



GTURBO

WHY A GTURBO

FOR YOUR TD42

1988-2006 NISSAN PATROL

Version 1.1 (2026)

PERFORMANCE BY DESIGN



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GTURBO

US

GTurbo is proudly Australian-owned and operated. Our turbochargers are designed and manufactured at our Balcatta facility in Western Australia.

ABOUT

Our story begins with founder Graeme Bentink, an avid explorer of Australia's rugged landscapes, who struggled with the limitations of an underpowered and inefficient 4WD.

Convinced his factory LandCruiser had untapped potential, Graeme used his background in process engineering and metallurgy to create a solution: a high performance turbocharger built for real-world conditions.





Fourteen years on, GTurbo has grown into one of Australia's leading manufacturers of high-performance diesel turbos and tuning solutions. Fuelled by a passion for performance, we engineer, test, and optimise every product to deliver maximum power and reliability for every drive.

**DRIVEN BY INNOVATION AND BACKED BY ENGINEERING
EXCELLENCE, WE FOCUS ON THE ENTIRE SYSTEM TO BRING
YOU GREATER POWER OUTPUT WITH EVERY UPGRADE.**

OUR TURBOS



**ENGINEERED
BY DESIGN**

**BUILT ON THE FOUNDATION
OF FACTORY-FITTED UNITS,
OUR TURBOCHARGERS ARE
COMPLETELY REIMAGINED
USING CUTTING-EDGE DESIGN
PRINCIPLES TO MEET
MODERN PERFORMANCE
DEMANDS.**

All GTurbo turbochargers are balanced using state-of-the-art, four-stage high-speed equipment, spinning at up to 200,000 RPM.

We use a proprietary GTurbo balancing procedure that delivers levels of precision far beyond any original turbo we've tested. This advanced balancing ensures quiet operation, exceptional reliability under extreme boost, and, most importantly, long service life. Each GTurbo is race-ready straight out of the box, with no need for extra tuning or preparation, giving drivers the confidence to push performance to the limit from day one.

**OUR COMPREHENSIVE REDESIGN DELIVERS MORE POWER,
GREATER EFFICIENCY, AND ENHANCED RELIABILITY UNDER
HIGH-DEMAND CONDITIONS, THROUGH IMPROVED AIRFLOW,
SUPERIOR MATERIALS, AND ROBUST CONSTRUCTION.**

1 Turbine Shaft

Larger and stronger, with advanced blade metallurgy.

2 Compressor Wheel

Precision billet aluminium or titanium, point-machined for uncompromised accuracy, far superior to line-machined alternatives common in the market.

3 Bearings

Reinforced to handle high boost with gapless seals for superior oil control.

4 Boost Capability

Rated over 40psi, ensuring durability even under over-boost conditions.

5 Variable Nozzle Technology (VNT)

Precision-controlled VNT for rapid spool, consistent boost delivery, and unmatched throttle response.





GTURBO & **THE TD42**

The Nissan TD42, made famous in the Nissan Patrol, has built a loyal following thanks to its simplicity, mechanical injection system, and strong low-RPM characteristics. With its 4.2L inline-six layout, gear-driven timing and heavy-duty cast-iron construction, the TD42 has long been respected as a dependable touring and towing platform.

In factory form, particularly the naturally aspirated variants, performance was modest, and even the factory turbo models left significant headroom in airflow and fueling potential. While the TD42 is a strong and reliable engine, it is not indestructible, and crankshaft failures are well known to occur when subjected to excessive torque and aggressive tuning in pursuit of peak dyno numbers.

At GTurbo, our approach to the TD42 has always been focused on intelligent engineering rather than chasing figures for the sake of it. We have developed a dedicated range of turbochargers designed to maximise usable torque, improve boost response, and enhance overall drivability, all while operating within the platform's realistic reliability limits.

