

AT LAST, ITS DEBUT! A WRC CHAMPION REPLICA

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Named the...

22B **STi** Version

**2.2L BOXER
16VALVE TURBO**

The WRC Champion Impreza World Rally Car was a car that fascinated Subaru enthusiasts with its overwhelming performance and immaculate form. It was an untouchable dream, but now its glamorous figure, clad in blue, is finally a "dream come true" on the streets of Japan.



It gives the impression of "being alive" to those who see it. Its probably due to the organic lines of the widebody fenders, but it is certainly full of liveliness and its presence draws out emotion. Its name is the "22B STi Version." It was developed with the emphasis of reproducing the spirit of the World Rally Car, which has fought fiercely and earned Subaru multiple manufacturer's titles, and is a work that incorporates STi's passion and commitment to this platform. First of all is the exterior, which largely mirrors the World Rally car itself, using pressed steel blister fenders like the real rally car. This is especially true for the rear which cuts out the rear quarter panels and welds in the rear wide body steel panels. While there are slight changes to the specifications from the WRC spec car (since this is a still a car intended for usage on public roads), the finished product is a strong representation fo the original.

On the powertrain front, the bore has been increased from 92 to 96.9mm, expanding displacement to 2212cc on a closed deck cylinder block. Metal head gaskets are adopted and the valvetrain is lifted from a version 4 STi. Since the underlying concept was to emphasize torque in the low and mid range by increasing the displacement, the turbo utilized is not a peaky, power-chasing type. After consideration of this balance, the STi Version III VF23 turbo was chosen. The result doesn't reach 300ps (although this can be accomplished), but acheives 280ps at 6,000

rpm and 37.0kg0m of torque at 3,200rpm. Numerically, it doesn't change much from the EJ20, but it gets better torque from the lower rev range than before and in the mid-speed range it acheives a flat high torque. You can see from the engine performance curve that the power is strong all the way to 6,800 rpm.

In response to this performance improvement is the adoption of a large-capacity twin plate ceramic metal clutch. In the transmission, in addition to strengthening the material of the main shaft (1 and 2 speed drive gear), each gear is shot peened to ensure durability and reliability. The suspension is a combination of Bilstein inverted damper struts and Eibach springs. Filling out the new widebody fenders are BBS

7x 8.5JJ aluminum wheels unique to the 22B, wrapped in 235/40ZR17 Pirelli P-Zero tires, ultimately increasing the tread width by 10mm in the front and 40mm in the rear. The braking system is the same as the Version IV STi Type R, but are set apart with red paint. The steering rack is a quick ratio 13:1.

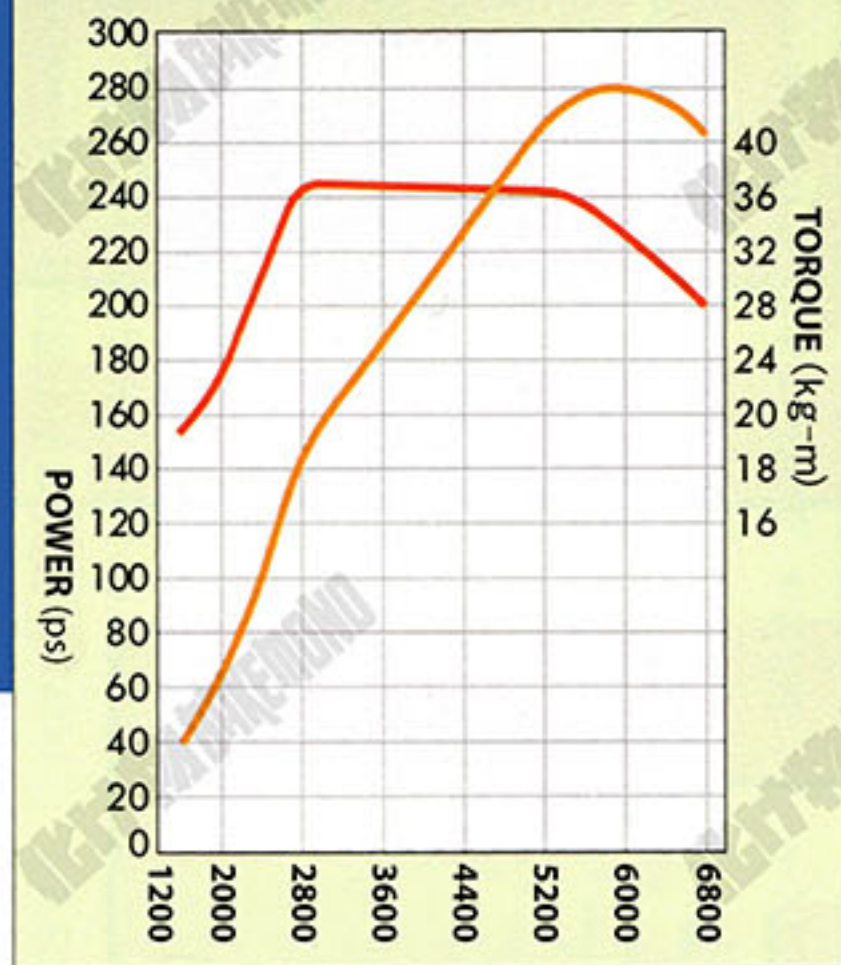
What you think of the ¥ 5,000,000 (~\$45,000 USD or \$80,000 in 2022 dollars) price tag will be different for each person. The 22B STi is a limited edition run of 400 units and is treated as a modified car that cannot participate in formal competitions requiring homologation, but it has performance and presence that far surpasses the conventional STi. This is a machine that can turn any public road into a "special stage."



