



GTURBO

WHY A **GTURBO**

FOR YOUR 12H-T

HJ61 LANDCRUISER

Version 1.1 (2025)

PERFORMANCE BY DESIGN





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ABOUT US

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.



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





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.

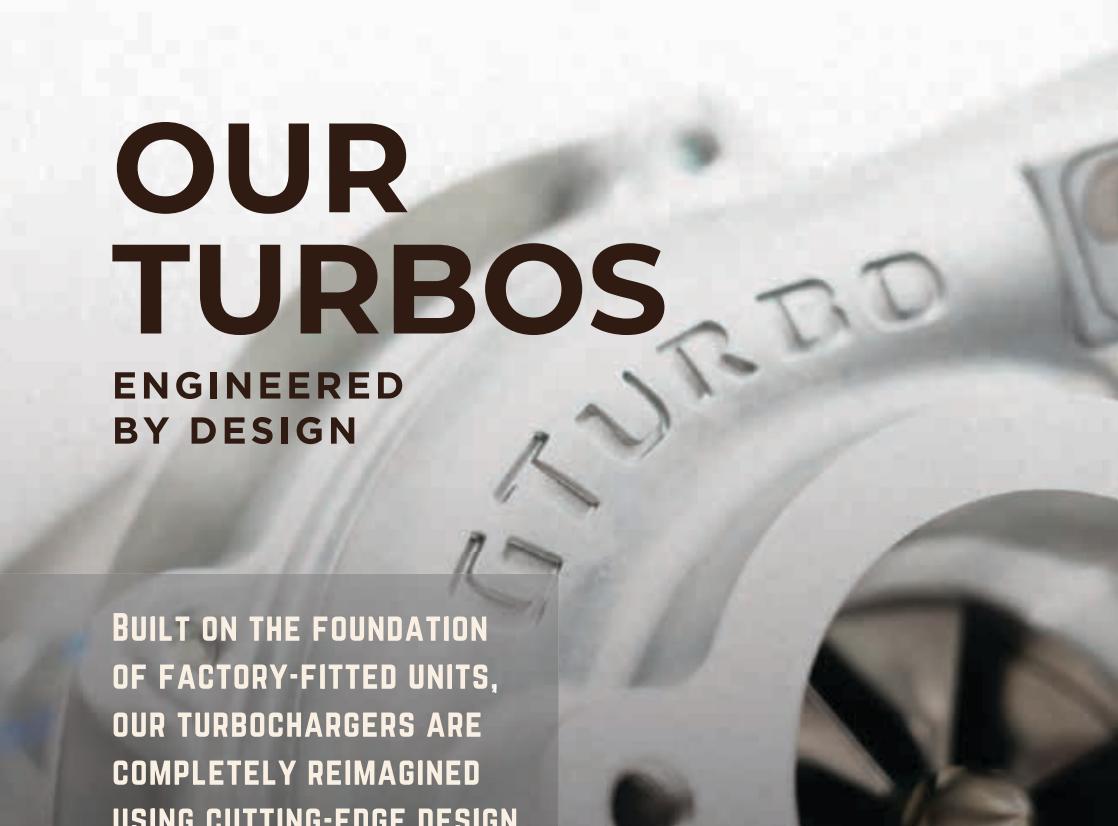
DRIVEN BY INNOVATION AND BACKED BY ENGINEERING EXCELLENCE, WE FOCUS ON THE ENTIRE SYSTEM TO BRING YOU GREATER POWER OUTPUT WITH EVERY UPGRADE.

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 12H-T

The Toyota 12H-T is widely regarded as one of the most sought-after diesel engines ever fitted to a passenger 4WD. Known for its impressive power potential and excellent fuel economy, both stock and modified, it's a favourite among enthusiasts and tourers alike.

