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Discussion on the Advanced Maintenance Scheme of the Hanging Parts of A Certain Type of Car

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Abstract: In the current background of economic development, the rapid economic development also puts forward new requirements for the railway operation in China. In recent years, although China's railway transportation and the development of overhaul have achieved gratifying results, there are still very serious problems. To a large extent, railway transportation plays a very important role in the transportation of some materials, so railway transportation cannot be replaced for a long time. In the process of railway transportation, it is inevitable to encounter some faults, which must be repaired in time to ensure the safety of railway transportation. Therefore, the establishment of railway vehicle maintenance program is always a pressing problem. This paper takes the overhaul of the hanging parts of a certain type of vehicle as the main starting point. The purpose is also to provide the basis and accumulate experience for China's railway vehicle advanced repair plan, so as to escort China's advanced repair and normal transport.

Keywords: Railway vehicle maintenance; Advanced maintenance; Plan formulation

1. Introduction

Railway transportation in China's transportation industry plays a very important role, and railway transportation cost is very high, so in order to effectively reduce the cost of railway transportation, it should use all means to prolong the service life of railway vehicle, and in order to achieve this goal, it should attach great importance to the railway vehicle repair this problem. The overhaul of railway vehicles is standard. If the overhaul is excessive, it will not only cause the waste of capital, but also affect the normal transport of the vehicle, thus affecting the normal traffic volume and transport progress. Therefore, the over-overhaul scheme is not desirable. However, if the maintenance problem is neglected, it may cause safety problems in the later operation of railway vehicles. Therefore, more attention should be paid to the advanced maintenance of railway vehicles.

2. A Brief Overview of Vehicle Overhaul System and Mode

In the whole process of vehicle maintenance, due to the different nature of damaged parts or vehicles, the maintenance methods used in the later period are certainly different. So in the face of this situation, it is necessary to take different solutions for different problems. Here is an overview of some common troubleshooting problems and corresponding troubleshooting methods.

2.1. Basic vehicle maintenance system

Vehicle maintenance is very simple, there are only three ways. The first is regular maintenance, which means to carry out systematic overhaul and troubleshooting of some basic components of the running vehicle within the inherent term. The second is a practical overhaul. In other words, make corresponding maintenance plan for the specific situation of driving vehicles. The third kind is after-the-fact maintenance, as the name implies, which means the vehicle has a problem in the process of driving, and then sent to the repair department for troubleshooting or problem maintenance. And the basic overhaul system also divides into two kinds. The first one is to make corresponding plan. In the process of repair, repair is carried out according to the plan in sequence, and the whole planning process is indispensable, which is also the system maintenance of the vehicle. The benefit of this overhaul system is that it does not cause any impact on the transportation of vehicles or lead to major safety problems because of the emergent problems. Another maintenance system is specific to the vehicle in the process of the problems occurred in the repair. Actually, these two kinds of maintenance systems have their own advantages and disadvantages. In the process of use, we should also adopt the most appropriate maintenance system on the premise of ensuring the lowest cost and maximum efficiency for the specific driving conditions of vehicles.

2.2. The maintenance system of the subway running vehicles

Nowadays, subway has become one of the major modes of transportation for most people, playing an indispensa-

ble role in urban transportation. Therefore, in order to guarantee the safety of subway operation, corresponding funds should be invested in the maintenance of subway vehicles. As for the main situation of subway vehicles, the maintenance period should be extended to a large extent, which is also the main means to guarantee the lowest cost. And the establishment of this specific cycle can be based on the use of vehicle parts and wear, etc. And must pay attention to the station maintenance this unique way, thus realizes to the small parts regular inspection, guarantees throughout the transportation process can be safe and reliable. Of course, regular system maintenance is also essential for subway vehicles.

2.3. Basic maintenance system for goods vehicles

For freight, its overhaul system is also special. Above all, freight is used to run long distance commonly, must buy the truck that pass quality to pass when choosing to enter freight car so. For the overhaul of freight cars, detailed maintenance plans must be formulated, and the specific maintenance process must be completed reasonably and strictly according to the plan. In this way, the efficiency of the truck in the transportation process can be guaranteed. In addition, the maintenance system of the truck is not single, so the waste of maintenance materials will probably occur in the entire maintenance process, which must be eliminated. Various maintenance departments should cooperate with each other and organize and mark the data of vehicle failure, which can effectively guarantee the improvement of the efficiency of later maintenance.

3. Advanced Maintenance Scheme for Hanging Parts of Certain Type of Vehicle

3.1. Technical testing and scheme formulation

The hanging part plays a very important role in the safety of the whole vehicle, so the technical detection is very important. The first is the precise measurement of each part. Any part must be accurate to ensure its high precision. Only in this way can the safety of its later operation be guaranteed. In the process of vehicle operation, it will cause certain wear and tear on the parts of the vehicle or corrosion on the parts after a long period of time, and these processes will have a certain impact on the size of parts and so on. These small effects will lay a very large safety hazard for later operation. Therefore, these parts are measured, if found to have problems must be repaired in time. The measuring tools used in this process are also very professional, such as vernier calipers, inside micrometers and outside micrometers. The tools used must be professional, so that the measured data can be accurate and correct.

3.2. Nondestructive testing of components

This link has certain particularity. Non-destructive testing of parts is a very important step, but in the process of completing this step, it must follow the principle of not destroying the essence of products. However, there are many kinds of methods adopted in our traditional detection methods and methods, which are still applicable today. For example, infrared inspection, radiographic inspection and so on can guarantee the product is not damaged, then can make corresponding detection. These methods are also highly desirable. Through these tests, the damage of parts inside the product can be obtained, which must be adjusted and replaced in time so as not to affect the later travel. This is similar to prevention testing in essence.

3.3. Performance testing of each part

The application of parts must ensure its availability, and the application requirements of the parts of transport vehicles are very strict. The performance test is also mainly reflected after the maintenance of the vehicle. As we have mentioned before, regular vehicle maintenance is a very important link. After the vehicle maintenance work is completed, the overall performance of the vehicle should be evaluated comprehensively, and the evaluation is passed. To a certain extent, it is also a recognition of the maintenance work, so that the vehicle can continue to be put into use in transportation. One of the main purposes of this work is to establish the next maintenance cycle so as not to cause unnecessary safety accidents.

4. Conclusion

Nowadays, the pressure of vehicle maintenance is indeed increasing, but regular maintenance and corresponding troubleshooting should not be neglected. In order to effectively reduce the cost of maintenance and improve the efficiency of maintenance, various parts manufacturers are required to cooperate in this process. Only in this way can the pressure of vehicle maintenance be greatly reduced to ensure the safe operation of vehicles, and the maintenance industry can achieve rapid development.

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