

Losi Ball Differential Instruction Manual

Thank you for purchasing the Losi® ball differential. We are confident that this ball differential will enhance the performance of your Losi vehicle over the standard gear differential. The ball differential comes prebuilt and ready to drop into your vehicle. Read the instructions below in order to understand installation, break-in, and maintenance.

Installation

1. Remove transmission from vehicle. Refer to the vehicle manual for the correct procedure.
2. Remove old gear differential from transmission along with aluminum spacers that house the gear diff bearings. The aluminum bearing spacers will not be used with the ball differential.
3. Insert new ball diff along with the included 10x15mm bearings into the transmission case ensuring that the diff adjustment screw is located on the left side of the transmission case. By doing so, this will ensure easy diff screw access for later adjustments.

Differential Break-in and Adjustment

Once the new ball differential is installed it will need to be broken in. To do so, turn on the radio and the vehicle. While holding the chassis with **only** the left side rear tire firmly on the ground, give the vehicle about one quarter throttle, for 15 seconds. The right side rear tire should spin freely during this time. Repeat this now with the right side rear tire held firmly to the ground, allowing the left rear tire to spin. Feel the differential action and tighten slightly, if necessary. The differential should have a tight, thick feel when rotating it after final adjustment. To check the tightness, hold the spur gear and right rear tire, then try rotating the left rear tire forward. It should be very difficult to turn the left rear tire. If the tire turns easily, the diff is too loose. To tighten the diff, line up the slot in the diff screw with the groove in the left outdrive. Place the tip of a 1/16-inch Allen wrench through both of the slots. This will lock the diff screw and outdrive together. While holding the Allen wrench in place, turn the right rear tire forward about 1/8 of a turn.

Slipper

Adjust the slipper once the differential is properly tightened. Please remember your slipper will need slip before the differential. The differential should **NOT** slip as that is what the slipper is for. If the differential does slip it will severely deteriorate the life of the diff balls, rings, and thrust assembly. A slipping differential will have a growling/barking sound during use. To test your slipper, with the vehicle on the ground do a full punch off (applying full throttle quickly). The slipper should slip for 1 to 2 feet when working properly. If not adjust slipper accordingly.

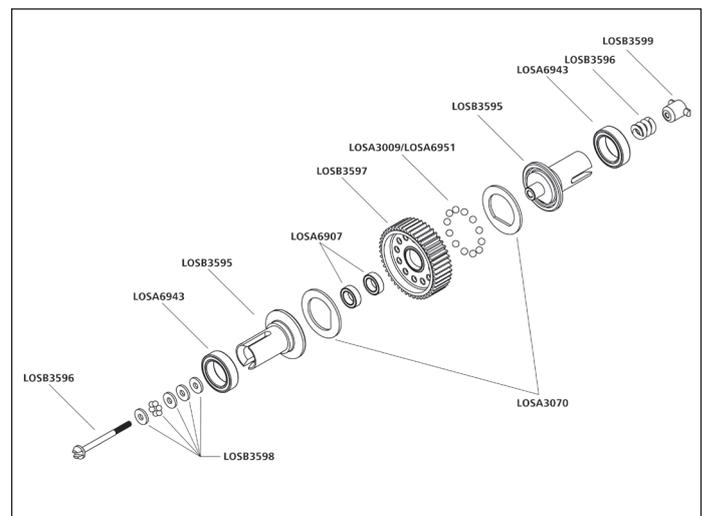


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Differential Rebuild Tips

After time the ball differential will become gritty or notchy feeling. This means it is time for a rebuild. During rebuilds use only Losi made parts that are listed in the parts list. To fully rebuild your diff take the entire diff apart and lay out the parts on a clean paper towel. It is recommended to replace the T-nut (LOSB3599), diff balls (LOSA3002), and thrust assembly (LOSB3598) for each diff rebuild. The differential rings (LOSA3070) can be flipped over one time to get an additional rebuild out of them. Higher quality carbide differential balls (LOSA6951) can be used for this differential resulting in multiple differential rebuilds out of a single set. For the diff balls use Losi Silicone Diff Lube (LOSA3065) and Losi Hi-Pressure Black Grease (LOSA99203) on the thrust assembly. To ensure all metal parts are free of dirt and debris always use Losi Nitrotec™ Motor spray (LOSA99217).



Replacement Parts List

Part Number	Description
LOSA3009	Differential Balls 3/32" (12)
LOSA3065	Losi Diff Lube
LOSA3070	Diff Rings (2)
LOSA6907	5 x 8mm Bearings (2)
LOSA6943	10 x 15mm Sealed Ball Bearings (2)
LOSA6951	Carbide Diff Balls 3/32" (12)
LOSA99203	Hi-Pressure Black Grease, 8cc
LOSB3595	Ball Diff Outdrive Set: SL, HRL, SCT
LOSB3596	Ball Diff Screw, Spring & Nut: SL, HRL, SCT
LOSB3597	Ball Diff Gear, 46T: SL, HRL, SCT
LOSB3598	Ball Diff Thrust Assembly: SL, HRL, SCT
LOSB3599	Ball Diff Nut(2): SL, HRL, SCT

For Help, Trust the Experts

Losi, a division of Horizon Hobby, wants to ensure that you get maximum enjoyment from your Losi purchase. In addition to the service information available in this instruction manual, our online Support - Answer Center is available at WWW.LOSI.COM for performance tips and troubleshooting questions. For live product support, US residents may call 877-504-0233 toll-free Monday through Friday.