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:

<table>
<thead>
<tr>
<th>M26SS Engine &amp; JR Propo Radio Gear</th>
<th>Aftershock Chassis Components:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horizon Hobby Inc.</td>
<td>Team Losi</td>
</tr>
<tr>
<td>4105 Fieldstone</td>
<td>4710 E. Guasti Road</td>
</tr>
<tr>
<td>Champaign, IL 61821</td>
<td>Ontario, CA 91761</td>
</tr>
<tr>
<td>1-877-504-0233</td>
<td>1-888-899-LOSI Fax 909-390-5356</td>
</tr>
</tbody>
</table>

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 (perferably 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.

Brake-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.
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 counterclockwise. 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 cyclinder. 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 linkedage 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 counterclockwise (loosen) one full turn. This should be a good overall setting.
**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.

**Note:** Outer (1st) Spur gear removed for photo.
Replacing the 2-Speed Gears

Be sure to replace the one way bearing in the same direction as removed.

Replacing the Clutchbell

Use a 3/32 wrench (provided) to remove the retaining screw (turn counter clockwise) while firmly holding the flywheel with a pair of pliers. Remove the screw, washers and clutch bell being careful not to lose any shims that may be used. Remove the ball bearings and brush any loose dirt away from the bearing faces. Put only ONE drop of oil on the inside face (the side facing away from the clutch shoes) near the inner race of the bearing. Install the bearings into the new clutch bell. Before replacing the clutch bell wipe out the inside with motor spray, lacquer thinner, or a similar cleaner (do not use fuel or oil based solvents). Replace the clutch bell and secure with the retaining screw in the same manner used to remove it. Note: do not over-tighten the screw, as it is not necessary.
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.
- 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.

* Note: These 4 are longer 2-56 x 3/4"
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.

