



GRP ENGINE LINE
**USER AND
MAINTENANCE
MANUAL**



US
VERSION

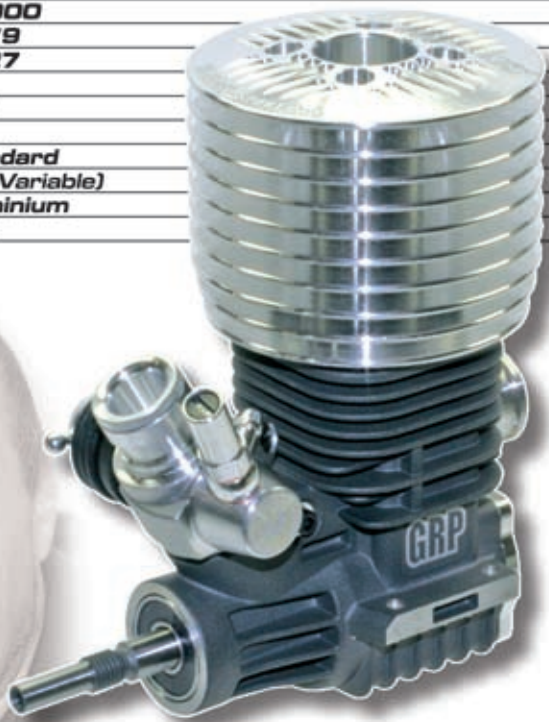
UPDATE
2.0 - 3.0



GRP
Engines

.21 Buggy - TECHNICAL DATA

Model Car		1:8 Buggy
Engine Code		LOSR2001
Displacement	cm ³	3.49
Rotation max.	rpm	38.000
Stroke	mm	16.79
Bore	mm	16.27
Ports	n	5
Sleeve		ABC
Crankshaft Diam.	mm	14
Glow Plug Type		Standard
Carburetor Diam.	mm	8.0 (Variable)
Carb. Material		Aluminium
Weight	gr	355



.21 Buggy - CONSTRUCTION DETAILS

The functions of these model engines are quite different from other combustion engines. Compression is not obtained by a piston ring, but by the fact that both the piston and cylinder are slightly conical and this allows the perfect closure of the combustion chamber when the piston is at its maximum upper stroke. When the engine is cold, the piston is tightly locked within the cylinder and for this reason it is difficult to turn the engine manually, but this is absolutely normal since the ideal contact between piston and cylinder is obtained when both reach the normal temperature for operating the engine.

CONROD

It is produced with a special advanced technological material, which has allowed the exclusion of a bushing on piston side. This gives a greater lightness, leading to a higher acceleration and rotational rate. Moreover, this material has a specific heat resistance at high temperatures of use guaranteeing a minimal deformation.

SLEEVE/PISTON

The piston has a particular design and it is made directly from a "cnc" production, using a special aluminium alloy, which guarantees a very high dimensional stability at high temperatures, a very high wear resistance and it gives easy running and lower friction. The sleeve is made with a special AEC alloy, but the main technical and mechanical characteristics are gained after special internal treatments, which guarantee a very high hardness and a considerable wear-resistance. All external surfaces are tried to assure the highest dimensional quality.

CRANKCASE

It has been studied with the most developed and advanced software of mechanical simulation, to simulate all deformations at high temperatures of use. Therefore, we managed to create a very stiff structure, mainly in the area of cylinder/exhaust and carburetor joint/intake. The manifold joint is fixed with 4 identical springs, which are perfectly fitted between the cooling fins. The special aluminium alloy used for the press fusion process, combined with the patent system for port production are extremely important.

CARBURETOR

It is made from a single piece of an Aluminium alloy, through a press fusion process. All O-rings are made with a special material to guarantee the highest elasticity and resistance to fuel.

