



Spinning Pulley Fan Pulley Bracket Assembly Corrosion Preventive Casting Parts

Our Product Introduction

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Basic Information

- Place of Origin: China
- Brand Name: Dongfeng
- Certification: IATF 16949:2016
- Model Number: 1308023-FD2541
- Minimum Order Quantity: 100 piece
- Price: EXW 318.8CNY/piece
- Packaging Details: Metal mesh box packaging
- Delivery Time: Spot goods
- Payment Terms: T/T
- Supply Ability: Annual production of 50000 pieces



Product Specification

- Material: Cast Iron
- Color: Black
- Application: Engine Components
- Type: Pulley System
- Safety Features: Non-slip Grip And Secure Locking Mechanism
- Maintenance: Low
- Weight: Varies Depending On Size
- Function: Smooth And Efficient Rotation
- Installation: Easy To Install
- Durability: High
- Highlight: Fan Pulley Bracket Assembly Spinning Pulley, Casting Parts Spinning Pulley, Corrosion Preventive Spinning Pulley



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Product Description

Detailed introduction of fan pulley bracket assembly

The fan pulley bracket assembly is one of the key components in the engine system, whose main function is to support and fix the fan pulley, ensuring the normal operation of the engine cooling fan. This article will provide a detailed introduction to the structure, materials, working principle, function, design optimization, and maintenance of the fan pulley bracket assembly, which is an important engine accessory.

1, Structure of fan pulley bracket assembly

The fan pulley bracket assembly usually consists of multiple key components, including the bracket body, bearings, central shaft, locking ring, etc. Each component plays a specific role in ensuring the normal operation of the entire system.

Bracket body

The bracket body is the main structure of the fan pulley bracket assembly, usually made of high-strength alloy steel to ensure its sufficient strength and durability. The bracket body is designed with bearing holes inside for installing bearings, and is fixed to the engine cylinder block or fan pulley through a series of connecting structures.

Bearing

Bearings are key rotating components in the fan pulley bracket assembly, used to support and rotate the central axis. Bearings are usually made of high-quality bearing steel, with steel balls or roller structures used internally to maintain operational efficiency and lifespan through lubricating grease. The design and selection of bearings directly affect the rotational performance and durability of the fan pulley bracket.

Central axis

The central shaft is the core component of the fan pulley bracket assembly, connected inside the bearing to support and transmit power. The central axis is usually made of high-quality alloy steel, and its surface is precision machined to ensure its axial accuracy and surface quality. The design of the central axis should not only meet the strength requirements, but also have sufficient rigidity and wear resistance.

Locking snap ring

The locking ring is one of the fasteners in the fan pulley bracket assembly, used to ensure a tight connection between the bearing and the central shaft. The locking ring is usually made of high-quality stainless steel or high-strength alloy steel, and its surface is specially treated to improve its corrosion resistance and wear resistance. The correct installation and fastening of the locking ring is crucial for the stability and safety of the fan pulley bracket.

2, Material of fan pulley bracket assembly

The material selection of the fan pulley bracket assembly directly affects its performance and service life. Here are some commonly used materials and their characteristics:

High strength alloy steel

High strength alloy steel is one of the main materials for the fan pulley bracket assembly, with excellent strength and durability. It can maintain stable performance in high temperature and high pressure environments, and is not easily deformed or damaged.

High quality bearing steel

High quality bearing steel is the main material for bearings, with excellent wear resistance and fatigue resistance. The internal structure and chemical composition of bearing steel have been carefully designed and optimized to ensure its stability and reliability during high-speed operation.

stainless steel

Stainless steel is one of the commonly used materials for locking clamps and other fasteners, with excellent corrosion resistance and wear resistance. Stainless steel can maintain its performance in harsh environments and is not easily rusted or corroded.

3, Working principle of fan pulley bracket assembly

The working principle of the fan pulley bracket assembly is relatively simple, but its function is crucial. When the engine is running, power is transmitted to the fan pulley through a belt, and the fan pulley drives the fan to rotate, thereby achieving engine cooling. The fan pulley bracket assembly plays a supporting and fixing role in this process, ensuring that the fan pulley can operate stably.

Supporting function

The bracket body supports the fan pulley through bearings and a central shaft, enabling it to operate smoothly. The design and material selection of the bracket body ensure that it can withstand the load and vibration generated by the operation of the fan pulley.