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. 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
- 2.7 in. (68mm) Steering
- 2.8 in. (70.8mm) Rear Toe-In
<table>
<thead>
<tr>
<th>Problem</th>
<th>Things To Check</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine won't start</td>
<td>Out of fuel</td>
<td>Check/Replace Glow plug</td>
</tr>
<tr>
<td></td>
<td>Spoiled or improper fuel</td>
<td>Charge/change battery</td>
</tr>
<tr>
<td></td>
<td>Glow plug not lighting</td>
<td>Let cool - see &quot;Testing the Temperature&quot;</td>
</tr>
<tr>
<td></td>
<td>Glow igniter not charged</td>
<td>Clean &amp; reoil aircleaner</td>
</tr>
<tr>
<td></td>
<td>Engine overheating</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Engine flooded</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Air cleaner blocked</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Exhaust blocked</td>
<td></td>
</tr>
<tr>
<td>Engine won't turn over</td>
<td>Engine is flooded</td>
<td>Loosen glow plug and tug on the pull start to “turn” the engine over</td>
</tr>
<tr>
<td></td>
<td>Engine seized</td>
<td></td>
</tr>
<tr>
<td>Engine starts then stalls</td>
<td>Idle speed set too low</td>
<td>See &quot;Carburetor Adjustments&quot;</td>
</tr>
<tr>
<td></td>
<td>Glow plug is fouled/weak</td>
<td>See &quot;About Glow Plugs&quot;</td>
</tr>
<tr>
<td></td>
<td>Air bubbles in fuel line</td>
<td>Check for split/hole in fuel line</td>
</tr>
<tr>
<td></td>
<td>Engine is overheated</td>
<td>See &quot;Testing the Temperature&quot;</td>
</tr>
<tr>
<td></td>
<td>Insufficient fuel tank pressure/blockage</td>
<td>Clear pressure line</td>
</tr>
<tr>
<td>Engine performing poorly</td>
<td>Hi-Speed fuel mixture is too rich</td>
<td>See &quot;Engine Tuning&quot;</td>
</tr>
<tr>
<td></td>
<td>Engine overheating</td>
<td>Replace glow plug</td>
</tr>
<tr>
<td></td>
<td>Leaking glow plug</td>
<td>Try fresh fuel</td>
</tr>
<tr>
<td></td>
<td>Carburetor dirty or blocked</td>
<td>Clean/Adjust/Repair</td>
</tr>
<tr>
<td></td>
<td>Fuel bad or contaminated</td>
<td>Check for binds in drive-train</td>
</tr>
<tr>
<td></td>
<td>Clutch or Slipper slipping</td>
<td>Rebuild</td>
</tr>
<tr>
<td></td>
<td>Bound up drive-train</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Engine worn out</td>
<td></td>
</tr>
<tr>
<td>Engine overheats</td>
<td>Hi-Speed fuel mixture is too lean</td>
<td>See &quot;Understanding Rich and Lean&quot;</td>
</tr>
<tr>
<td></td>
<td>Low-Speed fuel mixture too lean</td>
<td>Clean head fins</td>
</tr>
<tr>
<td></td>
<td>Spoiled or improper fuel</td>
<td>Check for binds</td>
</tr>
<tr>
<td></td>
<td>Cooling air is being blocked</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Excessive load on the engine</td>
<td></td>
</tr>
<tr>
<td>Engine hesitates or stumbles</td>
<td>Engine overheated</td>
<td>See &quot;Engine Tuning&quot;</td>
</tr>
<tr>
<td></td>
<td>Hi-Speed mixture too lean</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Low-Speed mixture too rich</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Air bubbles in fuel line</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Glow plug fouled</td>
<td></td>
</tr>
<tr>
<td>Engine stalls instantly when throttle is fully opened from idle</td>
<td>Glow plug fouled</td>
<td>Change glow plug</td>
</tr>
<tr>
<td></td>
<td>Hi-Speed mixture too rich</td>
<td>See &quot;Engine Tuning&quot;</td>
</tr>
<tr>
<td></td>
<td>Low-Speed mixture too lean</td>
<td></td>
</tr>
<tr>
<td>Engine stalls while driving around turns</td>
<td>Fuel level is low</td>
<td>Add Fuel</td>
</tr>
<tr>
<td></td>
<td>Idle speed set too low</td>
<td>Increase Idle speed</td>
</tr>
<tr>
<td>Engine stalls while idling</td>
<td>Low-Speed mixture too rich</td>
<td>See &quot;Engine Tuning&quot;</td>
</tr>
<tr>
<td></td>
<td>Low-Speed mixture too lean</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Idle speed to low</td>
<td>Increase idle speed</td>
</tr>
<tr>
<td></td>
<td>Clutch shoes dragging</td>
<td>Check for broken clutch springs</td>
</tr>
<tr>
<td></td>
<td>Clutch bearings failed</td>
<td>Check/Clean/Replace</td>
</tr>
<tr>
<td></td>
<td>Engine worn out</td>
<td>Rebuild</td>
</tr>
</tbody>
</table>
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) ........................................ $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 & Brake 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
LOSB2850 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) ........................................ $2.00
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) ..................................... $9.99
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) (LST/2) ..................................................... $3.00
LOSB3341 18T/25T One-Piece Clutch Bell -- Steel (LST/2) ...................... $19.99

2-Speed & Slipper Parts

LOSB4301 2-Speed Cam & Bushings (LST/2) ........................................... $17.99
LOSB4304 2-Speed Clutch Shoes & Hardware (LST/2) ............................. $3.50
LOSB4309 2-Speed Low-Gear 1-way (AFT) ............................................. $14.99
LOSB4321 70T Spur (Low) Gear & Hard. (AFT) ........................................ $5.00
LOSB4323 63T Spur (Hi) Gear & Bell (AFT) ............................................. $7.00
LOSB4345 Slipper Cage (LST/2) ............................................................... $14.99
LOSB4351 Slipper Pads & Plates (LST/2) .................................................. $7.00
LOSB4355 2-Speed/Slipper Thrust Bearing & Hardware (LST/2) ............... $5.00
LOSB4301 12x18x4mm Shielded Ball Bearing ........................................ $4.50

