

# AFTERSHOCK



## Operations Guide



Not Responsible For Errors. All prices subject to change without notice.

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### **Introduction**

Thank you for choosing the Team Losi Sport Aftershock Monster Truck. This is a highly developed off-road vehicle that features a sophisticated computer based radio system and does require some mechanical experience and direct adult supervision. This guide contains the basic instructions and drawings for operating and maintaining your new Aftershock. Please take the time to read through it completely before running the model. **Your hobby dealer cannot under any circumstances, accept a model for return or exchange that has been run.**

#### **Customer Support Contacts:**

**M26SS Engine & JR Propo Radio Gear  
Horizon Hobby Inc.  
4105 Fieldstone  
Champaign, IL 61821  
1-877-504-0233**

**Aftershock Chassis Components:  
Team Losi  
4710 E. Guasti Road  
Ontario, CA 91761  
1-888-899-LOSI Fax 909-390-5356**

### **Safety Precautions**

THIS IS NOT A TOY! The Aftershock is a sophisticated, high performance radio controlled model, which needs to be operated with caution and common sense. Failure to operate this model in a safe and responsible manner could result in personal and/or property damage. It is your responsibility to see that the instructions are followed and precautions adhered to. The Aftershock is not intended for use by children without direct adult supervision. Team Losi, JR and Horizon Hobby shall not be liable for any loss or damages, whether direct, indirect, special, incidental or consequential arising from the use, misuse or abuse of this product or any product required to operate it. **\* This is still a model, don't expect it to do unrealistic stunts.**

### **Warnings**

- Fuel is dangerous if handled carelessly. Follow all directions and precautions on the fuel container.
- Keep fuel and all chemicals out of reach of children.
- Always keep the fuel container closed and never use around an open flame or while smoking.
- The exhaust emits poisonous carbon monoxide fumes. Always run the model in a well ventilated area and never attempt to run it indoors.
- The top of the engine and the exhaust pipe are extremely hot during and for a time after use. Use caution not to touch these parts, especially when refueling.
- The engine can be loud, especially when run in a confined area. If you find the noise objectionable, use ear protection.
- This model is controlled by a radio signal that is subject to interference from sources outside your control. Interference can cause temporary loss of control so it is advisable to always keep a safety margin in all directions to avoid collisions.
- Always operate your model in an open area away from people and cars. The potential speed of this model can cause injury or damage.

## Required Equipment

You will need the following items to operate your new Aftershock.

12 AA Alkaline batteries for the (8 for the transmitter- 4 for the receiver pack)

Team Losi Nitrotane 20% Fuel. This is the **only** fuel that supports the engine warranty.

Fuel bottle.

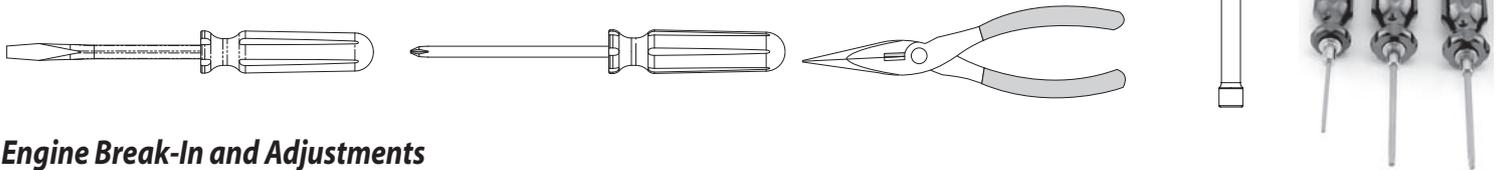
1.5v glow plug ignitor (preferably with a meter).



## Tools You Will Find Handy

In addition to the tools included with the Aftershock, you will find the following both useful and in some cases necessary.

- Small flat blade and Phillips screwdrivers
- Needle nose pliers
- Quality .050", 1/16", 5/64", 3/32", 1.5mm and 2.5mm hex (allen) Drivers



## Engine Break-In and Adjustments

Breaking-in your new engine is critical for proper performance. Failure to follow the break-in procedures can cause damage and shortened engine life. During break-in and when running always use Team Losi Nitrotane 20% fuel.

Although the carburetor is preadjusted at the factory, you must be familiar with the following adjustments and break-in procedure. If you change fuel or run in dramatically different environments (hot/cold, high/low elevation, etc) you will probably have to adjust at least the high speed needle to prevent overheating and maintain proper performance. Never, under any circumstances allow the engine to rev freely with the wheels off of the ground.

### Break-In Procedure

- 1.) The first three tanks of fuel should be run with the high and low speed needles noticeably "rich" (see explanation below). There should be a slight sluggishness and thick smoke when accelerating with the smoke decreasing as the model gains speed. At speed there should still be a noticeable trail of smoke from the exhaust pipe. Run the Aftershock on a flat surface in an oval pattern. Ease into the throttle as you accelerate on the straight sections easing off as you approach turns letting the model roll through the turn before easing back on the throttle. This will also allow you to get a feel for the steering response and handling characteristics of the truck.
- 2.) You can also break in the engine by placing the truck against a wall or fixed object and allow the engine to idle through two full tanks of fuel. You may have to lean the low speed mixture (slightly) as noted below.

### Understanding "Rich" and "Lean" Fuel Mixture

Adjusting the carburetor is one of the most critical facets of running a nitro powered R/C vehicle. The fuel mixture is referred to as being "rich" when there is too much fuel and "lean" when there is not enough fuel for the amount of air entering the engine. The amount of fuel entering the engine is adjusted with high and low speed threaded needle valves. The low-speed needle is located in the front of the moving slide. The high-speed needle sticks straight up at the back of the carburetor. Both feature a slotted head that is used as a reference and receptacle for a flat blade screwdriver for adjustments. The mixture is made richer by turning the needle counter-clockwise and leaner by turning clockwise. An overly "rich" mixture will yield sluggish acceleration and performance with thick smoke from the exhaust. A "lean" mixture can cause the engine to hesitate before accelerating or in some cases, to lose power momentarily after the initial acceleration. A lean mixture also makes the engine run hotter than desired and does not provide enough lubrication for the internal engine components causing premature wear and damage. It is always advisable to **run the engine slightly rich** and **never lean** to avoid overheating and possible damage.

### Base Start-up Settings from the factory

High-Speed Needle -- 3 turns out from bottom

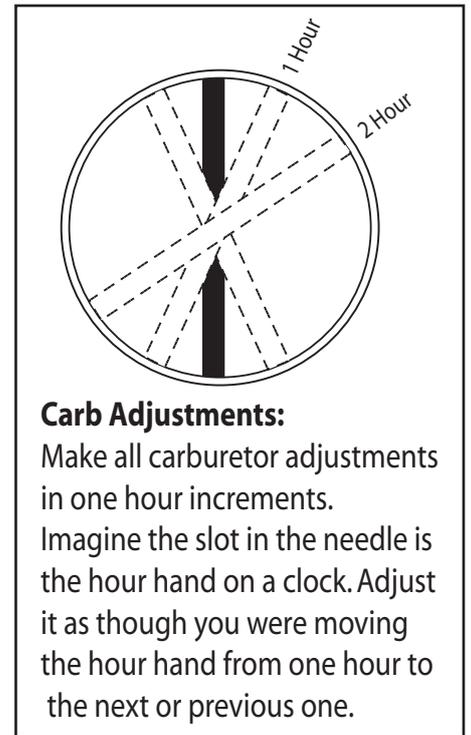
Low-Speed Needle -- 3 turns out from bottom

### Engine Tuning

After the engine is broken in you can tune it for optimum performance. When tuning it is critical that you be cautious of overheating as severe damage and premature wear can occur. You want to make all carburetor adjustments in "one hour" increments.

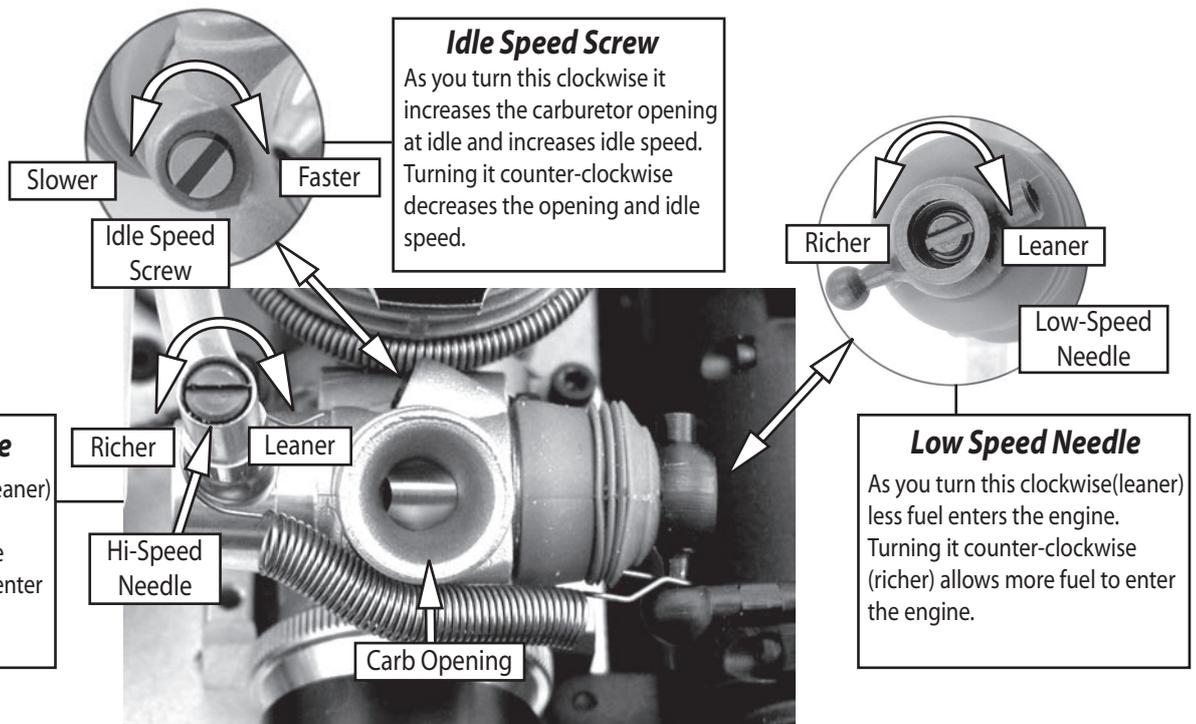
### Low Speed Adjustment

The low speed adjustment effects the idle and slightly off idle performance. The optimum setting allows the motor to idle for at least 8-10 seconds. The truck should then accelerate with a slight amount of sluggishness and a noticeable amount of smoke. The simplest way to check this is to make sure the engine has been warmed up and let the engine idle for 8-10 seconds. If the low speed mixture is so far off that the engine won't stay running this long, turn the idle stop screw clockwise, increasing the idle speed. With the engine at idle, pinch and hold the fuel line near the carburetor, cutting off the flow of fuel and listen closely to the engine RPM (speed). If the low speed needle is set correctly, the engine speed will increase only slightly and then die. If the engine increases several hundred RPM before stopping, the low speed needle is too rich. Lean the mixture by turning the needle clockwise one hour and trying again. If the engine speed does not increase but simply dies, the needle is too lean and needs to be richened up by turning the needle counter-clockwise one hour before trying again. After you have optimized the low speed setting, the engine will probably be idling faster. You will have to adjust the idle stop screw counter-clockwise to slow down the engine idle speed. The engine should accelerate at a constant pace without hesitating.



