



Car Torsional Vibration Damper Ford Small Car Cast Iron Parts Buffer

Our Product Introduction

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Basic Information

- Place of Origin: China
- Brand Name: Dongfeng
- Certification: IATF 16949:2016
- Model Number: 372F-1005070
- 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

- Efficiency: Effectively Reduces Vibration By 80%
- Size: 10 Cm X 10 Cm X 5 Cm
- Installation: Easy To Install
- Operating Temperature: -40°C To 120°C
- Function: Reduce Torsional Vibration
- Durability: High
- Warranty: 1 Year
- Maintenance: Low Maintenance Required
- Color: Black
- Package Contents: 1 Car Torsional Vibration Damper, Installation Manual
- Weight: 2.5 Kg
- Installation Method: Bolt-on
- Maximum Torque Capacity: 300 Nm
- Compatibility: Fits Most Car Models



More Images



Product Description

Introduction to torsional vibration dampers for passenger cars

In modern passenger cars, torsional vibration dampers are a crucial component that not only affects the driving safety and stability of the vehicle, but also directly impacts driving comfort and vehicle durability. This article will provide a detailed introduction to the function, working principle, advantages, and adjustment methods of torsional vibration dampers for passenger cars, helping readers better understand this precision automotive component.

1, Function of torsional vibration damper

Torsion shock absorber, also known as torsional damper, is an important component in automotive clutches, mainly composed of elastic elements and damping elements. Its core functions include:

Reduce the torsional frequency of the transmission system: By reducing the torsional stiffness of the joint between the engine crankshaft and the transmission system, the natural frequency of torsional vibration in the transmission system can be lowered to avoid resonance phenomena.

Suppress torsional resonance: Increase the torsional damping of the transmission system, suppress the amplitude corresponding to torsional resonance, and attenuate transient torsional vibration caused by impact, protecting the transmission system from damage.

Control idle vibration: When the powertrain is idling, control the torsional vibration of the clutch and transmission shaft system to eliminate the idle noise of the transmission and the torsional vibration and noise of the main reducer and transmission.

Improve engagement smoothness: alleviate the torsional impact load of the transmission system under unstable working conditions, improve the engagement smoothness of the clutch, and make gear shifting smoother.

2, Working principle of torsional vibration damper

The working principle of torsional vibration dampers can be simply understood as the process of energy absorption and dissipation. When the vehicle is driving on uneven roads or making sharp turns, the transmission system will produce torsional vibration. The torsional vibration damper absorbs and dissipates the vibration energy through internal elastic elements (such as springs) and damping elements (such as damping plates).

Specifically, when the driven disc is in operation, the friction torque experienced by the friction plates on both sides is first transmitted to the driven disc body and the shock absorber disc, and then transmitted to the driven disc hub through several shock absorber springs. When the spring is compressed, it plays a buffering role, greatly reducing the impact on the transmission system. At the same time, the torsional vibration in the transmission system will cause the driven disc hub to oscillate back and forth relative to the driven disc body and the shock absorber disc, consuming the energy of the torsional vibration through the friction of the damping plate sandwiched between them, resulting in rapid attenuation of the torsional vibration.

3, Advantages of torsional vibration dampers

Compared with traditional shock absorbers, torsional shock absorbers have the following significant advantages:

More stable damping force: By using a controllable hydraulic system, the damping force can be adjusted as needed, making the damping force smoother and the shock absorption effect more significant.

Less energy loss: It can convert the energy generated by the vehicle during driving into electrical energy and store it in the battery, thereby further improving fuel economy and reducing environmental impact.

Lower maintenance costs: With a reliable electronic control system, there is no need to regularly replace hydraulic oil and seals, resulting in lower maintenance costs.

4, Adjustment method and influence of torsional vibration damper angle

Due to the influence of the vehicle's center of gravity and load distribution on the angle of the torsional vibration damper, adjusting the angle of the torsional vibration damper can further improve the smoothness and comfort of driving. The specific adjustment method is as follows:

Measure the original angle: Before adjusting the angle, it is necessary to measure the original angle so that the adjusted effect can be compared. Professional angle measurement tools are required during measurement to ensure accurate and reliable measurement data.

Adjusting the torsion angle: Based on the actual situation of the vehicle and measurement data, the angle of the torsional vibration damper can be adjusted. In general, upward adjustment can improve the stability and anti rollover ability of the vehicle, while downward adjustment can enhance the comfort and transitional performance of the suspension system.

Test effect: After the adjustment is completed, a road test is required to verify the effect of the adjustment. During testing, attention should be paid to vehicle speed and road conditions to ensure the authenticity and validity of the test data.

5, Summary

As an important component in passenger cars, torsional vibration dampers ensure smooth operation and driving comfort by reducing the torsional stiffness and vibration of the transmission system. Its working principle and advantages have made it widely used in modern automobile manufacturing. Meanwhile, by adjusting the angle of the torsional vibration damper, the driving performance of the vehicle can be further optimized. Therefore, it is crucial for car manufacturers, owners, and maintenance personnel to understand and master the relevant knowledge of torsional vibration dampers.



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