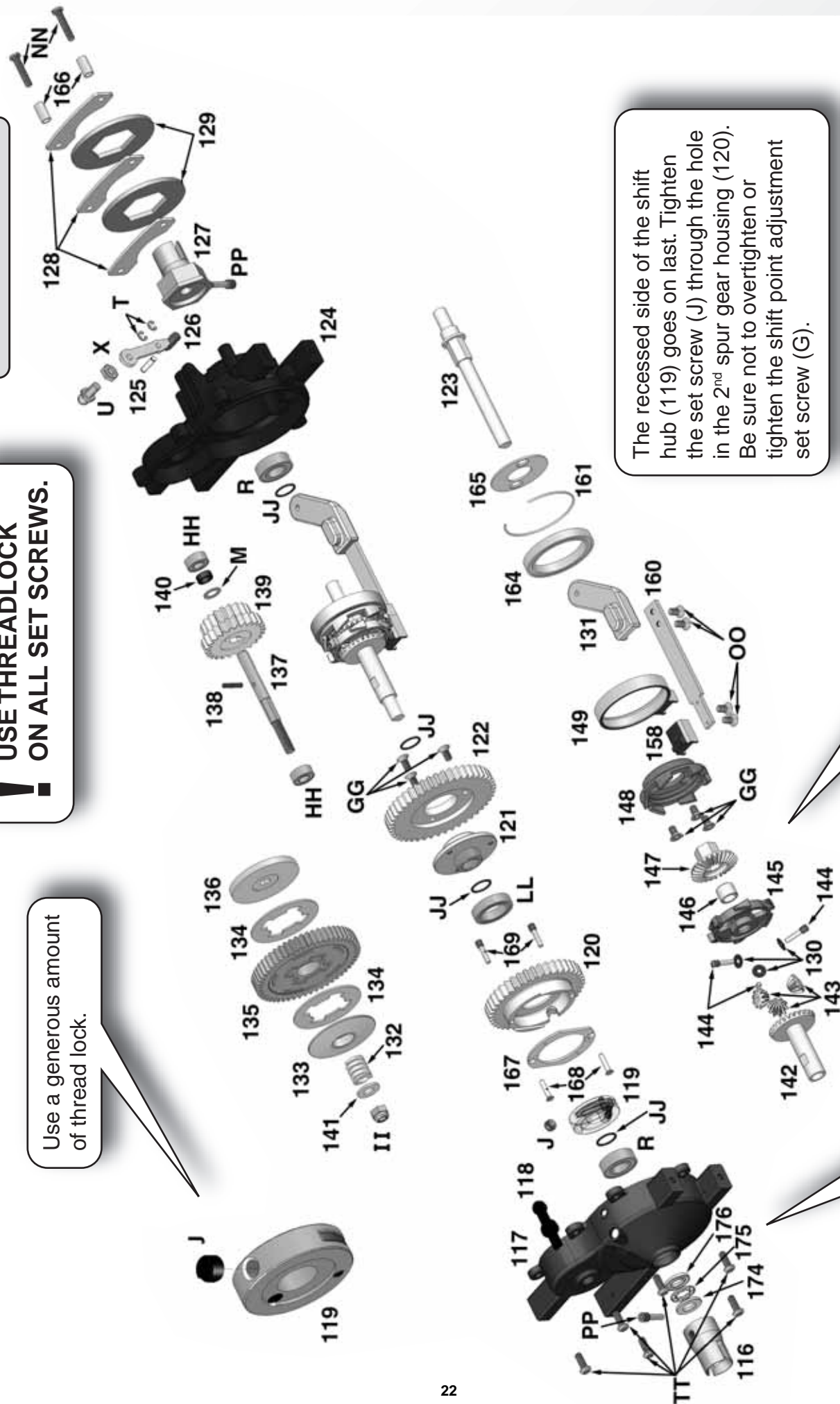
**USE THREADLOCK  
ON ALL SET SCREWS.**

Use a generous amount  
of thread lock.