.21 Buggy - STANDARD ACCESSORIES

STANDARD FEATURES ON EACH ENGINE - LOSR2001

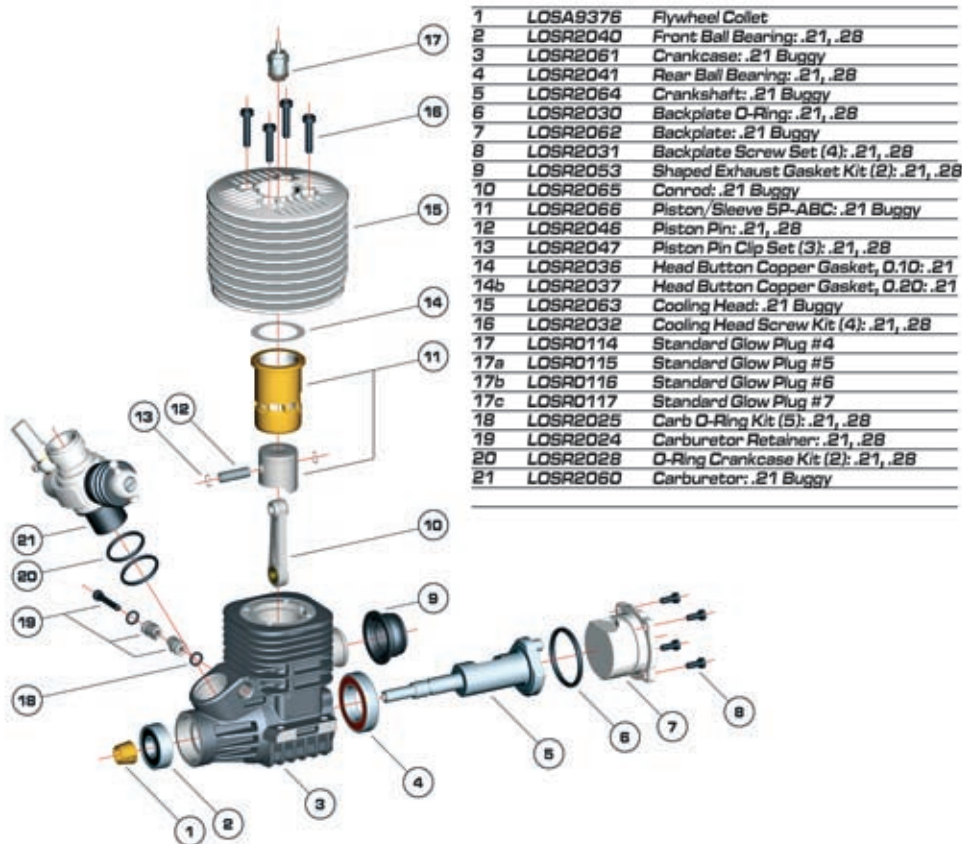
This is a 1/8-Buggy high-powered engine with 3.5 cc capacity, for competition.

The air reducers on the carburetor can be exchanged, thus adapting the engine functions to various types of tracks and different driving styles. The 8.0 mm reducer is part of standard supply, but spare parts include all sizes from 5.0 mm to 9.0 mm.

Each single engine comes with a security cap on the exhaust, entrance of carburetor, fuel intake and on the crankshaft. It is sold in a plastic box, complete with standard accessories included with each engine kit:

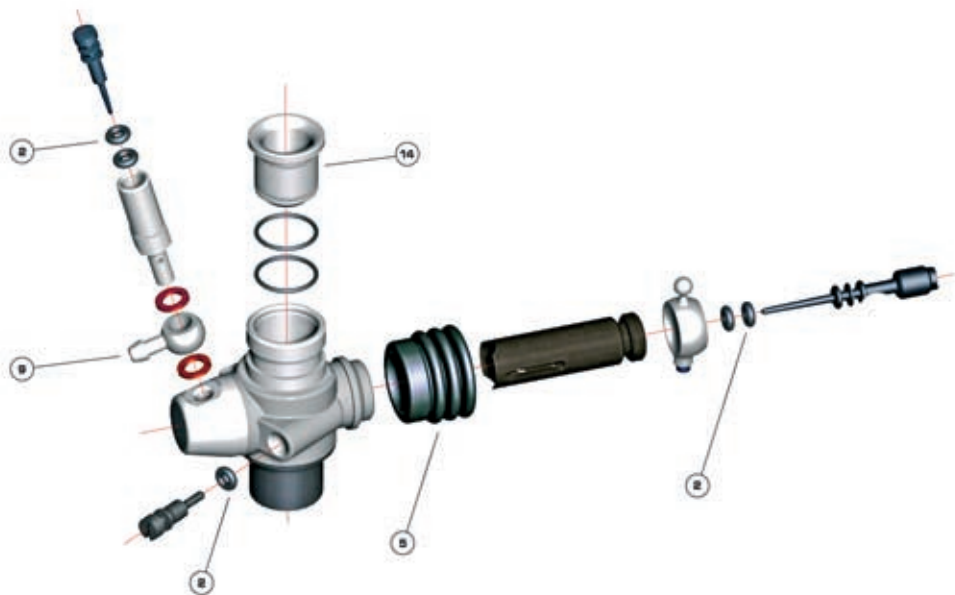
- Standard glow plug S6 (Mounted directly on engine, LOSR0116).
- 0.1 mm Head gasket (2 pieces LOSR2036).
- Exhaust gasket (1 piece LOSR2053).
- Manifold fastening spring (4 pieces LOSR2052).
- 8.0 mm carburetor air reducer (Mounted directly on engine, LOSR2069).
- Engine protection cover (Mounted directly on engine).
- Decal logo on engine
- Use and Maintenance Manual (1 piece GRP108MAN02)

