

FABRICATION OF AUTOMATIC BRAKE FAILURE INDICATOR AND ENGINE CUTOFF

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ABSTRACT

Automatic brake failure indicator and Engine reduce off system, it is true task which is wholly outfitted and designed for vehicle vehicles. This varieties an fundamental section of proper quality. The one of the primary cause is brake failure, it brought on to due to very negative upkeep as nicely as product defect, in order to secure shield the precious human for accident the accident monitoring of brake is very essential aspect in vehicle Vehicle security is the avoidance of vehicle accidents or the minimization of unsafe outcomes of accidents, in precise as difficulty to human lifestyles and health. Special protection aspects have been constructed into cars occupants only, and some for the protection of others. Automatic brake failure indicator and Engine reduce off device is the most positive answer on this trouble .it is the most advantageous and the easiest methodology used to limit the fee of accident due to brake failure. In this device the aspects used are two way relay, buzzer, battery, motor, wiring system

And subsequently the Engine reduce off device mounted in the two wheeler via the usage of these aspects the most high-quality device is to be generate. In this system, if brake failure is take place then the buzzer provide the indication to the driver in the shape of sound and concurrently choice braking machine begin their working and practice the secondary brakes by way of the usage of motor outfitted to the chassis, as the end result of these the velocity of the car get decreased and car is quit in some second. The primary benefit of the device is that it is compact in size, and the set up price is very less. If this gadget is set up in automobile then accident due to brake failure get reduced, as the end result of these the fee of accident due to brake failure get reduce.

KEYWORDS: Brake, Relay, motor, and Vehicle.

I. Introduction

Today accidents are appear due to many reasons, the one of the fundamental purpose is brake failure, it precipitated to due to poor maintenance as properly as product defect, in order to secure shield the treasured human for accident the accident monitoring of brake is very vital aspect in car Vehicle protection is the avoidance of car accidents or the minimization of detrimental outcomes of accidents, in specific as subject to human lifestyles and health. Special safety features have been constructed into automobiles occupants only, and some for the security of others. We have pleasure in introducing our new idea “Automatic Brake Failure Indicator and braking system”. This is outfitted via relay braking unit. It is proper thought which is thoroughly outfitted and designed for car vehicles. This varieties an essential section of nice quality. This product underwent check in our car cars and it is best. A brake is a mechanical gadget that inhibits action through slowing down a physique or with the aid of slowing it. Brakes retard the movement of a body creating friction between two working surfaces and convert the kinetic electricity of the transferring physique in to

heat. Brakes are normally utilized to transferring as properly as types. Sometimes brake failure may additionally show up when the brake lining is cut-off.

II. LITRATURE RIVIEW

Dr.N.Venkatachalapathi , V. Mallikarjuna

Automatic Brake Failure Indicator and Over Heating Alarm

The braking machine of a vehicle is most likely one of its greater vital features. The intention of this work is to create a higher braking machine with indicator. Brake failure takes place solely due to the fact of worn out of brake shoe and reduce in liner. It consists of two sensors. One sensor is linked with the brake shoe. The different sensor is the brake liner. The sign from the two sensors is given to a microcontroller. When the brake shoe is worn out, the sensor senses sign to the microcontroller. Also if the brake liner is cut, the sensor sends sign to the microcontroller. The microcontroller analyses the sign and operates the corresponding indicator. It nothing wrong, the car will pass and if any one critical, the automobile will stops and the display suggests the indication of brake failure. Since this shows the repute of the brake, the person can pick out the situation of the brake and therefore limiting the possibilities of malfunction

P.Balashanmugam , K.Balasubramaniyan , G.Balasubramaniyan ,S.Vinoth

Fabrication Of High Speed Indication And Automatic Pneumatic Braking System

As for the Indian avenue transport state of affairs is concerned, accidents are turning into a day to day reason an try has been made in this mission to minimize such mishaps. In our task a excessive pace indication is given and computerized braking is utilized via reducing off the gas furnish to the engine when the setup pace is exceeded. In our project, we have used solenoid valve and an operational amplifier circuit the usage of LM324IC. The alternations to be made to put into effect this mission in the cars are additionally discussed.Radhakishan Maske , Satesh Surwase , Balbhim Moharir , Vrushabh Mahajan , Vijay Kedar Prof.Amol Adkine.

III. WORKING PRINCIPLES

Very easy and effortlessly reachable aspects are used in this undertaking for the motive of fabrication. This consists of a braking system, an IR sensor and a manage unit. Also the gas tank, gasoline pump and the gasoline injectors are used. The IR sensor typically senses the braking gadget of the vehicle.A gasoline pump is linked from the gasoline tank to the gas injector, pumps gasoline from the tank to the injector which in flip injected into the engine. If the braking machine works usually barring any trouble, the sensor works as usual. When the braking gadget fails, the IR sensor detects this failure and sends indicators to the manipulate unit.The manage unit linked to the ignition coil. Hence at the time of brake failures, it is routinely detected by way of the sensor and the reduce off the ignition furnish so that automobile to be stopped.

.COMPONENTS

In this system the components used are two way relay, buzzer, battery, motor, wiring system, and finally the breaking system installed already in the two wheeler. By using these components the most effective system is to be generated.

Drum Brake

A brake plays a main role in stopping the vehicle. It is opposite of Clutch. A brake is used to rotating axle to stop the vehicle. In a two wheeler two types of brakes: Drum brake & Disc Brake. Generally drum brakes are widely used in the rear wheel. In India and many nations we find the application of drum brake on both front and rear wheel. A drum brake used brake shoes or friction pads to create braking force.

