



A Bumping Standard for Locks from ASTM

The **NEW** F883-09 ASTM rating.



by Richard Allen Dickey

Since the mass media attention on bumping in 2006, many manufacturers have made attempts to minimize or eliminate the bumping threat. Kwikset has completely removed pins and replaced them with disks in several of their products. Master Lock has designed their own solution to the problem as well as other manufacturers.

However, how do you determine if a lock really is bump resistant? Unless there is a standard that has a set of guidelines to follow, you only have the manufacturer's word that their product works. To solve this problem, a new bumping standard is finally available from ASTM International.

ASTM International, originally known as the American Society for Testing and Materials (ASTM), was formed over a century ago. They are one of the largest voluntary standards development organizations in the world. Standards developed at ASTM are the work of over 30,000 ASTM members. These technical experts represent producers, users, consumers, government and academia from over 120 countries.

Participation in ASTM International is open to all with a material interest, anywhere in the world. With their latest addition to the F883 standard, the F883-09, there is now an extensive and consistent test procedure that can be used to test a lock for vulnerability to bumping.

The bumping portion of the F883 standard allows a lock to be rated from Grade 0 through Grade 6. It starts with the manufacturer supplying 5 padlocks or cylinders for the bump testing. Each lock or cylinder has to be supplied with 7 working keys. The test will be conducted by 3 locksmiths. Each locksmith will use 2 of the 7 keys to create their own push bump key and pull bump key.

Phase 1 of the testing starts with the locksmith bumping one of the locks 10 times with a push bump key followed by 10 times with a pull bump key. All of

this must be done within 2-1/2 minutes. If the lock does not open it is classed as a grade 1. The same process is followed again by the same locksmith. If the lock still does not open after the additional 20 strikes, it is classed as a grade 2. This continues until the lock opens, or a total of 120 impacts have been given by the first locksmith. This equals a grade 6 rating.

The same locksmith repeats this process on each of the remaining 4 locks. If any of the 5 locks is bumped open, all 5 locks receive the lowest grade achieved. That means if 4 locks make it to grade 6 and the 5th lock is bumped open at a grade 2 level, all locks are rated as grade 2.

Before these locks are passed on to the next locksmith for testing, the 7th key is used to see if the lock will still open. If the lock does not open, it does not mean the lock has failed the test, since it provides a way to detect that bumping was attempted. If the lock captures the key, it is awarded a grade 6.

Now the second locksmith goes through the same set of tests using his bump keys made from 2 of the original 7 keys. Finally the third locksmith goes through these same steps.

For a lock model to receive a grade 6 rating, each of the 5 locks will have been struck a total of 360 times, 120 strikes by each locksmith and failed to open or have become inoperable, or it will have captured the key and failed to open. Either way, a surreptitious entry would have been prevented.

It has been reported that only 1 lock manufacturer has protested this rating system. I bet you would like to know who they are, wouldn't you? Well, I can't say, but it looks like a good rating system to me.

For more information on this standard or any other standard from ASTM, visit their web site at "www.astm.org" or call them at 610-832-9500. They will be glad to help.