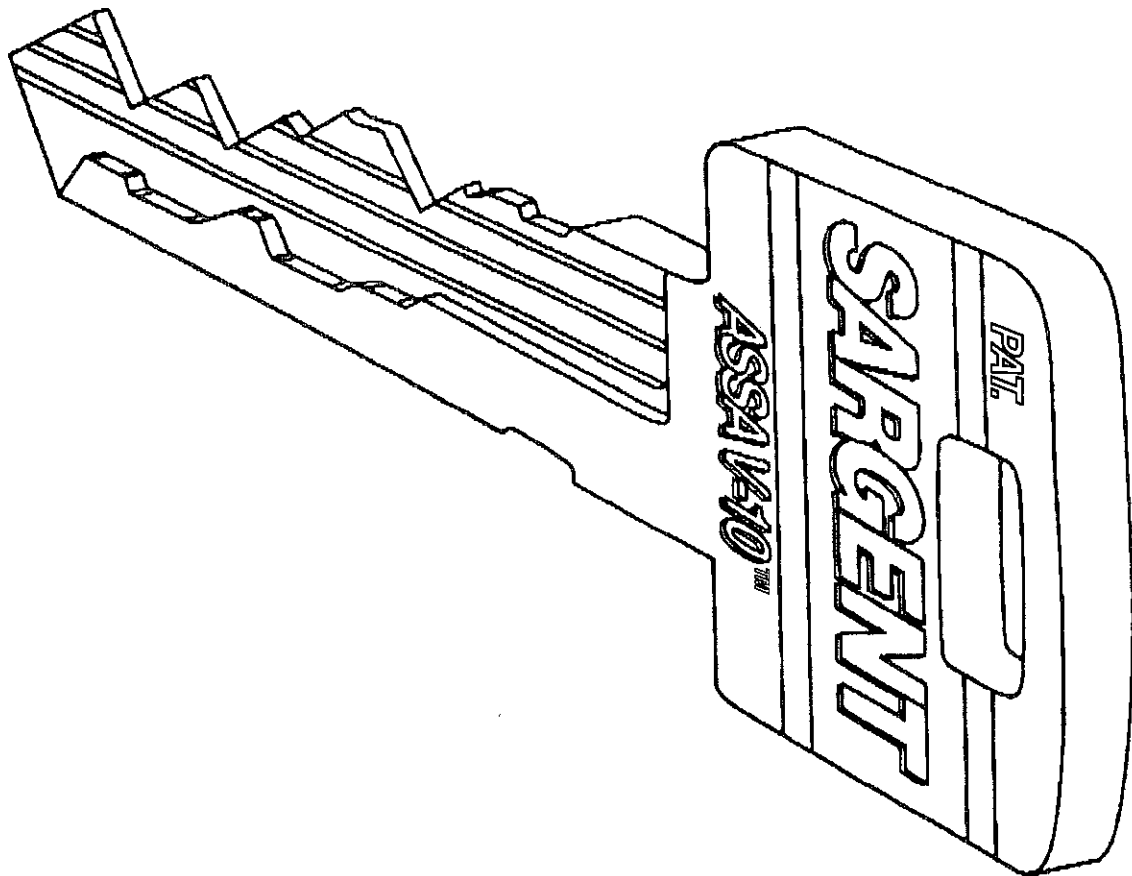


# V-10™

# Technical Service Manual



A7768A

**SARGENT**

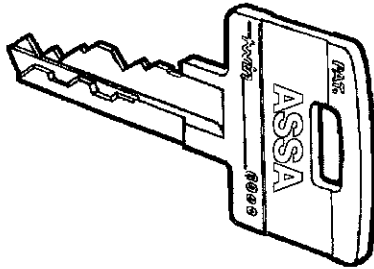
ASSA ABLOY

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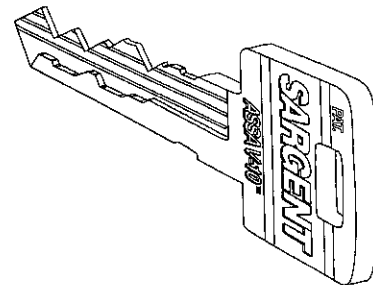
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# 1 Comparing the Twin 6000 with the V-10

## ASSA Twin 6000



## SARGENT ASSA V-10

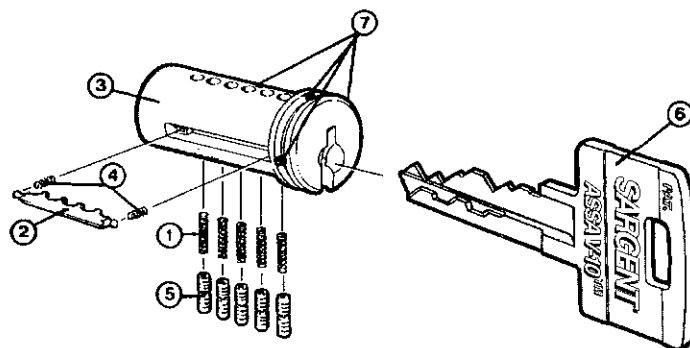


Using the ASSA Twin 6000 for a foundation, the SARGENT ASSA V-10 is the next form of evolution for the high security cylinder. The 6000 and V-10 share common features and components. Both use the same ASSA sidebar with the combination milled into it. Cylinder housings, bodies, tumblers and tailpieces are the same in both systems.

The new V-10 utilizes a new inner plug, that houses new side pins and side pin springs. The key that operates the V-10 is so unique that it has its own 17 year utility patent. These four components make up the improvements introduced in the new SARGENT ASSA V-10 high security cylinder.

The new V-10 key blank has ten side cuts instead of five found on the 6000's. Mated with the new V-10 side pins, keying capabilities are increased several orders of magnitude.

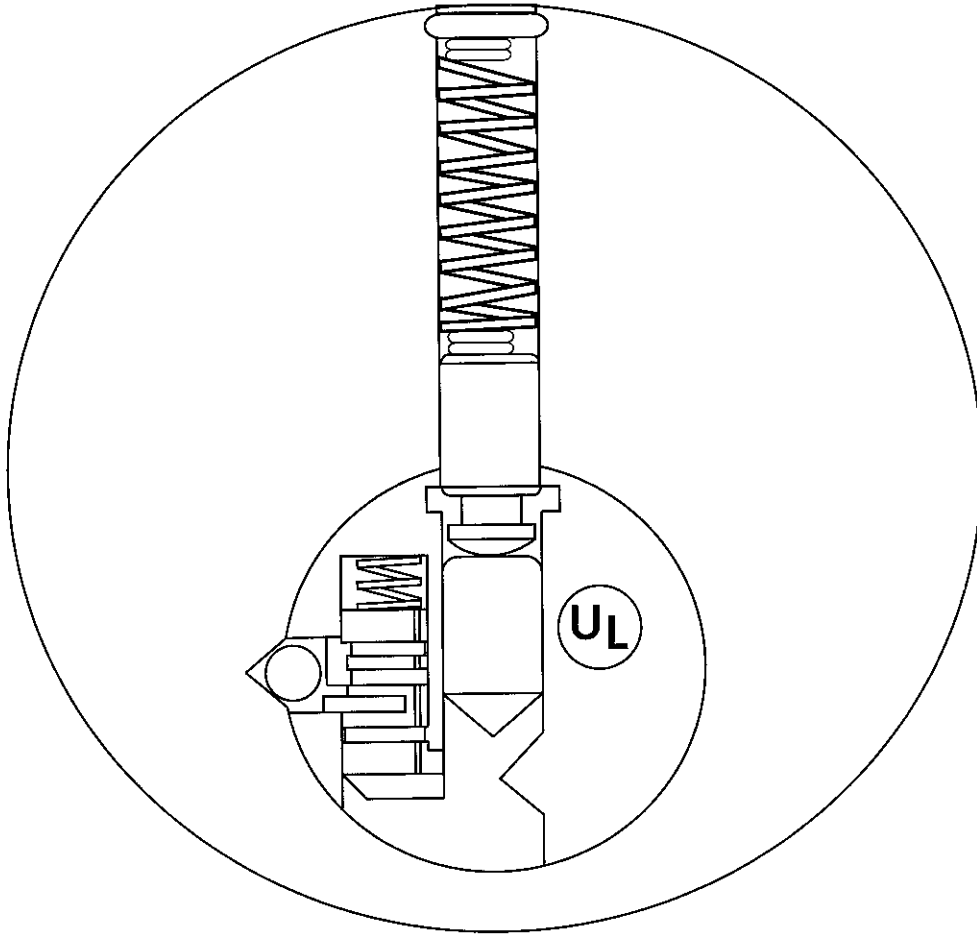
1. Side Pin Springs
2. Sidebar
3. Cylinder Plug
4. Sidebar Springs
5. Side Pins
6. V-10 Key
7. Drill-resistant Inserts



Because of the backward-compatibility engineered into the SARGENT ASSA V-10, an existing ASSA Twin 6000 cylinder can easily be upgraded to the new system. By exchanging the 6000 cylinder plug with a new V-10 cylinder plug, complete with new side pins and side pin springs, the cylinder is automatically upgraded. All other 6000 series components, including the sidebar, are compatible with the new V-10 system.

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## 2 Cylinder Section



# High Security Cylinders

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The SARGENT ASSA V-10 cylinder is a high security option for all SARGENT locksets and retrofits most other manufacturers' locks. Two independent locking mechanisms are simultaneously operated by a specially shaped key. As with the ASSA Twin 6000, the SARGENT ASSA V-10 incorporates a combined sidebar and keyblank. The V-10 configuration is comprised of a new specialized sidebar milling providing extensive master keying and sidebar combinations.

**MATERIALS:** The cylinder housing and inner plug are high-quality brass. The pins are stainless steel or nickel silver.

**MANUFACTURING TOLERANCES:** Precision machining insures smooth, positive operation and extended cylinder life.

**DRILL RESISTANCE:** In addition to side and tumbler pins, case-hardened drill-resistant inserts are embedded in the cylinder plug and housing.

**PICK RESISTANCE:** SARGENT ASSA V-10 cylinders have two independent shear lines that help assure optimum pick resistance. "False" grooves in the side pins catch the sidebar when it is improperly positioned. When rotational force is applied, the spool driver pins are caught by the countermilling in the cylinder plug.

**KEYS:** The V-10 keys are manufactured from quality nickel silver material. The key's rounded back facilitates smoother operation and minimizes wear. The large key bow simplifies key identification and use by manually impaired individuals.

**OTHER DESIGNS:** V-10 cylinders are available in different models for use in many types of locks.

**PATENTS:** Existing U.S. patents and those existing and pending in over two dozen other countries prohibit the manufacture or use of unauthorized keys or cylinders. Any infringement of the ASSA patent rights will be forcefully prosecuted in court.

**PATENTS:** ASSA Twin 6000 cylinders, keyblanks and other components are covered by one or more of the following U.S.: 4,356,713; 4,393,6773; 4,577,479; 274,302; 278,880; 264,680.

SARGENT ASSA V-10 cylinders, keyblanks and other components are covered by one or more of the following U.S. and Canadian Patents: Patents Pending.

**MORTISE AND RIM CYLINDERS:** SARGENT ASSA V-10 mortise and rim cylinders are designed to be compatible with all SARGENT exit devices and mortise locksets. Available in a variety of finishes, these reliable cylinders withstand the heaviest of use.

V-10 mortise cylinders will improve the security of locksets installed in aluminum storefront doors, rolling grilles, shutters, overhead doors and a wide variety of special locking devices. These mortise cylinders can also be applied in standard mortise locksets manufactured by ARROW, Best, Corbin/Russwin, Schlage, Yale and other lock manufacturers.

V-10 rim cylinders can be used for surface applied deadlocks, exit devices and a wide range of auxiliary locking products.

