# 2022

# Geely Binyue's high-strength alloy silver turbocharger can improve engine efficiency.

## **Basic Information**

Place of Origin: China zhajiang
Brand Name: GEELY
Model Number: 2034006200

Minimum Order Quantity: 5

Price: RMB+1690+PC
Packaging Details: carton packaging,
Delivery Time: 20-30Work days
Payment Terms: MoneyGram
Supply Ability: 50000+PC+30day



# **Product Specification**

• Application: Improve Engine Efficiency.

• Color: Silver

Material: High-strength Alloy

• Type: Car Inerior

Package: Standard/Protective

• Function: Improve Engine Efficiency.

Car Model: Geely BinyueSize: Standard

• Highlight: High Strength Alloy Turbocharger,

Geely Binyue Turbocharger,

Silver Turbocharger



#### **Product Description**

# Geely Binyue's high-strength alloy silver turbocharger can improve engine efficiency Description:

### I. Advanced technology integration

Geely Binyue's turbocharger adopts a series of advanced technologies. Among them, low inertia turbocharged technology can effectively reduce turbine hysteresis, so that the turbocharger can intervene at a lower speed (such as 1000rpm), making the overall power output more surging. At the same time, it also has a direct injection technology in the cylinder, which can make the fuel atomize better when it is sprayed, so as to improve the efficiency of the engine.

#### II. Efficient combustion system

The airway of the turbocharger adopts a unique MASK structure, which greatly improves the level of rolling flow in the cylinder, accelerates the combustion speed, and further improves the performance of the engine.

#### III. Optimize NVH performance

In order to improve the comfort of driving, Binyue has been optimized for NVH. For example, the engine is equipped with a balance shaft to reduce the vibration of the engine; in DVVT, a long-lasting timing belt is used, and the service life of the belt can reach 8-10 million kilometers, and during the service life of the vehicle, the working noise of the timing belt will be lower than that of the timing chain, which is conducive to reducing engine running noise. At the same time, a dual-mass flywheel is installed to change the vibration frequency of power. In the modular and lightweight design of the whole machine, a hollow camshaft, synthetic resin intake manifold, integrated water pump module, etc. are used to reduce the weight of the engine, thus effectively optimizing the NVH performance of the engine.

#### IV. Strong power output

The power output of this engine can be proud of the same level, and 255N·m of torque can be released at 1500 rpm, which can make the vehicle have an excellent starting speed-up response. For example, Geely Binyue's 1.5TD turbocharged engine has a maximum power of 130kW/5500rpm and a maximum torque of 255N·m/1500-4000rpm.

#### V. Excellent gearbox matching

Matching the turbocharger is the wet 7DCT dual-clutch gearbox, which has a leading torque ratio, the electronic shift handle achieves a fast switching gear response, and the shift response time is only 0.2 seconds. At the same time, the transmission efficiency of the gearbox is as high as 96.8%, maximizing fuel economy. Compared with the dry dual-clutch gearbox, the wet dual-clutch gearbox has more advantages in smoothness. Its gearbox oil can cool the valve body to avoid overheating of the gearbox, and the wet clutch has a wider valve adjustment, making the shift more stable, smooth, reliable and durable. VI. Multiple driving modes

Binyue also has a variety of driving modes, such as ECO economy, NORMAL standard and SPORT sports mode. At the same time, the steering system also has three steering modes, namely, comfort, standard and sports mode. When adjusting the driving mode, the steering mode can also follow the linkage to the corresponding mode to meet the personalized choice of different driving needs and road conditions.