### Carb Adjustments:

Make all carburetor adjustments in one hour increments. Imagine the slot in the needle is the hour hand on a clock. Adjust it as though you were moving the hour hand from one hour to the next or previous one.



### **Hi-Speed Adjustment**

After initial acceleration the engine should pull at a steady rate while maintaining a two-stroke whine and a noticeable trail of smoke. If the engine labors and is sluggish with heavy smoke, the mixture is too rich and needs to be leaned by turning the hi-speed needle clockwise in one hour increments until it runs smoothly. If the engine isn't smoking or starts to die after starting to accelerated, it is too lean and you must richen the mixture by turning the needle counter-clockwise. Don't be confused by the sound of the engine and the actual performance. A leaner mixture will produce a higher pitch exhaust note but this does not necessarily mean improved performance as the engine is on the verge of over heating and possible damage. Ideally you want to run the engine so that it is on the slightly rich side of optimum. This will give you the best combination of speed and engine life. **CAUTION:** The engine is too lean and overheating if it accelerates rapidly with a high pitch scream then seems to labor, stops smoking, or loses speed. This can be caused by the terrain, atmospheric conditions, or drastic altitude changes. To avoid permanent engine damage, **Immediately** richen the mixture by turning the hi-speed needle counter-clockwise at least "two hours" and be prepared for further adjustments before running anymore.

### **About Glow Plugs**

The glow plug is like the ignition system in your automobile. The coiled element in the center of the plug glows red hot when connected to a 1.5-volt battery (located in the igniter). This is what ignites the fuel/air mixture when compressed in the cylinder. After the engine fires, the heat generated by the burning fuel keeps the element hot. Common reasons for the engine not starting is the 1.5 volt battery being weak or dead, the glow plug being wet with fuel, or the element burned out. Use a spare glow plug to check the igniter. If the igniter makes the element glow, remove the plug from the engine to check it in the same manner. A wet glow plug means there is excess fuel in the engine. To eliminate this, put a rag over the head and turn the engine over a few seconds with your "Spin-Start". Reinstall the glow plug making sure you have the brass gasket on it. The engine should now start.



### **Testing the Temperature**

The ideal operating temperature for the engine will vary with the air temperature but in general it should be in the 200°F to 230°F (93.3°C to 110°C) range. A simple way to check the engine temperature is to put a few drops of water on the top of the head/heatsink. It should take 3-5 seconds for the water to evaporate. If it boils away quickly the engine is overheating and the Hi-Speed needle needs to be richened (turned counter-clockwise) at least "two hours". If you plan on racing or prolonged hi-speed running, there are several inexpensive hand held digital temperature gauges available you may want to invest in.

### **About the Radio**

The JR radio installed in the Aftershock is a professional level system with more than the usual features you may find useful. Be sure to read through the Radio manual included for complete instructions on what and how to use these. The following is a simple guide to commonly used and referred to items needed to run your truck.

- 1. Power Switch - Turns your transmitter ON and OFF**
- 2. Steering Wheel - Controls the trucks steering**
- 3. Steering Trim Tab - Allows you to fine-tune the neutral position of the steering**
- 4. Throttle Trigger - Pull back for throttle and push forward for brakes**
- 5. Throttle Trim Tab - Allows you to set the idle/brake of the truck**
- 6. Transmitter Display - Digital readout shows battery voltage, frequency, feature functions/settings.**
- 7. Transmitter Antenna - Transmits signal to the receiver in the truck.**



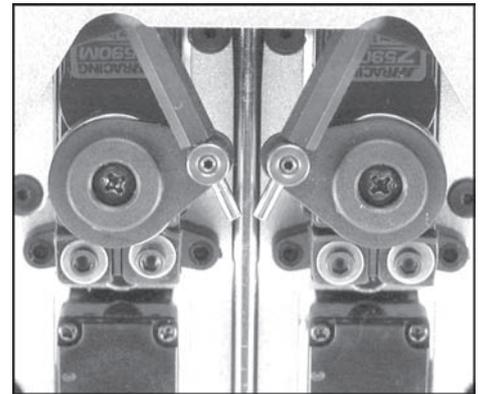
## Radio Operation

It is important that you familiarize yourself with the radio system, as this is your direct link to the truck.

- Never run your truck with low receiver or transmitter batteries.
  - Never leave the power on or the batteries will not last long.
  - Always fully extend the transmitter antenna before running your truck
  - Always turn the transmitter ON before turning the truck ON.
  - When finished running, always turn the truck OFF before the transmitter.
  - For best operation it will be necessary to keep the "trims" adjusted for both the steering and throttle as noted below.
- Steering Trim: The truck should go straight without turning the steering wheel. If not, tap the trim lever found just above the steering wheel in the direction needed for the truck to go straight. Each tap of the trim button will be accompanied by an audible tone indicating a change has been made. It may take several taps to get the correct trim setting.
- Throttle Trim: The truck should idle without the tires rotating when the trigger is at its neutral position. If not, tap the trim tab located to the left of the steering wheel to reposition the throttle servo and close the carburetor and apply more brakes. Note that additional braking force is applied when you push the trigger forward.

Synchronizing the Steering Servos: If you remove the steering servos or the servo savers you will probably have to make some small adjustments to insure they are working together at maximum capacity. With the servo savers removed and the linkage attached;

- Turn on the radio and reset the steering trim to read "0" (which is neutral) on the radio screen.
- Loosen the set screws securing the linkage slightly and mount the servo savers so they are timed as close as possible like that seen in the photo.
- Use the steering trim on the transmitter to fine-tune the timing of the servo savers.
- Make sure the front tires are pointing forward and lock the steering linkage in place by tightening the setscrews.



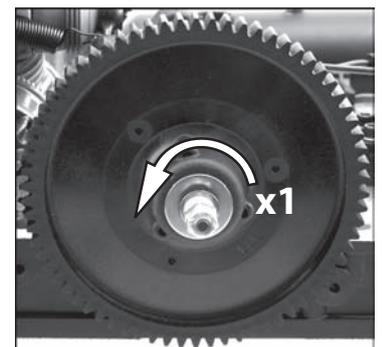
## Maintenance

In addition to the service needs pointed out in this guide, you should try to maintain your new truck for proper performance and to prevent wear. If dirt gets in the moving parts it can seriously hinder the performance of the model. Use compressed air, a soft paintbrush, and/or toothbrush to remove dirt and dust. Avoid using solvents, if possible, as this can actually wash the dirt into bearings and areas not accessible without disassembly causing additional wear. We suggest you follow these basic guidelines.

- Remove as much freestanding dirt and dust as noted above.
- Never leave fuel in the tank for more than a couple of hours.
- When done running for the day or longer, let the engine run out of fuel. Remove the air cleaner and pour a little WD40, or quality after-run engine oil into the carburetor and spin the engine over a few seconds.
- If needed, clean and re-oil the air cleaner before installing it back on the truck.
- Inspect the truck for worn, broken, or binding parts and repair as necessary.

## Adjusting the Slipper

The slipper is a key component of the drivetrain that is designed to help absorb sudden or large impacts that would otherwise stress various drivetrain parts. You should never run the Aftershock with the slipper locked (completely tight). The slipper can also be used as a tuning aid for extremely slick conditions. To adjust the slipper start by turning the 1/4" adjustment nut clockwise (tighten) until it gets tight and the spring is compressed. Do Not Over Tighten as you will strip the nut. Now turn the adjustment nut counter-clockwise (loosen) one full turn. This should be a good overall setting.

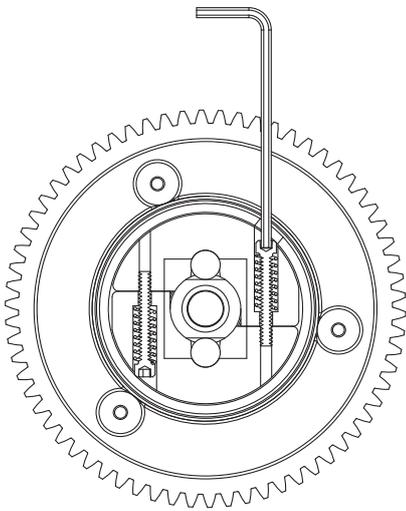


**Slipper - 1 turn out**

## 2-Speed Adjustment

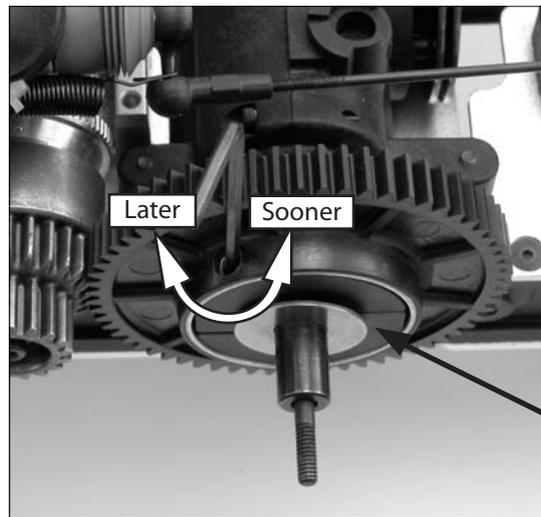
Although pre-adjusted at the factory, the two-speed can be adjusted to shift at the point that suits you best. Under normal circumstances, it should shift slightly before the engine reaches maximum power. The actual distance traveled will vary with the gear ratio and tune of the engine. There are two adjustment screws (see fig 1) that must be changed evenly for the two-speed to function correctly. Turning these clockwise will make it shift later and require the engine to rev higher. Turning them counter-clockwise will make it shift earlier and require less engine speed. If you should get lost adjusting the two-speed, start over at the **factory setting** by **lightly** bottoming out the adjustment screws and then backing them out **five** full turns. The procedure for adjusting the two-speed is as follows:

- Remove the gear cover.
- Turn the spur gears until the adjustment hole is visible in the bell housing between the large and small spur gears.
- Hold the small spur gear and using your thumb, rotate the slipper forward until you can see the head of one of the adjustment screws.
- Use a 5/64 Allen wrench to make your adjustment in 1/2 turn increments. Use the bent leg of the wrench as your guide.
- Turn the slipper forward 1/2 rotation to adjust the other adjustment screw like the first.  
**(Remember to always adjust BOTH screws the same amount)**
- Test drive the truck to check the new shift point and **replace the gear cover** if satisfied.
- **Never** run your truck without the gear cover as it is dangerous and gear damage will occur!



