Techdata Sheet
May 1984 84-08

DUAL CONTROL PADLOCK (DCP): EQUIVALENT SECURITY AT HALF THE COST

This Techdata Sheet describes disassembly and maintenance procedures for a new NAVSEA-certified lock: the Dual Control Padlock (DCP), Model 1381. It was designed for controlling secure spaces aboard ship but will have applications in the Navy Shore Establishment, such as for securing special weapons storage areas and in-transit cargos. At a cost of approximately $65, the Model 1381 is less than half the cost of the alternative: two Model 831-B locks with appropriate hasps.

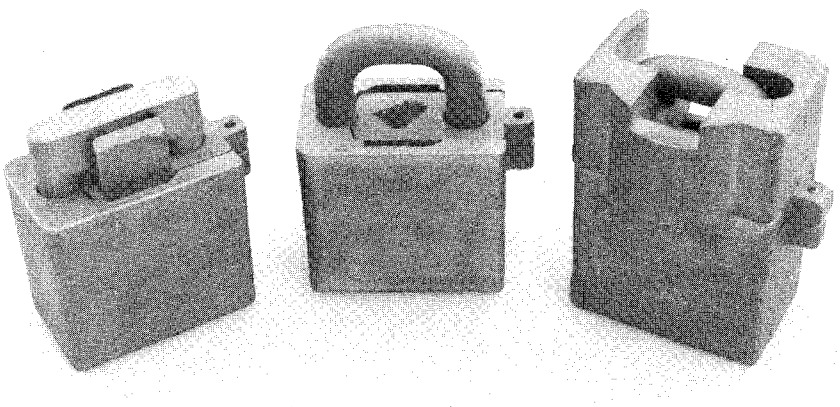

Figure 1. Three DCP configuration styles.

The Dual Control Padlock (DCP), Model 1381, was designed by NCEL to provide dual access control in a single lock. The Model 1381 provides operational flexibility for implementing two-man control. Although this padlock was developed for shipboard use, it can also be used to provide dual access control for special weapons ashore. This padlock is versatile and has potential application for risk category arms, ammunition and explosives, critical utilities, and other areas where dual access control and increased security may be required.

The Model 1381 meets the requirements of OPNAVINST C5510.83 and has been certified by the Naval Sea Systems Command (NAVSEA) as a high security padlock that meets or exceeds the security criteria of

military specification MIL-P-43607 when used in the three configuration styles shown in Figure 1. Style 1 is for use with the NAPEC Model 1300 series high security shipboard hasp. Style 2 is for use with the NAPEC 0957/8 high security shrouded hasp that has been modified with anti-rotation blocks. Style 3 has a raised shoulder and is for use with the NAPEC 0957/8 hasp without anti-rotation blocks. The last two applications would normally be for shore-based facilities.

The Model 1381 consists of the lock body that houses two independently keyed high security lock cylinders, two locking bars, a top plate, and shackle that are designed for the style hasp it must interface (see Figure 2). The lock body is 304L stainless steel and is designed to protect the lock cylinders and other components. The two locking bars provide interface between the lock cylinders and the top plate. Each locking bar operates independently to release one side of the shackle. The lock cannot be opened unless both locking bars are retracted.

Disassembly, cleaning, inspection, lubrication, and reassembly should be performed at 6-month intervals. Under extreme conditions (excessive dust, dirt, or salt spray), shorter maintenance intervals should be established. See Table 1 for recommended padlock lubricants and solvents. (Note: Petroleum-based products should not be used for lock maintenance.)