**KEY-IN-KNOB AND KEY-IN-LEVER CYLINDERS:** Greatly improving key control, the V-10 cylindrical cylinders can replace the original cylinder without replacing the entire lockset. Thus, the quality SARGENT ASSA V-10 locking product used in new construction becomes compatible with the retrofitted existing product recapturing total key control for the entire facility. SARGENT ASSA V-10 cylinders are manufactured to exact original manufacturers' specifications to assure precise fit and operation.

# SARGENT Catalog Model Numbers

## 40 SERIES MORTISE CYLINDERS

LENGTH & CAM REQUIRED	SARGENT NUMBER
1 1/8" with SARGENT Standard Cam	VA-41
1 1/4" with SARGENT Standard Cam	VA-42
1 3/8" with SARGENT Standard Cam	VA-43
1 1/2" with SARGENT Standard Cam	VA-44
1 5/8" with SARGENT Standard Cam	VA-45
1 3/4" with SARGENT Standard Cam	VA-46
1 7/8" with SARGENT Standard Cam	VA-47
2" with SARGENT Standard Cam	VA-48
1 1/8" with SARGENT Short Cam	VA-41-8
1 1/4" with SARGENT Short Cam	VA-42-8
1 3/8" with SARGENT Short Cam	VA-43-8
1 1/2" with SARGENT Short Cam	VA-44-8
1 5/8" with SARGENT Short Cam	VA-45-8
1 3/4" with SARGENT Short Cam	VA-46-8
1 7/8" with SARGENT Short Cam	VA-47-8
2" with SARGENT Short Cam	VA-48-8
1 1/8" with Adams Rite 1850 Cam	VA-41-101
1 1/4" with Adams Rite 1850 Cam	VA-42-101
1 3/8" with Adams Rite 1850 Cam	VA-43-101
1 1/2" with Adams Rite 1850 Cam	VA-44-101
1 5/8" with Adams Rite 1850 Cam	VA-45-101
1 3/4" with Adams Rite 1850 Cam	VA-46-101
1 7/8" with Adams Rite 1850 Cam	VA-47-101
2" with Adams Rite 1850 Cam	VA-48-101
1 1/8" with AirTec Cam	VA-41-110
1 1/4" with AirTec Cam	VA-42-110
1 3/8" with AirTec Cam	VA-43-110
1 1/2" with AirTec Cam	VA-44-110
1 5/8" with AirTec Cam	VA-45-110
1 3/4" with AirTec Cam	VA-46-110
1 7/8" with AirTec Cam	VA-47-110
2" with AirTec Cam	VA-48-110

To order an uncombined cylinder (no top pins, no top springs, no sidebar and no sidebar springs), substitute the prefix "VS" for "VA". The cylinder will have the side pins and side pin springs loaded.

## 40 SERIES MORTISE CYLINDERS

LENGTH & CAM REQUIRED	SARGENT NUMBER
1½" with Best 30H Cloverleaf Cam	VA-41-109
1¼" with Best 30H Cloverleaf Cam	VA-42-109
1¾" with Best 30H Cloverleaf Cam	VA-43-109
1½" with Best 30H Cloverleaf Cam	VA-44-109
1¾" with Best 30H Cloverleaf Cam	VA-45-109
1¾" with Best 30H Cloverleaf Cam	VA-46-109
1¾" with Best 30H Cloverleaf Cam	VA-47-109
2" with Best 30H Cloverleaf Cam	VA-48-109
1½" with Cor/Rus Cloverleaf Cam	VA-41-103
1¼" with Cor/Rus Cloverleaf Cam	VA-42-103
1¾" with Cor/Rus Cloverleaf Cam	VA-43-103
1½" with Cor/Rus Cloverleaf Cam	VA-44-103
1¾" with Cor/Rus Cloverleaf Cam	VA-45-103
1¾" with Cor/Rus Cloverleaf Cam	VA-46-103
1¾" with Cor/Rus Cloverleaf Cam	VA-47-103
2" with Cor/Rus Cloverleaf Cam	VA-48-103
<b>The 103 cam configuration also is used with all of SARGENT's 4000 Series Key Switches.</b>	
1½" with Cor/Rus Beaver Tail Cam	VA-41-107
1¼" with Cor/Rus Beaver Tail Cam	VA-42-107
1¾" with Cor/Rus Beaver Tail Cam	VA-43-107
1½" with Cor/Rus Beaver Tail Cam	VA-44-107
1¾" with Cor/Rus Beaver Tail Cam	VA-45-107
1¾" with Cor/Rus Beaver Tail Cam	VA-46-107
1¾" with Cor/Rus Beaver Tail Cam	VA-47-107
2" with Cor/Rus Beaver Tail Cam	VA-48-107
1¼" with Cor/Rus Jumbo Cyl. Cam	VA-7552
1¾" with Cor/Rus Jumbo Cyl. Cam	VA-7553
<b>These cylinders are 1½" diameter.</b>	
1½" with Schlage L Series Cam	VA-41-106
1¼" with Schlage L Series Cam	VA-42-106
1¾" with Schlage L Series Cam	VA-43-106
1½" with Schlage L Series Cam	VA-44-106
1¾" with Schlage L Series Cam	VA-45-106
1¾" with Schlage L Series Cam	VA-46-106
1¾" with Schlage L Series Cam	VA-47-106
2" with Schlage L Series Cam	VA-48-106

To order an uncombined cylinder (no top pins, no top springs, no sidebar and no sidebar springs), substitute the prefix "VS" for "VA". The cylinder will have the side pins and side pin springs loaded.

## 40 SERIES MORTISE CYLINDERS

LENGTH & CAM REQUIRED	SARGENT NUMBER
1¼" with Segal Cam	VA-41-111
1¼" with Segal Cam	VA-42-111
1¾" with Segal Cam	VA-43-111
1½" with Segal Cam	VA-44-111
1¾" with Segal Cam	VA-45-111
1¾" with Segal Cam	VA-46-111
1¾" with Segal Cam	VA-47-111
2" with Segal Cam	VA-48-111
1¼" with Yale Standard Cam	VA-41-108
1¼" with Yale Standard Cam	VA-42-108
1¾" with Yale Standard Cam	VA-43-108
1½" with Yale Standard Cam	VA-44-108
1¾" with Yale Standard Cam	VA-45-108
1¾" with Yale Standard Cam	VA-46-108
1¾" with Yale Standard Cam	VA-47-108
2" with Yale Standard Cam	VA-48-108
1½" ASSA Moqul Detention Cylinder	VA-8551
<b>This cylinder is 2" diameter.</b>	

To order an uncombined cylinder (no top pins, no top springs, no sidebar and no sidebar springs), substitute the prefix "VS" for "VA". The cylinder will have the side pins and side pin springs loaded.

## 34 SERIES RIM CYLINDERS

LENGTH & TAILPIECE REQUIRED	SARGENT NUMBER
1¼" with Horizontal Tailpiece	VA-34S
1¼" with Vertical Tailpiece	VA-34-V
1¼" with Lazy Motion Tailpiece	VA-34-L

To order an uncombined cylinder (no top pins, no top springs, no sidebar and no sidebar springs), substitute the prefix "VS" for "VA". The cylinder will have the side pins and side pin springs loaded.



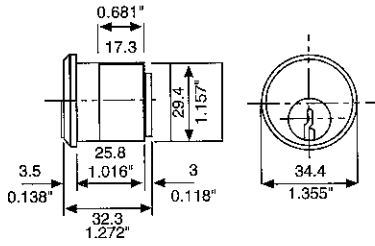
# Key-In-Knob, Key-In-Lever and Bored Deadlock Cylinders

	<b>SARGENT NUMBER</b>
SARGENT 480 Series Bored Deadbolt	VA-C480
SARGENT 6 Line (S & N Knobs)	VA-C10
SARGENT 6 Line (B Knob)	VA-C10
SARGENT 7,8 and 9 Line	VA-C8
SARGENT 7600 Integralock	VA-C7600
SARGENT 6500	VA-C10
SARGENT 10 Line	VA-C10
ARROW Standard & Heavy Duty 6 pin (Two Tailpieces included)	VA-65691
ARROW Bored Deadbolts 6 pin	VA-65674
Cor/Rus New Style Heavy Duty	VA-65651
Cor/Rus New Style Standard Duty (Tailpiece included)	VA-65652
Cor/Rus 19FE5 Cylinder	VA-65653
Cor/Rus 24F15, 25F26, 25F56, 55F76 and 67F69 Cylinders	VA-65654
Cor/Rus 25F65 Cylinder	VA-65655
Falcon S and X Series (MUST reuse the original Falcon tailpiece)	VA-65651
Schlage Standard, Heavy Duty and "B" Series Bored Deadbolts, 6 pin (3 length breakoff tailpiece included)	VA-65611
Weiser 4000 & 9000 Sgl. Cyl. Deadbolt Cylinders	VA-65681
Weiser 4000 & 9000 Dbl. Cyl. Deadbolt Cylinders	VA-65682
Yale Standard and Heavy Duty Cylindrical Knob Lockset Cylinders	VA-65631
Yale Heavy Duty Cylindrical Lever Lockset Cylinders	VA-65632

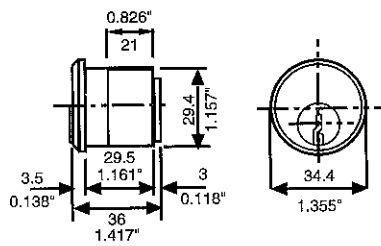
To order an uncombined cylinder (no top pins, no top springs, no sidebar and no sidebar springs), substitute the prefix "VS" for "VA". The cylinder will have the side pins and side pin springs loaded.

# Mortise Cylinders

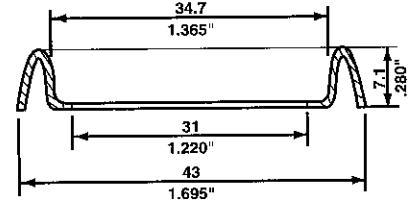
**VA or VS41**  
1 1/8" Mortise Cylinders



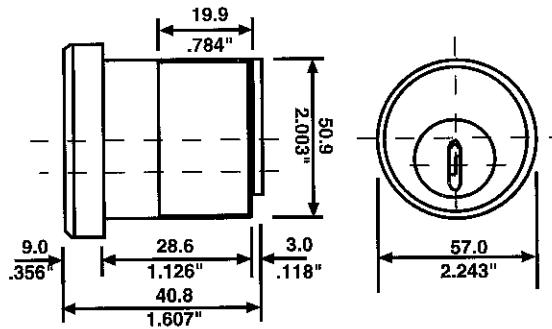
**VA or VS42**  
1 1/4" Mortise Cylinders