**Fig 1**

**Always adjust BOTH Adjustment screws evenly.**

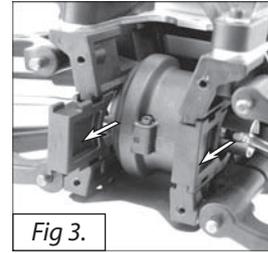
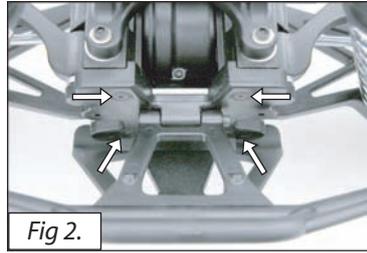
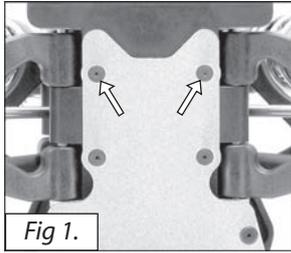


Turning the adjustment screws counter-clockwise makes the 2-speed shift sooner, turning clockwise will make it shift later.



## Servicing the Differentials

The differentials should be serviced periodically. Be sure to clean and inspect all of the gears and replace if severely worn. Always use plenty of high-quality grease (like Team Losi LOSA3066) on all gears. **NOTE:** These can also be made into racing type viscous diffs as noted below. Always service one diff at a time and pay close attention to install the housing with the "TOP" marking up so it can be seen looking down on the truck.

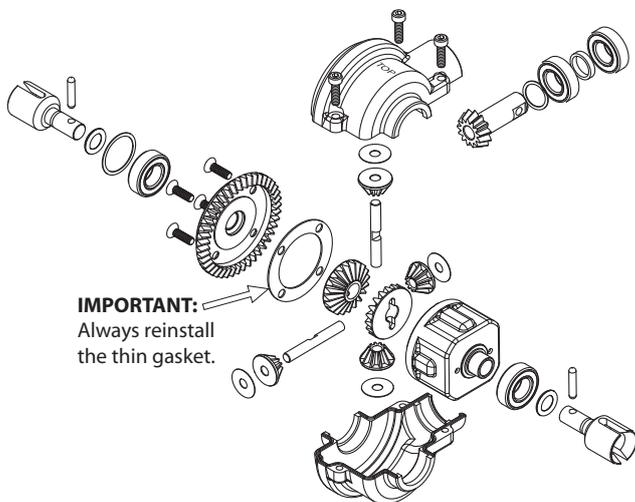
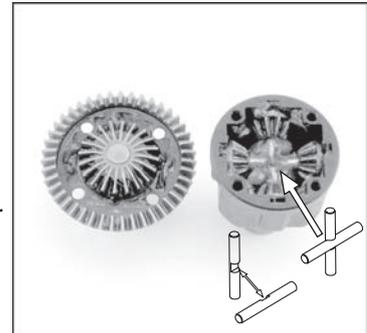


### Removing the diffs

- Remove the two screws in the bottom at the extreme end of the chassis (fig1)
- Remove the four screws in the bulkhead allowing the bumper/skidplates and pin mounts to be removed (fig 2).
- Remove the diff retainers and slide the diff out (fig 3). **NOTE:** On the front end only you will have to remove the lower front shock attachment screws and swing the shocks up and out of the way. On the rear end you will need to "pop" off the rear camber links.

### Diff Service

- Remove the three 5/64" cap head screws and the top of the differential housing, then the diff.
- Remove the four 5/64" flat head screws from the ring gear allowing it to be removed.
- Inspect the ring and pinion gears for wear - replace if necessary.
- Remove the cross shafts, bevel gears, and shims for the carrier.
- Clean and inspect all parts - replace as needed.
- Check all ball bearings. Clean or replace as necessary.
- Remove pins from outdrives. Remove outdrives, regrease and reinstall.
- Lube all shafts and gears with LOSA3066 assembly grease and reassemble.
- Load cross shafts with gears into the carrier with extra grease. Apply the rubber gasket to the carrier and reinstall ring gear.
- Lube ring and pinion with grease and reassemble diff into diff housing.
- Reinstall into chassis with "TOP" on housing facing up.



### For Viscous Differential

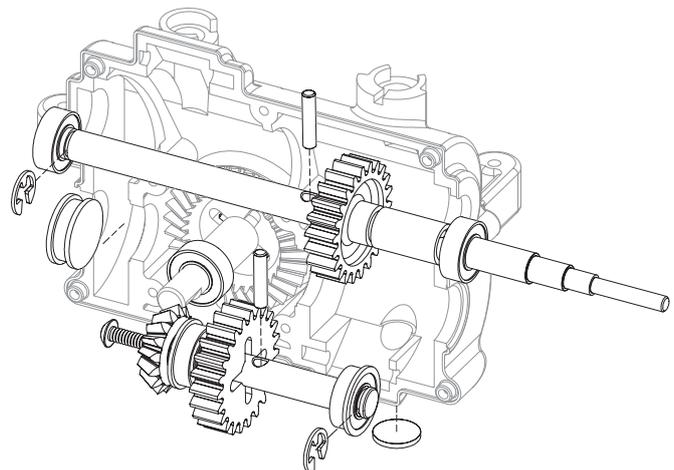
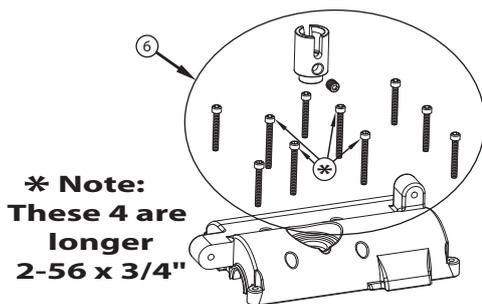
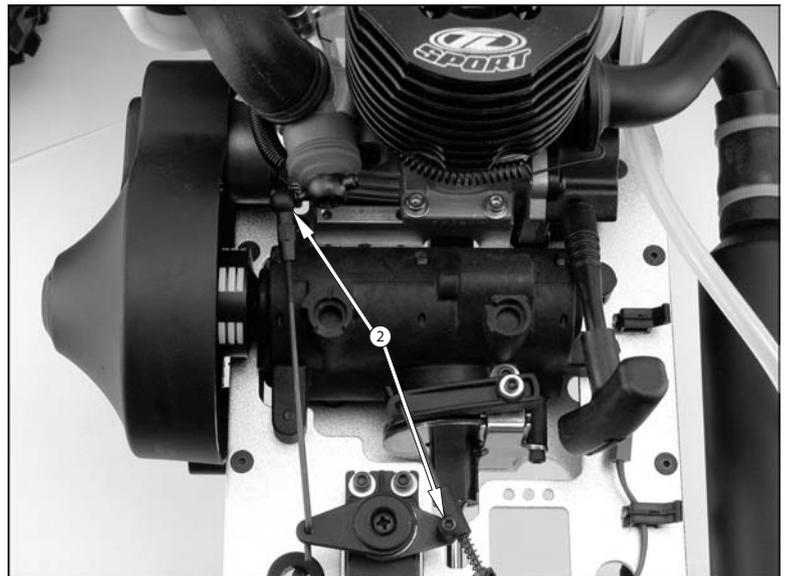
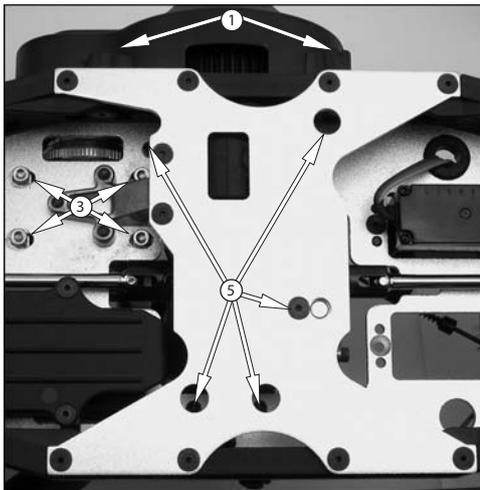
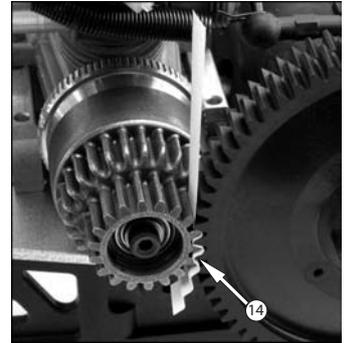
Instead of grease you can use Silicone fluid in the differential for a limited slip feel as desired for racing. Simply fill the diff up to the top of the gears before replacing the ring gear. (Be sure to reinstall the gasket). You may have to replace the o-rings on the outdrives at the same time you change to this type of differential if the old ones are worn. Popular silicone fluid for monster trucks is 10,000cs and is available at your local hobby dealer.

## Servicing the Transmission

The Transmission should also be cleaned and serviced periodically. All gears and shafts should be closely inspected for wear and replaced if necessary. Always use a high quality grease or lubricant to prevent premature wear and/or failure.

