Application for patent rights
Project: S-CAM II

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Description

1. Field of Invention

The subject invention relates to tamper evident security lock for cargoes transportation by Trucks, Trailers and Containers.

It also plays a critical role in system and record filing, intrusion with serial numbering and barcode running number for security.

This high quality S-CAM II lock complies of a "T" insert and a locking ring molded to form the plastic locking body and comes with a metal bolt lock.

This product assists shippers and logistics providers in ensuring the security and protecting valuables, cargoes and equipments against theft or any attempted 3rd party intrusion around the world.

As security and asset tracking initiatives continue to be implemented across the globe, this subject product is considered to have very high endurance strength with cost effectiveness to security purpose and visibility solution within the logistics process.

2. Description of Related Art

In connection on ensuring protection and security, this invented have a growing desire to provide some form of security against theft and any attempted 3rd party intrusion.

The subject product consists of a Metal Bolt inserted into the plastic Lockbody.

Within the plastic Lockbody, it was molded with a "T" Insert and a Locking Ring positioned along the "T" Insert channel.

The Metal Bolt is carbon steel with zinc plate and chromate finish available in 73mm length designed to limit and restrict tampering.

The "T" Insert and Metal Bolt are tested complying C-TPAT & ISO/PAS 17712, accepted by the UK & US Customs.

The plastic Lockbody case is molded with high impact polystyrene (ABS) and at the insert entrance, it was designed with plastic chamfer step-up as tamper evident and to eliminate possible change of tampering.

This high level of security lock tightly and removal only by bolt-cutter, and barcodes or serial numbers will be printed on the flat surface of the Lockbody that provides asset tracking application.

These are the important factors to the product marketability.

3. Summary of Invention

It is an object that:

- tamper evident plastic security lock which can provide a psychological deterrent by ensuring that evidence of forced entry or tampering is clearly visible and that the crime can not be subsequently hidden or covered up.

- integral of Metal Bolt and "T" Insert provides a high level of security which able to securely locked and removal only by possible by disruptive means with bolt-cutter.

- includes asset tracking application. It can be procured with the company name or logo and sequential serial numbers or barcodes.

- the "T" Insert design & plastic chamfer step-up design at insert entrance of Lockbody; enhance tamper evident in event of any possible attempted intrusion by unauthorized personnel or sources.

4. Brief Drawing Description

Figure 1, an orthographic view of the invention,

Figure 2, an exploded view of the invention,

Figure 3, a perspective view of the inserting orientation,

Figure 4, an insert-molded section view of Lockbody,

Figure 5, a perspective view of locked device.

5. Detail Descriptions Reference to Drawing

The Figure 1 shows:

- The front view and sides view of the product components.

The Figure 2 shows:

- Ⓐ Metal Bolt, which is the piece that is inserted into the Lockbody Ⓓ.
- Ⓑ Locking Ring, which will locked into the Metal Bolt Groove Ⓖ, is fitted in the channel of "T" Insert Ⓒ.
- Ⓒ "T" Insert, which is molded and covers by the plastic Lockbody Ⓓ, enhance tamper evident in event of any possible attempted intrusion by unauthorized personnel or sources.
- Ⓓ Lockbody, molded plastic which covers the "T" Insert Ⓒ firmly in place.
- Ⓔ Plastic chamfer step-up, which is designed at insert entrance of Lockbody Ⓓ, act to detect sign of any attempted or intrusion presence.
- Ⓕ Flat surface of Lockbody Ⓓ can incorporate with printed or laser-marked with barcode label tag or serial numbers.
- Ⓖ Metal Bolt Groove, locking mechanism designed for the "T" Insert Locking Ring Ⓑ to be seated and locked the product securely.

The Figure 3 shows:

- the top view and inserting direction of the product (metal bolt insert to lockbody from this view).

The Figure 4 shows:

- cross-sectional view of the molded lockbody; (Lockbody, "T" Insert & Locking Ring)

The Figure 5 shows:

- Full inserted view of the product, Metal Bolt inserted into Lockbody.

6. Conclusion

This new invention will allow shippers, carriers and logistics providers to secure and protect their cargo with high confidence against any act of attempted intrusion.

Users can use the invention for additional security due to its high endurance strength and resistant against impact of lock properties.

"T" Insert is tamper evident in minimizing and eliminate intrusion attempt.

Plastic chamfer step-up at lockbody entrance effectively act to prevent tampering or in event of any tampering is attempted, the clearance limitation at this step-up chamfer will be able to detection the presence of intrusion.

Tamper-indicating polystyrene material will blush if tampering occurs and cannot be reattached if broken. The S-CAM II can have custom wording and consecutive numbering to enforce accountability, for tracking application.

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Claims

The claimed is:

1) The invention consists of 4 different parts,

   Ⓐ Metal Bolt,

   Ⓑ Locking Ring,

   Ⓒ "T" Insert,

   Ⓓ Lockbody.

2) The Ⓓ Lockbody consists of a step-up plastic, which designed to limit and minimize the movable allowance of the Metal Bolt after locked.

3) The Ⓒ "T" Insert is designed such that the "T" will enhance the higher tamper evident in event of any intrusion attempted.

4) The invention is designed in a way when the Metal Bolt and Lockbody are locked, there is no room of any excess movable allowance and any intrusion attempt, the "T" insert will crack the plastic housing.

5) The invention will allow the locked product to be release only by bolt-cutter and once removed, it will totally not be re-attached in whatever mean.