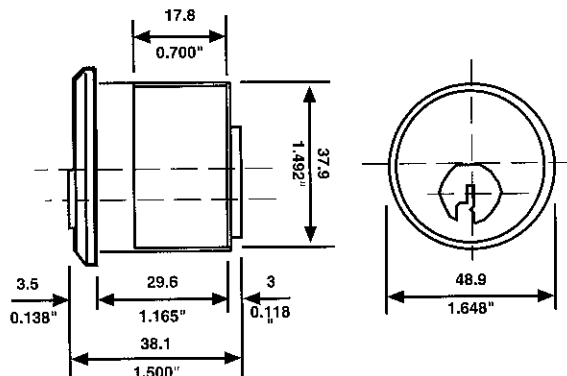
**97**  
Mortise Cylinder Ring



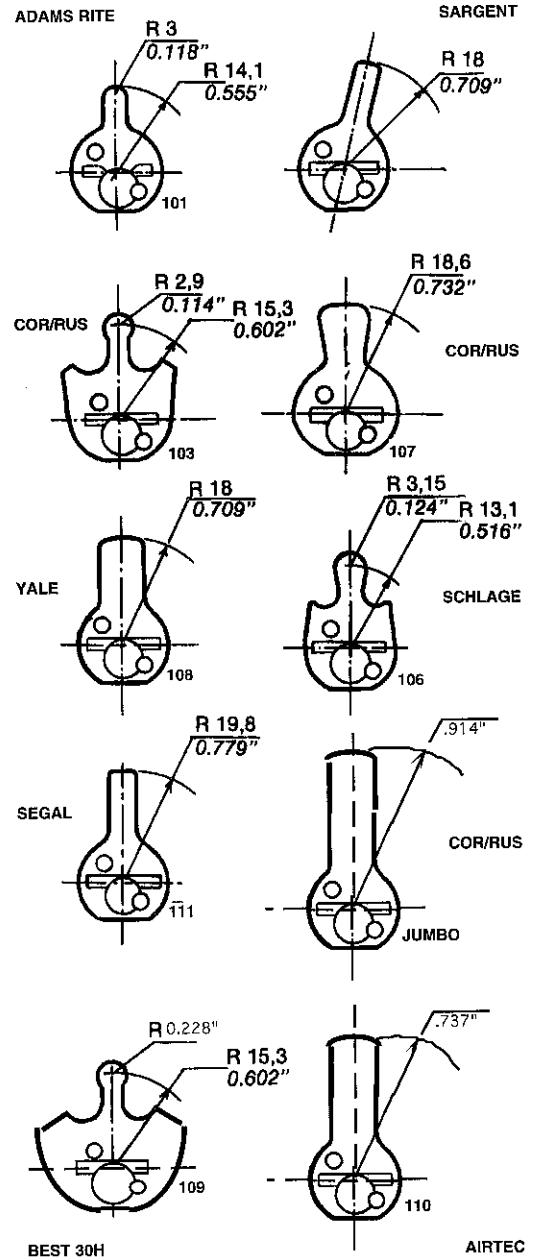
**VA or VS8551**  
Mogul Detention Cylinder



**VA or VS7552**  
1 1/4" Corbin Jumbo Mortise Cylinders

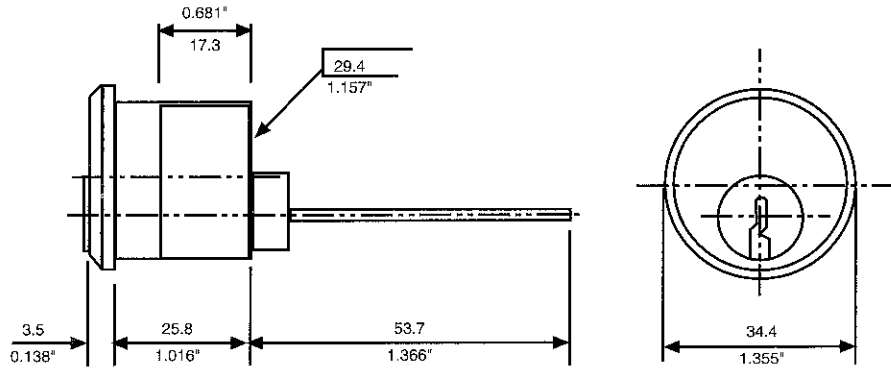


## CAMS

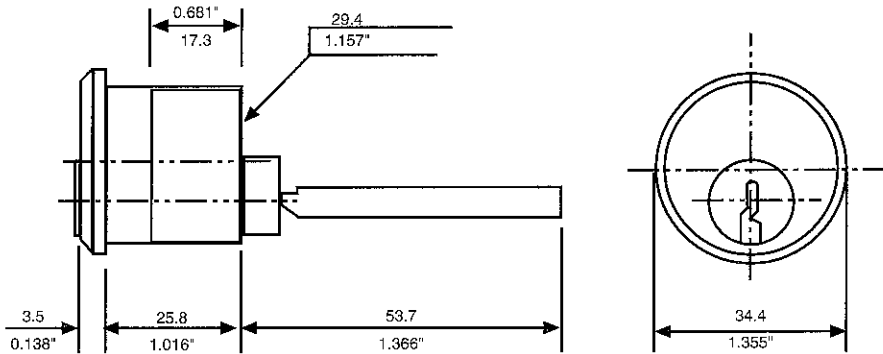


# Rim Cylinders

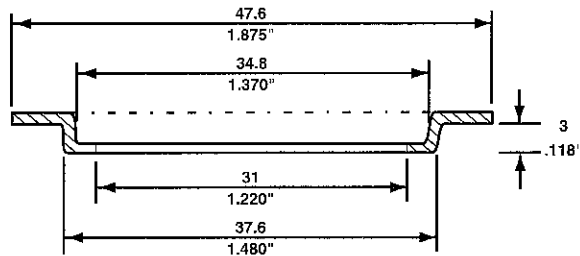
VA or VS34S  
Rim Cylinders



#34S - Rim Cylinder with Horizontal Tailpiece (Shown)  
#34V - Rim Cylinder with Vertical Tailpiece



#34L - Rim Cylinder with Lazy Motion Tailpiece



#99 - Rim Cylinder Ring

# Mortise & Rim Interchangeable Core Cylinders

## 34 SERIES RIM and 40 SERIES MORTISE INTERCHANGEABLE CORE CYLINDERS

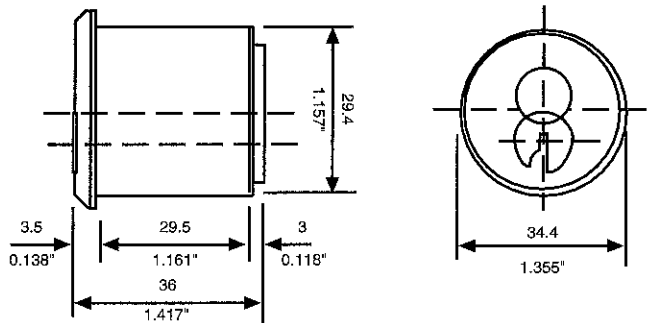
The 34 series rim and 40 series (1¼" length only) mortise including Cor/Rus Jumbo cylinders are available with interchangeable cores. In lieu of the VA-prefix, substitute the VC-prefix.

### EXAMPLE:

1. VA-42-101 is a 1¼" long standard mortise cylinder with a cam for an Adams Rite #1850 series deadlock.
2. VC-42-101 is a 1¼" long interchangeable core mortise cylinder with a cam for an Adams Rite #1850 series deadlock.

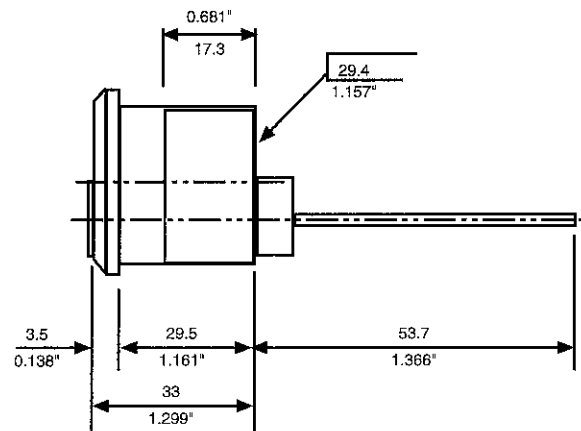
### VC or VCVS42

#### 1¼" Mortise Interchangeable Core Cylinder



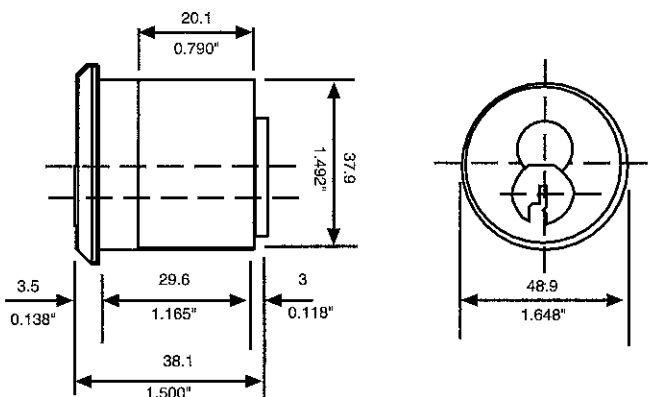
### VC or VCVS34S

#### Rim Interchangeable Core Cylinder



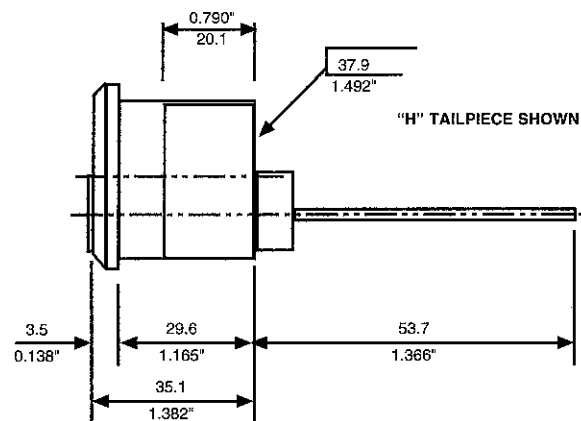
### VC or VCVS7552

#### 1¼" Mortise Corbin Jumbo Interchangeable Core Cylinder



### VC or VCVS7552 (H,V or L)

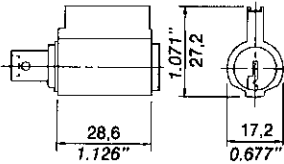
#### 1¼" Rim Corbin Jumbo Interchangeable Core Cylinder



# Key-In-Knob & Lever and Bored Deadlock Cylinders

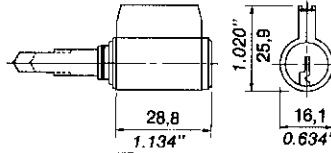
## VA OR VS C8 SARGENT

Heavy Duty 7,8, 9 lines.



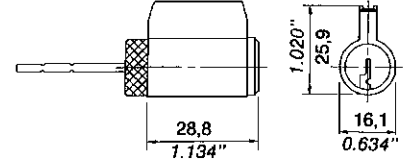
## VA OR VS C10 SARGENT

Standard Duty 6-line, Heavy Duty 10-Line and 6500 Series Lever Locksets. 3 tailpieces included.



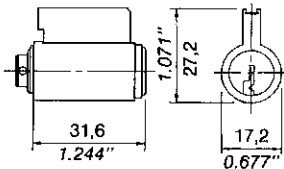
## VA OR VS C480 SARGENT

480 Series Bored Deadlock. 3 tailpieces included.



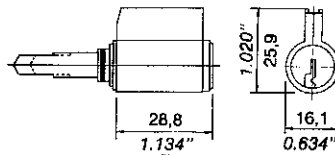
## VA OR VS C7600 SARGENT

7600 Series Integralok.



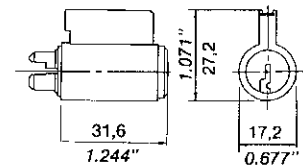
## VA OR VS 65691 ARROW

Standard and Heavy Duty 6-pin, 2 tailpieces included.



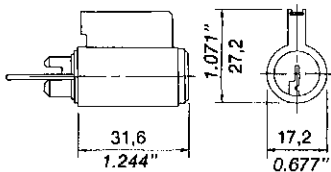
## VA OR VS 65651 Corbin/Ruswin

Heavy Duty. New Style.



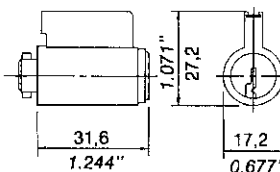
## VA OR VS 65652 Corbin/Ruswin

Standard Duty. New Style. Tailpiece included.



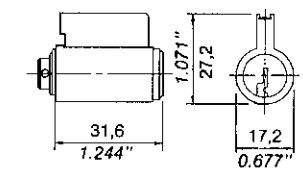
## VA OR VS 65653 Corbin/Ruswin

Ruswin cylinder 19FE5.



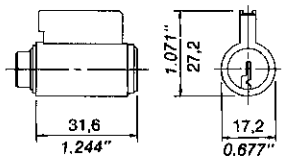
## VA OR VS 65654 Corbin/Ruswin

Ruswin cylinder 25F26, 25F56, 24F15, 67F69, 55F76



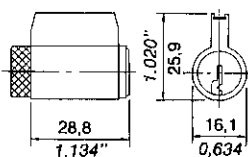
## VA OR VS 65655 Corbin/Ruswin

Ruswin cylinder 25F65.