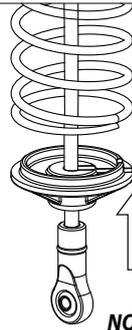
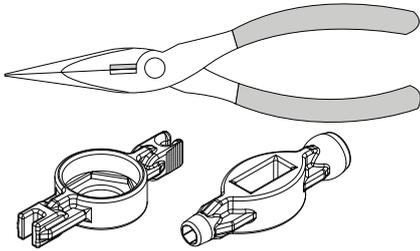
### Removing the transmission

- ① Remove the gear cover.
- ② Remove the throttle linkage from the carburetor and the brake linkage from the servo arm.
- ③ Loosen the four motor mount screws (bottom of the chassis) and slide the motor back.
- ④ Remove 2-Speed Spur Gears.
- ⑤ Remove the five transmission mounting screws and lift the transmission out.
- ⑥ Remove the outdrive and ten 5/64 cap head screws. Remove the transmission case half.
- ⑦ Regrease the gears and shafts, inspecting each for wear.
- ⑧ Replace any worn or failed gears.
- ⑨ Wipe out the inside of the gear case, removing any debris, old grease and foreign matter.
- ⑩ Check all ball bearings for free movement cleaning or replacing as necessary.
- ⑪ Reinstall gears on the shafts lubing with LOSA3066 Team Losi Assembly Grease.
- ⑫ Reassemble the transmission lubricating liberally with LOSA3066 or similar hi-grade grease.
- ⑬ Make sure the setscrews in the outdrive cups are tightened - a locking compound is highly suggested.
- ⑭ Install the transmission in the chassis, reset the gear mesh by using a small piece of paper between the pinion and spur gears, applying pressure while retightening the engine. Reconnect all linkages and connections as necessary.



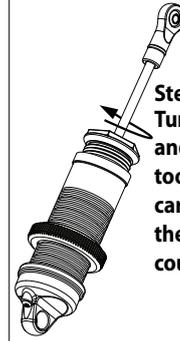
# Rebuilding/Refilling the Shocks

## Tools Needed

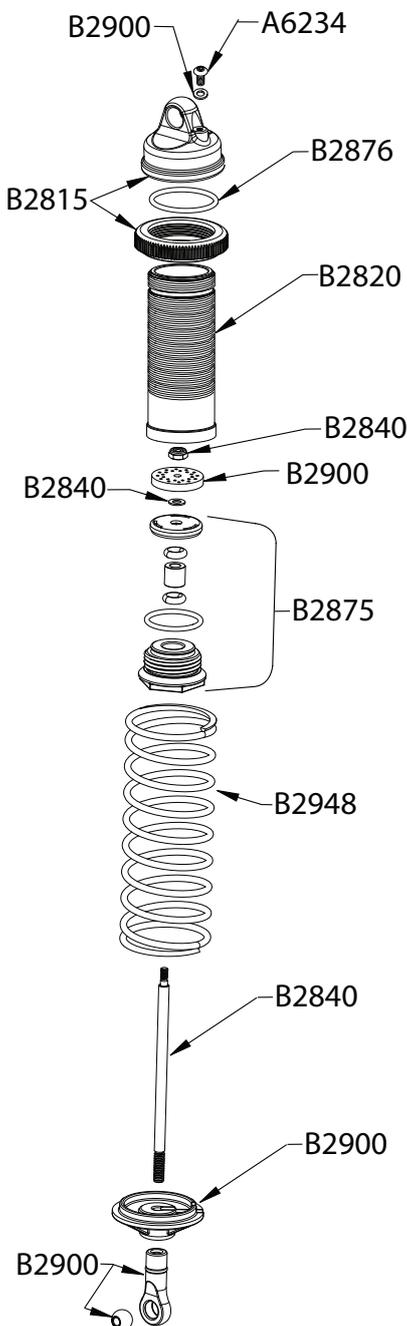


**Step 1.**  
After removing the shock, push up on the lower spring cup and snap it off of the shaft. Remove the spring.

**NOTE:** If you only wish to change or fill the shock fluid skip to step 6.



**Step 2.**  
Turn the shock upside down and using the included shock tool, remove the black shock cartridge/shaft assembly from the shock body by turning it counter clockwise.



**Step 3.**  
Remove the 1/4" nut by turning it counter-clockwise. Remove the piston and washer. Remove the old cartridge. Put a drop of shock oil on the shock shaft before installing new shock cartridge.

Hold Here with needle nose pliers

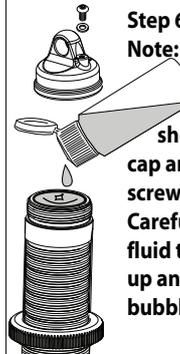


**Step 4.**  
Install washer onto the shock shaft until it stops. Slide the shock piston onto the shaft against the washer. Reinstall 1/4" nut and tighten by turning it clockwise.

Be sure to reinstall washer



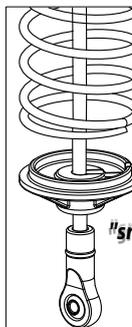
**Step 5.**  
If you plan on completely changing the shock fluid (suggested) dump out the old fluid from the shock body before reinstalling the cartridge/shaft assembly. Pull the shaft out so that the piston is next to the cartridge and reinstall the assembly into the shock body and tighten in a clockwise direction.



**Step 6.**  
**Note:** If you are just refilling your shocks, be sure to use Team Losi 30wt silicone shock fluid. Remove the shock cap and the small button head screw and washer in the top of it. Carefully fill the shock body with fluid to the top. Move the shaft up and down slowly to remove bubbles. Top off with oil if needed.



**Step 7.**  
Holding the shock upright, push the shock shaft in slowly until it bottoms out. While holding the shock shaft in this position, replace the small screw and washer in the shock top. If fluid leaks around the threads of the cartridge, it is probably not tight enough.

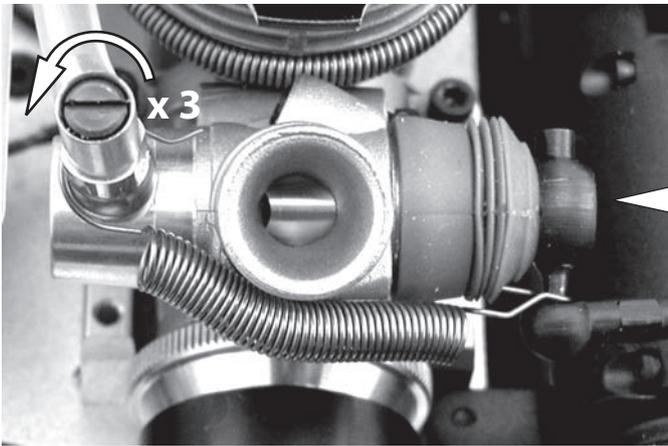


**Step 8.**  
Slide the spring over the shock body against the shock adjuster nut. Slide the lower shock cup onto the shock shaft and snap it onto the shock end being sure that it seats on the mount. **"snap!"** Reinstall the shock.

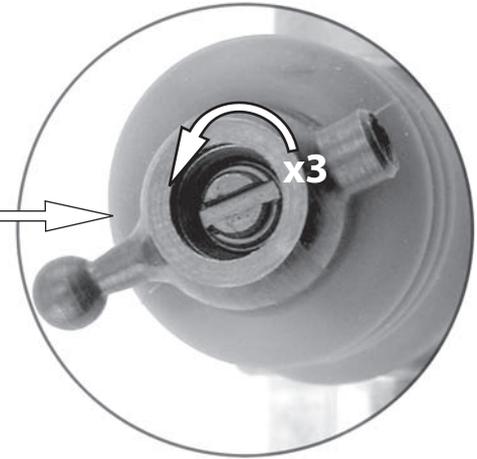
# Quick Reference Guide

## Initial Factory Settings

### Engine

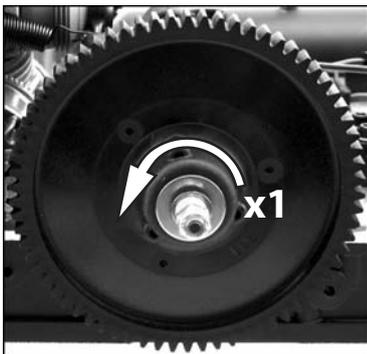


Hi-Speed Needle - 3 turns out

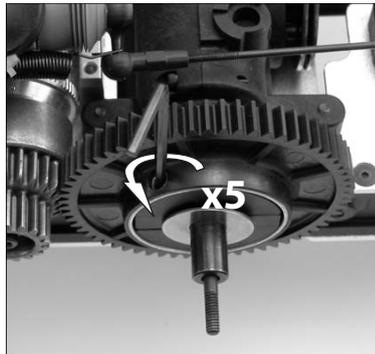


Low-Speed Needle 3 turns out

### Transmission



Slipper - 1 turn out



Two-Speed - 5 turns out

### Axles



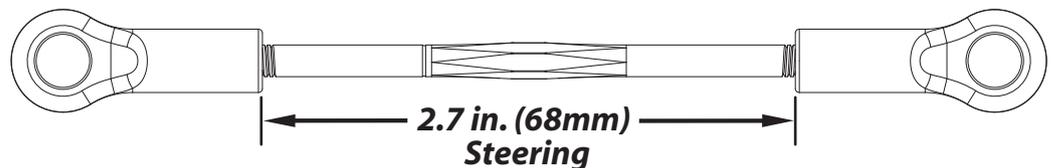
Black Axles = Left Side  
Silver Axles = Right Side

### Shocks



Team Losi 30wt  
Shock Oil  
(LOSA5224)

### Tie Rods



# Trouble shooting Chart

Problem	Things To Check	Remedy
Engine won't start.....	Out of fuel Spoiled or improper fuel Glow plug not lighting Glow igniter not charged Engine overheating Engine flooded Air cleaner blocked Exhaust blocked	Check/Replace Glow plug Charge/change battery Let cool - see "Testing the Teperature" Clean & reoil aircleaner
Engine won't turn over.....	Engine is flooded Engine seized	Loosen glow plug and tug on the pull start to "turn" the engine over
Engine starts then stalls.....	Idle speed set too low Glow plug is fouled/weak Air bubbles in fuel line Engine is overheated Insufficient fuel tank pressure/blockage	See "Carburetor Adjustments" See "About Glow Plugs" Check for split/hole in fuel line See "Testing the Temperature" Clear pressure line
Engine performing poorly.....	Hi-Speed fuel mixture is too rich Engine overheating Leaking glow plug Carburetor dirty or blocked Fuel bad or contaminated Clutch or Slipper slipping Bound up drive-train Engine worn out	See "Engine Tuning"  Replace glow plug  Try fresh fuel Clean/Adjust/Repair Check for binds in drive-train Rebuild
Engine overheats.....	Hi-Speed fuel mixture is too lean Low-Speed fuel mixture too lean Spoiled or improper fuel Cooling air is being blocked Excessive load on the engine	See "Understanding Rich and Lean"  Clean head fins Check for binds
Engine hesitates or stumbles.....	Engine overheated Hi-Speed mixture too lean Low-Speed mixture to rich Air bubbles in fuel line Glow plug fouled	See "Engine Tuning"  Check fuel line for holes Change glow plug
Engine stalls instantly when throttle is fully opened from idle.....	Glow plug fouled Hi-Speed mixture too rich Low-Speed mixture too lean	Change glow plug See "Engine Tuning"
Engine stalls while driving around turns.....	Fuel level is low Idle speed set too low	Add Fuel Increase Idle speed
Engine stalls while idling.....	Low-Speed mixture too rich Low-Speed mixture too lean Idle speed to low Clutch shoes dragging  Clutch bearings failed Engine worn out	See "Engine Tuning"  Increase idle speed Check for broken clutth springs  Check/Clean/Replace Rebuild

