

Bike Side Stand Unfolded Ride Lock Link

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Abstract

The Bike Side stand unfolded ride lock link for two wheelers is the one of the lifesaving mechanism which prevents the ride from riding the bike in unreleased position (retracted position) of the side stand. This prevents the rider as well the vehicle to lose the center of gravity by imbalance or surface hindrance due to retracted position of side stand and thereby saves life of the rider. The side stand lock link is cheap, rugged and easier to install without additional installations and fittings.

Keywords-Bike Side stand,safety, rider, low cost

Introduction

We may have witnessed motorcycle accidents because of the surface hindrance of retracted positioned side stand. One of the most common problems that are encountered in using the side stand is negligence or carelessness to kick back the side stand. The negligence may be due to absence of mind, urgency, divergence in concentration and few other reasons, which may prevent the rider to kick back the side stand to its original position (released position). Failure to kick back the side stand for any of the reasons stated above may hit the side stand to surface of road and there by affect the stability of the vehicle and lead to accident of the vehicle and riders involve in the accident, sometimes fatal. To ensure safety of the rider, during absence of mind, negligence, urgency or carelessness the side stand lock link helps in knowing the state of side stand prior to movement of vehicle.

Description

The side stand lock link relates to the field of automobiles industry, especially for two-wheeler vehicles using side stand apart from the Main center stand provided therein for the resting of the vehicle. The side stand lock link makes the contact with the gear lever there by indicating the person handling the vehicle about the unreleased side stand when the rider tries to apply the gear in unreleased state of stand and prevents him from being endanger or to have unsafe ride of motorcycle. The figure 1 shows the schematic representation of the link designed for front gear motorcycle. The bike considered

for design of link is Bajaj Platina 100cc, 2008 model. The link is fabricated with use of bending and punching processes.

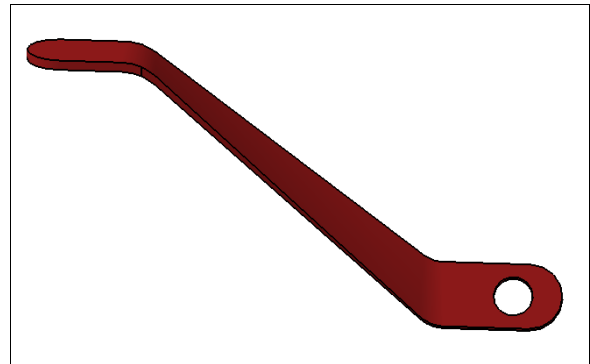


Figure 1: Model of the link

Practical Installation of Rider Lock Link

The figure 2, 3 and 4 show the side stand lock link assembled with the existing side stand of bike. From the figure 3, we can see that the link restricts the movement of the gear lever when the stand is in unreleased condition.

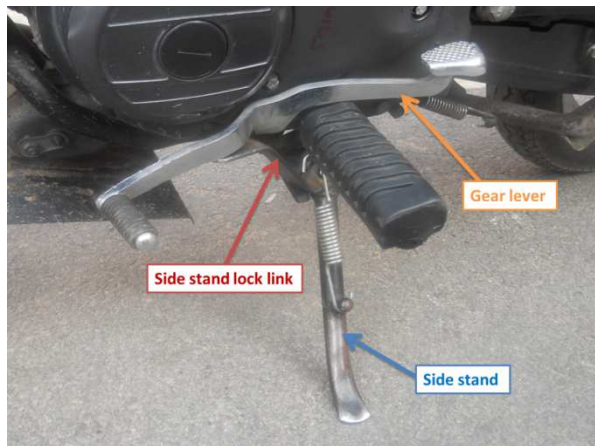


Figure 2: Unreleased position of the side stand with assembled side stand lock link



Figure 3: Closer view of unreleased position of the side stand with assembled side stand lock link



Figure 4: Released position of the side stand with assembled side stand lock link

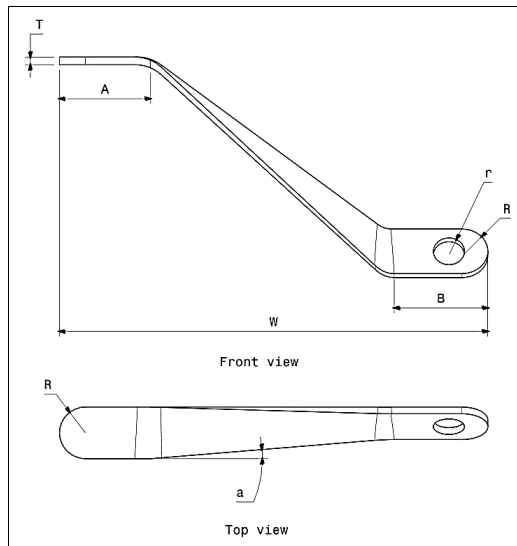


Figure 5: Drawing of the link with the dimensions in form of nomenclature

The figure 5 shows the drawing of the link with the dimensions in form of nomenclature. It is required to vary the values of T, A, B, W, R, a, and r as per the model of the bike.

Conclusions

Presently many commercial two wheelers come with built in side stand locking systems with indicator and alarm systems, but they are expensive and can't be installed to the bikes that are in use (already on road) without the provisions for fixing it. The developed side stand lock link can be fitted to any motorcycle with slight dimensional changes in the link. It is simple in design, easy to fabricate and is low cost.

References

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