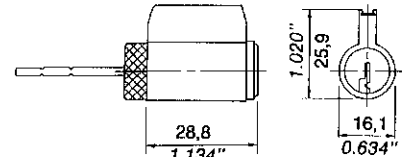
## VA OR VS 65661 Falcon

S & X Series. Includes cap, pin, spring and tailpiece washer. Use original Falcon tailpiece.



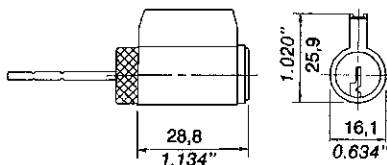
## VA OR VS 65611 Schlage

Standard and Heavy Duty 6-pin. Includes cap, pin, spring and 3 length breakoff tailpiece. Reuse existing tailpiece with "B" Deadlocks.



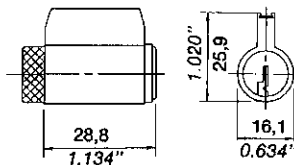
## VA OR VS 65681 Weiser

Weiser Deadbolt Single cylinder 4000, 9000.



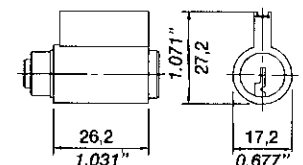
## VA OR VS 65682 Weiser

Weiser Deadbolt Double cylinder 4000, 9000.



## VA OR VS 65631 Yale

Standard and Heavy Duty 6-pin Cylindrical Knob Locksets (use V65632 for 5400L).

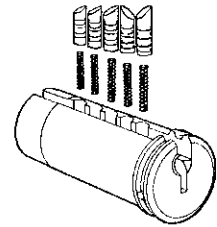


# Sidebar Assembly

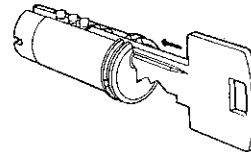
SIDEBAR ASSEMBLY METHOD IS THE SAME FOR ALL SARGENT ASSA V-10 CYLINDERS.

A) Turn the cylinder plug upside down. Insert the side pin springs into the pin holes. These pin holes are drilled from the bottom side of the cylinder.

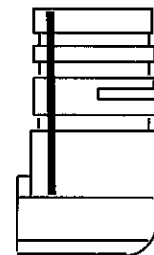
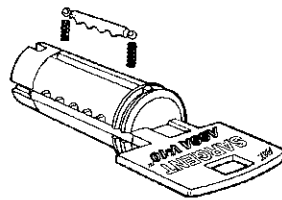
B) Insert the side pins with the hollowed end towards the spring. Be sure that the springs and pins are properly seated in the recess. If a spring or pin is jammed, the cylinder will not function. The sidepins are positioned LEFT OR RIGHT and MUST BE INSERTED properly to match the sidebar code being used.



C) Keep the cylinder plug upside down and insert a key or key blank to keep the side pins in place. Depress the side pins in order to insert the key.

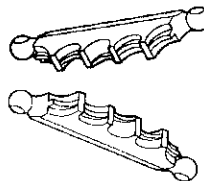


D) Insert the short springs (side pin springs) in the small holes at each end of the groove along the cylinder plug for the sidebar. Be sure that the springs seat correctly.



V-10 Sidebar Pin  
Left

E) Place the side bar so that the shelves (lugs) correspond to the deep waists of the side pins. Press the side bar into the groove so that it can be fully depressed into the cylinder plug. The key should be kept in the cylinder plug at all times during assembly.



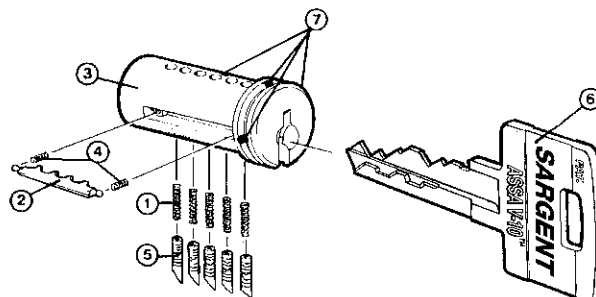
If the side bar does not fully depress into the cylinder plug, invert the sidebar. They are reversible.

F) Slide the cylinder plug into the cylinder housing. If the position of the sidebar is correct, the cylinder plug will turn. Hold the cylinder plug in place when drawing out the key.

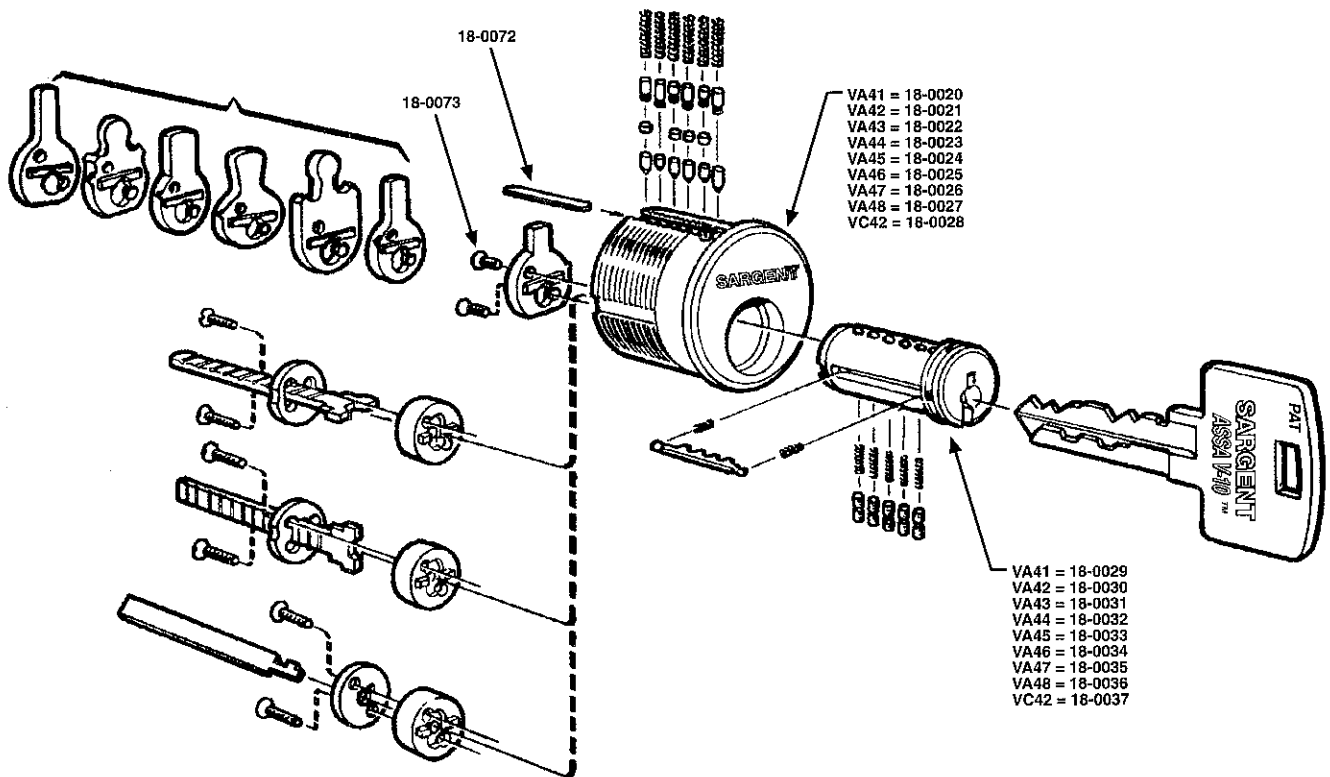
G) Fasten the tailpiece to the end of the cylinder plug. After assembly, test the cylinder for proper operation.

## Sidebar Components

1. Side Pin Springs
2. Sidebar
3. Cylinder Plug
4. Sidebar Springs
5. Sidebar Pins
6. V-10 Key
7. Drill Resistant Pins



# Mortise & Rim Cylinder Assembly



Insert the sidebar mechanism, bottom pins, master pins and springs with the same method as described earlier.

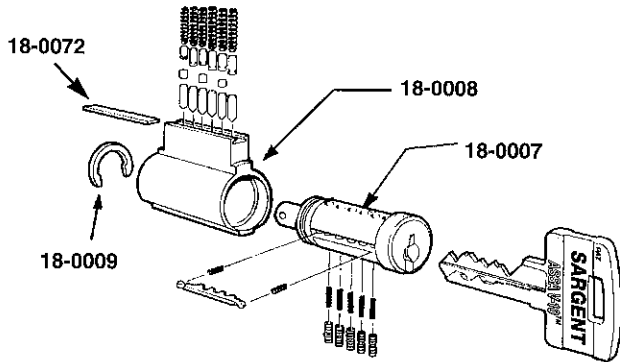
Insert the pin chamber closing strip into the pin bible and then "stake" with a small chisel or similar tool so the strip will remain in position.

After the cylinder assembly is completed, test for proper operation.

1. The ASSA mortise cylinder can be assembled utilizing one of ten different cams. See schedule.
2. The 1 $\frac{1}{8}$ " (6551) cylinder housing is universal in that it is manufactured to work both threaded mortise and tapped for rim screws. Mortise cams and rim tails have universal fittings.
3. The 1 $\frac{1}{4}$ " (6552) cylinder housing is not tapped for rim installation. (Available on special order.)
4. Rim cylinder screws and mounting plate are available as an option.

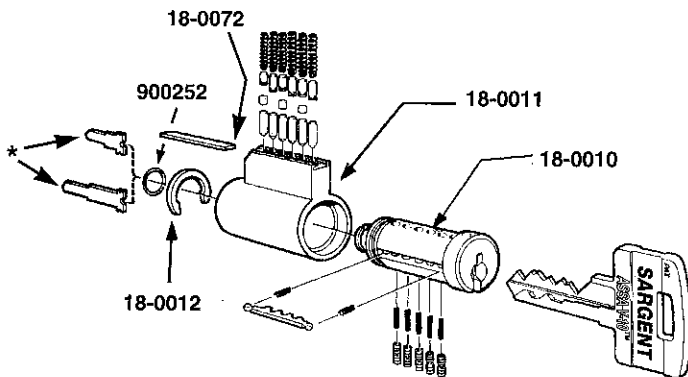
# Key-In-Knob & Lever and Bored Deadlock Cylinders

1. Insert the sidebar mechanism, bottom pins, master pins and springs with the same method as described earlier.
2. Insert the pin chamber closing strip into the pin bible and "stake" with a small chisel or similar tool so the strip will remain in place.
3. After the cylinder assembly is completed, test for proper operation before installing in the lockset.



## VA OR VS C8 SARGENT

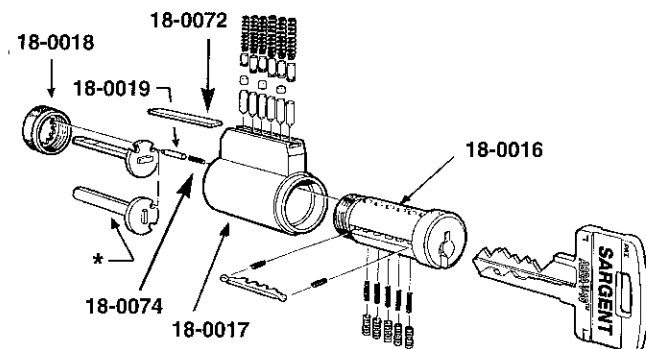
1. Install cylinder plug in housing as shown in diagram.
2. Install cylinder retaining clip from above and ensure it is well seated.



## VA OR VS C10 SARGENT

1. Install cylinder plug in housing as shown in diagram.
2. Install cylinder retaining clip from above and ensure it is well seated.
3. Install proper tailpiece depending on function.