As a proof of concept, we have seen GTurbo-equipped TD42 builds produce over 230kW and over 900Nm @ the Wheels. This demonstrates the airflow capability of our turbo systems and the theoretical limits of the engine combination. However, this level of output is not what we recommend for long-term customer vehicles, as it pushes beyond what can reasonably be considered a reliable street or touring setup.

When tuned correctly and supported with the appropriate fuel and cooling upgrades, the TD42 becomes a completely different engine, delivering massive low-end torque, strong mid-range pull and confident towing performance, while maintaining the dependable character that made it legendary in the first place.



PRODUCT GUIDE

FOR THE TD42 PLATFORM





TURBOCHARGERS



TD-G333 Titan
T T TD42-T S1.1

Description

Delivers rapid spool and strong low-end torque, perfect for touring and responsive everyday performance.

\$2690



TD-G380 Titan
T T TD42-T S3B

Description

Combines sharp response with massive midrange power, ideal for heavy towing and high-output builds.

\$2690



TD-G400 Titanium
T T TD42-T S4

Description

Engineered for maximum boost and top-end performance, delivering extreme power for serious builds.

\$3490



TD-G333 TITAN

STAGE 1: TURBO UPGRADE

RESPONSIVE | LOW-END TORQUE | DAILY DRIVES

The GTurbo TD-G333 Titan is our Stage 1 turbo upgrade, designed for strong low-end torque and excellent all-round drivability. It is the ideal choice for daily drives, towing, touring, and off-road driving.

PRICE **\$2690**



Key Features



At the core of the TD-G333 Titan is our advanced Vortex 4 billet compressor wheel. Built from upgraded 2618-grade alloy and finished in our Titan thermal coating for improved heat resistance and long-term durability.



The unit features a revised compressor cover with anti-surge slots and a larger 3.5" inlet, which improves airflow and throttle response over the stock 2.75" setup. The full-plate high-efficiency turbine wheel reduces back pressure for cooler exhaust gas temperatures (EGTs) and better top-end performance.



The TD-G333 Titan is built for reliable performance under sustained load with a 4340 chromoly shaft, stepped piston ring seals, and enhanced oiling to the thrust bearing.

Performance Expectations

The TD-G333 Titan delivers efficient boost from 10–33 psi, with a 24 psi design boost and an 18 psi preset. With a boost controller and gauge, boost can be increased for additional performance. When tuned correctly, expect at least 10 psi by 1500 rpm, and up to 16 psi at 1500 rpm with full supporting modifications.

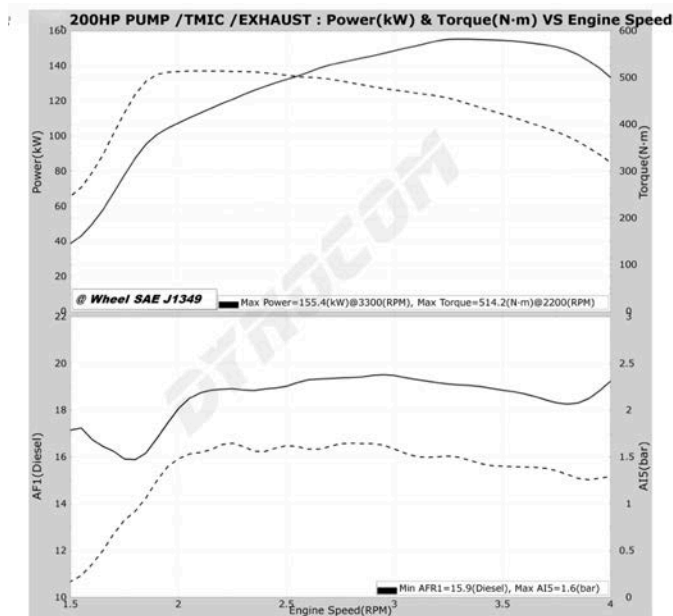
Product	Torque (Nm)	Power (rkwW)
Stock TD42-T	295	80-88
Stock TD42-NA	180	55
(TD42-T) TD-G333T + FIP* Tune	400-550	120-135
(TD42-NA) TD-G333T + FIP* Tune	300-400	90-100
TD-G333T + Supporting mods	600	160

*FIP = Factory injection pump

**Only suitable for the TD42-T

***Supporting Mods = Clutch, large intercooler, 3" exhaust, upgraded airbox, high-flow injectors, injector pump

The dyno graph below reflects real-world performance of the TD-G333 Titan on a TD42 vehicle with full supporting mods.