Drive Train Parts

LOSB5301 F/R CV Driveshaft Set (2)(LST/2) ............................................ $37.99
LOSB5302 F/R Drive shaft only (2)(LST/2) ................................................. $11.95
LOSB5303 F/R Axle Right Side - Silver (LST/2) .......................................... $6.50
LOSB5304 F/R Axle Left Side - Black (LST/2) ............................................ $6.50
LOSB5305 CV Driveshaft Rebuild Set (LST/2) ............................................ $7.00
LOSB5308 Wheel Hex & Drive Pins (4ea)(LST/2) ....................................... $3.00
LOSB5329 F/R Differential Assembled Complete ..................................... $19.99
LOSB5333 Cast Aluminum Diff Case (AFT) ............................................. $9.00
LOSB5334 F/R Diff Ring & Pinion (LST/2) ............................................... $26.99
LOSB5337 F/R Diff Housing (LST/2) ........................................................ $4.00
LOSB5338 F/R Diff Bevel Gear Set (LST/2) ............................................... $7.00
LOSB5339 F/R Diff Seal Set (2) (LST/2) .................................................... $3.50
LOSB5340 F/R Diff Outside Drive (LST/2) ................................................ $9.00

Hardware

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

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
LOSB5010 Air Cleaner w/Hose & Nut (LST/2) ........................................... $7.00
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**

**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 (LST2) ........................................................................... $14.99

**Chassis Parts**
- LOSB2260 Heavy Duty Chassis Plate - Hard Ano. (LST2) ............................... $49.99
- LOSB2261 Heavy Duty Chassis Skid Plate - Hard Ano. (LST2) ....................... $24.99
- LOSB2262 Heavy Duty Chassis Top Plate - Hard Ano. (LST2) ....................... $16.99
- LOSB2263 Heavy Duty Front Bottom Plate - Hard Ano. (LST2) .................... $16.99
- LOSB2264 Heavy Duty Rear Bottom Plate - Hard Ano. (LST2) ................. $18.99
- LOSB2270 Hi.-Perf Graphite Chassis Plate - (LST2) ........................................ $109.99
- LOSB2271 Hi-Perf Aluminum Skid Plate - Hard Ano. (LST2) ....................... $24.99
- LOSB2272 Hi-Perf Graphite Top Plate (LST2) ................................................ $36.99
- LOSB2273 Hi-Perf Alum. Front Bottom Plate - Hard Ano. (LST2) ............. $18.99
- LOSB2274 Hi-Perf Alum. Rear Bottom Plate - Hard Ano. (LST2) .............. $18.99
- LOSB2451 Extra Long Body Mounts (LST2) .................................................. $4.50
- LOSB2501 Wing Mount Plastics (LST2/AFT) ................................................ $9.00

