

SIDE STAND ENGINE LOCK SYSTEM

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ABSTRACT

KEYWORDS

PneumaticSystem, Directional Control Valve, Compressor, Sheet Cutter, Bending Punch & Die.

In our day to day life transportation is the most important provision used by maximum of the population because of the efficiency to reach their destinations is high. While using this provision there is chance of accidents because of the many reasons like clashing of two vehicles, overspeeding, drunk driving, distraction to driver, red light jumping etc. many accidents occur because of the small mistakes which are very silly such as picking up side stand etc. we can reduce some causes of accidents by making any instrumental or devices which gives us the remainder so that we can react to that. focusing on the accidents occurred due to picking up the side stand we can make a device by which the accidents will be reduced because of the side stand.



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INTRODUCTION

Although road accidents are common, they are still the most unfortunate thing that can happen to a motorist. The worst part is that we drive around making the same errors over and over again. Accidents and collisions occur because drivers are too careless, even though the majority of drivers are aware of the basic regulations and safety precautions to follow while driving. Human mistake is the leading cause of accidents and crashes. Some of the most typical human actions that lead to accidents are being described here.

1. Driving at an excessive speed
2. Driving under the Influence
3. Driver Distractions,
4. Leaping Red Lights
5. Disregarding Safety Equipment, Such as Helmets and Seat Belts
6. Disregarding lane markings and improperly passing

These are the most prevalent driving behaviours that cause accidents, according to studies conducted at the national and worldwide levels.

Speeding:

Going too fast for conditions causes the majority of fatal incidents. The human spirit is hardwired to achieve greatness. If given the opportunity, man will surely reach limitless speed. To the contrary, when we must share the road with other motorists No matter what, we'll always be following a car. Accidents are more likely and more severe while travelling at higher speeds. Automobiles travelling at higher speeds are more likely to be involved in accidents, and those accidents that do occur are more likely to be catastrophic. The danger increases as the speed increases. A longer stopping distance, or braking distance, is required while travelling at high speeds. As a result of the law of concept, a slower vehicle skids for a considerable distance before coming to a complete stop, while a quicker one takes a much longer distance to stop. When a car is going fast, it will have more of an impact when it crashes, which means more people will be hurt. Speeding also impairs one's capacity to foresee potential hazards, which increases the likelihood of making a mistake in judgement and, ultimately, a collision.

2. RELATEDWORK

Side stand signal With this kind of indication, when we open our side stand, we will be notified by an LED light on our bike's dashboard. The biggest problem with this method, however, is that we are usually in a rush and fail to see the warning signs that an accident is about to happen. If our side stand is open and the ignition is turned on, we will get an alarm to let us know, and we can then take the necessary steps to secure it.

preceding step. The biggest problem with this solution is that, as a developing nation, our population and economy are both in a precarious financial position. As a result, many of us buy bikes without servicing them, which means that the alarm doesn't work because the battery dies. Thus, this is the cause of accidents. In the current market, these are the options that customers have. The number of motorised cars in

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India has been steadily rising due to the country's robust economic development. As of March 31, 2018, 210 million automobiles were registered in India. According to data on vehicle make and pattern of category-wise growth rates, road users favour private transport over public transport. The number of automobiles per 1000 people in India, a measure of vehicular penetration, has risen significantly during the 1980s, rising from 8 in 1981 to 167 in 2015. There are major implications for traffic congestion and safety caused by the rise of private transport options and the fall of public transit. Forgetting to raise the side stand so it doesn't collide with another vehicle is a common cause of accidents involving two-wheelers. If you're in a rush, you could make a little error. To fix this, either provide the leftover money or make it clear that the stand is not elevated to those who ride bicycles or scooters. We may not be able to prevent accidents caused by car collisions, slamming into barriers or walls, etc., but we can certainly lessen the frequency of these types of incidents.

3. IMPLEMENTATION

Now the steps for implementing the sidestand engine lock system are as follows:
.For setting up this system, wiring connections have to be made between the reed switch and ignition.

Our module works on the principle of magnetic to connect with Arduino so that the code can also be included hence we have connected the DC motor to Arduino.

Hardware Description

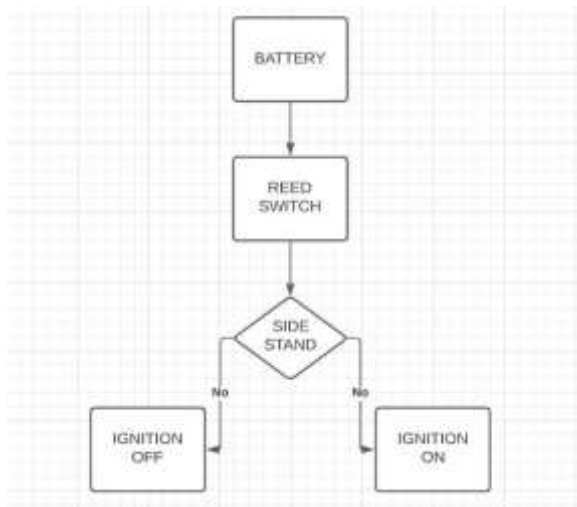
- BIKE STAND
- MAGNETIC REED SWITCH
- MAGNET
- CONNECTING WIRES
- SHRINK TUBE
- RELAY SWITCH
- ARDUINO
- LIMIT SWITCH
- ADAPTOR
- DC MOTOR