TD-G380 TITAN

STAGE 2: TURBO UPGRADE

MID-RANGE PUNCH | REAL-WORLD PERFORMANCE

The GTurbo TD-G380 Titan steps up the performance game with sharp response down low, huge midrange torque, and the ability to carry boost all the way to redline. It's built for those chasing real-world performance in towing, touring, and high-output builds.



PRICE **\$2690**

Key Features



The TD-G380 Titan features our latest Vortex 4 billet compressor wheel, 12% larger than the G333 and made from a high-strength, heat-resistant 2618-grade alloy, with our Titan thermal coating for corrosion protection and long service life.



Our redesigned compressor cover with anti-surge slots and a 3.5" inlet boosts airflow, while the full-plate turbine wheel improves efficiency and lowers back pressure.



The TD-G380 Titan has a 4340 chromoly shaft, stepped piston ring seals, and enhanced oiling to the thrust bearing to provide long-term durability under sustained boost.

Performance Expectations

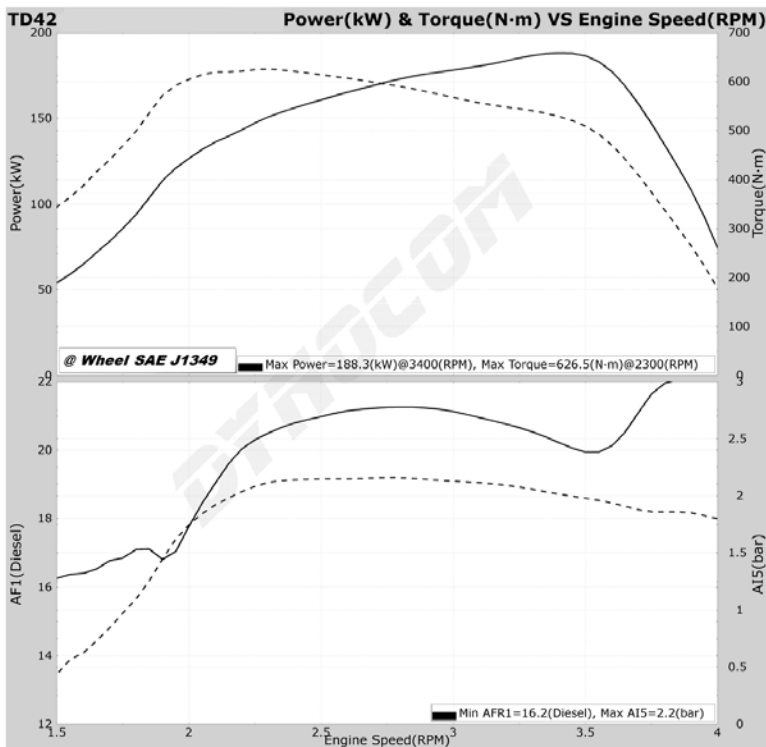
The TD-G380 Titan operates efficiently from 16–36 psi with a 28 psi design boost and a 20–25 psi preset. With a boost controller and gauge, boost can be increased for additional performance. When tuned correctly, expect at least 9 psi by 1500 rpm, and up to 16 psi at 1500 rpm with full supporting modifications.

