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Utilizing of Nylon Material as Personal Luggage Protector for Biker

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Abstract: This design begins from trend of using scooters has increased nowadays. This trend based on people whom are feeling uneasy using public transportation. Furthermore, the whole process to get a scooter is a lot easier. There are many kinds of profession that utilize scooters, from student to office workers. From a variety of different profession there is one similarity, most of them bring bag for school or office tools. The problem is there are still no products that can be used as protector for bags from the unpredictable weather nowadays, especially when rain fall. The use of qualitative methods expected to give information about what kind of product that could help bikers to protect their luggage from rain.
This design is expected will be a good input for producer about what kind of product that bikers really need to protect their luggage from rain.

Keywords: Product, protector, rain, scooter

1. Introduction

Two-wheeled vehicle plays an important role as transportation in the urban areas of developing countries, such as Indonesia. It is clearly noticed by the increasing of two-wheeled vehicle annually. In 2010 there are about 1 million motorcycles all over the world. At first, motorcycle was dominated by machine system that used manual transmission as core transmission method. Nowadays, the transmission method shifted into automatic transmission over the time. Data also shows the use of manual transmission in motorcycle are shifting into automatic transmission.

Biker nowadays is dominated by employees and students that most of them bring bag or working tools while driving. Those tools that was kept inside the bag is quite risky if it exposes to the rain.

Biker is really depended on weather. It really affects their activity if the weather is rainy. For biker, rainy situation could be anticipated by using poncho raincoat. Poncho raincoat could protect the body but not the luggage they bring. Alternatively, some people choose to wear their bag first before using raincoat. But there are also people who prepare plastic bag for rainy situation.

Figure 1 Biker with poncho raincoat

Figure 2 Poncho raincoat that often used by biker

Figure 3 Jacket raincoat that often used by biker

Figure 4 Side view scooter

2. Method

Design of luggage protector from rain starts with making survey about size of some bag that often used by biker. There are two most common bags, backpack and sling bag. The next step is to specify size that will be placed at scooter and determine what kind of material that will be used for prototype.

After that, analyze some aspect to determine the place of product. The next crucial step is to design protector for biker's luggage.

These are design aspects:

1. Shape
2. Tying technique
3. Placing technique

2.1. Shape

Shape of design will follow bag that is brought by biker. Necessary research to form the shape is the dimension of bag that is brought by biker.

At this step there are two alternative designs. The first design use drybag system where bikers put their bags into a bag, just like drybag system. And the second design use wrapping without a joint at the body part of the product.

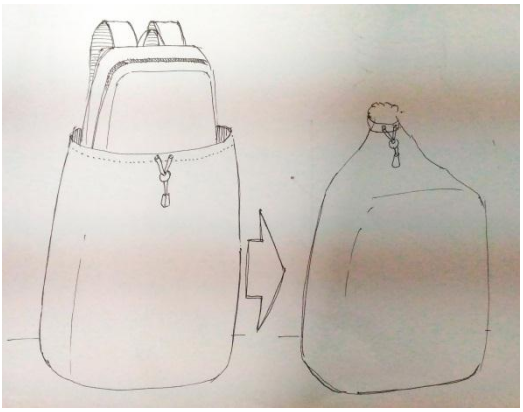

Figure 5 First alternative design

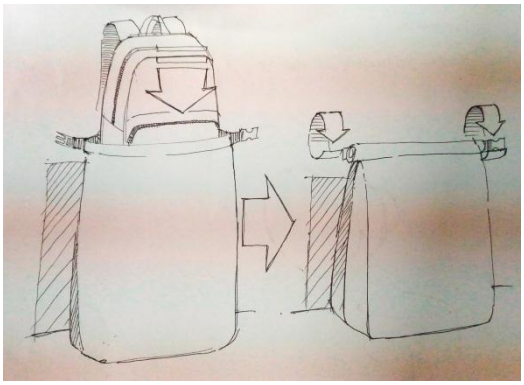

Figure 6 Second alternative design

The second alternative design was chosen based on effectivity of production process, production fee and the efficiency material used. The important part is security system of the second alternative design is safer than the first one.

2.2. Tying Technique

Some of scooter brand have hook for biker place their luggage. The hook's position is located in front of the seat or under. The product was designed so that it could be hooked between two options that is in scooter.

This chosen technique uses bungee cord to fasten upper side of the protector product.

2.3. Placing Technique

Common scooter has empty space between handle and seat that is functioned as footrest. This empty space will be utilized to place the product.

Figure 7 Simulation of product placing

From variety of brand and size of scooter, there are some standard that can be used as reference to place the product; distance between two feet, distance between arms and handle that was used as reference in design a motorcycle, especially at the middle part of scooter.

3. Conclusion

From the design process, there are some things that can be used as conclusion from this research.

Most biker is divided into two profession, student and employee. Almost of all the two professions turn out they bring school or work tools in a bag.

There are some different scooters shape especially in the front part. Some scooter has an empty space between handle and seat. There also some scooter that has border in the middle. In this research, scooter that has an empty space that will be utilized to place the product.

Material that used in process design is nylon with rubber coating. This material is waterproof and light also can be carried around while travelling.

Conclusion from this research is a product that is designed for protecting biker's luggage from rainy weather. That product is placed at the empty space between handle and seat where there is a hook to keep the product from falling.

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