



Subaru Impreza Group N Rally Car

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## Subaru Impreza Group N Rally Car

Prodrive is the world's leading independent motorsport business. For nearly 20 years we have been behind some of the greatest names in rally including Porsche, MG Rover, BMW and Subaru. During this time we have won more than 100 international rallies and five World Rally Championship titles.

The Subaru Impreza and its competition variants, designed by Prodrive in partnership with Subaru Tecnica International, have an unrivalled pedigree. As a World Rally Car, it has won five World Rally titles and over the years, we have used this experience and engineering expertise to turn the Group N Impreza

into the most competitive car in its class and a rally winner across the world.

Each Prodrive Subaru Impreza Group N Rally Car is built from a new 4-door Subaru Impreza WRX-STI imported directly from Japan. This car variant is only available in Japan and has been specifically designed to be homologated by the

FIA for motorsport use. As a result, it has many features as a road car which make it the ideal base for a competitive Group N Rally Car.

Design and build of the car takes place at our motorsport headquarters in Oxfordshire in the UK, using the same facilities as the Subaru World Rally Team.



## winning support

From first contact with Prodrive, through delivery of the new Subaru Group N Rally Car, an account manager is assigned to look after the needs of our customers giving them access to the resources of the world's leading motorsport business.

Our distribution centre in the UK carries a comprehensive stock of parts for the Subaru Impreza Group N,

which can be dispatched overnight to any part of the world. We can rebuild engines, transmissions and major assemblies in our technical centre and crash repairs in our bodyshops. Our account managers can also arrange to have vehicles liveried and we can organise driver training or familiarisation sessions with the car.

The new Prodrive Subaru Impreza N9 once again closes the competitive gap with the World Rally Car. The engine power and torque have been significantly increased with improved responsiveness and power delivery, while the bodyshell has been redesigned creating a stiffer chassis.



## engine

The two litre quad cam engine can be supplied in two stages of tune, with the stage 2 engine providing the optimum power and torque combined with excellent response. The new engine includes a twin scroll turbo, improved camshaft design, revised exhaust manifold and competition

sump. There is also a larger 4.3 litre tank for the intercooler water spray all helping to generate up to a 15 per cent increase in torque (535Nm @ 3250 rpm) and up to a five per cent rise in power (270 bhp @ 4000 rpm). At the same time, we have reduced operating costs through new 1000 km service intervals.

## transmission

A five speed 'dog' engagement gearbox is available on the Impreza Group N, which has been homologated with close ratio gears. The ratios optimise the engine's performance and provide faster gear changes. We have improved the durability of the gearbox through the use of spur

gears with reduced clearances and tighter tolerances and by increasing the number of 'dogs' from four to six.

Traction is improved through an active centre differential and limited slip front and rear differentials.

## suspension

Prodrive-Ohlins three-way adjustable suspension is standard on the Subaru Impreza Group N Rally Car. 54mm dampers on the front and 50mm at the rear with adjustment for low and high speed bump and rebound optimise performance on rough and smooth gravel and tarmac.

There is a new anti-roll bar linkage and adjustable spring platforms to fine tune ride heights and handling. While a range of spring rates and camber washers are available to suit all conditions.



## bodyshell

The Prodrive Subaru Impreza Group N is available in left or right hand drive and includes the aerodynamic rear spoiler and an optional roof vent.

The rollcage is very similar in design to that used in the Subaru World Rally Car. Made from lightweight T45 steel it has an FIA mandatory rear cross

structure which helps give the bodyshell five per cent more stiffness than the previous Impreza Group N.

Optional Kevlar under body protection and alloy undershields are available to protect the engine and transmission and we can provide Kevlar side protection if required.



## brakes

Both tarmac and gravel brakes are homologated with the standard car for wheel sizes up to 7.5" x 17"

### Tarmac

Brembo calipers	front - four piston	rear - two piston
Discs	front - 326 mm	rear - 316 mm

### Gravel

Subaru calipers	front - four piston	rear - two piston
Discs	front - 296 mm	rear - 290 mm

## fuel system

The FIA approved FT3 95 litre safety fuel tank is shaped to allow the fitting of two spare wheels and complies with full FIA WRC Production Cup regulations. The 90 litre usable capacity has a minimum operating level of less than one litre and there are FIA quick fill Staubli valves and an FIA discriminator/roll valve and optional FIA sampling valve. The updated Bosch pump and filter are connected with aviation style fuel lines and a serviceable pre-pump filter.