Methodology

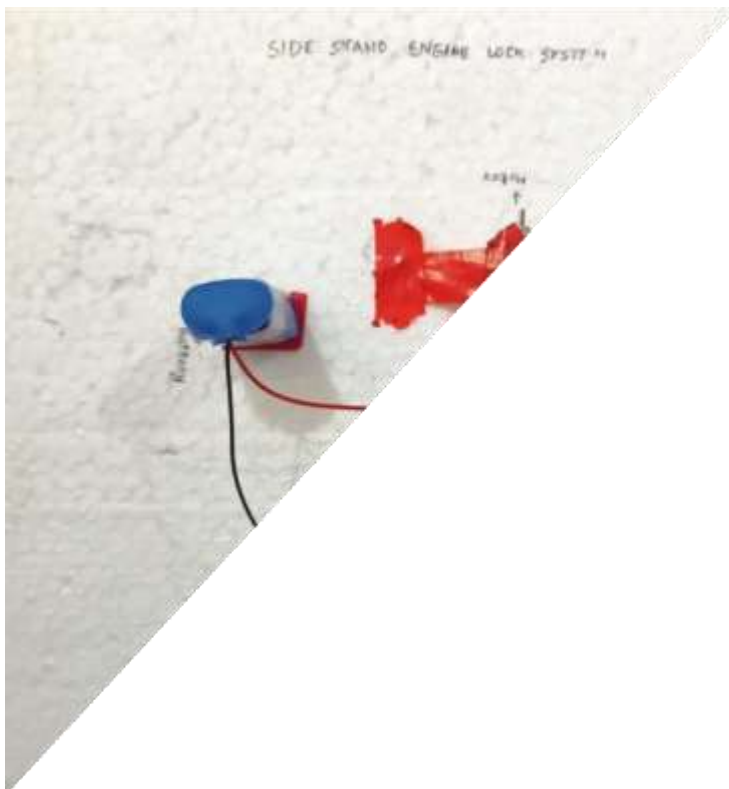
Our project's overarching goal is to make vehicles safer for drivers and passengers by reducing the likelihood of unexpected malfunctions in the sliding system—a problem that plagues current automated side stand designs.

system. The reference and conventional system studies informed our parameter selection for the project, which was based on two-wheeler accidents and occurrences, side stand and frame design, drive and power aspects of the system.

Block Diagram

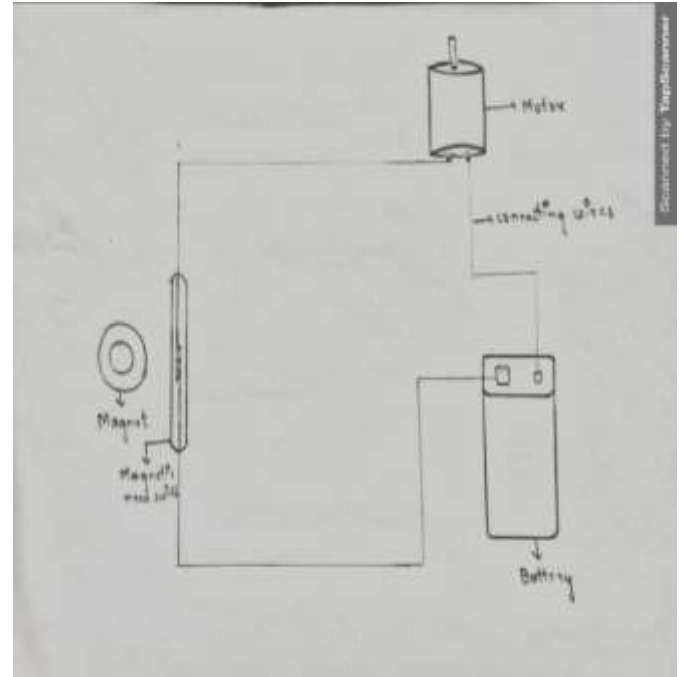


RESULTSANDDISCUSSIONS



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CircuitDiagram:



The frequency of reports of accidents with side stand sliders has increased recently. Safety, aesthetics, the drive system, and overall efficiency are all enhanced with the addition of a "SIDE-STAND ENGINE LOCK SYSTEM" to any preexisting two-wheeler. Because it is less likely to malfunction and costs less to install and maintain than other traditional systems, this one will be more convenient for the user. Additionally, this system's design and drive are separate from the primary engine and gearbox system, so it won't impede the two-wheelers' functionality. All classes of vehicles will benefit from this system's low cost and high level of safety. Expanding the use of this technology improved the system's electrical circuitry and design ergonomics, it may evolve into a high-tech one. ONCLUSION

The need for people to travel from one location to another in order to meet their basic necessities prompted the creation of the automotive industry. People are increasingly turning to two-wheeler vehicles, as opposed to the more conventional four- or three-wheeled cars, in order to achieve more mobility independence. As a result, the rider of a two-wheeled vehicle must take extra precautions to protect himself while on the road. He places a premium on personal safety since it protects not just himself but also others who rely on him. The combined Centre of Gravity (CG) of the vehicle and rider(s) is a measure of the vehicle's stability. Every force acts via this location. When it's not in use, two-wheeled vehicles often come with their own stands to put them on. You can keep your bike or motorbike upright without using anything else or someone else thanks to the kickstand. Joseph Paul Treen—the father of Dave Treen, the former governor of Louisiana—invented the kickstand. Many bicycles include a metal component called a kickstand that extends out from the frame and makes touch with the floor. Typically, you'll find it in the back or in the centre of the bike.

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