**Shocks**
- LOSB2801 Shock Body - Blue (LST2/AFT) ......................................................... $11.99
- LOSB2802 Shock Cap - Blue (LST2/AFT) .......................................................... $8.00
- LOSB2803 Shock Body - Red (LST2/AFT) .......................................................... $11.99
- LOSB2804 Shock Cap - Red (LST2/AFT) ............................................................ $8.00
- LOSB2805 Shock Body - Gold (LST2/AFT) ......................................................... $11.99
- LOSB2806 Shock Cap - Gold (LST2/AFT) .......................................................... $8.00
- LOSB2807 Shock Body & Cap Set - Red (4) (LST2/AFT) ............................... $68.99
- LOSB2808 Shock Body & Cap Set - Gold (4) (LST2/AFT) ............................... $68.99
- LOSB2813 Shock Adjust Nut - Blue Aluminum (LST2) .................................... $6.00
- LOSB2814 Hard Ano. Threaded Shock Body & Adj. Set (4) (LST2) ................. $58.99
- LOSB2841 Titanium Nitride Shock Shaft (LST2/AFT) ...................................... $7.50
- LOSB2879 Assembled Threaded Shaft w/ Spring (Blue) (LST2) ..................... $34.99
- LOSB2901 Shock Pivot Balls - Hard Ano Conversion (4) (LST2) ................. $7.50
- LOSB2949 Shock Springs - White 4.0 lb Rate (pr) (LST2/AFT) ....................... $6.50
- LOSB2951 Shock Springs - Black 6.0 lb Rate (pr) (LST2/AFT) ...................... $6.50
- LOSB2952 Shock Springs - Yellow 7.4 lb Rate (pr) (LST2/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) (LST2) .............................. $10.00
- LOSB3351 18T Steel Pinion (LST2) ................................................................. $5.00
- LOSB3352 18T Steel Pinion w/Ti-Nitride (LST2) ............................................. $14.99
- LOSB3356 25T Steel Pinion (LST2) ................................................................. $5.00
- LOSB3357 25T Steel Pinion w/Ti-Nitride (LST2) ............................................. $14.99

**2-Speed & Slipper Parts**
- LOSB3410 2-Speed Low-Gear Hub w/1-way(LST2/AFT) ............................... $22.99
- LOSB3411 2-Speed Hi-Gear Hub w/Bearing (LST2) ....................................... $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 (1st) (LST2) .................................. $33.99
- LOSB3429 70T Steel Spur w/Ti-Nitride (2nd) (LST2) .................................... $25.99
- LOSB3431 Drive Rings for 70T Steel Spur ....................................................... $2.00

**Drivetrain Parts**
- LOSB3509 Wheel Hex Set - Hard Anodized Alum. (LST/AFT) ....................... $19.99
- LOSB3510 20mm Wheel Hex - Alum (2)(LST/AFT) ...................................... $15.99
- LOSB3511 Nut Set (Large/Small) for 20mm hex (2ea) ................................. $4.00
- LOSB3531 Aluminum Diff Cases - Polished (LST2/AFT) .......................... $10.00
- LOSB3532 Alum. Diff Case - Blue (LST/2/AFT) ............................................ $11.99
- LOSB3536 Ti-Ni F/R Ring & Pinion (LST2/AFT) ........................................... $37.99

**Hardware**
- LOSB4021 Pivot Balls - Hard Anodized Aluminum (4) (LST2) ..................... $8.00
- LOSB4102 Titanium Nitride Inner Hinge Pins (2) (LST2) ........................... $8.00
- LOSB4103 Titanium Nitride Outer Hinge Pins (2)(LST/AFT) ....................... $8.00

**Motor Accessories**
- 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 (LST2) ........................................... $6.00
- LOSB5056 Tuned Pipe Mount & Hardware (LST2) ....................................... $2.50
- LOSB5055 Tuned Exhaust Pipe (LST) .......................................................... $39.99
- LOSB5057 Tuned Pipe & Header - Polished (LST2) ...................................... $69.99
- LOSB5058 Tuned Pipe & Header - Hard Anodized (LST2) .......................... $74.99
- LOSB5060 “HT” Tuned Pipe & Header - Polished (LST2) ........................... $69.99
- LOSB5061 “HT” Tuned Pipe & Header - Hard Anodized (LST2) ............... $74.99

**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
- LOSB7221 Foam Tire Inserts - Firm (LST2/AFT)(pr) ................................. $8.00
- LOSB7222 Foam Tire Inserts - 2 Stage (LST2/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 (LST2/AFT) ................. $24.99
- LOSB9950 5 Cell 6V 1100 mAh Ni-MH Receiver Pack (LST2) ....................... $31.99

---

**Page 14**
Drive Train Assy
**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, 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 cashier’s 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...

...use something small.

The Mini-LST.