Major Specifications

Subaru E-GC8	
Impreza Premium Sports Coupe 22B-STi Version	
SMT	
Vehicle Specifications	
Overall Length (mm)	4365
Width (mm)	1770
Height (mm)	1390
Interior Length (mm)	1800
Interior Width (mm)	1330
Interior Height (mm)	1170
Wheelbase (mm)	2520
Track Width (front) (mm)	1480
Track Width (rear) (mm)	1500
Ground clearance (mm)	140
Curb Weight (kg)	1270
Seating Capacity	5
Gross Weight (kg)	1535
Performance	
Minimum Turning Radius (m)	5.2
Engine	
Model	EJ22
Type	Horizontally Opposed 4 Cylinder, DOHC, Intercooled Turbo
Bore x Stroke	96.9 X 75.0
Displacement (cc)	2212
Compression Ratio	8.0
Max Power (Net) (ps/rpm)	280/6000
Max Torque (kg-m/rpm)	37.0/3200
Fuel Injection Control	EGI= Electronically Controlled Fuel Injection (Multipoint Ignition)
Fuel Tank Capacity (L)	60
Fuel Type	Unleaded Premium Gasoline
Transmission	
Gearing	Forward 5 Speed, Reverse 1 Speed
1st Gear	3.083
2nd Gear	2.062
3rd Gear	1.545
4th Gear	1.151
5th Gear	0.825
Reverse	3.416
Final Drive	4.444
Steering	
Gear Type	Rack and Pinion
Gear Ratio (Overall)	13:1
Suspension	
Front Wheels	Independent Suspension (Strut)
Rear Wheels	Independent Suspension (Strut)
Braking	
Main Brakes Type	2-way Hydraulic with Booster
Front Brakes	Ventilated Disc
Rear Brakes	Ventilated Disc
Parking Brake Type	Mechanical Rear 2 Wheel

EJ22 Performance Curve



Steel blister fenders are fitted to both the front and rear. The standard body is cut at the center of the quarter pillar and the rear widebody panel is welded on. The genuine WRC sideskirts are integrated w/the widebody, but the 22B skirts are installed afterwards.

There is a large rear spoiler with 2-stage angle adjustment not found on the WRC car, offering 17 degrees of adjustability. Like the STi, the spoiler is roto-molded with nylon resin powder.

On the side of the 22B STi front fender is a special emblem with the STi logo. This is a specially made item manufactured in titanium. This is proof that this car is different from other STi versions, and is special.