Built for longevity, the 12H-T regularly surpasses 500,000 km with proper care. Its inline mechanical injection pump offers far greater durability compared to the more common Bosch VE pumps, while its direct injectors typically outlast indirect injection systems found in engines like the 2H, 1HZ, and TD42, often lasting 2–3 times longer.

Unfortunately, a legacy of poorly designed turbocharger kits and incorrect tuning has created unnecessary fear around boost. But boost itself isn't the problem, engine damage is typically caused by excessive turbo back pressure, over-fuelling, and improper tuning, all of which raise piston crown temperatures beyond safe limits.

At GTurbo, our systems are purpose-built to efficiently deliver the airflow needed to support high fuel delivery, unleashing the true potential of the 12H-T without compromising reliability. When combined with proper tuning and accurate air-fuel ratio (AFR) monitoring, the 12H-T becomes a powerhouse that retains its signature longevity. With the right setup and tuning, the 12H-T offers incredible performance without sacrificing the durability it's famous for.



PRODUCT GUIDE

FOR THE 12H-T PLATFORM



TURBOCHARGERS



12H-G333 Titan
T T 12HT S2B

Description

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

\$2690



12H-G380 Titan
T T 12HT S3B

Description

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

\$2690

SUPPORTING MODS



NPC700 Clutch
C CL XHD T1

Description

700nm rated heavy-duty clutch for the HJ61 manual transmission.

\$990



Intercooler - HJ61
A IC AA T8F

Description

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

PRICING FROM \$1700



12H-G333 TITAN

STAGE 1: TURBO UPGRADE

RESPONSIVE | LOW-END TORQUE | DAILY DRIVES

The GTurbo 12H-G333 Titan is our Stage 1 turbo upgrade, designed for strong low-end torque and excellent all-round drivability. It's the ideal choice for daily drives, towing, touring, and off-road driving.

PRICE \$2690



Key Features



At the core of the 12H-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 12H-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 12H-G333 Titan delivers efficient boost from 16–28psi, with a design and preset boost of 18psi. For more aggressive builds, a boost controller and gauge allow you to safely raise boost levels beyond the preset.

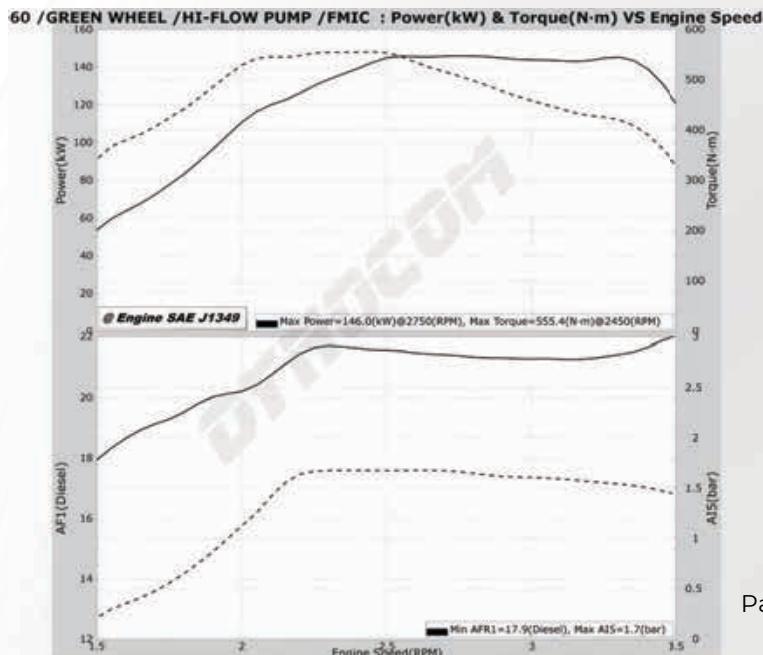
Thanks to its low-inertia design and advanced aerodynamics, the 12H-G333T spools rapidly, hitting 9psi by 1500rpm, or up to 16psi with the right tuning and supporting mods.