Product	Torque (Nm)	Power (rwkW)
Stock TD42-T	295	80–88
TD-G380T + FIP* Tune	450–550	125–140
TD-G380T + Supporting mods**	700	200

*FIP = Factory injection pump

**Supporting Mods = Clutch, large intercooler, 3" exhaust, upgraded airbox, high-flow injectors, injector pump

The dyno graph below, demonstrates real-world performance of the TD-G380 Titan on a TD42 with full supporting mods.





TD-G400 TITANIUM

STAGE 3: TURBO UPGRADE

SUPERIOR TOP-END POWER | DEMANDING DRIVES

The GTurbo TD-G400 Titanium is designed for serious power seekers. It delivers massive top-end horsepower, outstanding towing capacity, and proven durability for demanding off-road, touring, and competition builds.



PRICE **\$3490**

Key Features



The TD-G400 Titanium is engineered with our most advanced internals yet. At its core is a lightweight, ultra-strong titanium compressor wheel, delivering faster spool and higher boost stability under extreme load.



A redesigned compressor cover with anti-surge slots and a large 3.5" inlet ensures minimal restriction and maximum airflow. The latest high-flow turbine wheel with a full-plate rear reduces back pressure for improved top-end power. While the 4340 CrMo shaft and upgraded thrust assembly provide exceptional durability under sustained boost.



The TD-G400Ti features enhanced oil flow and stepped piston seals on both the compressor and turbine sides, keep the turbo cool even under punishing conditions.

Performance Expectations

The TD-G400 Titanium operates efficiently from 16–42psi (design boost: 35psi), and preset to 22–25psi. Boost can be raised to 47psi with a boost controller and supporting mods.

With the right setup and tuning, this turbo delivers 30psi by 1750rpm and 40psi by 2000rpm, making it ideal for high-load, high-output diesel builds.

Product	Torque (Nm)	Power (rkwW)
Stock TD42	295	80-88
TD-G400Ti + FIP* Tune	450-550	125-140
TD-G400Ti + Supporting mods**	900	245

*FIP = Factory injection pump

**Supporting Mods = Clutch, large intercooler, 3" exhaust, upgraded airbox, high-flow injectors, injector pump



SUPPORTING MODS



NPC Viper Clutch
C CL XHD T3

Description

1000Nm rated heavy-duty clutch for TD42 manual transmission.

\$1895



High-Flow Airbox
A AB GT GU

Description

Unrestricted airflow and ultimate dust sealing for maximum engine performance.

\$1495



200hp Injector Pump
F IP TD42 200hp

Description

Delivers clean, reliable fuel flow for TD42 builds pushing up to 200rwhp

PRICING FROM \$2750





250hp Injector Pump
F IP TD42 250+hp

Description

Delivers clean, reliable fuel flow for 1TD42 builds chasing 250rwhp and beyond

PRICING FROM \$3150



Intercooler - GU S1-3
A IC AA T1F-3

Description

Optimised airflow and thermal efficiency to support higher boost and sustained performance. For manual transmission.

PRICING FROM \$1800



Intercooler - GQ
A IC AA T1F-4

Description

Optimised airflow and thermal efficiency to support higher boost and sustained performance. For automatic transmission.

PRICING FROM \$1800



Intercooler - GU S4
A IC AA T1F-2

Description

Optimised airflow and thermal efficiency to support higher boost and sustained performance. For manual transmission.

PRICING FROM \$1700



Boost Controller
T T BC

Description

Take control of your power by increasing boost beyond the preset limits

\$55

HIGH-FLOW AIRBOX

NISSAN GQ/GU PATROL AIRBOX

DURABLE | LIGHT-WEIGHT | DROP-IN FIT

GTurbo's high-performance airboxes are engineered for maximum airflow, strength, and durability to complement our turbo systems. Designed for harsh conditions, they deliver consistent performance, reliable filtration, and the long-term protection needed for high-power builds.

PRICE \$1495



Features

Our High-Flow Airbox features a market-first double-seal system for superior dust and water protection in the harshest conditions. Built from 3mm alloy with 8mm flanges and finished in corrosion-resistant anodizing, it delivers strength, durability, and long-term reliability.