# Aftershock Parts List

## SUSPENSION PARTS

LOSB2001 F/R Suspension Arms (pr)(LST/AFT).....	\$10.00
LOSB2101 F/R Spindles & Carriers (LST/AFT).....	\$7.00
LOSB2102 Steering Bell Cranks, Shafts, & Chassis Braces (LST/2)...	\$7.00
LOSB2151 F/R Shock Tower & Pin Mounts (LST/2) .....	\$8.50
LOSB2201 F/R Suspension Pin Brace Set (AL) (LST/2).....	\$7.00

## Chassis Parts

LOSB2251 Main Chassis Plate (LST/2) .....	\$26.99
LOSB2252 Chassis Skid Plate (LST/2) .....	\$9.50
LOSB2253 Top & Brace Chassis Plates (LST/2) .....	\$13.99
LOSB2254 Motor Plate/Chassis Brace (LST/2).....	\$6.00
LOSB2256 Chassis Side Rails (LST/2) .....	\$8.50
LOSB2257 R&L Bulkheads & Diff Retainer (LST/2) .....	\$6.00
LOSB2350 Radio Box & Hardware (LST/2) .....	\$7.00
LOSB2351 Battery Mount Set (LST/2) .....	\$5.50
LOSB2401 F/R Bumpers & Braces (LST/2) .....	\$10.99
LOSB2450 F/R Body Mount Posts & Hardware (LST/2) .....	\$3.50

## Shocks

LOSB2815 Shock Nut & Cap Molded (4) (LST) .....	\$9.00
LOSB2820 Molded Shock Body (2)(AFT).....	\$9.99
LOSB2840 Shock Shaft (LST/2).....	\$5.00
LOSB2875 Shock Cartridges & Seals (2) (LST/2).....	\$6.00
LOSB2876 Shock Cart. & Cap O-Rings (8) (LST/2).....	\$3.00
LOSB2880 Assm. Molded Shock w/Spring(no oil)(AFT) .....	\$19.99
LOSB2900 Shock Hardware-All Plastics (LST/2).....	\$6.50
LOSB2948 Shock Springs - Flat Black (AFT).....	\$6.00

## Transmission

LOSB3102 Transmission Case Set (LST/2) .....	\$10.99
LOSB3125 Trans Drive & Selector Pin Set (LST/2) .....	\$2.00
LOSB3127 Trans Output Shaft & Spacer (LST/2).....	\$3.50
LOSB3128 Trans Outdrive Cup Set (LST/2) .....	\$9.00
LOSB3132 Fwd. Only Input Shaft Set(LST/2/AFT) .....	\$5.50
LOSB3133 Fwd. Only Input Gear 22T (LST/2/AFT).....	\$9.00
LOSB3135 Fwd. Only Counter Shaft Set (LST/2/AFT) .....	\$3.50
LOSB3136 Fwd. Only Counter Gear 23T Tini LST/2/AFT).....	\$9.99
LOSB3138 Fwd. Only Trans Plug Set (LST/2/AFT).....	\$3.50
LOSB3190 Gear Cover (2-Speed)(LST/2).....	\$4.50
LOSB3193 Inside Gear Cover (LST/2).....	\$5.50
LOSB4203 FWD/REV & Brake Arms (LST/2).....	\$3.00

## Clutch Parts

LOSB3301 Flywheel, Collet, & Nut (LST/2).....	\$10.99
LOSB3322 Clutch Spring Set (3) Silver (LST/2).....	\$3.00
LOSB3341 18T/25T One-Piece Clutch Bell -- Steel (LST/2).....	\$19.99

## 2-Speed & Slipper Parts

LOSB3401 2-Speed Cam & Bushings (LST/2).....	\$17.99
LOSB3404 2-Speed Clutch Shoes & Hardware (LST/2) .....	\$3.50
LOSB3409 2-Speed Low-Gear 1-way (AFT).....	\$14.99
LOSB3421 70T Spur (Low) Gear & Hard. (AFT) .....	\$5.00
LOSB3423 63T Spur (Hi) Gear & Bell (AFT) .....	\$7.00
LOSB3450 Slipper Cage (LST/2) .....	\$14.99
LOSB3451 Slipper Pads & Plates (LST/2) .....	\$7.00
LOSB3455 2-Speed/Slipper Thrust Bearing & Hardware (LST/2).....	\$5.00

## Drive Train Parts

LOSB3501 F/R CV Driveshaft Set (2)(LST/AFT).....	\$37.99
LOSB3502 F/R Drive Shaft only (2)(LST/AFT).....	\$11.95
LOSB3503 F/R Axle Right Side - Silver (LST/AFT).....	\$6.50
LOSB3504 F/R Axle Left Side - Black (LST/AFT).....	\$6.50
LOSB3505 CV Driveshaft Rebuild Set (LST/AFT).....	\$7.00
LOSB3508 Wheel Hexs & Drive Pins (4ea.)(LST/AFT).....	\$3.00
LOSB3529 F/R Differential Assembled Complete .....	\$49.99
LOSB3533 Cast Aluminum Diff Case (AFT) .....	\$9.00
LOSB3534 F/R Diff Ring & Pinion (LST/2) .....	\$26.99
LOSB3537 F/R Diff Housing (LST/2).....	\$4.00
LOSB3538 F/R Diff Bevel Gear Set (LST/2).....	\$7.00
LOSB3539 F/R Diff Seal Set (2) (LST/2).....	\$3.50
LOSB3540 F/R Diff Outdrive Set (LST/2).....	\$9.00

LOSB3541 F/R Diff Drive Yoke (LST/2).....	\$5.00
LOSB3545 Center CV Driveshaft (LST/2) .....	\$10.99
LOSB3601 Brake Disks -- Steel(2)(LST/2).....	\$4.00
LOSB3603 Brake Cam (LST/2) .....	\$3.00
LOSB3605 Brake Pads & Bracket(LST/AFT) .....	\$5.00

## Hardware

LOSA3045 Gear Cover Access Plug .....	\$1.50
LOSA4002 Antenna Tube & Cap .....	\$2.25
LOSA4003 Antenna Caps .....	\$1.25
LOSA6100 1/8" E-Clips .....	\$1.25
LOSA6103 3/32" E-Clips .....	\$1.25
LOSA6106 4mm E-Clips (12) .....	\$2.00
LOSA6107 6mm E-Clips (12).....	\$2.00
LOSA6204 4-40 x 1/2" Caphead Screw (10).....	\$1.50
LOSA6205 4-40 x 3/4" Caphead Screw (10).....	\$1.50
LOSA6206 4-40 x 3/8" Caphead Screw (10).....	\$1.50
LOSA6210 4-40 x 3/8" Flathead Screw (10) .....	\$1.50
LOSA6216 4-40 x 7/8" Caphead Screw (10).....	\$1.50
LOSA6220 4-40 x 1/2" Flathead Screw (10) .....	\$1.50
LOSA6221 4-40 x 5/8" Caphead Screw (6).....	\$1.50
LOSA6227 4-40 Hardened Set Screw (10) .....	\$1.80
LOSA6229 4-40 x 3/8" Buttonhead Screw (10).....	\$2.00
LOSA6232 2-56 x 1/4" Caphead Screw (10) .....	\$2.50
LOSA6233 4-40 x 5/8" Flathead Screw (10) .....	\$2.50
LOSA6234 4-40 x 1/4" Buttonhead Screw (10).....	\$2.50
LOSA6240 5-40 x 1/2" Caphead Screw (8).....	\$2.50
LOSA6241 5-40 x 5/8" Caphead Screw (8).....	\$2.50
LOSA6242 5-40 x 1 1/4" Caphead Screw (4).....	\$2.50
LOSA6244 Kingpin Screw (LST) (8).....	\$4.00
LOSA6245 4-40 x 5/16" Caphead Screw (10).....	\$2.00
LOSA6246 2-56 x 5/8" Caphead Screw (8).....	\$3.00
LOSA6247 2-56 x 3/4" Caphead Screw .....	\$3.00
LOSA6250 4mm & 5mm Set Screws (4 ea.) .....	\$2.50
LOSA6252 3 x 10mm Button & Flathead Machine Screws .....	\$2.00
LOSA6307 5-40 Nuts -- Lock & Hex (4 ea.) .....	\$2.00
LOSA6305 4-40 Steel Lock Nuts .....	\$3.50
LOSA6321 5mm Locknuts -- R & L Thread (4 ea.).....	\$4.00
LOSA6350 #4 & 1/8" Hardened Washers.....	\$2.50
LOSA6355 2.2 & 3.6mm Washers (6 ea.) .....	\$2.00
LOSA6356 5 & 6mm Shim Set .....	\$2.00
LOSA6907 5 x 8mm Shielded Ball Bearing .....	\$6.50
LOSA6937 5 x 10mm Shielded Ball Bearings (2).....	\$5.00
LOSA6939 6 x 10mm Shielded Ball Bearings (4).....	\$8.00
LOSA6940 6 x 12mm Shielded Ball Bearings (4).....	\$8.00
LOSA6941 6 x 12mm Flanged Ball Bearings (4).....	\$13.99
LOSA6942 8 x 16mm Sealed Ball Bearings (4) .....	\$8.00
LOSA6944 15 x 21 x 4mm Shielded Ball Bearings .....	\$7.00
LOSA8200 Body Clips .....	\$1.25
LOSB3951 Differential Shims (13mm) (LST/2/AFT).....	\$2.00
LOSB4001 93mm Turnbuckle Set w/Ends (2)(LST).....	\$5.50
LOSB4104 Pivot Pin Set (4 ea.)(LST/2) .....	\$11.99
LOSB4020 Rod Ends & Pivot Balls (8)(LST).....	\$7.00
LOSB4104 Pivot Pin Set (4 ea.)(LST/2) .....	\$11.99
LOSB4111 Spindle Bearing Spacer Set (LST/AFT) .....	\$2.50
LOSB4201 Steering Hardware Set (LST/2).....	\$7.50
LOSB4203 Fwd/Rev & Brake Arms(LST/2/AFT) .....	\$3.00
LOSB4204 Throttle, Brake, Reverse Linkage Set (LST2) .....	\$6.00
LOSB4250 Servo Saver & Mount Set (LST/2) .....	\$10.99
LOSB4601 Tool Set (LST/AFT) .....	\$4.50
LOSB4603 4-Way Wrench (Steel).....	\$6.00