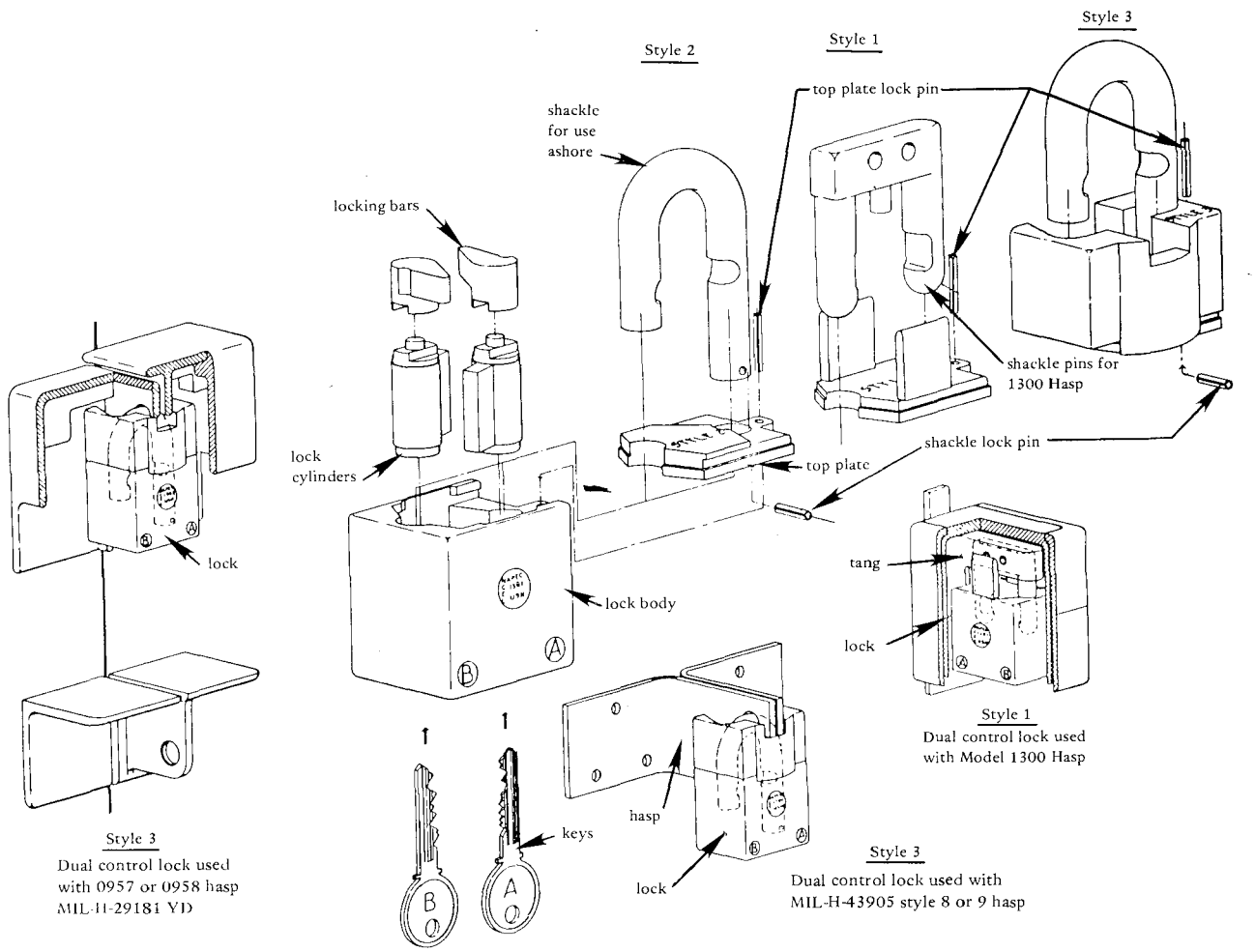

Figure 2. Exploded view of three DCP configuration styles.