Main Equipment

- Exterior**
 - ★ World Rally Car Inspired Front Grill and Bumper
 - Cherry Blossom Red Stars Front Grill Emblem
 - Halogen Headlight (High-Wattage Bulb Headlight)
 - World Rally Car inspired fog light covers (STi sticker, no foglamp)
 - Aluminum Front Hood (WRC inspired hood vents)
 - World Rally Car inspired front fender & STi Side Emblem (Titanium)
 - World Rally Car inspired Sideskirts
 - World Rally Car inspired Sidesill Plate (Stainless Steel w/ STi Logo)
 - World Rally Car Inspired Widebody Rear Fenders
 - World Rally Car Inspired Rear Bumper
 - World Rally Car Inspired 2-Position Rear Spoiler (with LED Stop Lamp)
 - Rear and Rear Quarter Deep Color Glass
 - Rear 22B-STi Badge
 - 17 X 8.5J BBS Aluminum Wheels and Carbon Center Caps
 - 235/40R17 Pirelli P-ZERO Tires
- Cockpit/ Power Equipment/ Seats/ Interior**
 - Anti-glare Instrument Panel
 - NARDI Genuine Leather-wound Steering Wheel (Cherry Blossom Red Stitching)
 - Metal-look Meter Panel & White-face Gauges
 - Tachometer (7900rpm Rev-limiter)
 - 3 Speed Dial Air-Control Panel
 - Auto Air-Conditioning
 - Serial Number Plate (on Center Console)
 - Metal-look Front Console
 - Genuine Leather Shift Knob & Handbrake Lever (Cherry Blossom Red Stitching)
 - Centralized Door Locks
 - Power Windows
 - Bucket Seats
 - Original Design Ecscaine (Ultrasuede) Seat & Door Trim Accent
- Engine**
 - Dedicated ECU
 - Closed Deck Cylinder Block
 - Forged Molybdenum-coated Pistons & Piston Rings
 - Hollow Valve (Sodium Filled Exhaust Valves)
 - Inner-shim Valve Lifter
 - Metal Gasket
 - Silver Intercooler (with "Tuned by STi" Sticker)
 - Intercooler Auto Water Spray (also with Manual Switch)
 - Intercooler Ducting (Aluminum w/ Silicone Seal)
 - Wrinkle Red Intake Manifold
 - Wrinkle Red Timing Belt Cover
 - Low Back -Pressure Muffler (Large Diameter Tail Pipe)
 - STi Radiator
- Drivetrain**
 - Driver Control Center Differential (DCCD) (DCCD Indicator on Gauge Cluster)
 - Super Quick Shift Linkage
 - Stenghtened Transmission
 - Stenghtened Twin Plate Clutch (Ceramic Metal Disc)
 - Stenghtened Rear Axle
 - Rear Mechanical LSD (2-way, 4 Pinion)
 - Stenghtened Rear Differential Bushing
- Suspension and Brake System**
 - Bilstein Struts and Eibach Springs
 - Stiffened Front and Rear Suspension Arm Bushing
 - Aluminum Front Control Arms
 - Front Carbon Fiber Strut Tower Bar (Made by FHI Aerospace Division)
 - Front and Rear Stabilizer
 - Quick Power Steering (Power Steering Oil Cooler/ High Capacity Oil Pump)
 - Super Quick Steering Rack (13:1)
 - Front Ventilated Brakes (16" Rotor with Red 4-pot Caliper)
 - Rear Ventilated Brakes (15" Rotor with Red 2-pot Caliper)
 - High Pressure Brake Hose

An optional PIAA manufactured fog lamp can be built into the space behind the fog covers in the bumper. Mounting brackets are also available. Necessary to give it that World Rally look?

The top of the aluminum hood gets hood vents styled after the '97 World Rally Car, although smaller to fit the OEM hood. The widebody bumper has an integrated grill like the World Rally Car.

The fascia is given a matte-black anti-glare treatment like the real World Rally Car. The door panels are given the same treatment. The steering wheel is made by Nardi, and is not equipped with an airbag. The rest is the same as a base Version IV STi.



The shape of the seats are the same as the STi, but have a special design and color. The trim color is coordinated with the exterior blue color, and the "22B STi Version" logo is attached to the backrest.



The front of the center console box is given an original design plate with a dedicated serial number, starting with 001. The car shown here is a prototype, so its number is 000.



This is the EJ22 cylinder block and piston. The block is a closed deck type with high rigidity. The piston has an increased bore, but the height is the same as a 2L so the weight increase is minimized.



This is the equipped twin plate ceramic metal clutch. The total weight of the clutch system is 10% lighter than stock, and the inertia mass is reduced by about 15%, improving the response and feel.



The 2212cc EJ22 puts out 280PS/37.0kgm. The intake manifold is painted with wrinkle red paint, like the standard STi version, but unique to the 22B are the wrinkle-red-painted timing belt covers.



The suspension consists of Bilstein inverted struts with Eibach springs. The dampening is 10kgf higher on the fronts and 5kgf on the rears. Spring rates are 3.5kg/mm on the fronts and 3.0kg/mm on the rears.



On the rear are 15" rear vented rotors with 2 pot calipers. Both the front and rear calipers are painted in red to appeal to the potential of the 22B STi. However, the part itself is the same as the conventional STi.



The tires are Pirelli P-Zero (235/40ZR17). The forged 8.5x17+48 offset "BBS" wheels weigh the same as the OEM 16" wheels! Due to the hub change and offset, the track is 10mm wider in the front and 40mm in the rear.

Specific to 22B STi Version (Using WRX STi Version IV Type R as a base)