Product	Torque (Nm)	Power (rkw)
Stock 12H-T	250	67
12H-G333T + FIP* Tune	390-420	95-115
12H-G333T + supporting mods**	550	150

*FIP=Factory Injection Pump

**Supporting Mods = Clutch, large intercooler, 3" exhaust, upgraded airbox, injector pump

The dyno graph below, reflects real-world performance of the 12H-G333 Titan on a 12H-T vehicle with full supporting mods.





12H-G380 TITAN

STAGE 2: TURBO UPGRADE

MID-RANGE PUNCH | REAL-WORLD PERFORMANCE

The GTurbo 12H-G380 Titan steps up the performance game with a sharper 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 12H-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 12H-G380T 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 12H-G380 Titan operates efficiently from 16–36psi (design boost: 28psi), with a preset range between 20–25psi. Boost can be adjusted with a boost controller and gauge, to suit more aggressive tuning. Expect minimum 8psi by 1500rpm, or 14psi with supporting mods and tuning.

Product	Torque (Nm)	Power (rkwW)
Stock 12H-T	250	67
12H-G380T + FIP* Tune	400-450	100-120
12H-G380T + supporting mods**	650	180

*FIP=Factory Injection Pump

**Supporting Mods = Clutch, large intercooler, 3" exhaust, upgraded airbox, injector pump

FM INTERCOOLER

HDJ60 PDI INTERCOOLER KITS

UNMATCHED COOLING | EFFICIENT | SEAMLESS

The PDI Front Mount Intercooler Kit for the 60 Series Landcruiser is the ultimate cooling upgrade for HJ60 and HJ61 models running the 12H-T engine. It delivers unmatched cooling efficiency and durability, and is designed to fit to both round headlight and twin square light variants.

PRICING FROM \$1700



Features

PDI's front-mount intercooler combines a high-efficiency 545 x 300 x 65 mm core with recessed end tanks for a clean, factory-style fit. Designed to integrate seamlessly with the factory air conditioning, it uses custom stainless-steel piping for optimal airflow and durability. By keeping charge temperatures consistently low, it delivers sharper throttle response and more power—especially with a turbo set to 18 psi, maximising the potential of the standard injection pump.

PDI's intercooler kit comes complete with stainless-steel piping, silicone joiners, and a custom intake flange for the 12H-T. For left-hand drive models, a small piping adjustment may be needed to clear the steering box—an easy modification that won't affect performance or fitment quality.

Why should I upgrade my intercooler?

The factory 12H-T runs without intercooling, meaning intake air temperatures rise quickly under boost. This causes high intake temps that cut power and strain the engine under load.

NPC700 CLUTCH

12H-T MANUAL TRANSMISSION

EXCELLENT DRIVEABILITY | RELIABLE | STRONG

The NPC700 Clutch offers excellent drivability with a factory-like pedal feel while providing the strength and reliability required to handle significant torque for long-term performance. NPC remains our trusted partner for all LandCruiser clutch applications.

PRICE \$990



Features

The NPC700 clutch is engineered to handle up to 700Nm of torque, making it the perfect match for high-performance turbo upgrades and heavy-duty applications. Featuring a full-face organic disc and a heavy-duty pressure plate, the NPC700 delivers superior clamping force while maintaining a smooth, factory-like pedal feel for everyday comfort.

Every NPC700 clutch kit is engineered for strength and reliability, designed and built in Australia, the NPC700 is purpose-made to handle the harsh environments and heavy loads typical of LandCruiser use.

Why upgrade your clutch?

The factory clutch in manual HJ61 models with the 12H-T is now decades old and often begins to slip at around 400Nm at the wheels, particularly under load or after tuning. Even at stock power levels, age and wear make failure increasingly likely. For those targeting higher power levels, upgrading to the NPC700 clutch is highly recommended for its strength and reliability.

