AMENDMENT TO
FEDERAL SPECIFICATION
LOCKS, COMBINATION ELECTROMECHANICAL

The General Services Administration has authorized the use of this amendment, which forms a part of FF-L-2740B, dated June 15, 2011, by all federal agencies

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Paragraph 2.2, at the end of las sentence add ")".

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Delete paragraph 3.5 and substitute the following:

3.5 Design.

3.5.1 Unspecified design features. The Government reserves the right to eliminate any manufacturers design feature that is not required by the specification which could cause unanticipated operational, procedural or life safety problems with the intended use (per Para 1.2) of the product.

3.5.2 Changing combinations. Changing procedures shall require access to the back of the lock, to have the bolt extended during changing, and shall ensure the operator must know the current combination prior to changing the combination, except in the case of a lost combination. For situations when the combination is lost, a procedure shall be provided to change the lock combination without revealing the lost combination or requiring replacement of components.

3.5.3 Key change combination locks. Key change combination locks shall be designed to be readily combination-changeable by use of a key or special tool. Changing the combination shall not require removal or disassembly of the lock.

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3.5.3.1 <u>Style 1 combination change key</u>. Style 1 lock's key or special tool required for combination changes shall not be able to communicate with the lock's microprocessor or electronic circuitry. These keys or special tools shall not have any memory-holding capability or signal processing ability.

3.5.4 <u>Bolt lockout</u>. The lock shall have a mechanical relock mechanism that will prevent retraction of the bolt if the lock cover is moved more than 0.10 inches (2.54 mm) at any point from its normal operating position.

3.5.5 <u>Combinations</u>. The lock combination shall be selected by the use of a dial. The combination for opening the lock shall not exceed four numbers. Each number shall be within the range of 0 to 99, inclusive. The lock shall have as a minimum 1,000,000 operational combinations, as defined in 6.3.4. Both digits in a double digit number shall be entered at one time. Locks with graduated dials shall be designed to initiate retraction of the bolt on a setting of or near 0 when installed in right hand, left hand, vertical up or vertical down positions.

3.5.6 <u>Lock operation</u>. The dial, spindle, bolt and all internal parts shall operate smoothly for the operating life of the lock. Locks shall be tested for compliance with this requirement as specified in 4.6.2.

3.5.7 <u>Lock bolt operation</u>. All energy required to retract or extend the lock bolt shall be derived from mechanical operation of the lock dial by the operator. The torque required to retract and extend the bolt shall not exceed 32 inch-ounces (0.225 N-m). When the bolt is in the open position, application of a torque of 50 inch-ounces (0.353 N-m) to the dial shall not cause damage to the dial, spindle or any other part of the lock that will cause the lock not to function properly.

3.5.8 <u>Combination redial</u>. Once the lock bolt has been extended to the locked position it shall not be possible to reopen the lock without completely redialing the current lock combination. For the purposes of this requirement, the locked position means the bolt has been fully extended.

3.5.9 <u>Case access</u>. When the lock is mounted to the test fixture and locked, the assembled lock case shall not permit internal visual inspection of the lock.

3.5.10 <u>Dial torque</u>. Dial torque for the lock shall be 16 to 20 inch-ounces (0.113 to 0.141 N-m) to facilitate ease of dialing. Torque shall remain within the specified range for the operating life of the lock, when tested in accordance with 4.6.2. Lock design may provide for adjustment of the torque to remain in the specified range. The dial and rotating internal parts shall not be free-wheeling.

3.5.11 <u>Temperature</u>. The lock shall operate in a temperature range of -10°F to 158°F (-23.3°C to 70.0°C). Locks shall be tested for compliance with this requirement in accordance with 4.6.10.

3.5.12 <u>Moisture absorption and humidity</u>. The lock shall be designed to operate in a humidity range of 10 to 98 percent relative humidity for its operating life. Locks shall be tested for compliance with this requirement in accordance with 4.6.6.

3.5.13 <u>Vibration</u>. Locks shall be subjected to environmental vibration tests, as specified in 4.6.9. Operation and security performance and tolerance shall remain within standards.

3.5.14 <u>Shock</u>. Locks shall be subjected to shock tests in accordance with 4.6.7.

3.5.15 <u>Electromagnetic pulse</u>. Locks shall be subjected to electromagnetic pulse tests as specified in 4.6.11. The lock shall operate normally after exposure.