\* 10 LINE = 18-0015  
 6500 = 18-0015  
 6 LINE S = 18-0013  
 6 LINE B = 18-0014



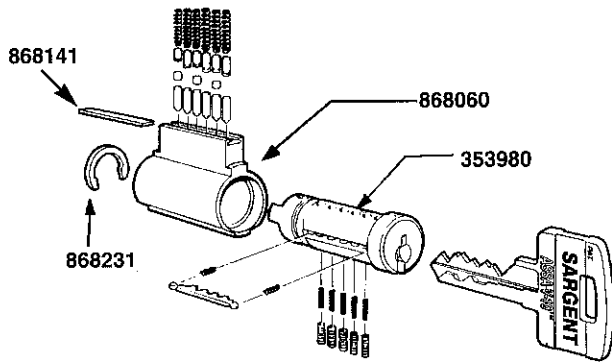
## VA OR VS C480 Sargent

1. 3 tailpieces provided to accommodate different functions.
2. The tailpiece can be located in either vertical or horizontal positions.
3. When installing the tailpiece, depress cylinder cap pin and tighten cap clockwise until it is tight, then back off one or two notches.

\* 484 = 13-0878  
 485 & 487 = 13-0880  
 486 = 13-0881

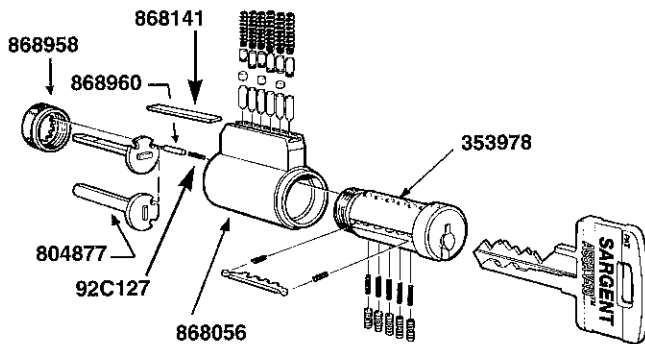


# Key-In-Knob & Lever and Bored Deadlock Cylinders



## VA OR VS C7600 SARGENT

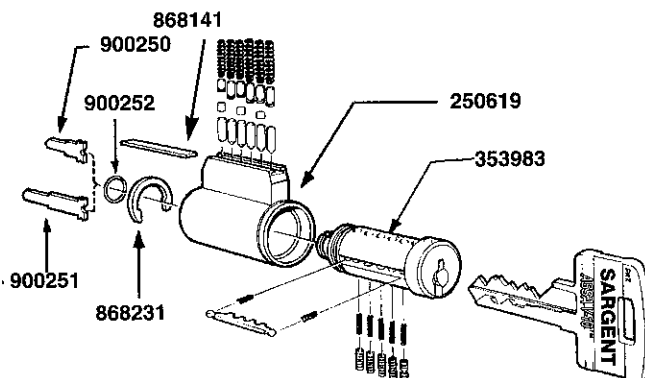
1. Install cylinder plug in housing as shown in diagram.
2. Install cylinder retaining clip from above and ensure it is well seated.



## VA OR VS 65674 ARROW (Bored Deadlocks)

1. 3 tailpieces provided to accommodate different functions.
2. The tailpiece can be located in either vertical or horizontal positions.
3. When installing the tailpiece, depress cylinder cap pin and tighten cap clockwise until it is tight, then back off one or two notches.

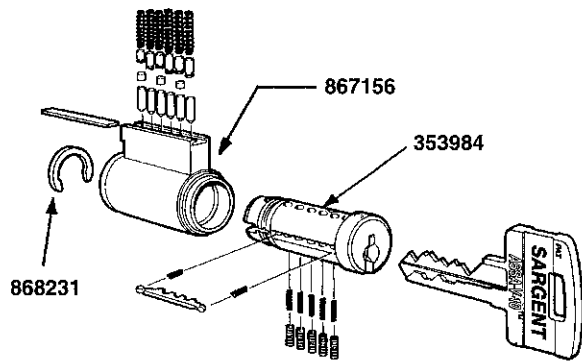
Note: The cap must be properly adjusted. If cap is too loose the key cannot be withdrawn because cylinder plug and cylinder housing pin chamber will not line up properly. If the cylinder cap is too tight the cylinder will be difficult to operate.



## VA OR VS 65691 ARROW (Cylindrical Locksets)

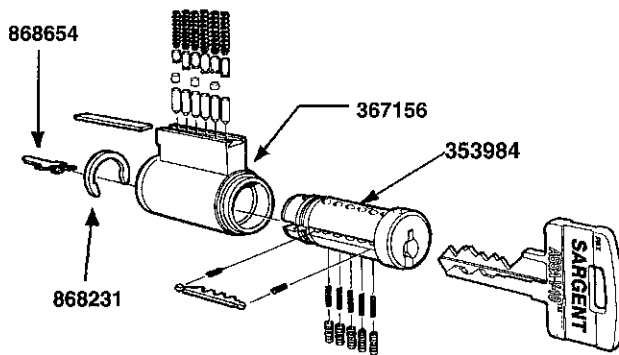
1. Install cylinder plug in housing as shown in diagram.
2. Install cylinder retaining clip from above and ensure it is well seated.
3. Install proper tailpiece depending on function.

# Key-In-Knob & Lever and Bored Deadlock Cylinders



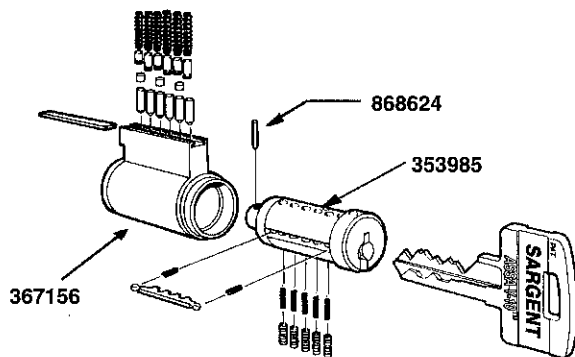
## VA OR VS 65651 Corbin/Ruswin

1. Install cylinder plug in housing as shown in diagram.
2. Install cylinder retaining clip from above and ensure it is well seated.



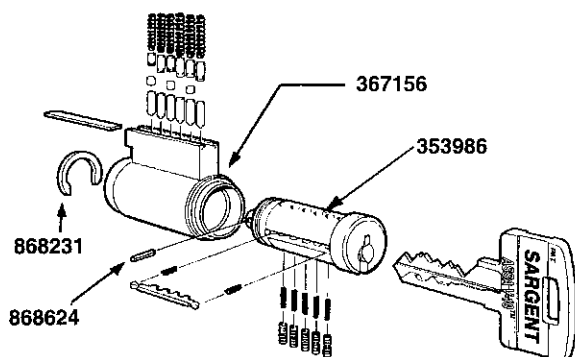
## VA OR VS 65652 Corbin/Ruswin

1. Install cylinder plug in housing as shown in diagram.
2. Install tailpiece as shown before installing cylinder retaining clip.



## VA OR VS 65653 Corbin/Ruswin

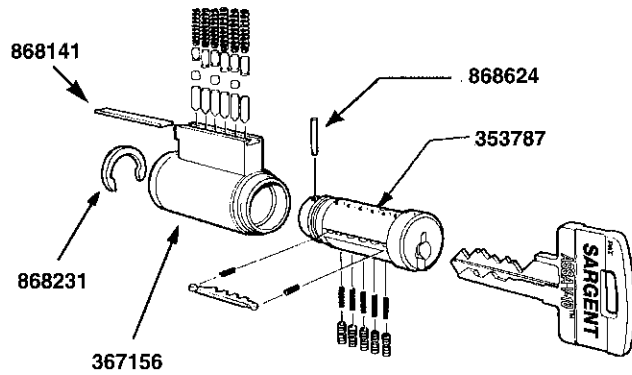
1. Install cylinder plug in housing as shown in diagram.
2. Install roll pin from above to allow installation of original manufacturer's tailpiece.



## VA OR VS 65654 Corbin/Ruswin

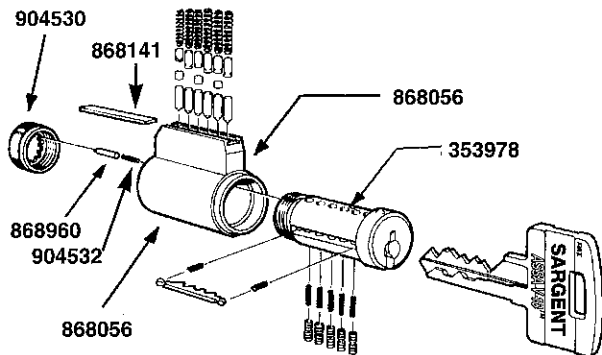
1. Install cylinder plug in housing as shown in diagram.
2. Install cylinder retaining clip from above and ensure it is well seated.
3. Install roll pin from above to allow installation of original manufacturer's tailpiece.

# Key-In-Knob & Lever and Bored Deadlock Cylinders



## VA OR VS 65655 Corbin/Russwin

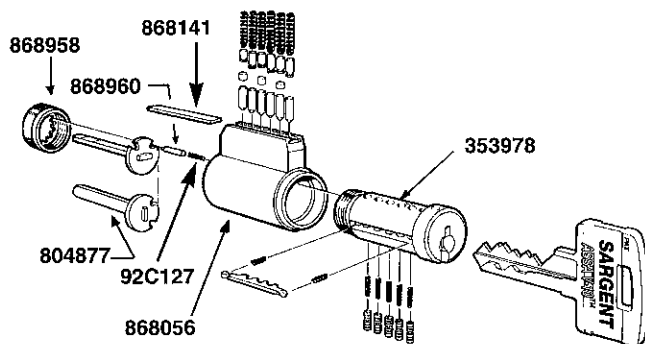
1. Install cylinder plug in housing as shown in diagram.
2. Install cylinder retaining clip from above and ensure it is well seated.
3. Install roll pin from above to allow installation of original manufacturer's tailpiece.



## VA OR VS 65661 Falcon

1. Install cylinder plug in housing as shown in diagram.
2. Special tailpiece washer provided by ASSA. Use original manufacturer's drive bar to complete assembly.
3. When installing tailpiece, depress cylinder cap pin and tighten cap clockwise until it is tight, then back off one or two notches.

Note: The cap must be properly adjusted. If cap is too loose the key cannot be withdrawn because cylinder pin chamber will not line up properly. If the cylinder cap is too tight, the cylinder will be difficult to operate.

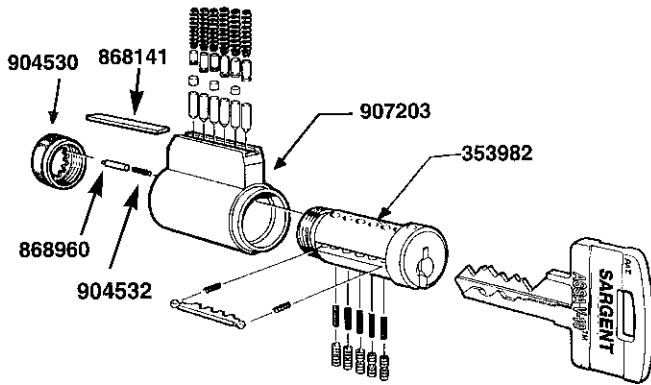


## VA OR VS 65611 Schlage

1. Break off tailpiece provided to accommodate different functions. Cut to proper length at score.
2. The tailpiece can be located in either vertical or horizontal positions, or substituted with original Schlage tailpiece.
3. When installing the tailpiece, depress cylinder cap pin and tighten cap clockwise until it is tight, then back off one or two notches.

Note: The cap must be properly adjusted. If cap is too loose the key cannot be withdrawn because cylinder plug and cylinder housing pin chamber will not line up properly. If the cylinder cap is too tight the cylinder will be difficult to operate.