PERFORMANCE EXPECTATIONS

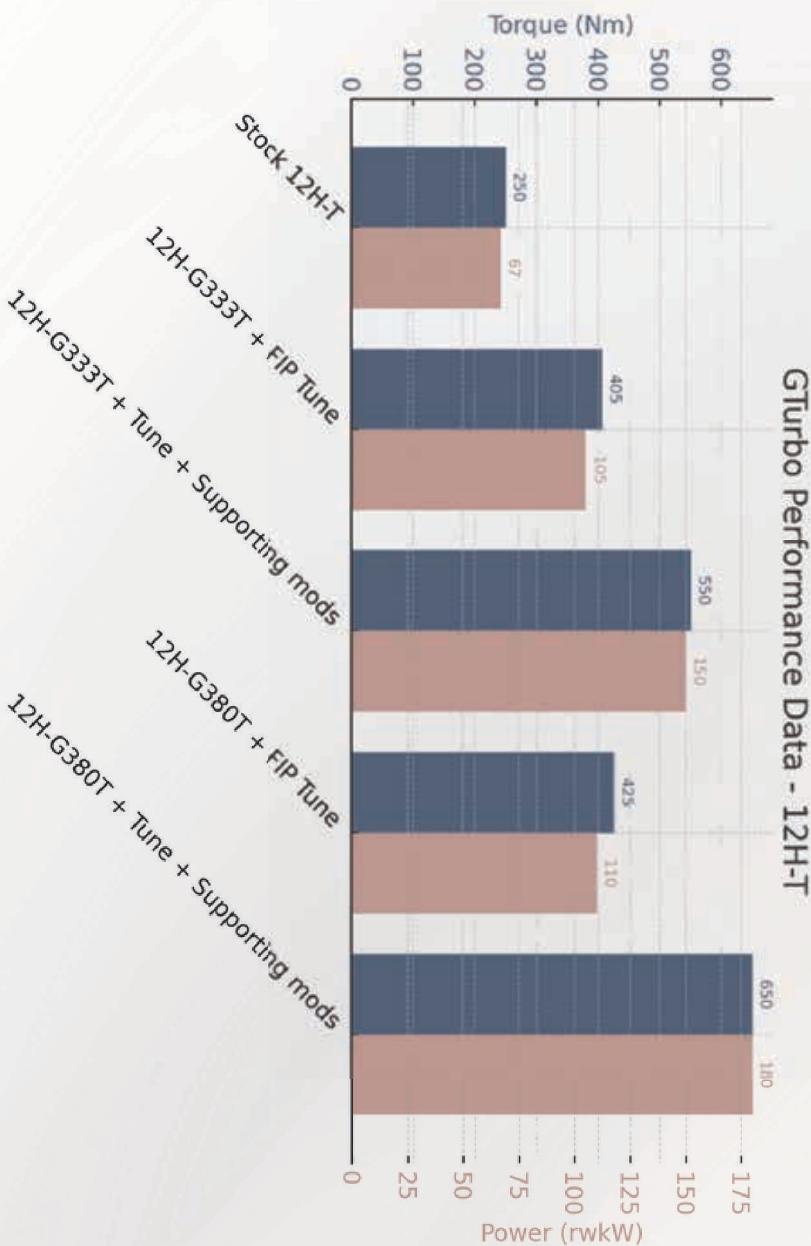
COMPARISON TABLE

When choosing the right turbo for your 12H-T upgrade, it's important to consider your performance goals, vehicle use, and supporting modifications. The table below compares each GTurbo option to help you decide which upgrade best suits your needs.

Product	Torque (Nm)	Power (rwkW)
Stock 12H-T	250	67
12H-G333 Titan		
12H-G333T + FIP* Tune	390-420	95-115
12H-G333T + Tune + supporting mods**	550	150
HD-G380 Titan		
12H-G380T + FIP* Tune	400-450	100-120
12H-G380T + Tune + supporting mods**	650	180

*FIP=Factory Injection Pump

**Supporting Mods = Clutch, large intercooler, 3" exhaust, upgraded airbox, injector pump





PRODUCT GUIDE

SPECIAL 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 the right 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

- Upgraded clutch

RECOMMENDED

- PDI Front-Mount Intercooler with transmission cooling
- Minimum 3" Exhaust
- Airbox
- 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 2.75" 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 minor modifications to suit the new dimensions.