## Motor Accessories

LOSB5001 Fuel Tank (LST/AFT).....	\$14.99
LOSB5003 Fuel Tank Lid & Spring (LST/2).....	\$4.00
LOSB5005 Fuel Tank Mounts & Hardware (LST/2).....	\$3.75
LOSB5006 Fuel Filter -- Hi Volume Aluminum (LST/2).....	\$8.95
LOSB5020 Air Cleaner w/Oil (LST/2) .....	\$11.99
LOSB5021 Air Cleaner Foam Set (LST/2).....	\$6.99
LOSB5030 Engine Mounts (LST/2) .....	\$10.99
LOSB5049 Exhaust Header, Spring & Seal (AFT) .....	\$14.99
LOSB5052 Exhaust Connector & Pull Ties (AFT) .....	\$3.50
LOSB5062 Exhaust Pipe/Muffler (AFT).....	\$19.99
LOSB5111 Spin-Start .21 - 427 Backplate (LST/2) .....	\$6.00

# Aftershock Parts List

LOSA9315 Fuel Tubing (24").....\$2.50

## Wheels & Tires

LOSB7001 "Magneto" Chrome Wheels (LST/AFT)(pr).....\$12.99  
LOSB7201 "Claw" MT Tires w/Foam (LST/AFT).....\$29.99  
LOSB7401 "Magneto" Wheels/"Claw" Tires Glued (LST/AFT)(pr).....\$44.99

## Bodies & Accessories

LOSB8015 Aftershock Painted Body w/Stickers (Blue).....\$49.99  
LOSB8016 Aftershock Clear Body w/Stickers & Mask.....\$34.99  
LOSB8203 Aftershock Sticker Sheet.....\$6.00

## OPTION PARTS

### Suspension Parts

LOSB2221 Sway Bar Kit (LST/2).....\$14.99

### Chassis Parts

LOSB2260 Heavy Duty Chassis Plate - Hard Ano. (LST/2).....\$49.99  
LOSB2261 Heavy Duty Chassis Skid Plate - Hard Ano. (LST/2).....\$24.99  
LOSB2262 Heavy Duty Chassis Top Plate - Hard Ano. (LST/2).....\$16.99  
LOSB2263 Heavy Duty Front Bottom Plate - Hard Ano. (LST/2).....\$16.99  
LOSB2264 Heavy Duty Rear Bottom Plate - Hard Ano. (LST/2).....\$18.99  
LOSB2270 Hi-Perf Graphite Chassis Plate - (LST/2).....\$109.99  
LOSB2271 Hi-Perf Aluminum Skid Plate - Hard Ano. (LST/2).....\$24.99  
LOSB2272 Hi-Perf Graphite Top Plate (LST/2).....\$36.99  
LOSB2273 Hi-Perf Alum. Front Bottom Plate - Hard Ano. (LST/2).....\$18.99  
LOSB2274 Hi-Perf Alum. Rear Bottom Plate - Hard Ano. (LST/2).....\$18.99  
LOSB2451 Extra Long Body Mounts (LST/2).....\$4.50  
LOSB2501 Wing Mount Plastics (LST/2/AFT).....\$9.00

### Shocks

LOSB2801 Shock Body - Blue (LST/2/AFT).....\$11.99  
LOSB2802 Shock Cap - Blue (LST/2/AFT).....\$8.00  
LOSB2803 Shock Body - Red (LST/2/AFT).....\$11.99  
LOSB2804 Shock Cap - Red (LST/2/AFT).....\$8.00  
LOSB2805 Shock Body - Gold (LST/2/AFT).....\$11.99  
LOSB2806 Shock Cap - Gold (LST/2/AFT).....\$8.00  
LOSB2807 Shock Body & Cap Set - Red (4) (LST/2/AFT).....\$68.99  
LOSB2808 Shock Body & Cap Set - Gold (4) (LST/2/AFT).....\$68.99  
LOSB2811 Threaded Shock Body - Hard Anodized (LST/2/AFT).....\$12.99  
LOSB2813 Shock Adjuster Nut - Blue Aluminum (LST/2).....\$6.00  
LOSB2814 Hard Ano. Threaded Shock Body & Adj. Set (4) (LST/2).....\$58.99  
LOSB2841 Titanium Nitride Shock Shaft (LST/2/AFT).....\$7.50  
LOSB2879 Assembled Threaded Shock w/Spring (Blue) (LST2).....\$34.99  
LOSB2901 Shock Pivot Balls - Hard Ano. Aluminum (4) (LST/2/AFT).....\$7.50  
LOSB2949 Shock Springs - White 4.0 lb Rate (pr) (LST/2/AFT).....\$6.50  
LOSB2951 Shock Springs - Black 6.0 lb Rate (pr) (LST/2/AFT).....\$6.50  
LOSB2952 Shock Springs - Yellow 7.4 lb Rate (pr) (LST/2/AFT).....\$6.50

### Transmission

LOSB3193 Inside Gear Cover (LST2).....\$5.50

### Clutch Parts

LOSB3323 Alum. Clutch Shoe & Spring Set (LST2).....\$10.00  
LOSB3340 Clutch Bell Only 2-Speed (Threaded) (LST/2).....\$5.00  
LOSB3350 18T Steel Pinion (LST/2).....\$5.00  
LOSB3351 18T Steel Pinion w/ Ti-Nitride (LST/2).....\$14.99  
LOSB3356 25T Steel Pinion (LST/2).....\$5.00  
LOSB3357 25T Steel Pinion w/Ti-Nitride (LST/2).....\$14.99

### 2-Speed & Slipper Parts

LOSB3410 2-Speed Low-Gear Hub w/1-way(LST/2/AFT).....\$22.99  
LOSB3411 2-Speed Hi-Gear Hub w/Bearing (LST/2).....\$16.99  
LOSB3420 70T Spur (Low) Gear (LST/AFT) (Stock).....\$4.00  
LOSB3424 63T Spur (Hi) Gear (LST/AFT)(Stock).....\$4.00  
LOSB3428 2-Speed Steel/Ti-Nitride Gear Conversion (LST/2).....\$79.99  
LOSB3429 70T Steel Spur w/Ti-Nitride (1st) (LST/2).....\$33.99  
LOSB3430 63T Steel Spur w/Ti-Nitride (2nd) (LST/2).....\$25.99  
LOSB3431 Drive Rings for 70T Steel Spur (2).....\$2.00

## Drivetrain Parts

LOSB3509 Wheel Hex Set - Hard Anodized Alum. (LST/AFT).....\$19.99  
LOSB3510 20mm Wheel Hexes - Alum (2)(LST/AFT).....\$15.99  
LOSB3511 Nut Set (Large/Small) for 20mm hex (2ea).....\$4.00  
LOSB3531 Aluminum Diff Cases - Polished (LST/2/AFT).....\$10.00  
LOSB3532 Alum. Diff Case - Blue (LST/2/AFT).....\$11.99  
LOSB3535 Ti-Ni F/R Ring & Pinion (LST/2/AFT).....\$37.99

## Hardware

LOSB4021 Pivot Balls - Hard Anodized Aluminum (4) (LST/2).....\$8.00  
LOSB4102 Titanium Nitride Inner Hinge Pins (2) (LST/2).....\$8.00  
LOSB4103 Titanium Nitride Outer Hing Pins (2)(LST/AFT).....\$8.00

## Motor Accessories

LOSB5031 Finned Engine Mounts - Hard Ano. Aluminum (LST/2)....\$12.99  
LOSB5050 Exhaust Header (RE) & Springs (LST/2/AFT).....\$17.99  
LOSB5051 Exhaust Header Seals & Springs (2)(LST/2/AFT).....\$6.00  
LOSB5054 Exhaust Pipe Seals & Springs (LST/2).....\$6.00  
LOSB5056 Tuned Pipe Mount & Hardware (LST/2).....\$2.50  
LOSB5055 Tuned Exhaust Pipe (LST).....\$39.99  
LOSB5057 Tuned Pipe & Header - Polished (LST/2).....\$69.99  
LOSB5058 Tuned Pipe & Header - Hard Anodized (LST/2).....\$74.99  
LOSB5060 "HT" Tuned Pipe & Header - Polished (LST/2).....\$69.99  
LOSB5061 "HT" Tuned Pipe & Header - Hard Anodized (LST/2).....\$74.99

## Motor Accessories

LOSB5100 Spin-Start Hand Held Starter (LST/2).....\$44.99  
LOSB5102 Spin-Start Motor & Battery Leads (LST/2).....\$16.99  
LOSB5103 Spin-Start Mechanics (LST/2).....\$22.99  
LOSB5104 Spin-Start Hex Starter Shaft (LST/2).....\$5.00  
LOSB5105 Spin-Start Hand Strap & Pin (LST/2).....\$5.00  
LOSB5106 Spin-Start Case & Switch Set (LST/2).....\$8.00  
LOSB5108 Spin-Start Drive Gear (Metal) (LST/2).....\$3.00

## Wheels & Tires

LOSB7005 Bead Lock "Look" Wheels/Blue Rings (LST/AFT)(pr).....\$24.99  
LOSB7006 Bead Lock "Look" Rings - Red (LST/AFT)(4).....\$24.99  
LOSB7007 Bead Lock "Look" Rings - Gold (LST/AFT)(4).....\$24.99  
LOSB7221 Foam Tire Inserts - Firm (LST/2/AFT)(pr).....\$8.00  
LOSB7222 Foam Tire Inserts - 2 Stage (LST/2/AFT)(pr).....\$12.99  
LOSB7650S Super King-Pin MT Tires w/Foam Liners(pr).....\$34.99

