

JOB ROLE – AUTOMOTIVE SERVICE TECHNICIAN

Sector: Automotive
(Qualification Pack Code : **ASC/Q01402**)



PSS Central Institute of Vocational Education
Shyamla Hills, Bhopal – 462013, Madhya Pradesh, India

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UNIT 4 : Suspension system

Session- 1: Maintenance of suspension system

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Session Objectives

1. The student will be able to explain the importance of suspension system in a vehicle .
2. Able to identify major components of suspension system .
3. Able to understand and describe the functions of suspension system in a vehicle.

Introduction

Vehicle's suspension system is made up of four basic components namely the struts, shock absorbers, springs and tyres. Shock absorbers and struts are important for on road safety performing the function of keeping the tyres evenly connected with the road and maintaining a vertical load on the tyres. The shock absorbers on a vehicle go through as many as one thousand movements per kilometre so it is not surprising that they wear out quite quickly and should be checked every 20,000 kilometres during major servicing. The springs support the weight of vehicle act as a flexible link that allows the body and frame to ride with minimal disturbance, while the tyres and suspension follow the road.

The suspension of the vehicle has a number of functions for safety and optimum performance.

The important functions are given here:

- Maintaining the correct vehicle ride height
- Reducing the effect of shock forces to the vehicle
- Maintaining the correct wheel alignment
- Supporting the vehicles driving stability
- Keeping the vehicles tyres in contact with the road
- Control of vehicle's direction of travel.
- Maintain the centre of gravity.

when vehicle is moving. Maintenance of vehicle suspension system is very important. One must observe that how vehicle behaves on the road. Making sure it is working properly and will not only make your vehicle safer but will also help to reduce unnecessary wear and tear.

Suspension check-ups

Suspension is very important to the safety and performance of vehicle. As the part of vehicle that puts tyres in contact with the road, the suspension plays a critical role. Badly maintained suspension results in faster and more uneven tyre wear, which further compromises safety. If you don't have a well maintained suspension system you are not as safe as you should be and are putting yourself and others at risk. Most of the suspension parts are made of rubber material to minimize shocks, therefore it is necessary that rubber parts should be regularly checked for wear, tear and torn.

Maintenance Tips for Suspension system

- Thoroughly clean the leaf spring set and its fittings, With the help of grease or pneumatic grease gun, lubricate all shackle pins, swing arm of the leaf spring set.
- Lubricate each leaf with graphite grease.
- Tighten the u clamp bolts /nuts with specified torque.
- Check the center bolt.
- Tighten the clamp nut bolt with specified torque.
- Check the slackness of shackle and tighten the set if needed
- In case of shock absorber/stud, tighten the holding nuts and bolts at both ends.
- In case of two wheeler, tighten the swinging of nuts/bolts of front and rear wheels.
- Avoid overloading vehicle.

Summary

In this session you have learnt about , The shock absorbers on a vehicle go through as many as one thousand movements per kilometer so it is not surprising that they wear out quite quickly and should be checked every 20,000 kilometers during major servicing.

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