Boost and Power Limits (Stock Configuration)

The 12H-T handles low-to-moderate boost levels well, but it's important not to push it too far, especially without an intercooler. We recommend limiting boost to 14–16psi on a non-intercooled setup and 18–22psi on intercooled setups. This typically results in around 80–115rkwW and 350–420Nm at the wheels. Going beyond this on a stock setup increases the risk of reliability issues.

Cooling System Upgrades

The 12H-T's cooling system is adequate in stock form but marginal when pushed. Radiators often suffer from internal scaling, and viscous hubs lose efficiency with age. Upgrading or servicing the radiator, thermostat, and fan hub is strongly recommended before adding boost or towing heavy loads.

Aging Fan Clutch

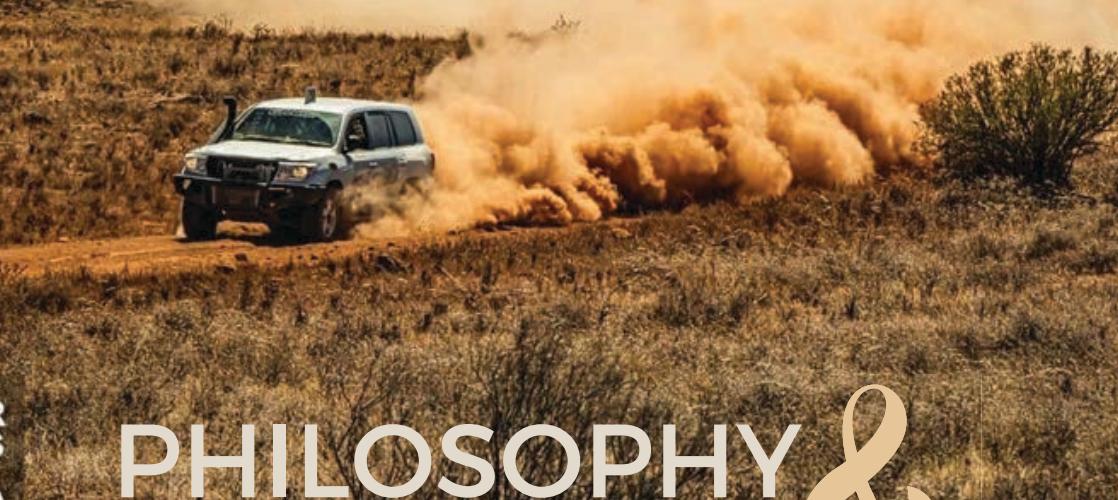
Many 12H-Ts are still running the original viscous fan hub, which can lose its effectiveness over time as the internal silicone oil breaks down or leaks out. This results in poor cooling under load, particularly in hot conditions or when towing. We recommend inspecting or replacing the fan clutch to avoid overheating.

Age and Component Fatigue

All surviving 12H-T engines are now decades old. Common age-related issues include cracked manifolds, worn turbos, and tired injection pumps/injectors. Oil leaks and hardened seals are also widespread. Any performance build should begin with a health check and refresh of seals, bearings, and fuel system components.

Piston Reliability and EGT Management

Unlike later engines, the 12H-T lacks an alfin insert in the piston crown, making it more susceptible to heat-related stress and cracking, especially under high EGTs from poor tuning, excess boost, or heavy loads. Effective intercooling, conservative tuning, and careful air-fuel management are essential to protect pistons in performance builds.



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



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.

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Opening Hours

Monday – Friday:
8:30 AM – 4:30 PM

Saturday – Sunday:
Closed

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