3.5.16 <u>Electrostatic discharge</u>. Locks shall resist damage due to electrostatic discharge. Locks shall be tested to 250,000 volts, as specified in 4.6.12. The lock shall operate normally after exposure.

3.5.17 <u>Operating system access</u>.

3.5.17.1 <u>Style 1 locks</u>. Style 1 locks shall have no external data transfer ports or the ability to transfer data to or from a secondary device. Keys or special tools required for combination changes shall not be able to communicate with the lock's operating system, microprocessor or electronic circuitry. Any data contained in the audit function (opening/closing history) may only be accessed from the lock's display.

3.5.17.2 <u>Style 2 locks</u>. Style 2 lock's external data transfers from the operating system, microprocessor or electronic circuitry to a secondary device shall meet applicable FIPS Standards. These devices may be used to monitor authorized/unauthorized openings, personnel access, combination verifications, combination changes, etc. These secondary communication devices shall not be able to open the electromechanical lock.

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Paragraph 3.5.6, delete the last sentence and substitute the following:

"When the bolt is in the open condition, application of a torque of 50 inch pounds (67.8N-m) to the dial shall not cause damage to the dial, spindle, or any other part of the lock that will cause the lock not to function properly."

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Delete paragraph 3.7.5 and substitute the following:

3.7.5 <u>Software security</u>.

3.7.5.1 <u>Physical control</u>. Software will not be classified but shall be controlled in a manner to protect the software from disclosure to unauthorized personnel as designated by GSA. A software security plan shall be submitted to GSA for approval prior to product submission against the specification.

3.7.5.2 <u>Software development information</u>. The manufacturer shall provide all the information on the software and firmware necessary to complete a thorough security review to include but not limited to the following; the fully documented source code including source for any reference libraries. The development environment configuration must be provided including the Compiler version, library/reference files, project settings/files and all workspace files. Any other compiler/environment settings necessary to independently compile code to get the same supplied binary must be supplied to include a compiled binary image.

3.7.5.3 <u>Software verification tool</u>. The manufacturer shall provide a software verification tool to GSA with the following features; the ability to verify that the approved firmware has been loaded into the lock assembly and the ability to determine (during production) if the lock firmware has been altered or manipulated from the approved reference firmware. The manufacturer shall provide the following documentation regarding the verification tool; all schematics/PCB design files, special hardware requirements, COTS data and bill of materials. The fully documented source code including source for any reference libraries must be provided to include the developmental environment configuration with the compiler version, library/reference files, project settings/files and all workspace files. Any other compiler/environment settings necessary to independently compile code to get the same supplied binary must be supplied to include a compiled binary image.

3.7.5.4 <u>Firmware Requirements</u>. The manufacturer shall store all critical lock parameters (e.g. combination) internal to the microcontroller. It is recommended that the manufacturer use a microcontroller that has built in code protection/security features. The lock shall have no externally available communications interface to the firmware.

3.7.5.5 <u>Changes in firmware</u>. Once a product has been tested and approved under the specification, no subsequent change of any kind shall be made to the firmware unless prior written authorization to make a change is obtained by the manufacturer from GSA.

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Paragraph 4.1.1, delete third sentence and substitute the following:

"The absence of any inspection requirements in the specification shall not relieve the supplier of the responsibility of assuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the specification."

Paragraph 4.2, change "the-tests" to "the tests".

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Paragraph 4.5.2, change "3.1.1.1 or 3.2.1.2" to "3.2.1.1 or 3.2.1.2".

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Paragraph 4.5.5, second sentence, change "provide documented source code" to "documented source code".

Paragraph 4.6.2, fifth sentence, change "3.5.6" to "3.5.10".

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Paragraph 4.6.8.3, last sentence, change "3.6.2" to "3.7.2".

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Paragraph 4.6.10.2, last sentence, delete quotation marks at the end of paragraph.

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Delete paragraph 5.3.1 and substitute the following:

5.3.1 Security label. Each unit container specified in 5.1 shall have an additional security label with the following special handling instructions:

WARNING

THIS LOCK IS A US GOVERNMENT LIMITED USE ITEM WHICH MUST BE SHIPPED, STORED AND INSTALLED AS SPECIFIED IN FEDERAL STANDARD 809

WARNING

The security label shall be approximately 4" X 8" in size and must be applied to cover the box seam such that the label must be cut to open the box. The letters shall be ¼-inch high minimum. Color to be red or black and shall be applied by application of a preprinted label.

Preparing Activity:
GSA-FAS
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