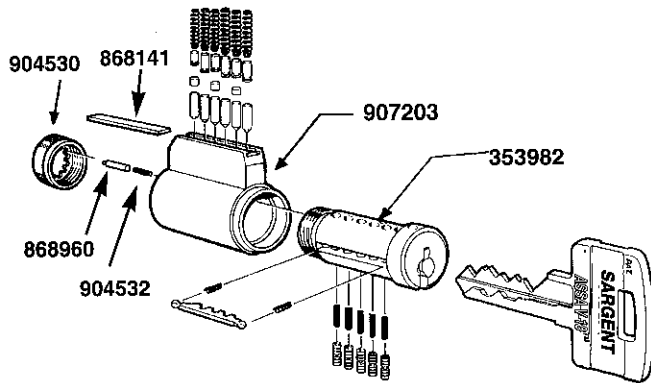
# Key-In-Knob & Lever and Bored Deadlock Cylinders



## VA OR VS 65681 Weiser

1. ASSA cylinder will retrofit Weiser tailpiece.
2. The tailpiece can be located in either vertical or horizontal positions.
3. When installing the tailpiece, depress cylinder cap pin and tighten cap clockwise until it is tight, then back off one or two notches.

Note: The cap must be properly adjusted. If cap is too loose the key cannot be withdrawn because cylinder plug and cylinder housing pin chamber will not line up properly. If the cylinder cap is too tight the cylinder will be difficult to operate.

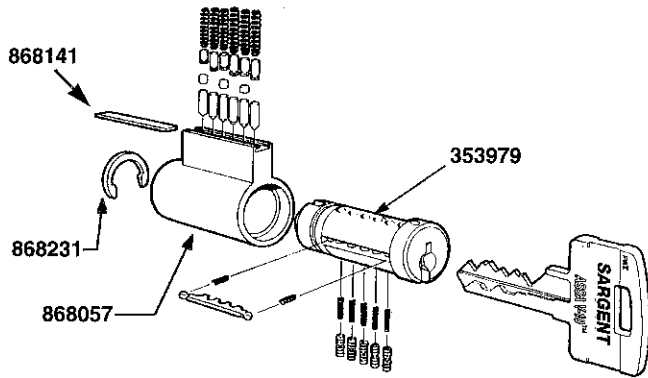


## VA OR VS 65682 Weiser

1. ASSA cylinder will retrofit Weiser tailpiece.
2. The tailpiece can be located in either vertical or horizontal positions.
3. When installing the tailpiece, depress cylinder cap pin and tighten cap clockwise until it is tight, then back off one or two notches.

Note: The cap must be properly adjusted. If cap is too loose the key cannot be withdrawn because cylinder plug and cylinder housing pin chamber will not line up properly. If the cylinder cap is too tight the cylinder will be difficult to operate.

# Key-In-Knob & Lever and Bored Deadlock Cylinders

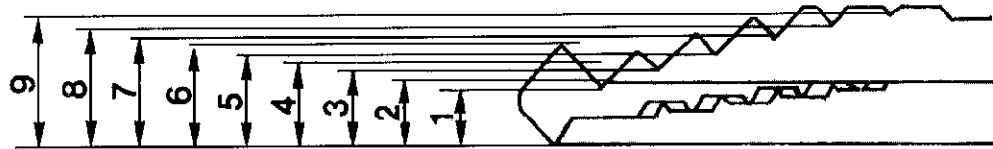


## VA OR VS 65631 Yale

1. Install cylinder plug in housing as shown in diagram.
2. Install cylinder retaining clip from above and ensure it is well seated.
3. For Key-In-Lever (5400L) Heavy Duty Lockset, use VA or VS65632.

# 3 Key Depth and Spacing Information

## Depths



### General Rules

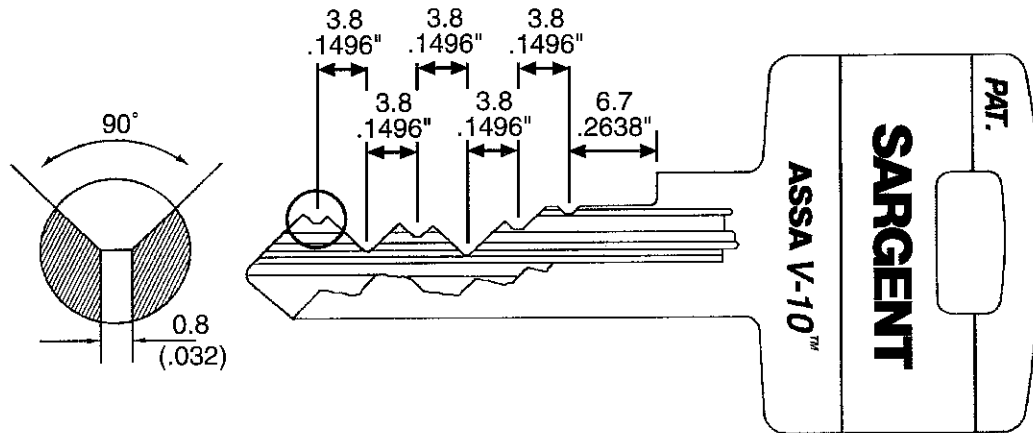
- A) No. 1 cut is deepest cut; No. 9 is shallowest.
- B) Maximum adjacent cut of 5. Example: 1-6 cut acceptable, not 1-7.
- C) Depths: Measure from bottom of the key blade to bottom of the cut.

No. 1 = 4.03 (0.1587")  
 No. 2 = 4.63 (0.1823")  
 No. 3 = 5.23 (0.2059")

No. 4 = 5.83 (0.2295")  
 No. 5 = 6.43 (0.2531")  
 No. 6 = 7.03 (0.2768")

No. 7 = 7.63 (0.3004")  
 No. 8 = 8.23 (0.3240")  
 No. 9 = 8.83 (0.3476")

## Spacing



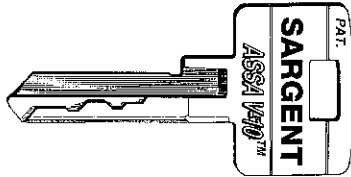
### General Rules

- A) 0.8 mm (.032") wide flat base.
- B) 90° cutting angle.
- C) System and KD code calculated from tip to bow.

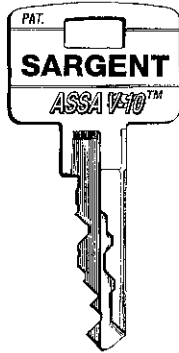
# 4 Keys, Key Blanks and Stamping Information

## Key Blanks V-10

- A) Sidebar Code is cut at ASSA Factory.  
Keyblanks are provided as shown.



- B) Sidebar code/profile can be identified on key bow. Example: 599-95.



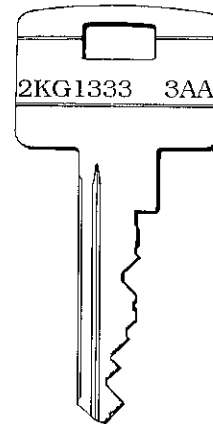
## Key Cutting

Sidebar code is precut at the ASSA factory. Pin tumbler codes can be cut on most code machines and duplicating machines. Manual duplicating machines, historically, produce better duplicate keys than automatic machines. The Twin 6000 and V-10 key is a hefty quality key. ASSA recommends quality cutters. ASSA has cutters and code cards available for the HPC 1200 CM code machine and cutters for the ASSA PS-6000T Framon machine.

## Key Stamping

All new cut keys should be stamped as original. Stamping procedures are as follows:

- 1) System Number
- 2) Individual key stamp - AA1



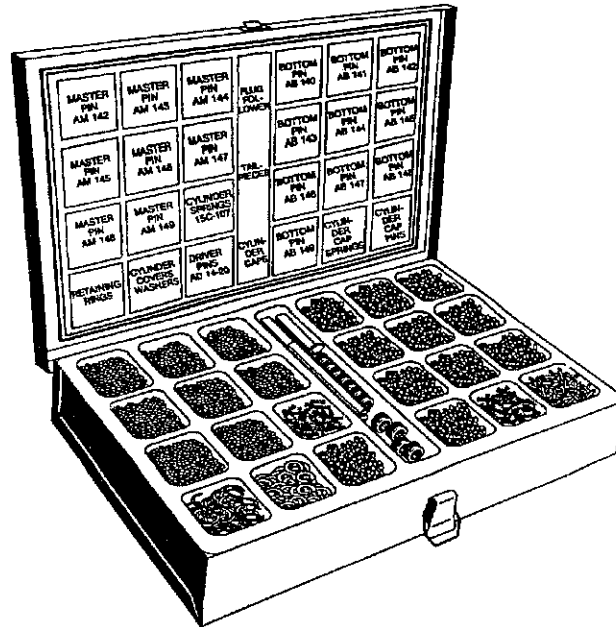
Decoder for KD/KA blind combinations.  
Count from tip to bow.

	1	2	3	4	5	6
1	E	F	J	B	G	A
2	J	A	B	C	D	F
3	F	C	D	J	H	E
4	C	H	A	D	B	J
5	D	G	F	E	J	H
6	B	D	E	H	A	G
7	H	B	G	F	C	D
8	G	J	H	A	E	C
9	A	E	C	G	F	B

Example: EAEGJC = 126958

**KD Blind codes can be found on factory code tags.**

## 5 Pinning Kits, Tools and Samples



### 437V - Pin Kit #1

Full Size Standard Kit for V-10, containing:

Description	SARGENT Part #	# Provided
Bottom Pin #1	18-0052	100
Bottom Pin #2	18-0053	100
Bottom Pin #3	18-0054	100
Bottom Pin #4	18-0055	100
Bottom Pin #5	18-0056	100
Bottom Pin #6	18-0057	100
Bottom Pin #7	18-0058	100
Bottom Pin #8	18-0059	100
Bottom Pin #9	18-0060	100
Master Pin #1	18-0044	100
Master Pin #2	18-0045	100
Master Pin #3	18-0046	100
Master Pin #4	18-0047	100
Master Pin #5	18-0048	100
Master Pin #6	18-0049	100
Master Pin #7	18-0050	100
Master Pin #8	18-0051	100
Driver Pin A	18-0040	100
Driver Pin B	18-0041	100
Driver Pin C	18-0042	100
Driver Pin D	18-0043	100
Top Pin Spring	18-0063	500
Sidepins, L.H.	18-0061	50
Sidepin Spring	18-0064	100
Sidebar Spring	18-0065	100
P.H. Cam Screws	18-0073	100
Cyl. Chamber Slides	18-0072	25

### CUTTER WHEELS

18-0066 - for FRAMON PS-600T - 90°/.032"

18-0067 - for HPC 1200CM - 90°/.032"

