



Unpacking the security baggage

By Marc Weber Tobias

You're going on vacation. You've packed everything. You've locked your luggage, so everything's secure – right?

Wrong. Our investigation shows that your bags are not safe – even those with Transportation Security Agency approved locks. That means you are at risk of theft, and more seriously, terrorists could plant explosives in your bag!

Increased security measures at US airports following 9/11 prevented passengers from utilizing padlocks because TSA required complete access to the contents of all baggage. Screeners would routinely cut the locks in order to carry out inspections when padlocks were employed. But passengers were concerned about security during the time that luggage was out of their control and demanded a way to prevent theft of contents. As a result, a trade group, Travel Sentry, was formed to work with manufacturers and TSA to develop padlocks that could be locked by a passenger, but opened and relocked by TSA.

Luggage alert

There has been a significant problem with theft from the 1,500,000 bags that travel through our nation's airports each day. A number of TSA employees and baggage handlers have been arrested for stealing from passenger luggage. Although baggage security experts agree that it is virtually impossible to protect luggage from pilfering, there are certain precautions that make theft more difficult. The lock, as they point out, is not the weakest link; soft material and zippers are. Approximately 70 percent of all bags use zippers. Baggage handlers can use ballpoint pens to rip apart the zipper, even if the bag is locked. They can steal the contents and then slide the zipper back together. Another tactic is to use a nail file to pry up the base of the slider, detach the zipper pull, open and close the bag and then reattach the zipper pull.

Travel Sentry's mission is to bring together baggage manufacturers with the lock industry to work toward the common goal of providing a lock that would allow bags to meet TSA criteria for access while protecting the public. The availability of these locks would bring passengers back to pre-9/11 standards, allowing them to secure their luggage.

Security expectations by the public

The public does not want expensive locks, but they want protection. None of the locks that were evaluated by the author cost more than 10 dollars, and none provide any real security against surreptitious or forced entry. Unfortunately, the public believes that regardless of cost, a certain measure of protection will be provided, because the majority of locks utilize three or four-wheel combination mechanisms, the padlocks look secure and are produced by known and respected manufacturers.

The concept of security, for padlocks, can be divided into two major categories: forced and covert entry. Forced entry is more common in instances of theft because luggage is inherently not secure due to the materials utilized. Covert entry is more worrying because this is the sort of method terrorists are likely to use.

What constitutes security in the context of surreptitious entry can be easily summarized and takes into account four primary factors: time, ease of bypass and expertise required, special tools and evidence of entry. In the case of all of the TSA locks that were tested, each of these criteria were evaluated. For every lock, the time to bypass each mechanism was minimal, often within a few seconds. Bypass was accomplished with virtually no expertise and no special tools. There was absolutely no

evidence of entry. And, to make matters worse, keys were produced by the author that would open all of the locks. Not just the locks that were tested, but every lock having the same basic identification number. Thus, one key could fit millions of locks.

Unfortunately, the traveling public would have no way of knowing of the security, or more precisely, the insecurity of the TSA-approved padlocks that are now being sold in every travel shop, luggage store and airport kiosk. These are being touted as offering ‘security’, however, the reality is that this term is misleading at best and these locks are nothing more than glorified seals, easily opened and certainly not to be relied upon for any real level of protection.

Contraband concerns

The question, then, is just what does the public expect these locks to accomplish. Consider the following scenario:

You pack your luggage in your hotel room in London the morning of your flight to the United States. You use a TSA-approved padlock to secure it, believing it is now sealed and safe from tampering or the introduction of contraband. The bags are picked up by the porter and stored until your return later in the day to retrieve them and head to Heathrow Airport. You check your bags at British Airways and can confidently answer the security screening questions with regard to the bags being locked, once packed and the potential that anyone inserted anything without your knowledge. X-ray does not detect the drugs that were placed in your bags, which will be retrieved by cooperating baggage handlers in Chicago. When you arrive in Chicago, dogs are used to sniff the cocaine that has been hidden in your luggage and you are detained. But, you say to Customs inspectors: “Yes, I locked my luggage and the contents are mine.” Now what? Even more ominous is the possibility that explosives were placed in your luggage and were not detected during the screening process. Yet, you thought your bags were secure, because they were locked by what appeared to be a secure device.

Lock manufacturers in the Travel Sentry program

Five original manufacturers produce locks that carry the Travel Sentry logo. Each has adopted a different design philosophy and each type of mech-

anism has a unique key that will function in an independent dual locking system that allows the passenger to use a combination and TSA to use a bypass key to open the lock. There are four combination locks and one key lock, identified with the codes TSA 001-005, stamped on the bottom of each lock. Some of the locks had three thumbwheels and some employed four wheels. The secondary key locks for three of the five mechanisms utilize pin tumblers; the TSA 002 utilizes wafers and the TSA 004 utilized no security at all, just a T-bar to turn a cam to the open position. Each of the designs was found to be easily decoded with a piece of paper or thin plastic and would require little to no skill in doing so.

In fairness to TSA, there are strict inventory guidelines for controlling keys for these locks at our airports. All keys are numbered and controlled, which may reduce the ability of TSA employees to obtain or use keys improperly. Unfortunately, baggage handlers can obtain keys without any difficulty by purchasing a lock and making a key for it. The TSA 003 keyway requires nothing more than a 1/8” x .016” piece of brass to be properly cut to size. It is no real keyway, so no need to obtain the special blank that would be required. In the case of TSA 002, the author actually used the plastic from a credit card to simulate the proper blank and was able to easily open the lock.

The TSA 005 keyway is the standard that is used on millions of padlocks that are produced by the manufacturer. Finally, the TSA 004 is simply a square slot, requiring only a T-bar key, similar to that used in thousands of pieces of luggage. The author modified one of these keys to open the padlock. Interestingly, there are no statutes that prohibit the possession or trafficking in keys for these locks. Similar statutes do exist for postal and defense department locks, as well as for other security devices.

Common characteristics

All combination locks utilize either three or four wheels. All are programmable by the user. This is usually accomplished by dialing the correct combination, opening the lock, turning the shackle a half revolution and depressing it into the lock body while turning the wheels to the desired new combination. The wheel design for all four locks is essentially identical. Generally, these locks can all

be decoded by inserting a thin piece of paper or shim at the correct point on each wheel and feeling for the gate or protruding tab. Although each design is unique, they all share the common problem of decoding. Each of the bypass key mechanisms could be easily picked or manipulated to the open position.

It is clear that none of the TSA-approved locks provide any measure of security against covert entry. The question for the user must be “what security is required to protect my luggage from pilfering or the introduction of contraband or dangerous items?” The answer clearly involves more than just locks and perhaps luggage can never really be secured. The real concern is the false impression that the consumer may be left with that if they utilize one of these locks to protect their luggage, especially if the luggage was left unattended in a hotel or other area, that there is a reliable indication of entry. As has been shown, with most of these locks, this is clearly not the case, although a couple of models have indicators to show they were opened. Would baggage handlers or others with access to luggage be able to open these locks without detection? That, of course would depend upon a number of factors, but the basic answer is probably yes, especially if a key is utilized.

Author’s advice

Do not rely upon these locks for any level of security. They are simply a form of expensive seal. A knowledgeable individual can open any of these locks by decoding the combination with very limited training or expertise and because one can purchase these locks anywhere, practice before theft is not a problem. Use of a key, of course, makes the task quite simple and would allow virtually anyone that has contact with a piece of luggage the ability to open it. ■

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A detailed report about the five primary versions of luggage locks is available at www.security.org.