Designed as a direct OEM replacement, it uses factory mounting points and utilises a VDJ79 filter for ease of servicing. Unlike plastic factory units that flex and leak under load, GTurbo's alloy design ensures clean, cool, and unrestricted airflow, improving engine performance and providing consistent protection for towing, touring, and serious off-road use.

Why its needed

High-performance turbos demand more air than the factory airbox can deliver. Stock units can become a major restriction, reducing power and efficiency.



NPC VIPER CLUTCH

GQ/GU TD42 MANUAL TRANSMISSION

EXCELLENT DRIVEABILITY | RELIABLE | STRONG

GTurbo proudly partners with NPC to deliver heavy-duty clutch solutions for your GTurbo upgrade. Whether you're towing, touring, or chasing serious power, these clutch kits provide the strength to manage high torque without sacrificing drivability, making them the ideal upgrade for demanding builds.



PRICING FROM **\$1895**

Features

The NPC clutch upgrade for the TD42 GQ/GU Patrol is engineered to handle up to 1,000 Nm of torque, making it ideal for high-performance turbocharged applications. Manufactured by NPC, the kit replaces the factory flywheel with a billet flywheel to deliver improved strength, reliability, and heat resistance.

Combined with a heavy-duty pressure plate and performance clutch disc, the system delivers superior clamping force while maintaining smooth engagement and a predictable, factory-like pedal feel under demanding conditions.

Why its needed

If you're chasing more than 400Nm at the wheels, a clutch upgrade is essential. The factory clutch simply isn't designed to hold that level of torque, especially under sustained load, and will quickly become a limiting factor in drivability and reliability.

FM INTERCOOLER

GQ/GU PATROL PDI INTERCOOLER

UNMATCHED COOLING | EFFICIENT | SEAMLESS

The PDI Front Mount Intercooler Kits provide the ultimate cooling upgrade for the TD42 platform. Engineered for serious performance in demanding conditions, this upgrade delivers dramatically lower intake temperatures, improved throttle response, and reliable power delivery, especially under load.



PRICING FROM **\$1700**

Features

The PDI Front Mount Intercooler kit for the Nissan TD42 GU & GQ Patrol is engineered for efficient cooling, clean fitment, and durability, using a rear-set core design to improve airflow and maintain bullbar and winch clearance. GU options include a 675 × 370 × 76 mm core (Series 4) with approximately 40% greater frontal area, and a 675 × 320 × 76 mm core for Series 1–3 models retaining the factory bonnet latch. The GQ kit uses a 595 × 330 × 76 mm core with recessed cast end tanks for a factory-style finish.

All kits feature high-flow cast end tanks, 2.5-inch stainless piping, oil-resistant silicone joiners, and high-torque clamps. Turbo-side pipework tapers where required for alignment across different turbo setups, while the intake side includes a manifold adapter with boost reference provision. The result is a direct-fit front mount system that lowers intake temperatures, reduces EGTs, improves throttle response and tune stability, and supports consistent performance under load.

Why should I upgrade my intercooler?

The TD42 engine runs rich with relatively low factory boost, resulting in high exhaust gas temperatures, especially as power is increased. The factory top-mounted intercooler quickly becomes a limitation due to heat soak and inconsistent performance, while replacement top-mounted units offer only marginal gains and increased induction noise.

A front-mounted intercooler delivers significantly lower inlet air temperatures, reducing EGTs, improving performance consistency and efficiency, and making it a critical upgrade for towing, touring, off-road use, and tuned or high-boost TD42 applications.

Why do the kits differ for each vehicle?

PDI offers multiple core configurations to suit different vehicle setups and usage requirements. The extra-large core is ideal for customers seeking maximum cooling performance and efficiency, while the raised-core option provides excellent intercooling capability with increased clearance for vehicles fitted with bullbars and winches. Both designs are engineered to integrate cleanly with the GU Patrol chassis and TD42 engine layout.