### CODE CARD

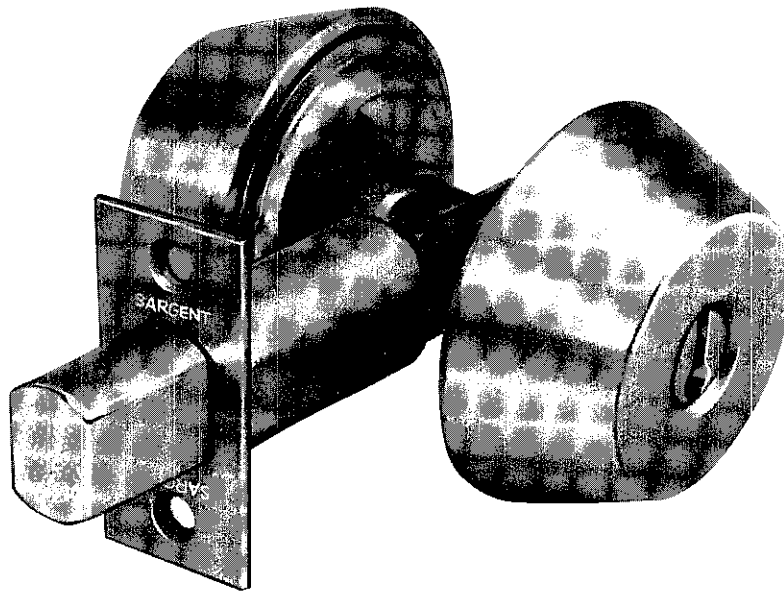
18-0068 - V-10 Code Card for HPC1200CM



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## **6** Deadlock Section

# HEAVY DUTY HIGH SECURITY DEADLOCKS



**SARGENT 20-480 Series Deadlock**

**2 $\frac{3}{8}$ " Backset**

**1" x 2 $\frac{1}{4}$ " Face**

**SARGENT 480 Series Deadlock**

**2 $\frac{3}{4}$ " Backset**

**1 $\frac{1}{8}$ " x 2 $\frac{1}{4}$ " Face**

**SARGENT 20-580 Series Deadlock**

**2 $\frac{3}{8}$ " Backset**

**1 $\frac{1}{8}$ " x 2 $\frac{1}{4}$ " Face**

**SARGENT 580 Series Deadlock**

**2 $\frac{3}{4}$ " Backset**

**1 $\frac{1}{8}$ " x 2 $\frac{1}{4}$ " Face**

**SARGENT 20-29-580 Series Deadlock**

**2 $\frac{3}{8}$ " Backset**

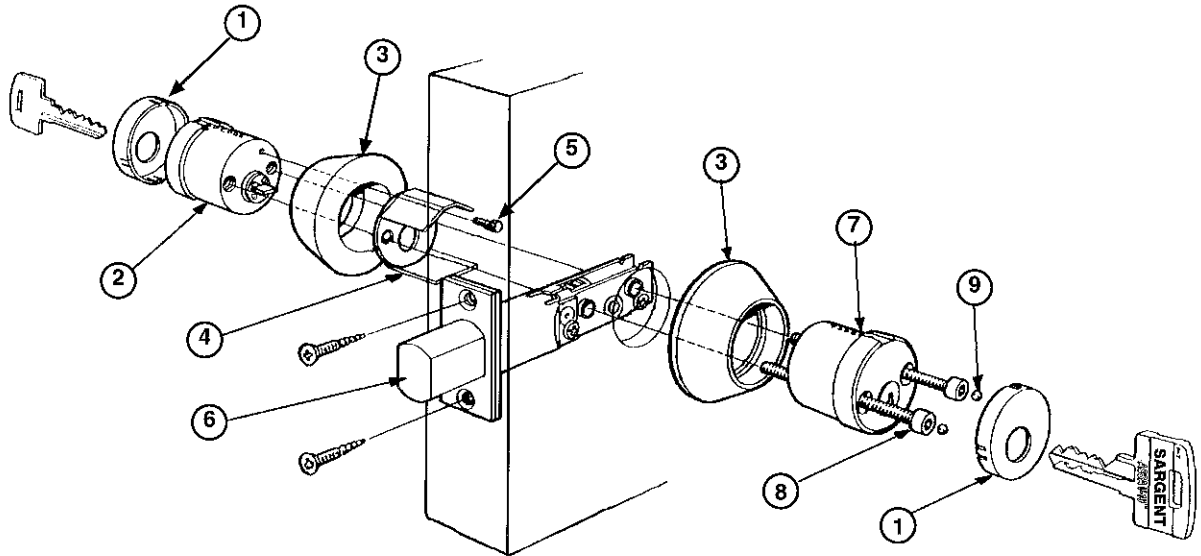
**1 $\frac{1}{8}$ " Diameter Drive Bolt**

**SARGENT 29-580 Series Deadlock**

**2 $\frac{3}{4}$ " Backset**

**1 $\frac{1}{8}$ " Diameter Drive Bolt**

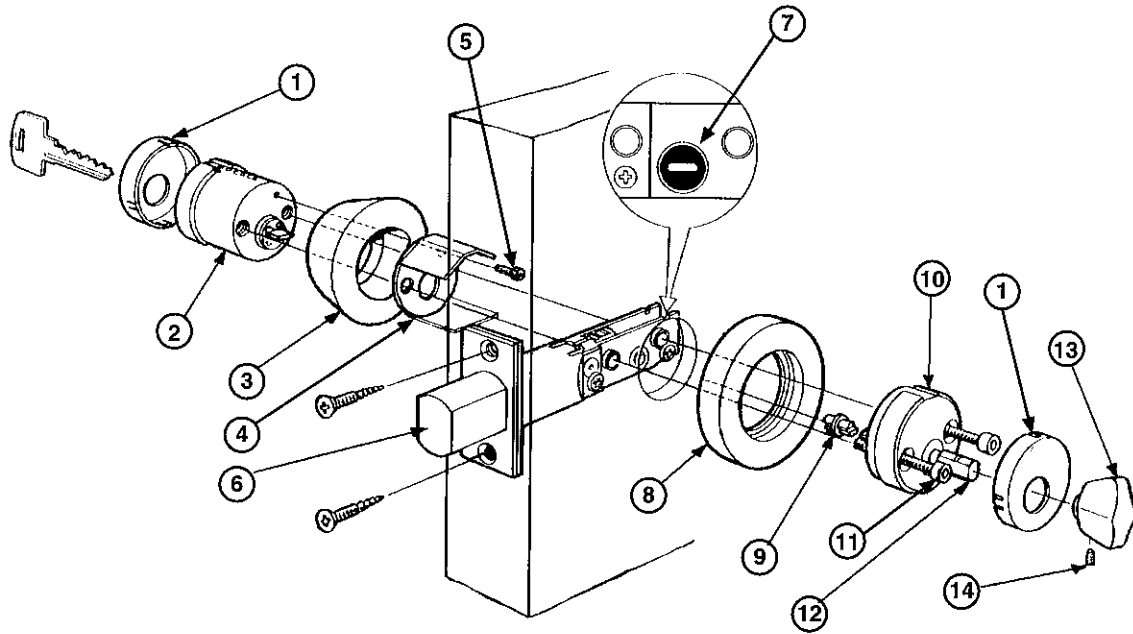
# SARGENT 584 Double Cylinder Deadlock



ITEM	PART #	DESCRIPTION	QUANTITY
1	806266	Cylinder/Thumbturn Cap	2
2	VA or VS580 OS	Outside Cylinder Sub-Assembly	1
3	806267	Cylinder Collar	2
4	907008	Bolt Guard Plate	1
5	907014	Bolt Guard Plate Screw	1
6	CHOOSE ONE (1) OF THE FOLLOWING		
6A	907001	Rectangular Face Deadbolt, 2 <sup>3</sup> / <sub>4</sub> " Backset	1
6B	907002	1 <sup>1</sup> / <sub>8</sub> " Dia Drive Deadbolt, 2 <sup>3</sup> / <sub>4</sub> " Backset	
6C	907003	Rectangular Face Deadbolt, 2 <sup>3</sup> / <sub>8</sub> " Backset	
6D	907004	1 <sup>1</sup> / <sub>8</sub> " Dia Drive Deadbolt, 2 <sup>3</sup> / <sub>8</sub> " Backset	
7	VA or VS580 IS	Inside Cylinder Sub-Assembly	1
8	907011	Mounting Bolts	2
9	907015	Security Balls	2

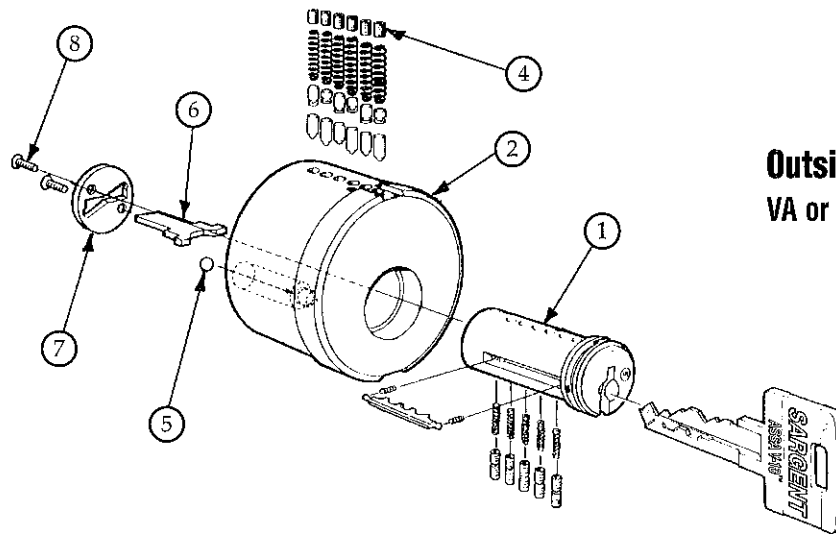
The deadbolt faceplate screws are packed with the strike screw pack.

# SARGENT 585 Single Cylinder Deadlock

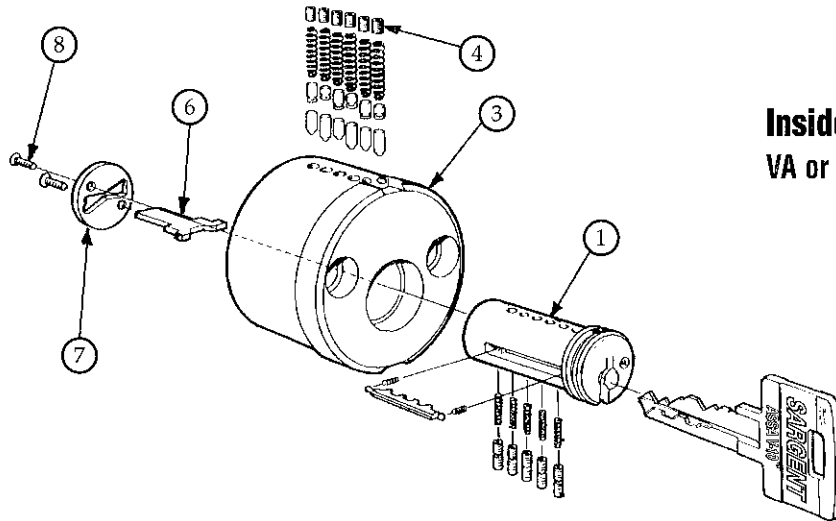


ITEM	PART #	DESCRIPTION	QUANTITY
1	806266	Cylinder/Thumbturn Cap	2
2	VA or VS580 OS	Outside Cylinder Sub-Assembly	1
3	806267	Outside Cylinder Collar	1
4	907008	Bolt Guard Plate	1
5	907014	Bolt Guard Plate Screw	1
6	CHOOSE ONE (1) OF THE FOLLOWING		1
6A	907001	Rectangular Face Deadbolt, 2 <sup>3</sup> / <sub>4</sub> " Backset	
6B	907002	1 <sup>1</sup> / <sub>8</sub> " Dia Drive Deadbolt, 2 <sup>3</sup> / <sub>4</sub> " Backset	
6C	907003	Rectangular Face Deadbolt, 2 <sup>3</sup> / <sub>8</sub> " Backset	
6D	907004	1 <sup>1</sup> / <sub>8</sub> " Dia Drive Deadbolt, 2 <sup>3</sup> / <sub>8</sub> " Backset	
7	806263	Nylon Actuator	1
8	806270	Thumbturn Ring	1
9	806263	Thumbturn Tailpiece Bushing	1
10	352325	Thumbturn Shaft Housing	1
11	907011	Mounting Bolts	2
12	806265	Thumbturn Shaft	1
13	352326	Thumbturn	1
14	806483	Thumbturn Set Screw	1

The deadbolt faceplate screws are packed with the strike screw pack.