Fixed function

Tighten the bearing and central shaft to the bracket body with fasteners such as locking rings to prevent them from loosening or falling off. This fixing function ensures the stability and reliability of the fan pulley bracket assembly.

4, Function of fan pulley bracket assembly

The fan pulley bracket assembly plays a crucial role in the engine system, and its functions include the following aspects:

Supporting fan pulley

The primary function of the fan pulley bracket assembly is to support the fan pulley, enabling it to operate smoothly. The design and material selection of the bracket body ensure that it can withstand the load and vibration generated by the operation of the fan pulley.

Transmitting power

The fan pulley bracket assembly transmits power from the engine to the fan pulley through the central shaft and bearings, thereby driving the fan to rotate. This transmission process needs to be efficient and stable to ensure the cooling effect of the engine.

Fixed and positioned

Tighten the bearing and central shaft to the bracket body with fasteners such as locking rings to prevent them from loosening or falling off. This fixing and positioning function ensures the stability and reliability of the fan pulley bracket assembly, avoiding malfunctions and damages caused by looseness or detachment.

Protect bearings

The bearing holes and lubricating grease inside the bracket can protect the bearings from erosion by pollutants such as dust and moisture, extending their service life. At the same time, the design and selection of bearings also take into account wear resistance and fatigue resistance to ensure their stability and reliability during high-speed operation.

5, Design optimization of fan pulley bracket assembly

With the continuous development of the automotive industry, the design of the fan pulley bracket assembly is also constantly being optimized and improved. Here are some common design optimization measures:

Lightweight design

Lightweight design is one of the important trends in the current automotive industry. By using high-strength and lightweight

materials such as aluminum alloy or carbon fiber composite materials, the weight of the fan pulley bracket assembly can be significantly reduced, improving the fuel economy and performance of the entire vehicle.

Optimization design of bearings

The bearing is one of the key components in the fan pulley bracket assembly. By optimizing the structure and material selection of bearings, their wear resistance and fatigue resistance can be improved, and their service life can be extended. Meanwhile, by adopting advanced lubrication technology and grease formula, the friction and wear of bearings can also be reduced, improving operational efficiency.

Fastener optimization

The design of fasteners such as locking rings also directly affects the stability and safety of the fan pulley bracket assembly. By optimizing the shape, size, and material selection of fasteners, their corrosion resistance and wear resistance can be improved, ensuring their reliability in harsh environments.

Integrated design

Integrated design is one of the important trends in current automotive component design. By integrating multiple components together, the number of parts can be reduced, manufacturing costs can be lowered, and the overall performance and reliability of the system can be improved. In the design of the fan pulley bracket assembly, it is possible to consider integrating the bracket body, bearings, central shaft, and other components together to form a compact and efficient overall structure.

6, Maintenance of fan pulley bracket assembly

In order to ensure the normal operation and prolong the service life of the fan pulley bracket assembly, regular maintenance and inspection are required. Here are some common maintenance measures:

clean

Regularly clean the fan pulley bracket assembly to remove dust, oil, and other pollutants. This helps to maintain lubrication and normal operation of the bearings, extending their service life.

lubrication

Regularly inspect and replace the lubricating grease of the bearings. Lubricating grease can reduce friction and wear of bearings, and improve operational efficiency. Suitable lubricating grease should be selected according to the manufacturer's recommendations and replaced according to the prescribed cycle.

Check fasteners

Regularly check the fastening condition of locking clamps and other fasteners. If looseness or damage is found, it should be replaced or tightened in a timely manner to ensure the stability and safety of the fan pulley bracket assembly.

Replace damaged components

If any component in the fan pulley bracket assembly is found to be damaged or severely worn, it should be replaced in a timely manner. This helps to avoid malfunctions and damage, ensuring the normal operation of the engine.

7, Conclusion

The fan pulley bracket assembly is one of the key components in the engine system, with a complex structure and important functions. By optimizing design and regular maintenance, it can ensure its normal operation and extend its service life. This article provides a detailed introduction to the structure, materials, working principle, functions, design optimization, and maintenance of the fan pulley bracket assembly, providing readers with a comprehensive understanding and reference. I hope this article can be helpful to readers in the research and application of fan pulley bracket assembly.



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