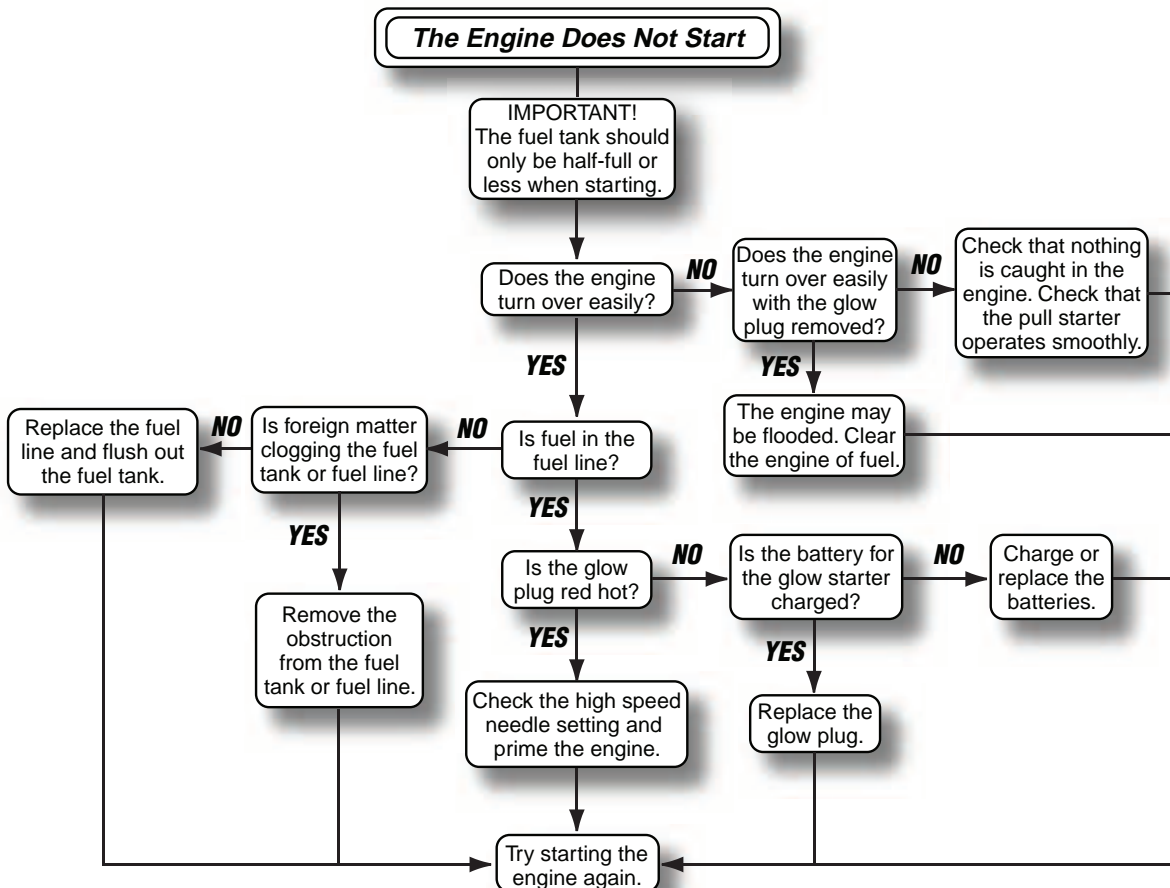
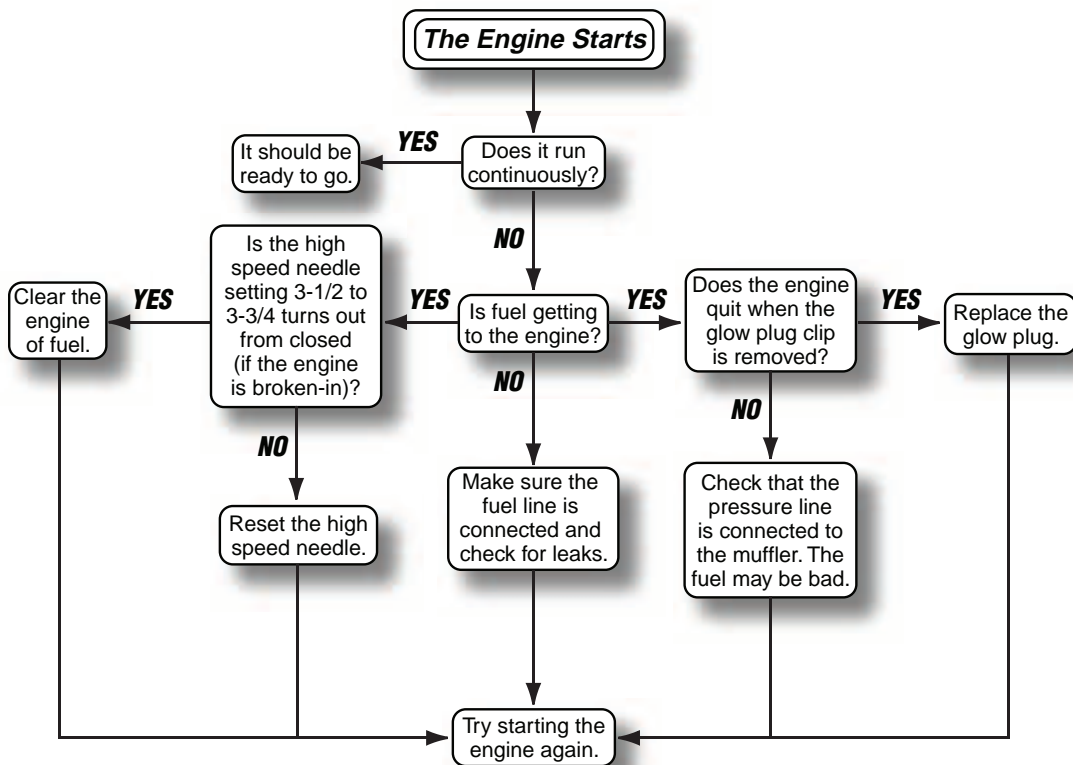
The recessed side of the shift  
hub (119) goes on last. Tighten  
the set screw (J) through the hole  
in the 2<sup>nd</sup> spur gear housing (120).  
Be sure not to overtighten or  
tighten the shift point adjustment  
set screw (G).