## interior

Wherever feasible carbon fibre componentry is used to minimise weight, for example on the door panels, driver's foot rest and damper covers. The Prodrive competition seats are equipped with Sabelt six-point harnesses

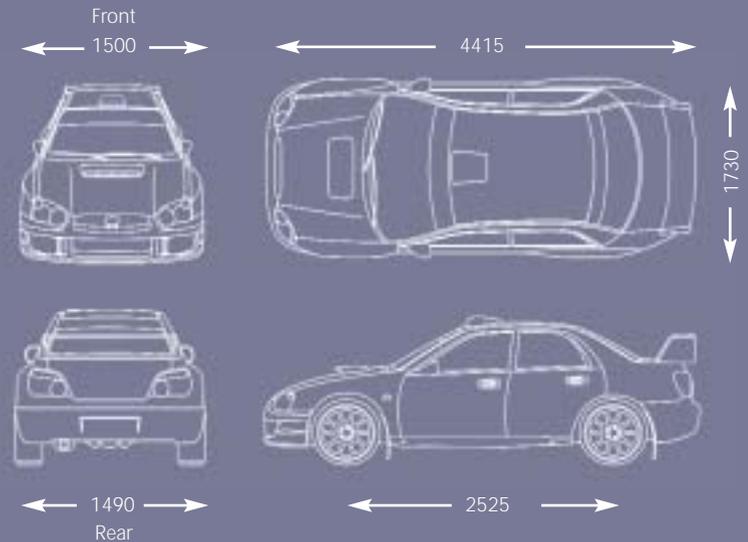
and there are FIA electric and hand-held fire extinguishers. A Peltor intercom system is standard and there is a choice of Coralba C-Rally or C-Giant trip computers and spare power outlets for map lights and auxiliaries.

## electrical system

The standard car's electrical system has been modified to full competition specification using aviation grade switches and contact breakers for safety and reliability. The wiring harness has

been reworked to include a split heated front screen, gas discharge lights and specially designed optional carbon fibre bumper and bonnet lighting pods.

## full technical specification



## 2003 specification

<b>Engine:</b>	Flat 4-cylinder boxer
<b>Capacity:</b>	1994cc
<b>Bore:</b>	92.0mm
<b>Stroke:</b>	75.0mm
<b>Power:</b>	270bhp @ 4000rpm
<b>Torque:</b>	535Nm @ 3250rpm
<b>Turbo charger:</b>	IHI
<b>Spark plugs:</b>	NGK
<b>EMS:</b>	Prodrive programmable electronic
<b>Catalytic converter:</b>	Three-way metallic catalyst located at rear
<b>Fuel system:</b>	95 litres FIA approved FT3 safety tank
<b>Transmission:</b>	
<b>Gearbox:</b>	Prodrive 5-speed manual dog engagement
<b>Front diff:</b>	Plated limited slip
<b>Centre diff:</b>	Electro mechanical clutch
<b>Rear diff:</b>	Plated limited slip
<b>Clutch:</b>	Alcon 240mm 6 paddle
<b>Suspension:</b>	
<b>Front:</b>	Prodrive-Öhlins MacPherson strut 3 way adjustable
<b>Rear:</b>	Prodrive-Öhlins MacPherson strut 3 way adjustable Longitudinal and transverse link

<b>Side impact protection:</b>	Standard door bars with optional carbon fibre and aluminium honeycomb
<b>Brakes:</b>	
<b>Front:</b>	Ventilated discs and 4-pot calipers Anti knock off springs fitted as standard DS3000 brake pads
<b>Rear:</b>	Ventilated discs and 2-pot calipers Anti knock off springs fitted as standard DS3000 brake pads
<b>Steering:</b>	Power assisted 13:1 rack and pinion
<b>Wheels:</b>	
<b>Tarmac:</b>	7.5" x17"
<b>Gravel:</b>	6" x15", 7x15"
<b>Snow:</b>	5.5" x16"
<b>Minimum car weight:</b>	1293kgs

<http://www.subaru-impreza.org>

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