Type	Core Size (mm)	Price
Large Core	675 × 260 × 76	\$1700
Extra Core	675 × 370 × 76	\$1800

Optional Add-Ons

Automatic Transmission Cooler

For automatic GU Patrols, an optional 45,000 BTU transmission cooler mounts directly to the intercooler using supplied adjustable brackets for optimal airflow. If retaining the factory cooler, custom brackets are required, with passenger-side mounting in front of the hot side recommended for effective cooling.

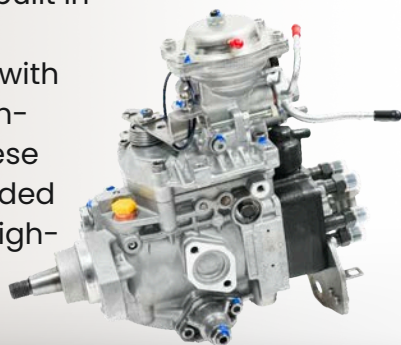
**OPTIONAL
UPGRADE \$520**

INJECTOR PUMPS

TD42 ADS INJECTOR PUMPS

PRE-TUNED | PRECISE CONTROL | BENCH-TESTED

GTurbo High-Flow Injector Pumps, built in partnership with ADS Injection, are designed for seamless integration with GTurbo systems. Every unit is bench-tested and pre-tuned, ensuring these pumps deliver the fuel volume needed for increased torque and reliable high-power performance.



PRICING
FROM **\$2750**

Key features

Each GTurbo high-Flow injector pump is fully bench-tested and pre-tuned before shipping, ensuring reliable plug-and-play fitment. Built for reliability and consistency, these pumps are designed for straightforward installation with no immediate tuning required. They can be preset to any desired power level within the pump's capability, offering tailored performance for a wide range of builds.

Why should I upgrade my injector pump?

The factory TD42 injector pump is decades old and, even in peak condition, is typically limited to around 135–140 kW and 450–550 Nm at the wheels for the TD42-T, and 100–110 kW and 350–400 Nm for the TD42-NA. As these pumps age, internal wear further restricts fuel delivery, making them a major bottleneck in performance builds. For larger turbochargers, higher boost, or power beyond factory limits, a pump upgrade is essential for safe and consistent fueling.

What we offer?

We offer two levels of high-flow injector pumps, supplied by ADS Injection, our trusted pump builder for over 10 years. Each ADS pump is pre-tuned on the bench, meaning you can install, prime, and drive with confidence. While some customers choose to fine-tune on the dyno for maximum results, these pumps are ready to deliver serious performance straight out of the box.

200hp Injector Pump

Designed to support builds making up to 180–200hp at the wheels. This is the ideal option for vehicles running moderate turbo and airflow upgrades, without upgraded injectors.

250hp+ Injector Pump

This pump unlocks power potential beyond 250hp at the wheels, when paired with the right supporting mods. On its own, the 250hp+ pump supports around 240–250hp at the wheels.

Purchase options

Exchange Program

Injector pumps are supplied first on an exchange basis with a **\$1500 refundable core charge**. The core charge is refunded once your original injector pump is received. The cores must be in working, serviceable condition for refund eligibility.

Outright Purchase

Outright purchase allows you to buy the injector pump without returning a core. This option is ideal if you want to keep your original pump or don't have a serviceable unit for exchange

Pricing

Engine	Injector Pump	Exchange Price	Outright Price
TD42-T	200hp	\$2750 + \$1500 core charge	\$3950
TD42-T	250+hp	\$2850 + \$1500 core charge	\$3950
TD42-NA	200hp	\$2850 + \$1500 core charge	\$2950
TD42-NA	250+hp	\$3150 + \$1500	\$4050

PRODUCT GUIDE

CONSIDERATIONS

Before Upgrading

Before upgrading your turbo, it's crucial to plan for the supporting modifications that make extra power safe and reliable. Relying on stock components can limit performance, or worse, lead to engine or driveline damage. Ensuring you have the right and necessary supporting mods, will protect your investment and unlock the full potential of your GTurbo upgrade.

