

Nitrotec™ R21 3.5cc Racing Engine

Parts List



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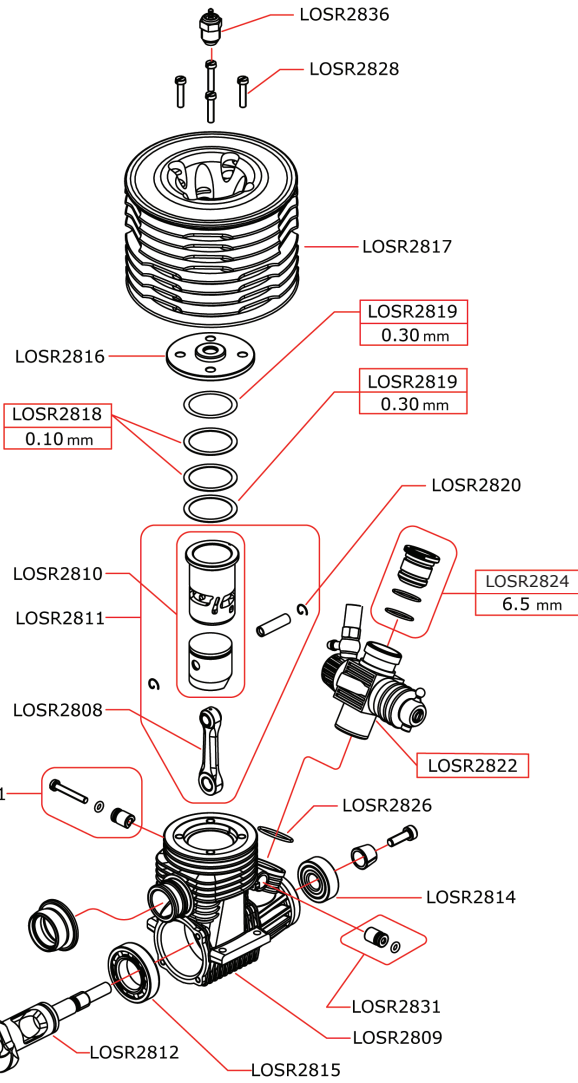
LOSR2800

Parts List

LOSR2808	R21 Connecting Rod
LOSR2809	R21 Crankcase
LOSR2810	R21 Piston & Sleeve Set
LOSR2811	R21 Piston, Sleeve, Connecting Rod Assm.
LOSR2812	R21 Crankshaft
LOSR2813	R21 Backplate
LOSR2814	R21 Front Ball Bearing w/Seal
LOSR2815	R21 Rear Ball Bearing
LOSR2816	R21 Head Insert
LOSR2817	R21 Cooling Head Off-Road
LOSR2818	R21 Head Shims (5) .1mm
LOSR2819	R21 Head Shims (5) .3mm
LOSR2822	R21 Carburetor
LOSR2823	R21 Carburetor Restrictor 6mm
LOSR2824	R21 Carburetor Restrictor 6.5mm
LOSR2825	R21 Carburetor Restrictor 7mm
LOSR2828	R21 Head Screws
LOSR2829	R21 Backplate Screws
LOSR2830	R21 Backplate O-Rings
LOSR2831	R21 Carburetor Lock Set
LOSR2836	#6 Turbo Glow Plug (C6TGC)

Optional

	LOSR2825	7.0 mm
	LOSR2823	6.0 mm



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.

Using the Proper Fuel and Glow Plug

Using the proper fuel and glow plug is critical in order to achieve maximum performance and reliability. You must use fuel, glow plugs and air filters specifically designed for model car/truck/buggy applications. **Never use any type of model airplane glow fuel!** Use of model airplane fuel can damage your engine and immediately void any warranty. We recommend using Nitrotane™ fuel. Nitrotane™ fuels are vigorously tested, researched and formulated to deliver superior power and engine protection. An LOSR2836 #6 turbo glow plug has been included and is ideal for this engine. This plug has been designed to deliver both performance and longevity. All car engines must use a properly oiled air filter to keep dirt out of the engine. Any dirt that enters the carburetor can immediately destroy your engine.