Note the direction of the  
reverser center section (145).

Grease the  
thrust bearing.



# ENGINE TROUBLESHOOTING



## OTHER ITEMS AVAILABLE FROM DURATRAX



**5-CELL RECEIVER HUMP PACK  
DTXM2030**

**FLASHPOINT  
DTXP3100**



**ULTIMATE TOOL SET  
DTXR0400**

**FREQUENCY CHECKER  
DTXP3110**

**CLEAN FLOW XL FUEL FILTER  
DTXC2552**



**FAILSAFE UNIT  
DTXM4000**



**PIT TECH THREADLOCKER  
DTXR2010**



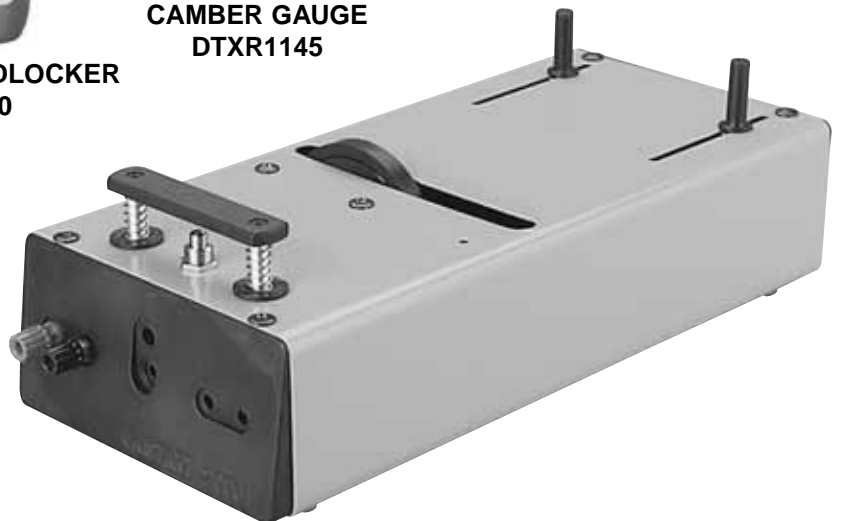
**CAMBER GAUGE  
DTXR1145**



**ULTIMATE FLYWHEEL WRENCH  
DTXR1105**



**STREET TRAC TIRES  
DTXC5260**



**UNIVERSAL II STARTER BOX  
DTXP5600**

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