

A review paper on pneumatic controlled ABS

Naveen Kumar¹, Ujjawal Kumar Jha², Vinay Kumar³

^{1,2} Student Department of Mechanical Engineering, MVSIT Sonipat, Haryana, India

³ Project Guide, Department of Mechanical Engineering, MVSIT Sonipat, Haryana, India

Abstract

In today's fast-moving world, automobiles are facing challenges in terms of having to survive road accidents, increasing traffic, bad road-conditions and high/express ways. Brake systems play a vital role in controlling the vehicle speed while avoiding road accidents. Now a days it is very necessary to improve the braking system for safety because people are driving at high speed and if they don't have the abs like brake for instant stopping their vehicle then it may cause alot of deaths. We are facing it in more metro cities like heavy traffic and people have ver few and managed time for travelling. So, it is necessary use it in modified and levelled way.

Keywords: levelled, fast-moving, challenges

Introduction

Usually driven by the vehicle engine, the air compressor is the source of energy for the air Brake system; for the air brake system the air compressor builds the air pressure. By the engine coolant system cools the air compressor is typically cooled and lubricated by the engine oil supply. (Certain models have self-lubricated and/or air-cooled versions available.) Note: Air compressor shafts can rotate neither direction, at atmospheric pressure, the vehicle's compressor draws in filtered air from the outside (or already at an increased pressure, from the engine turbocharger where permitted), and compresses it. The brake system needs a supply of compressed air between a preset maximum and minimum.

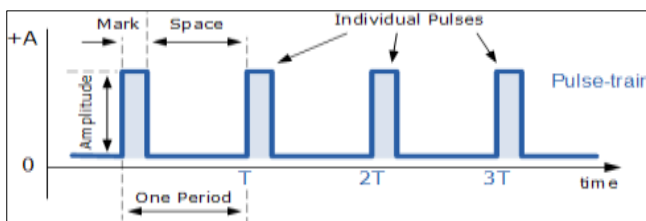


Fig 1

unloaded"). When the air pressure becomes greater than that of the preset "cut-out", the governor controls. The unloaded mechanism of the air dryer to purge. As the service reservoir air pressure drops to the "cut-in" setting of the governor, the governor returns the compressor back to building air and the air dryer to air drying mode. As the atmospheric air is compressed, all the water vapor originally in the air is carried along into the air system, as well as a small amount of the compressor lubricating oil as vapor. As the compressor need valve gor regulation and proper pumping condition so it is built inthe compressor. As it is most modified way to do this function accorring to the supply of things through the valves.

Literature Review

S. Mithun *et al.* (2014)^[1] An air brake system is used in heavy commercial vehicles for the purpose to stop or slow down the

vehicle. The layout was modeled in one of the commercially available multi-doma. This special valued thing is available in only this type of abs to provide the all safety measures according to the customer protection. This works an various types of valves and actuator. In this way we are doing some hilarious work on this to do it in the way we want. We are trying to use the proper actuator and valves to provide all the data. And this is very necessary to know full knowledge about the abs otherwise it will not work like that as you are thinking and it will create problem.

Zhou Kun *et al.* (2017)^[16] This article describes the structure and working principle of pneumatic balancer emergency braking system, the braking effect of the emergency braking system is that the it stops a lot of major accidents that is created by high speed accident prone. In now a days it wuold be seen that it is working alot and many of lives saved by this so we are doing good bya modifying it in very correct manner. We should also think in this way that we are using it in high standard so we also need to use it properly and tria to use it in safe way. ore better ideas.

Patil Pratik *et al.* (2016)^[17] Nowadays vehicle accident is a major problem. This may create a lot of problem with noraml people who can losse their life easily. This may be solved by the many creative ideas that improve the way of driving skill and safety measures. This should be solved by abs which gives a lot of things related to innovative braking system. So we are improving and modifying our abs also to provide good service.

Conclusions

- After reading the above research papers it can be judged that the response time for actuating the brake differs in every individual vehicle.
- ABS generally offers advanced vehicle control and minimize the stopping distance in slippery and dry surface, conversely on loose surface like gravel or snow covered pavement, ABS can significantly increase braking distance, although still improving vehicle control.
- The use of pneumatic system can prove to be useful in

automation due to its simplicity and ease of operation. Also, IR sensors to perform these operations.

- Centrally located and electrically powered compressor that powers cylinders and other pneumatic devices through solenoid valves can often provide motive power in a cheaper, safer, more flexible, and more reliable way than a large number of electric motors and actuators.
- Pneumatic actuators also have long life and perform well with negligible maintenance requirement throughout their life cycle. Initial cost is less; hydraulics equipment cost as much as twice the price of pneumatic equipment
- Above all, pneumatics provide spring effect when brakes are actuated, thus prove less jamming of disk in heavy vehicles carrying a huge load.

References

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