.21 Buggy - ENGINE - EXPLODED VIEW



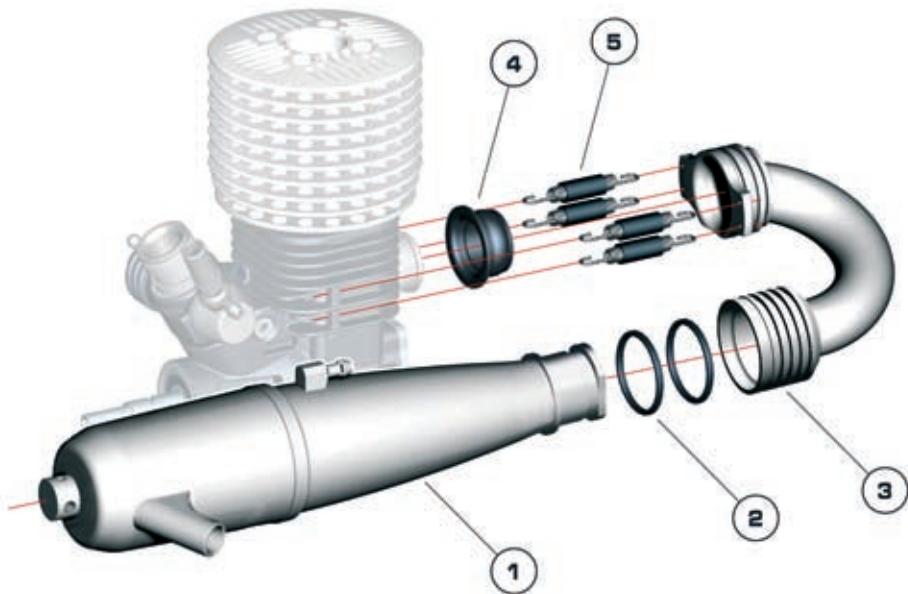
.21 Buggy - CARBURETOR - EXPLODED VIEW

2	LOSR2021	Needle O-Ring Kit (5): .21, .28
5	LOSR2022	Dust Protector, Rubber: .21, .28
9	LOSR2023	Fuel Intake Nipple
14	LOSR2067	Carburetor Air Restrictor Set, 5.0, 5.5, 6.0
14a	LOSR2068	Carburetor Air Restrictor Set, 6.5, 7.0, 7.5
14b	LOSR2069	Carburetor Air Restrictor Set, 8.0, 8.5, 9.0



.21 Buggy - EXHAUST - EXPLODED VIEW

1	LOSR2049	Efra 2053 Tuned Pipe: .21, .28
2	LOSR2051	O-Ring Pipe Gasket FLS Kit (2)
3	LOSR2050	Manifold, Short: .21, .28
4	LOSR2053	Shaped Exhaust Gasket Kit (2): .21, .28
5	LOSR2052	Manifold Spring Kit (4): .21, .28





All GRP engines, accessories and spare parts are packed and sold in appropriate colored see-through plastic boxes. This type of packaging ensures the maximum guarantee that the product does not get damaged during transportation to the hobby shop.

Each item is checked off by an item number, a description and a barcode for its complete identification.

GRP guarantees the absolute product authenticity only for item, which come in their original sealed packaging. Moreover, our product guarantee on engines is acknowledged only if our engine is used with its original GRP spare parts.

Indicated below is the type of use for each GRP article.

Article Code	Article Description	Article Engine Destination		
		21BU TUNED	28TR TUNED	21BU
LOSR2000	GRP Engine, Tuned 01 .21 Buggy	0		
LOSR2010	GRP Engine, Tuned 01 .28 Truggy		0	
LOSR2001	GRP Engine, .21 Buggy			0
LOSR2020	Carburetor: .21, .28 Tuned	0	0	
LOSR2060	Carburetor: .21 Buggy			0
LOSR2021	Needle O-Ring Kit (5): .21, .28	0	0	0
LOSR2022	Dust Protector, Rubber: .21, .28	0	0	0
LOSR2023	Fuel Intake Nipple	0	0	0
LOSR2024	Carburetor Retainer: .21, .28	0	0	0
LOSR2025	Carb O-Ring Kit (5): .21, .28	0	0	0
LOSR2026	Crankcase: .21 Tuned Buggy	0		
LOSR2061	Crankcase: .21 Buggy			0
LOSR2027	Crankcase: .28 Tuned Truggy		0	
LOSR2028	O-Ring Crankcase Kit (2): .21, .28	0	0	0
LOSR2029	Backplate: .21, .28 Tuned	0	0	
LOSR2062	Backplate: .21 Buggy			0
LOSR2030	Backplate O-Ring: .21, .28	0	0	0
LOSR2031	Backplate Screw Set (4): .21, .28	0	0	0