### Applications:

- 1. Improve engine power and torque: The turbocharger can increase the air intake of the engine and make the fuel burn more fully, thus greatly increasing the power and torque of the engine without increasing the engine displacement. For example, Geely Binyue 1.5TD turbocharged engine has a maximum power of 177 horsepower and a maximum torque of 255 N·m. Its power parameters are equivalent to the mainstream 2.5L naturally aspirated engine on the market.
- 2. Improve fuel economy: By improving combustion efficiency, fuel consumption can be relatively reduced. For example, taking the common 1.8 turbocharged engine as an example, its fuel consumption is not much higher than that of a 1.8-liter engine, but the power can reach the level of a 2.4-liter engine.
- 3. Provide plateau compensation function: at high altitudes, the air is thin, and the turbocharger can overcome the problem of engine power decline caused by air shortage.
- 4. Meet the requirements of emission regulations: It helps to reduce the emission of harmful components such as particulate matter and nitrogen oxides in the engine exhaust gas, making it easier for vehicles to meet stricter emission standards. Take the 1.5TD turbocharged engine carried by Geely Binyue as an example. The engine adopts a low inertia turbocharger, and the supercharger intervenes at 1000rpm, effectively eliminating turbine hysteresis and making the acceleration performance at low speed better. The airway adopts a unique MASK structure., which greatly improves the level of in-cylinder rolling current and accelerates the combustion speed. It also has a 350bar central in-cylinder direct injection technology, which can make the degree of atomization better when the fuel is sprayed, so as to improve the efficiency of the engine and reduce emissions and fuel consumption.

#### Specifications:

Application	improve engine efficiency.
Color	Silver
Material	high-strength alloy
Туре	Car Inerior
Package	Standard/Protective
Function	improve engine efficiency.
Car model	Geely Binyue
Size	Standard

#### Feature Advantage:

- 1. Low inertia design: The turbocharger from BorgWarner adopts a low inertia design. The engine can intervene at 1000rpm, and its maximum speed can reach 240,000 rpm, which can provide sufficient air supply at medium and high speed, effectively reduce turbine hysteresis, so that the vehicle can get more in the initial stage. High torque output brings more agile starting and accelerated response.
- 2. High-efficiency combustion: The fuel supply system is provided by Bosch and adopts in-cylinder direct injection technology. The high-pressure oil pump can provide 200 bar of fuel injection pressure, which is conducive to the full atomization of fuel. The injector adopts a central layout, which can effectively avoid the wet wall phenomenon, and at the same time make the mixture of fuel and air more fully and improve the combustion efficiency.
- 3. Optimize NVH performance: In order to balance the jitter of the three-cylinder engine, it is equipped with a balance shaft, which is integrated in the crankcase and driven by a crankshaft. The rotation direction is opposite to the crankshaft, which can balance the first-order inertial torque of the engine. At the same time, it is also equipped with a dual-mass flywheel, which can effectively alleviate the torque of the engine and reduce the noise of the engine and gearbox, so that the idle noise level in the

car is comparable to that of a four-cylinder naturally aspirated engine.

- 4. Strong derivatives: The 1.5TD model has become one of the main models of Geely's engine system. On this basis, 1.5TD+7DCTH PHEV plug-in hybrid system, 1.5T Miller cycle engine+7DCTH HEV oil-electric hybrid system and 1.5T are derived. D+7DCT MHEV light hybrid power system, etc., may also be derived from HEV oil-electric hybrid system and EREV add-to-program electric system in the future.
- 5. Joint development: Geely Binyue's 1.5T turbocharger is jointly developed by Geely and Volvo. Its engine adopts modular, platform-based design, high thermal efficiency, and adopts DVVT technology, which can meet the national six emission standards; the intake system adopts MASKING structure, the same The configuration of the single balance axis and the four pendulum double-mass flywheel further suppresses the vibration.
- 6. Strong Power: The Maximum Power Of Geely Binyue 1.5T Turbocharged Engine Can Reach 130kW (177Ps)/5500rpm, And The Maximum Torque Is 255 Nm/1500-4000rpm. The Power Parameters Are Excellent In The Same-displacement Engine, Providing A Strong Vehicle. The power output is comparable to that of the previous four-cylinder naturally aspirated engine and the four-cylinder turbocharged engine with the same displacement.

For example, the new generation of Jinqing 1.5TD turbocharged engine carried by Geely Xinbinyue, with a 7-speed wet dualclutch transmission, has a power of 133kW, a maximum torque of 290N m, and an acceleration of only 7.6 seconds, showing the three core advantages of "fast, fierce and economical".



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