

Safety Ignition System for Automobiles

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Abstract: Busy street with speeding vehicles and blaring noise is what a typical image of recent Automobile revolution. With increasing vehicular population, particularly two wheelers which are more vulnerable to accidents, there is increasing demand for the safety of both man and machine. More than 1000 people die every day because of accidents all over the world. One such case, where precaution has to be taken, is the side-stand in two-wheelers. A mere carelessness of not retracting the side-stand can cause huge damage to life and property. This problem provoked us to find an appropriate solution for it.

We have decided to generate a safety system to avoid any mishap. The idea of our project is to design a side-stand which prevents starting of the vehicle if the stand is not retracted. The stand is made in contact with a switch and some electrical wiring system of the bike is altered. This could be the most simple and cost effective way to avoid negligence of not pulling up the side stand. The advantage in the design is that it can be used in all types of two wheelers. By applying this technique to motorcycles we can avoid accidents that are caused due to mere human negligence in not retracting the side-stand and provide safety to the rider and his property.

1. INTRODUCTION

In this era of technology, transportation plays a vital role and thus automobiles are used in plenty. We people nowadays rely on automobiles even for moving 100mts from our living. We students especially love to ride bikes and of course they form the major part of the automobiles for road transport. This also leads to accidents which are taking place in large numbers nowadays. Thus our paper is going to deal with the safety system for the bikes and its riders.

2. PROBLEM STATEMENT

Many accidents occur in this busy century and the most of the death causing accidents are due to bike. Approximately in a busy city more than 1000 get serious injuries due to bike accidents. Many of the bike accidents are due to the negligence and carelessness of the people which may also include the removal of bike stand etc.

3. HISTORY OF METHODOLOGY

First one is the removal of stand automatically when the clutch is applied. Whenever we start the geared vehicles, it cannot be moved unless we change the gear by applying clutch. Thus the stand gets back to its original position automatically as all the time the clutch has to be applied to move the vehicle initially. Second one is blocking of the gear rod unless the stand is retracted. This is also a similar one as without changing the gear, we cannot move the bike. So the stand has to be retracted in order to move the bike i.e. change the gear.

4. DRAWBACKS TO OVERCOME

There is an equal amount of drawbacks in both the methods:

In the first type, the major disadvantages is that it can only be applied to vehicles having clutch in them, but in the name of technology development, the clutches are being removed such as in the cases of TVS JIVE. Whereas, in the second case, it can only be applied to vehicles having gear shifting either forward or backward. Thus, both in first case as well as second, it can be seen that they can be only applied if it is a geared vehicle but now, there can be seen an equal number of gearless vehicle running in our city and the solution for their problem is yet to be resolved.

5. PRODUCT IDEOLOGY

Our idea is to avoid starting of the vehicle when the stand is not retracted. In our method we are going to block the circuit connecting the CD unit and the ignition system. For this a press switch is used whose lines are connected to the above mentioned circuit. The switch will be in ON position whenever the stand is not retracted, and in OFF position when the stand is retracted. This made possible by fixing the switch in contact with the stand when it is not retracted. Thus the circuit connecting the CD unit and the ignition system is blocked whenever the stand is not retracted and thereby disabling the rider to start the vehicle either by kick start or by the self-start method. Our idea is to apply the stand retraction

system even in gearless vehicles. Thus this method can be applied to both geared and gearless vehicles.

6. DESIGN

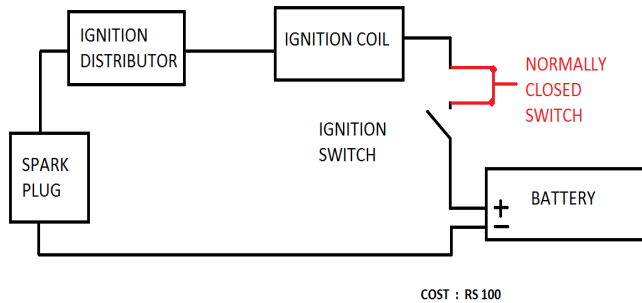


Fig 1

7. FEATURES

- The main advantage is that it can be used in all kind of vehicles.
- The cost of this system is very low.
- The components are easily available.

- The appearance of the vehicle is not varied by implementing this idea. And thus the aesthetic value of the vehicle is retained.
- It can also be implemented in the already running vehicles without any difficulties.

8. CONCLUSION

Thus by applying this method we can prevent bike accidents that are caused due to the negligence of the bike rider to retract the stand before moving the vehicle. And also this is a cost efficient and easier method to implement in the two wheelers and also in already running vehicles.

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