A drum brake assembly having brake shoes or friction pads, brake pedal or lever, springs, brake cable, brake drum, brake arm, brake cam, Dust seal, Anchor pin washer, brake panel.

Buzzer

A buzzer or beeper is an audio signaling device which is mechanical, electromechanical, or piezoelectric. Buzzers and beepers used in alarm devices, timers, and confirmation of user input such as a mouse click or keystroke.

Relay

A relay is a switch which operated electrically. Relays used as an electromagnet to mechanically operate a switch. Relays are used if it is necessary to control a circuit by a separate low-power signal, or where several circuits must be controlled by one signal only.

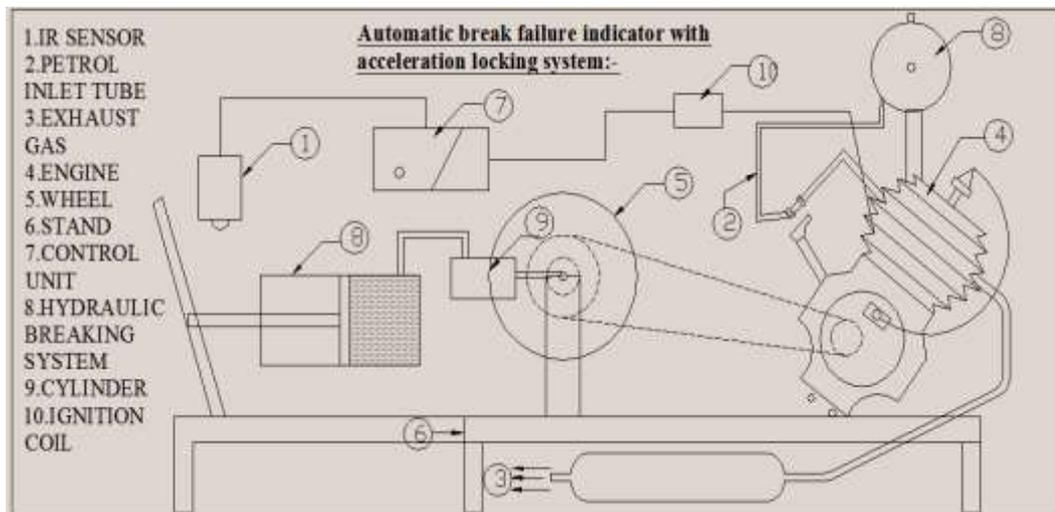
DC Motor

It is 10RPM 12V DC geared motors for this applications. It is easy to use and available in standard size. There are used nuts and threads on shaft to easily connect and internal threaded shaft to connect it to wheel.

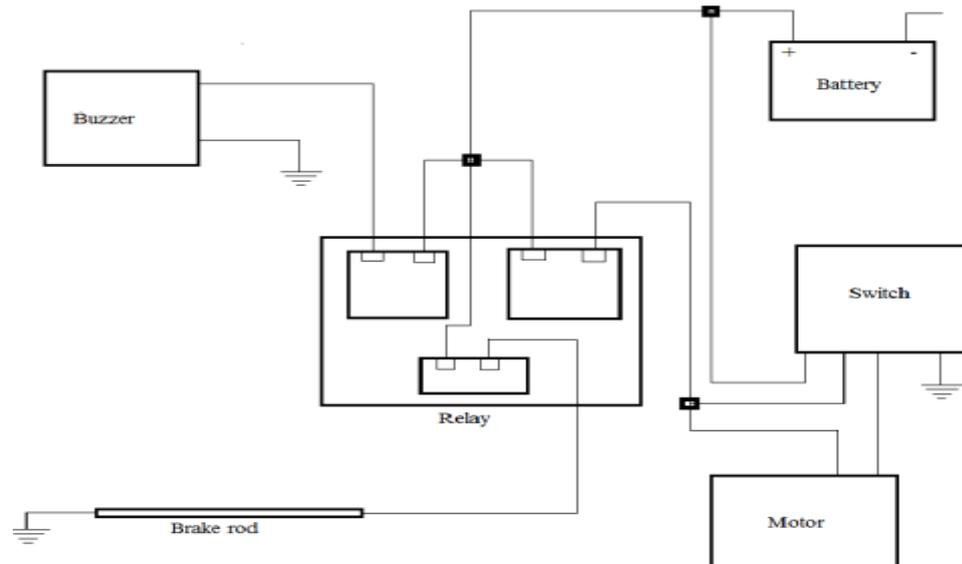
Battery

Battery is an electro chemical cell which transfer chemical energy into electrical energy

IV. LAYOUT



V. METHODOLOGY



VI. ADVANTAGES

- No need of external battery. Circuit can be powered from the vehicle's battery itself.
- Power consumption is comparably less.
- It is not depend on the petrol level.
- Operating principle is very easy.
- Installation is simplified very much.
- The safety of driver is ensured.
- Brake failure is notified to the surrounding traffic via buzzer.
- The cost is low.

VII. APPLICATIONS

- Four wheeler application
- 2. Two wheeler application
- 3. Mechanical Crane
- 4. Mechanical machines

VIII. Conclusion

This setup reduces the accidents and prevents loss of life. Auxiliary braking offers extra functionality to the driver and to make sure prevention of harm to existence and property. The task supply extra self belief that we will be capable to apply in practice, something theoretical knowledge. If actually persuade us to do greater and more, possibly in exact way in our future. Brake failure indicator is an early warning system. It continuously video display units the situation of the brake and provide audio visible signal. This setup reduces the accidents and prevents loss of life. Auxiliary braking gives additional functionality to the driver and to make certain prevention of harm to existence and property.

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