Table 1. Recommended Lock Lubricants and Solvents

Item	NSN	Comments
Trichloroethane technical grade (solvent)	6810-00-292-9625 (quart) 6810-00-664-0387 (gallon)	Used for cleaning. Avoid prolonged contact, inhalation, and heat. Use as directed.
Molybdenum disulfide (powder)	6810-00-264-6715 (MIL-M-7866, Type II)	Use sparingly as directed.
Dry film lubricant	9150-00-754-0064 MIL-L-23398B	

PADLOCK OPERATION

The DCP requires two operator keys (keys A and B) to open the lock. The normal operation of the padlock is as follows:

1. Insert key A fully into keyway A.
2. Turn key A clockwise approximately 30 degrees.
3. Insert key B into keyway B.
4. Turn key B clockwise approximately 30 degrees. Note: The keys cannot be removed when the padlock is unlocked.
5. Pull down on the lock body and remove from hasp.
6. Push up on the lock body to lock.
7. Turn key A or B counterclockwise to the locked position and remove the key.
8. Turn the other key counterclockwise to the locked position and remove the key.

DISASSEMBLY

The DCP can be disassembled as follows:

1. Unlock the padlock using steps 1-4 for normal operation of the padlock.
2. Use a 1/2-pound ball peen hammer and a 3/32-inch pin punch to drive out the top plate retaining pin. Note: The top plate retaining pin can be replaced with any standard 1/8- by 5/8-inch roll pin if necessary.
3. Remove the top plate by sliding it out of the body.
4. Lock the padlock in the locked position using steps 7 and 8 for the normal operation of the padlock.
5. Remove the two locking bars and cylinders by turning the lock body upside down and shaking them out into the hand.

MAINTENANCE

1. Inspect both keys for cracks, bends, or other irregularities.
2. Disassemble the padlock using steps 1-5 of the disassembly procedure.
3. Clean all padlock components and the cavity of the padlock body with solvent.
4. Insert keys into cylinders turning from lock to unlock several times, cleaning the cylinder and the key with solvent each time the key is removed.
5. Dry all components.
6. The padlock may be lubricated in one of two ways:
   a. Lubricate the locking bars by spraying with dry film lubricant. Allow them to dry before reassembling the padlock. A needle-nose spray head may be used to lubricate the keyway or the key may be sprayed and inserted into the keyway before drying.
   b. If molybdenum disulfide powder is used, dip the locking cam in the can of lubricant, and remove excess lubricant by tapping the cam against the interior rim of the can. Dip the key in the same lubricant, and insert the key into the keyway. Move the key in and out several times, turning from lock to unlock each time.

REASSEMBLY

Using Figure 2 as a guide to identification of components, reassembly of the

padlock after maintenance can be accomplished as follows:

1. Place the lock cylinders into their appropriate cavity.
2. Place the locking bars on top of the cylinders. Ensure the locking bar is in the locked position and fully seated on the end of the cylinder.
3. Slide the top plate in place.
4. Check the operation of the lock by inserting the keys and unlocking and locking the locking bars several times. Withdraw the key between each lock/unlock cycle.
5. Drive the top plate lock pin in until the top of the pin is flush with the top of the cover.

The Model 1381 is currently authorized for Navy use only. All requests for this padlock should be referred to the Commanding Officer, Naval Weapons Support Center, Code 902, Crane, IN 47522, AV 482-1879 or Comm (812) 854-1879. Requests for key replacement or additional keys shall be authorized by the Commanding Officer or Officer in Charge of the requesting activity. All letters requesting replacement, additional keys, or containing keys to be destroyed shall be sent by certified or registered mail to:

Commanding Officer
Naval Weapons Support Center
Code 102
Crane, IN 47522
AV 482-1354
Comm (812) 854-1354

Any Model 1381 that fails to operate properly shall be forwarded by certified or registered mail to:

Commanding Officer
Naval Civil Engineering Laboratory
Code L61
Port Hueneme, CA 93043
AV 360-5616
Comm (805) 982-5616

A letter identifying the suspected problem and a point of contact must be enclosed with the lock. Padlocks that are found by NCEL to be repairable will be forwarded by NCEL to the Naval Weapons Support Center, Crane, IN, for repair and return to the user.

DEPARTMENT OF THE NAVY

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