## Body & Accessories

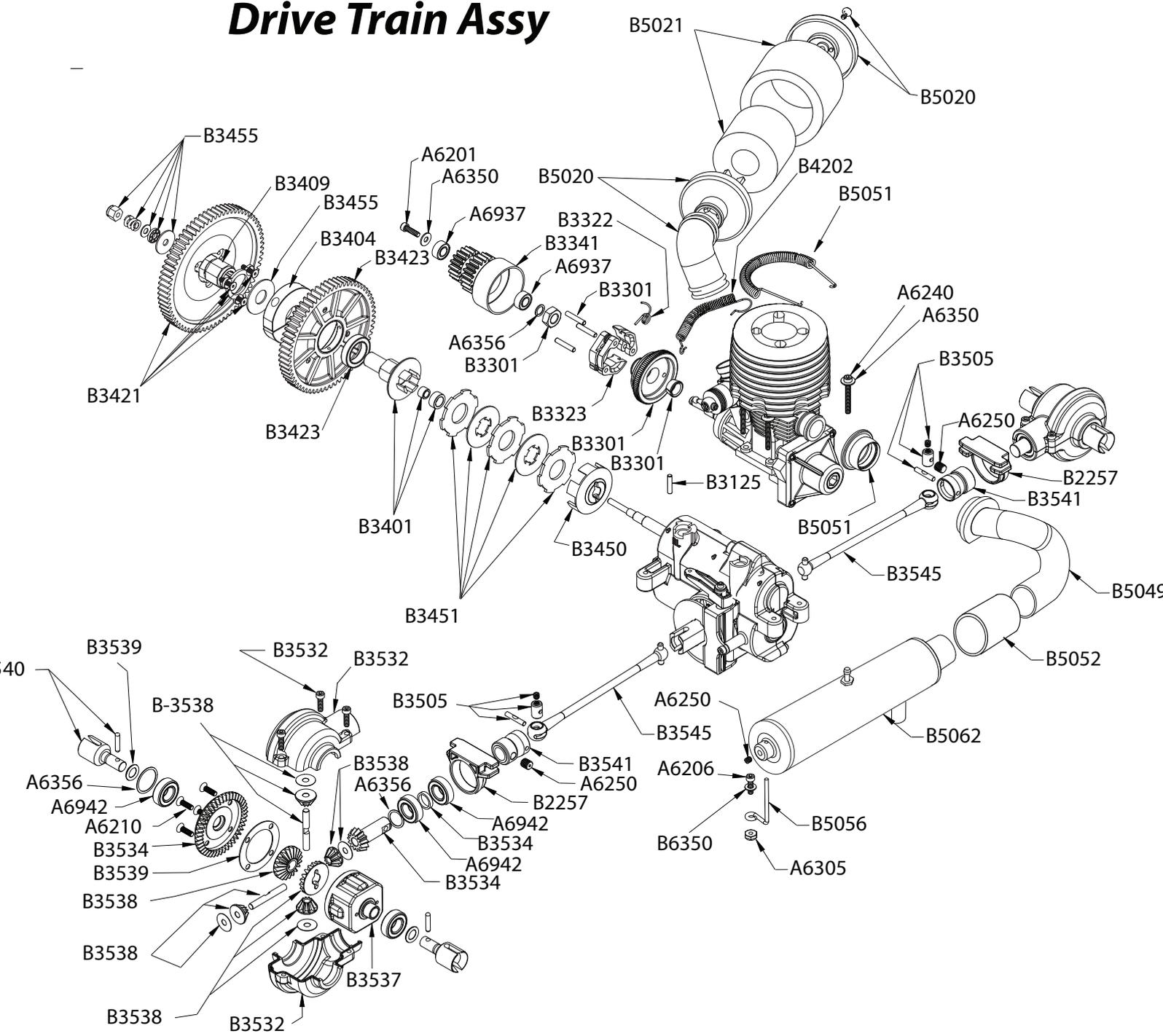
LOSB8001 LST Body Painted Blue w/Stickers.....\$49.99  
LOSB8002 LST Body Painted Red w/Stickers.....\$49.99  
LOSB8003 LST Body Clear w/Sticker & Masks.....\$29.99  
LOSB8005 LST "Racer" Clear Body w/Stickers & Masks.....\$30.99  
LOSB8011 LST2 Body Painted Grey w/Stickers.....\$49.99  
LOSB8012 LST2 Body Painted Red w/Stickers.....\$49.99  
LOSB8014 LST2 Body Clear w/Stickers.....\$34.99  
LOSB8150 Wing Kit (LST/2/AFT).....\$14.99  
LOSB8151 Wing Only (LST/2/AFT).....\$9.00  
LOSB8201 LST Sticker Sheet.....\$5.00  
LOSB8202 LST2 Sticker Sheet.....\$5.00

## Receiver Pack

LOSB9939 6v 900 Ni-MH Rx Flat Pack w/Charger (LST/2/AFT).....\$24.99  
LOSB9950 5 Cell 6V 1100 mAh Ni-MH Receiver Pack (LST/2).....\$31.99