Supporting modifications

We have provided extensive information on preceding pages regarding supporting modifications. To summarise:

REQUIRED

- Clutch

RECOMMENDED

- PDI Front-Mount Intercooler with transmission cooling
- Minimum 3" Exhaust
- Airbox
- High-flow injector pump
- Boost gauge and controller

Turbos

Every GTurbo upgrade includes a redesigned compressor cover with a larger 3.5" inlet and 2" outlet to maximise airflow and efficiency. Unlike the factory flanged inlet, these connections improve breathing and support higher boost levels. If you're retaining the stock airbox or intercooler, the intake and piping will need to be manufactured to suit the new dimensions.

Aging Fan Clutch

Many TD42 engines are still running the original viscous fan hub, which can lose effectiveness over time as the internal silicone oil degrades or leaks. This reduces cooling performance under load,

especially in hot conditions or when towing. We recommend inspecting or replacing the fan clutch to prevent overheating.

Secondary Fuel Filters

While adding a secondary fuel filter is a popular upgrade to protect the TD42 from contaminated fuel, using the wrong filter can do more harm than good.

Many aftermarket kits use a 5-micron element, which is far too restrictive for the factory injector pump to draw through on its own. This restriction causes the pump to struggle, leading to internal wear and metal contamination.

Over time, metal from the pump can circulate through the fuel system and even make its way back into the fuel tank, risking widespread damage.

We strongly recommend using a 30-micron filter at a minimum for secondary filtration. If you plan to run anything finer, a quality lift pump is essential to relieve strain on the injector pump and maintain long-term reliability.

Fueling

The factory mechanical injection pump performs well to a point, but begins to run out of fuel around 130–140rwkW. If you're aiming for more power, GTurbo recommends upgrading to a high-flow mechanical pump built by ADS Injection, matched to your target power level. Injector condition is also vital, worn injectors can lead to poor spray patterns, high EGTs, and reduced fuel economy.

Intercooling, Top Mount or Front Mount?

Compared to top-mount setups, front-mount intercoolers are significantly more efficient at managing intake temperatures, especially under sustained load like towing, touring, or off-road driving. They also make engine access easier, avoiding the bulk and heat soak issues of top-mounted designs.



PHILOSOPHY & WARRANTY

Philosophy

GTurbo turbos are designed to safely handle the boost levels we specify, while maintaining exceptional durability and performance. Our units are bolt-on replacements, connecting seamlessly to your existing manifold and exhaust for a straightforward upgrade.

At GTurbo, we prioritise safe, reliable performance. The figures we publish reflect conservative, real-world results suited to long-term reliability. If you're aiming for more aggressive tuning, we can accommodate that, with the understanding that increased risk may be involved. We're here to guide you through the right setup based on your goals and how you use your vehicle.

Warranty

Every GTurbo product comes with a 12-month warranty against manufacturing and assembly defects. This excludes our titanium models which are covered for 24-months under warranty.

We take pride in delivering world-class products that significantly enhance your vehicle's performance and in providing outstanding support to ensure the best possible GTurbo experience.

While we'll assist you wherever possible, please note that we cannot accept liability for issues caused by factors outside our control.

CONTACT US

G GTURBO

PERFORMANCE BY DESIGN

We're here to help you get the most out of your diesel performance. Whether you have questions about our products, need advice on the right upgrade, or want to book a tune, the GTurbo team is ready to assist.

**18 Abrams Street, Balcatta,
Perth, WA 6021,
Australia**

(08) 9240 8715
+61 401 524 399

www.gturbo.com.au
sales@gturbo.com.au

Opening Hours

Monday – Friday:
8:30 AM – 4:30 PM

Saturday – Sunday:
Closed

PERFORMANCE BY DESIGN

