



300Nm Maximum Torque Car Torsional Vibration Damper Great Wall Motor Manufacturer

Our Product Introduction

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Basic Information

- Place of Origin: China
- Brand Name: Dongfeng
- Certification: IATF 16949:2016
- Model Number: XEDA8
- Minimum Order Quantity: 100 piece
- Packaging Details: Metal mesh box packaging
- Delivery Time: Spot goods
- Payment Terms: T/T
- Supply Ability: Annual production of 500000 pieces



Product Specification

- Maximum Torque Capacity: 300 Nm
- Color: Black
- Application: Automotive Industry
- Model: ABC123
- Operating Temperature: -40°C To 120°C
- Durability: Highly Durable
- Function: Reduce Torsional Vibration
- Compatibility: Universal
- Installation: Easy To Install
- Installation Method: Bolt-on
- Weight: 2kg
- Country Of Origin: China
- Size: Standard
- Package Contents: 1 Torsional Vibration Damper
- Maintenance: Low Maintenance Required



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Product Description

Passenger car torsional vibration damper: a precision device that safeguards driving stability and safety

In modern automobile manufacturing, passenger car torsional vibration dampers play a crucial role as key components in the transmission system. It not only concerns the driving comfort and handling stability of the vehicle, but also directly affects the durability of the transmission system. This article will delve into the function, structure, working principle, and importance of torsional vibration dampers for passenger cars in the automotive industry, aiming to provide readers with a comprehensive and in-depth understanding.

1, Overview of the functions of torsional vibration dampers for passenger cars

Passenger car torsional vibration damper, also known as torsional damper, is mainly installed in the clutch driven plate and is an important bridge connecting the engine and transmission. Its core function is to absorb and dissipate the torsional vibration generated by the transmission system during operation, thereby protecting the transmission components from damage and improving the driving experience. Specifically, torsional vibration dampers can:

Reduce resonance risk: By adjusting the torsional stiffness, the transmission system can avoid resonance at specific frequencies, reducing noise and vibration.

Enhance durability: effectively suppress transient torsional vibration caused by impact loads, and extend the service life of transmission components such as bearings, gears, etc.

Enhance comfort: Optimize the smoothness of the vehicle during starting, acceleration, braking, and other working conditions, reducing driver and passenger fatigue.

Ensure safety: Ensure that the transmission system can still work stably under harsh road conditions or extreme driving conditions, and improve driving safety.

2, Structure and Working Principle

Passenger car torsional vibration dampers are usually composed of elastic elements (such as rubber springs, coil springs), damping elements (such as friction plates, damping oil), and support structures. Its working principle is based on a spring damping system. When the transmission system generates torsional vibration, the elastic element first absorbs the vibration energy, and then the damping element converts the energy into thermal energy through friction or fluid damping and dissipates it.

Elastic element: Provides necessary flexibility and restoring force to cushion torsional vibrations while maintaining the rigid connection of the transmission system.

Damping element: It consumes vibration energy through friction or fluid resistance, controls the attenuation speed of vibration, and prevents vibration rebound.

Supporting structure: Ensure the correct installation and stable operation of torsional vibration dampers, while transmitting necessary torque.

3, Technical characteristics and innovation

With the continuous advancement of automotive technology, passenger car torsional vibration dampers are also constantly innovating to adapt to more complex and changing driving environments and higher performance requirements.

Adjustable torsional vibration damper: By adjusting the internal structure or adopting an intelligent control system, the damping characteristics can be dynamically adjusted to meet the needs of different working conditions.

Lightweight design: using high-strength lightweight materials such as aluminum alloy, carbon fiber, etc. to reduce weight and improve fuel economy.

Integrated technology: Integrating torsional vibration dampers with other transmission components to reduce space occupation and improve overall system efficiency.

Intelligent monitoring and diagnosis: integrating sensors and algorithms, real-time monitoring of shock absorber status, predicting faults, and providing maintenance recommendations.

4, Application and maintenance

Passenger car torsional vibration dampers are widely used in various types of passenger cars, from economy sedans to luxury sports cars, without exception. Proper installation and maintenance are crucial for maintaining its optimal performance.

Installation: Ensure the correct alignment and fastening of the shock absorber and transmission system to avoid performance degradation caused by looseness or misalignment.

Inspection: Regularly check the shock absorber for abnormal wear, cracks, or leaks, and replace damaged parts in a timely manner.

Maintenance: Perform regular maintenance according to the vehicle manufacturer's recommendations, including changing lubricating oil, cleaning, etc., to extend the service life.

Professional maintenance: For complex faults or maintenance work that requires precise adjustments, it is recommended to entrust it to professional technicians for handling.

5, Future Development Trends

With the rapid development of electric vehicles and autonomous driving technology, passenger car torsional vibration dampers will face new challenges and opportunities. On the one hand, the power system characteristics of electric vehicles require shock absorbers to have higher accuracy and response speed; On the other hand, autonomous driving technology has put forward higher requirements for the stability and safety of vehicles, promoting the development of torsional vibration dampers towards intelligence and integration.

In summary, as a key component in the transmission system, the performance of passenger car torsional vibration dampers directly affects the driving quality and service life of the vehicle. Through continuous innovation and optimization, future torsional vibration dampers will become more intelligent and efficient, providing passengers with a safer, more comfortable, and enjoyable driving experience.



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