Carburetor Adjustments

Nitrotec engines come equipped with a precision slide-valve carburetor. Familiarize yourself with the various adjustments of the carb. Turning the low or high-speed needle valves counterclockwise will richen the mixture. Turning the needle valves clockwise will lean the mixture. Turning the idle screw clockwise will speed up the idle and vice versa. The carburetor may be rotated to fit your application by loosening the cap screw on the side of the crankcase below it. Although preset at the factory, changes to these settings will be needed for your model.



Starting settings using a 7mm insert

High-Speed Needle: 4 turns out (counterclockwise) from closed.

Low-Speed Needle: 3 turns out (counterclockwise) from closed.

Do not over-tighten the needles when checking the adjustment. Stop turning clockwise (closing) immediately when you feel resistance in the needle and begin turning the needles counterclockwise (open) counting the number of turns from "closed."

Break-In

Since this is a racing engine manufactured by one of the leading engine manufactures in the world you must follow the break-in directions included with these instructions. Take your time and you will be rewarded with a great performing engine that will last for a long time.

Starting Your Engine for the First Time

The first start of your engine is the most critical time of the engine's life, dictating how well it will perform. Turn on your radio and confirm the throttle is closed. Attach a glow igniter to the glow plug. Place your finger over the exhaust and turn the engine over with the starter for 1–2 seconds to prime the fuel line. (This should only be necessary when the engine is cold, **do not touch the exhaust pipe when the engine is warm.**) Should the engine become difficult to turn over, the engine may be flooded (hydro-locked). Excess fuel between the cylinder head and piston will not allow the piston to travel through its full range of compression, effectively "locking up" the engine. Should this occur, immediately remove the glow igniter and remove the glow plug. Turn the model upside down and rotate the flywheel to clear out the fuel or put a rag over the top of the head and turn over on the starter. You may need to "blip" the throttle on the transmitter (applying throttle on/off) while trying to start the engine as new engines are more difficult to start due to the tight piston/cylinder fit. Note: Pre-heating the cylinder of the engine with a heat gun helps initial starting easier. Increasing the idle speed during break-in will help keep the engine running while the needle settings are rich.



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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 directly. This will enable Horizon to better answer your questions and service you in the event that you may need any assistance. For questions or assistance, please direct your email to productsupport@horizonhobby.com, or call 877.504.0233 toll free to speak to a Product Support representative.

Inspection or Repairs

If this 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 is not responsible for merchandise until it arrives and is accepted at our facility**. A Service Repair Request is available at www.horizonhobby.com on the "Support" tab. If you do not have internet access, please include a letter with your complete name, street address, email address and phone number where you can be reached during business days, your RMA number, a list of the included items, method of payment for any non-warranty expenses and a brief summary of the problem. Your original sales receipt must also be included for warranty consideration. Be sure your name, address, and RMA number are clearly written on the outside of the shipping carton.

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To receive warranty service, you must include your original sales receipt verifying the proof-of-purchase date. Provided 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 the repair will be completed and payment will be required without notification or estimate of the expense unless the expense exceeds 50% of the retail purchase cost. By submitting the item for repair you are agreeing to payment of the repair without notification. Repair estimates are available upon request. You must include this request with your repair. Non-warranty repair estimates will be billed a minimum of ½ hour of labor. In addition you will be billed for return freight. Please advise us of your preferred method of payment. Horizon 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. Please note: non-warranty repair is only available on electronics and model engines.

United States

Electronics and engines requiring inspection or repair should be shipped to the following address:

Horizon Service Center
4105 Fieldstone Road
Champaign, Illinois 61822
USA

All other Products requiring warranty inspection or repair should be shipped to the following address:

Horizon Product Support
4105 Fieldstone Road
Champaign, Illinois 61822
USA

European Union

Electronics and engines requiring inspection or repair should be shipped to one of the following:

Horizon Hobby Limited
Units 1-4 Ployters Rd
Staple Tye, Harlow
Essex CM18 7NS
United Kingdom

Please call +44 (0) 1279 641 097 or email sales@horizonhobby.co.uk for any warranty questions.

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Please call +49 4121 46199 66 or email service@horizonhobby.de for any warranty questions.

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