# Drive Train Assy

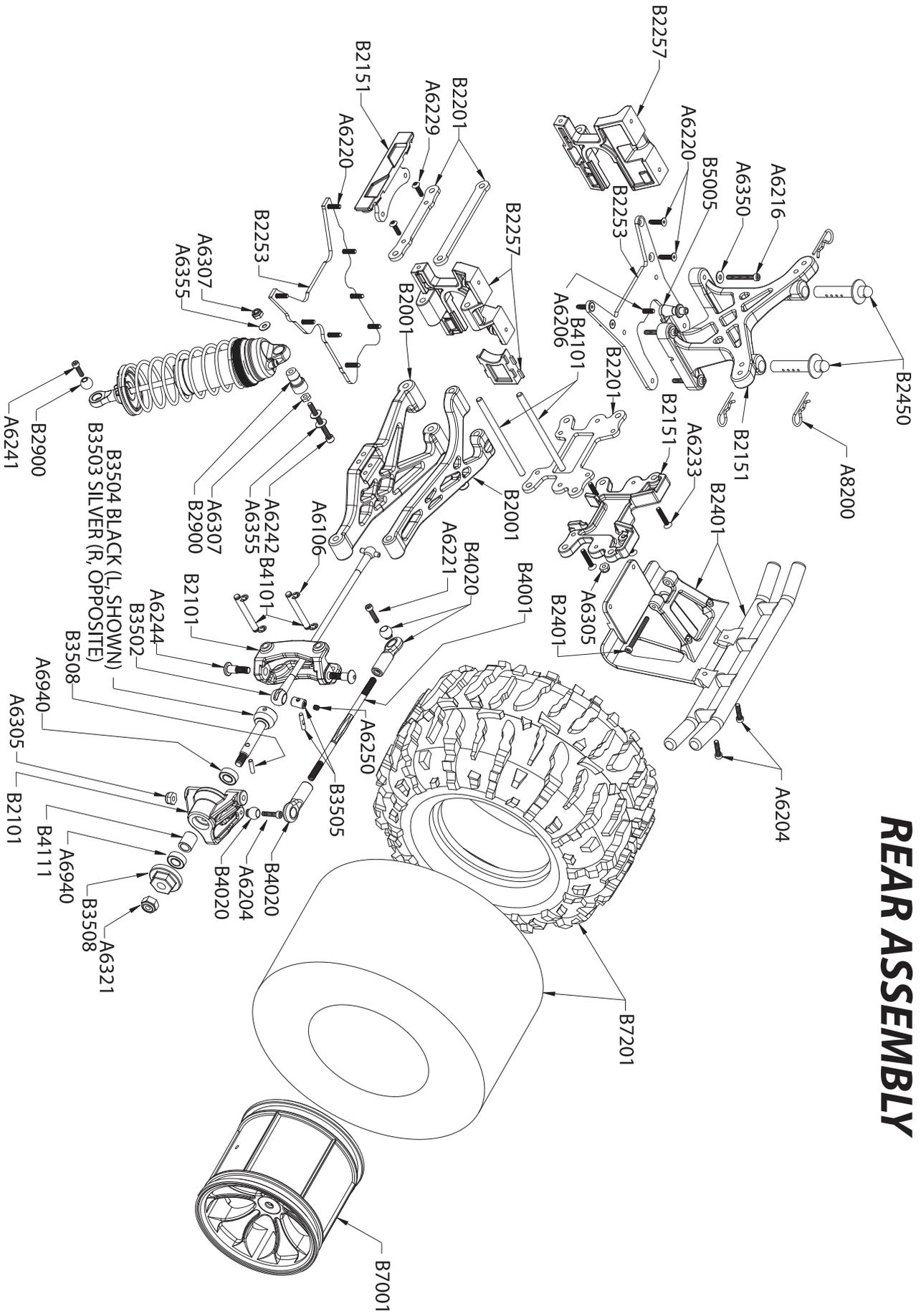


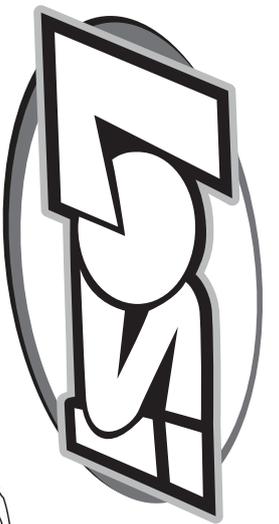




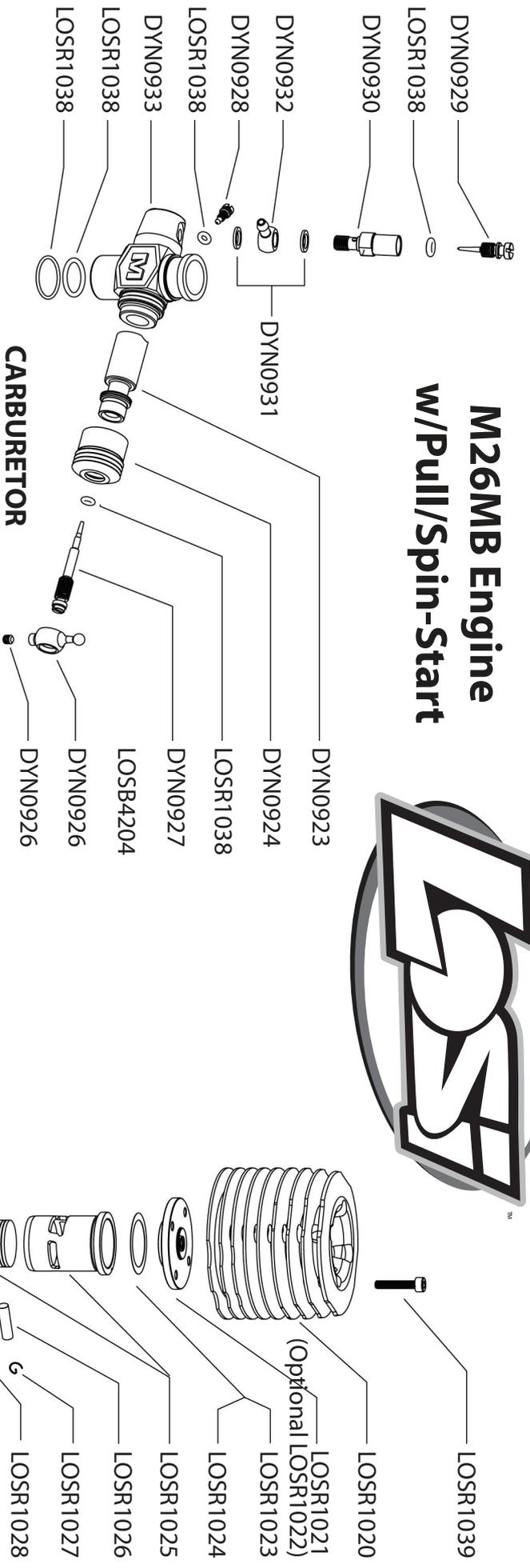


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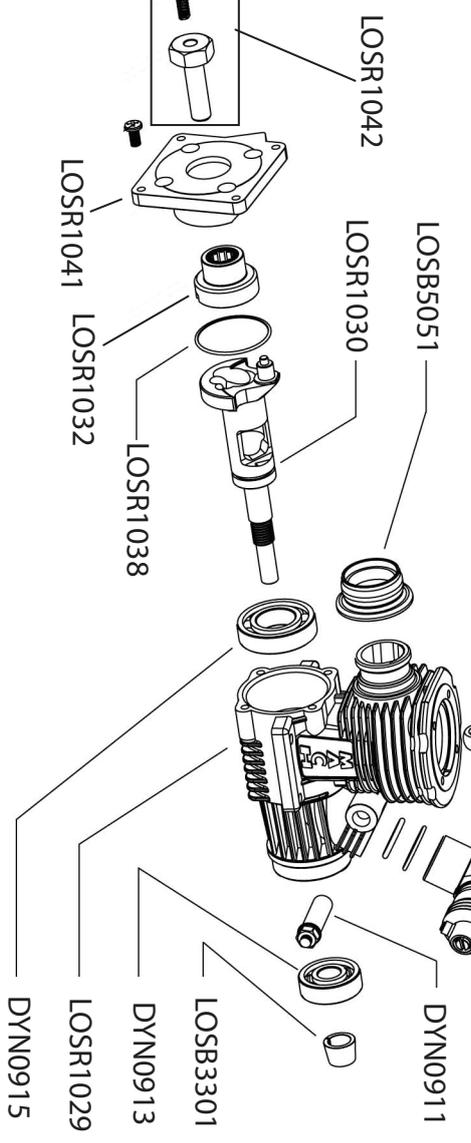
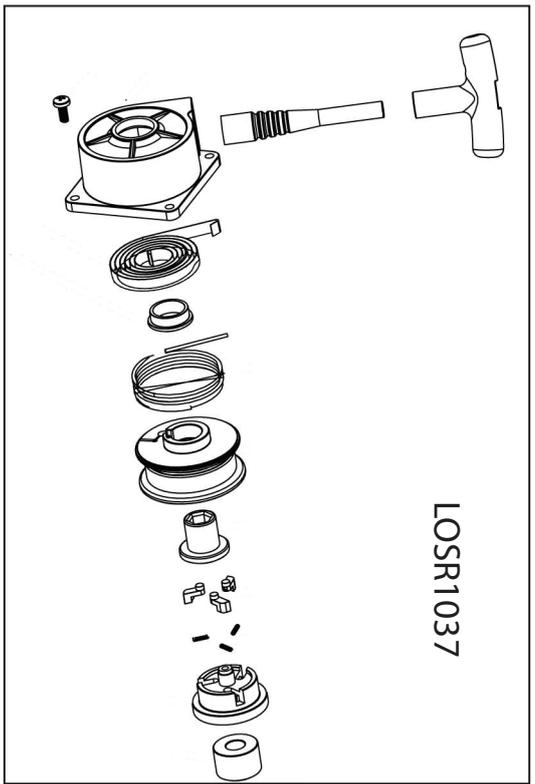




# M26MB Engine w/Pull/Spin-Start



## CARBURETOR



## **Warranty Information**

### **Limited Warranty Period**

Horizon Hobby, Inc. guarantees this product to be free from defects in both material and workmanship at the date of purchase.

### **Limited Warranty & Limits of Liability**

Pursuant to this Limited Warranty, Horizon Hobby, Inc. will, at its option, (i) repair or (ii) replace, any product determined by Horizon Hobby, Inc. to be defective. In the event of a defect, these are your exclusive remedies. This warranty does not cover cosmetic damage or damage due to acts of God, accident, misuse, abuse, negligence, commercial use, or modification of or to any part of the product. This warranty does not cover damage due to improper installation, operation, maintenance, or attempted repair by anyone other than an authorized Horizon Hobby, Inc. service center. This warranty is limited to the original purchaser and is not transferable. In no case shall Horizon Hobby's liability exceed the original cost of the purchased product and will not cover consequential, incidental or collateral damage. Horizon Hobby, Inc. reserves the right to inspect any and all equipment involved in a warranty claim. Repair or replacement decisions are at the sole discretion of Horizon Hobby, Inc. Further, Horizon Hobby reserves the right to change or modify this warranty without notice.

REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY OF THE CONSUMER. HORIZON HOBBY, INC. SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.

As Horizon Hobby, Inc. has no control over use, setup, final assembly, modification or misuse, no liability shall be assumed nor accepted for any resulting damage or injury. By the act of use, setup or assembly, the user accepts all resulting liability.

If you as the purchaser or user are not prepared to accept the liability associated with the use of this product, you are advised to return this product immediately in new and unused condition to the place of purchase.

### **Safety Precautions**

This is a sophisticated hobby product and not a toy. It must be operated with caution and common sense and requires some basic mechanical ability. Failure to operate this product in a safe and responsible manner could result in injury or damage to the product or other property. This product is not intended for use by children without direct adult supervision.

The product manual contains instructions for safety, operation and maintenance. It is essential to read and follow all the instructions and warnings in the manual, prior to assembly, setup or use, in order to operate correctly and avoid damage or injury.

### **Questions, Assistance, and Repairs**

Your local hobby store and/or place of purchase cannot provide warranty support or repair. Once assembly, setup or use of the product has been started, you must contact Horizon Hobby, Inc. directly. This will enable Horizon to better answer your questions and service you in the event that you may need any assistance.

### **Questions or Assistance**

For questions or assistance, please direct your email to [productsupport@horizonhobby.com](mailto:productsupport@horizonhobby.com), or call 877.504.0233 toll free to speak to a service technician.

### **Inspection or Repairs**

If your product needs to be inspected or repaired, please call for a Return Merchandise Authorization (RMA). Pack the product securely using a shipping carton. Please note that original boxes may be included, but are not designed to withstand the rigors of shipping without additional protection. Ship via a carrier that provides tracking and insurance for lost or damaged parcels, as Horizon Hobby, Inc. is not responsible for merchandise until it arrives and is accepted at our facility. Include your complete name, address, phone number where you can be reached during business days, RMA number, and a brief summary of the problem. Be sure your name, address, and RMA number are clearly written on the shipping carton.

### **Warranty Inspection and Repairs**

To receive warranty service, you must include your original sales receipt verifying the proof-of-purchase date. Providing warranty conditions have been met, your product will be repaired or replaced free of charge. Repair or replacement decisions are at the sole discretion of Horizon Hobby.

### **Non-Warranty Repairs**

Should your repair not be covered by warranty and the expense exceeds 50% of the retail purchase cost, you will be provided with an estimate advising you of your options. You will be billed for any return freight for non-warranty repairs. Please advise us of your preferred method of payment. Horizon Hobby accepts money orders and cashiers checks, as well as Visa, MasterCard, American Express, and Discover cards. If you choose to pay by credit card, please include your credit card number and expiration date. Any repair left unpaid or unclaimed after 90 days will be considered abandoned and will be disposed of accordingly. Electronics and engines requiring inspection or repair should be shipped to the following address (freight prepaid):

Horizon Service Center  
4105 Fieldstone Road  
Champaign, Illinois 61822

All other products requiring inspection or repair should be shipped to the following address (freight prepaid):

Horizon Product Support  
4105 Fieldstone Road  
Champaign, Illinois 61822

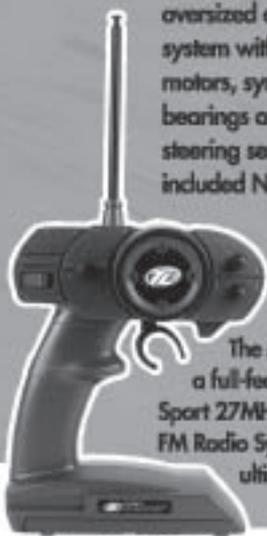


## THE MONSTER AMONG MINIS

Team Losi's world-renowned engineering team took the design of RC Car Action's 2005 Truck of the Year, the LST "Super Truck," and brought the monster truck excitement and off-road performance to the mini-monster truck category.

The result is the biggest, most powerful mini truck available, the Mini-LST. Featuring a dual-deck aluminum chassis, oversized oil-filled coil-over shocks, a 4-wheel drive system with 3 differentials, dual high-torque Frenzy-370 motors, synthesized 27MHz FM radio system, complete ball bearings and more, it is the ultimate mini truck experience. Twin steering servos keep the Mini-LST pointed in the right direction, while the included Ni-MH battery and charger provide ample power for any terrain.

Run it anytime, anywhere. Indoors or off-road.



The Mini-LST includes a full-featured Team Losi® Sport 27MHz Synthesized FM Radio System for the ultimate in control.

Start something **big**...  
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