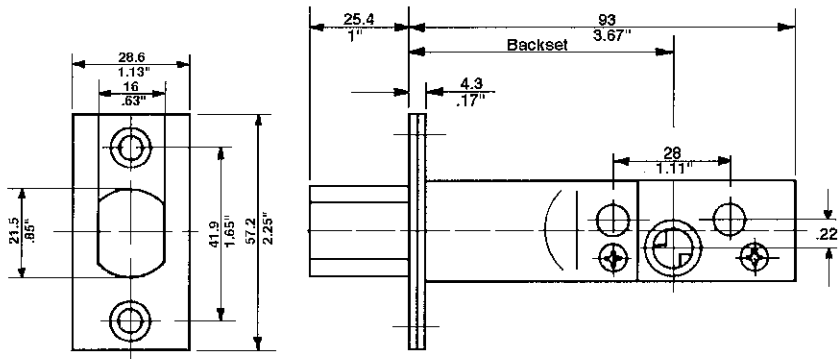
**Outside Cylinder**  
VA or VS580 OS



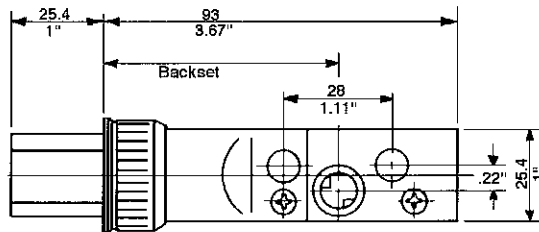
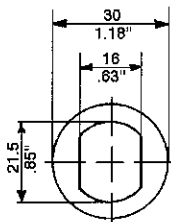
**Inside Cylinder**  
VA or VS580 IS

ITEM	PART #	DESCRIPTION	QUANTITY
1	353968	V-10 Cylinder Plug	1 per cylinder
2	352323	Outside Cylinder Housing	1
3	352324	Inside Cylinder Housing	1
4	806346	Pin Chamber Closing Screw	6 per cylinder
5	907015	Security Balls for Double Cylinder Deadlocks	2
6	806262	Tailpiece	1 per cylinder
	867109	Tailpiece for Special Door Thickness	as required
7	867046	Tailpiece Washer	1 per cylinder
8	867090	Tailpiece Screw	2 per cylinder
	907010	1/4-20 Socket Head Mounting Bolt for Single Cylinder	2
	907011	1/4-20 Socket Head Mounting Bolt for Double Cylinder	2
	907012	1/4-20 Socket Head Mounting Bolt 3" Long	as required
	907013	1/4-20 Socket Head Mounting Bolt 3 1/2" Long	as required

# Bolt Variations for 580 Series Deadlock



Faceplate Bolt	Backset
VA907001	2 3/4"
VA907003	2 3/8"

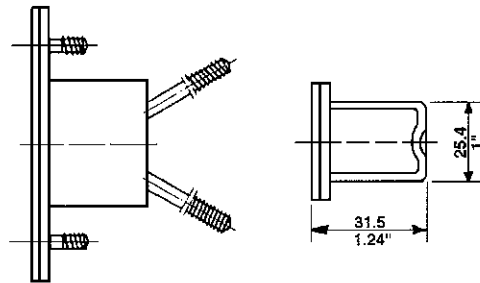


Faceplate Bolt	Backset
VA907002	2 3/4"
VA907004	2 3/8"

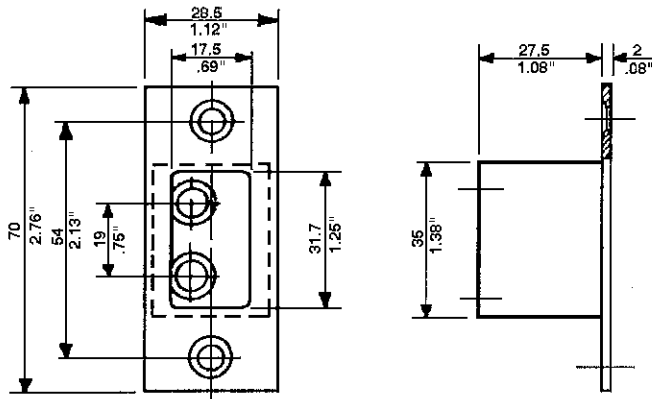
1 1/8" BORE REQUIRED

# Strike Plate, Reinforced Strike Box and Screws for 580 Series Deadlock

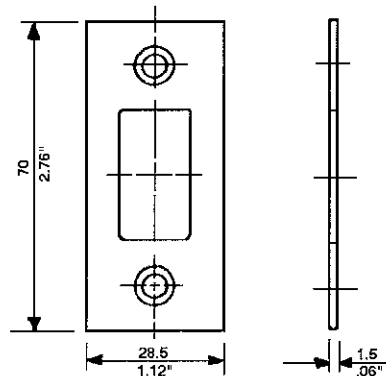
1. Provide required finish when ordering strike plate.
2. Strike box includes the complete screw pack.



STRIKE BOX AND SCREWS VA907007



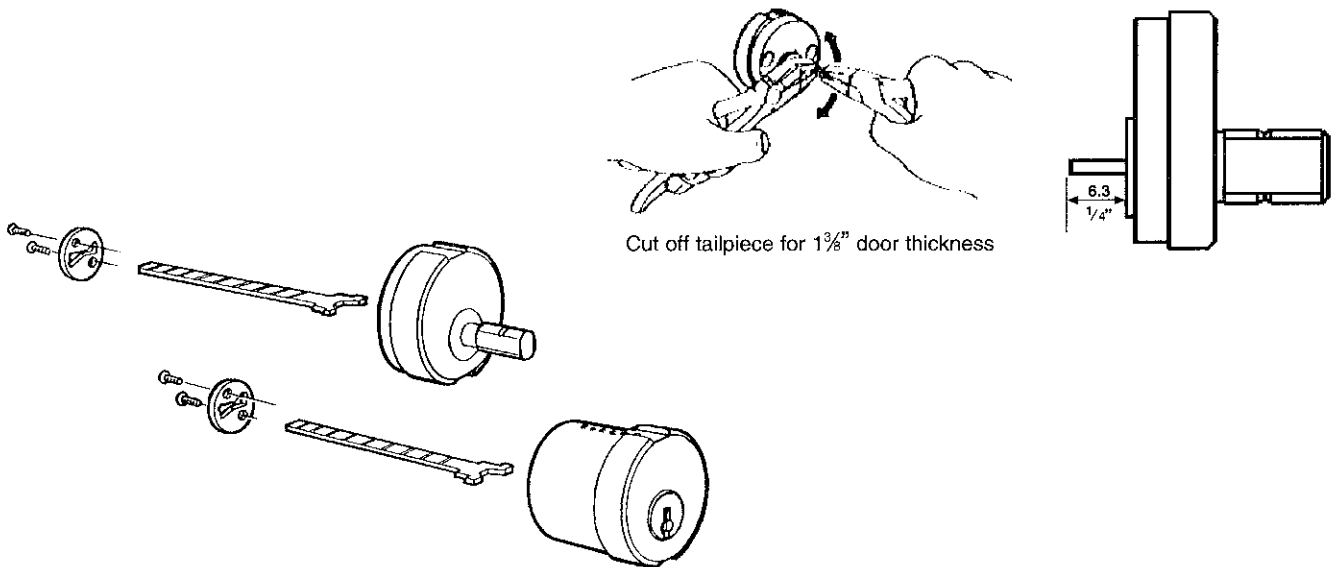
STRIKE PLATE VA907005 X FINISH



# Accessories for 580 Series Deadlock

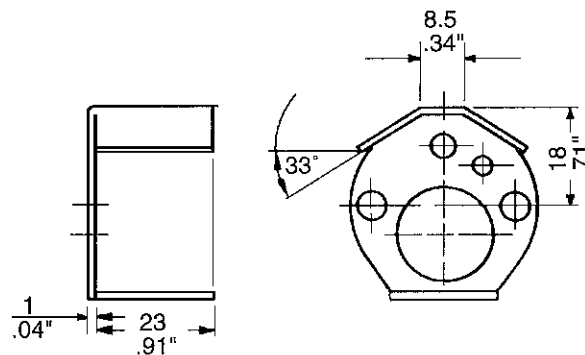
**Socket Head 1/4 - 20 Mounting Bolt Selection Chart**

Application	Door Thickness	Screw Length
Double Cylinder	1 3/8" to 1 3/4"	2 3/4"
Single Cylinder	1 3/8" to 1 3/4"	2 1/4"
Double Cylinder	2" to 2 1/2"	3 1/4"
Single Cylinder	2" to 2 1/2"	3"



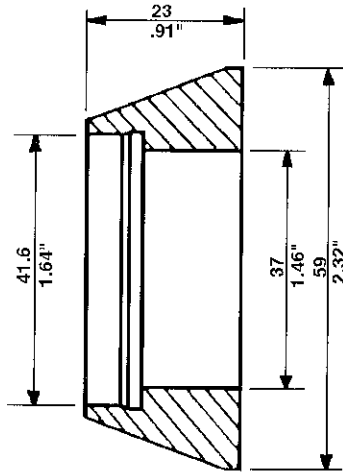
- Deadbolt utilizes standard rim style tailpiece
- Break off tailpiece for 2", 2 1/4", 2 1/2" door thickness

## VA907008 Bolt Guard Plate

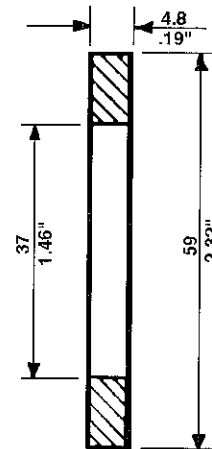


# Accessories for 580 Series Deadlock

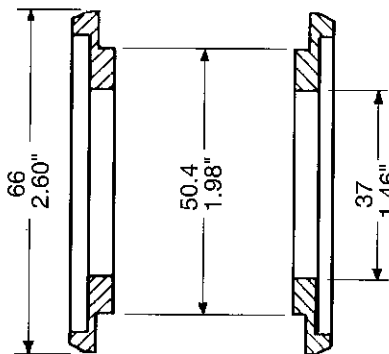
**VA806267 Cylinder Ring**



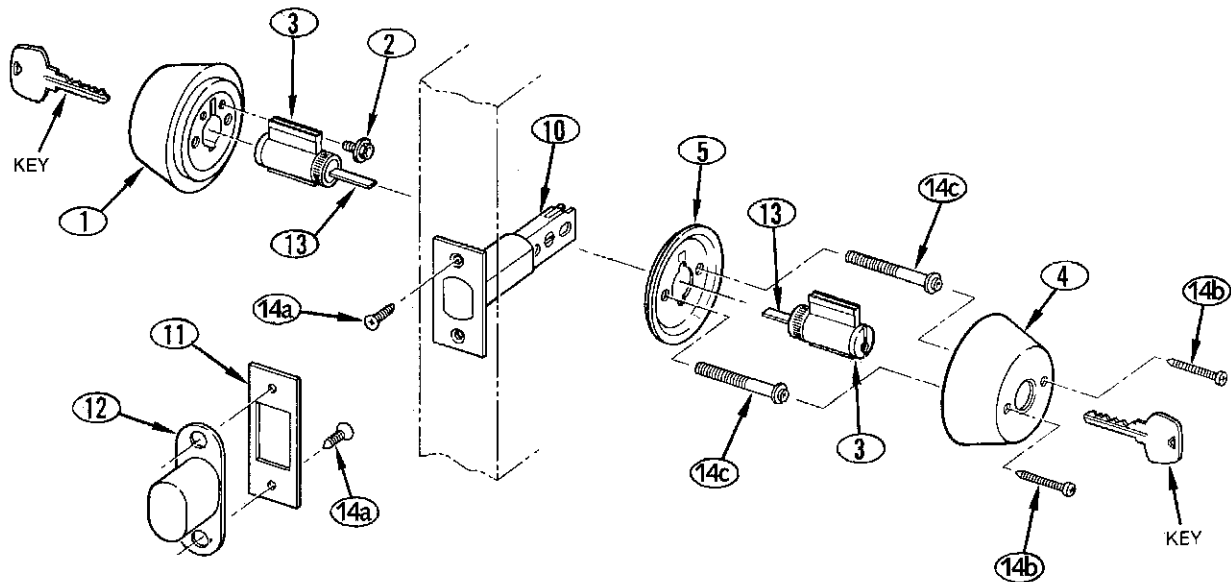
**VA806268 1 1/8" Door Spacer Ring**



**VA806269 2 1/8" Hole Adapter Rings**



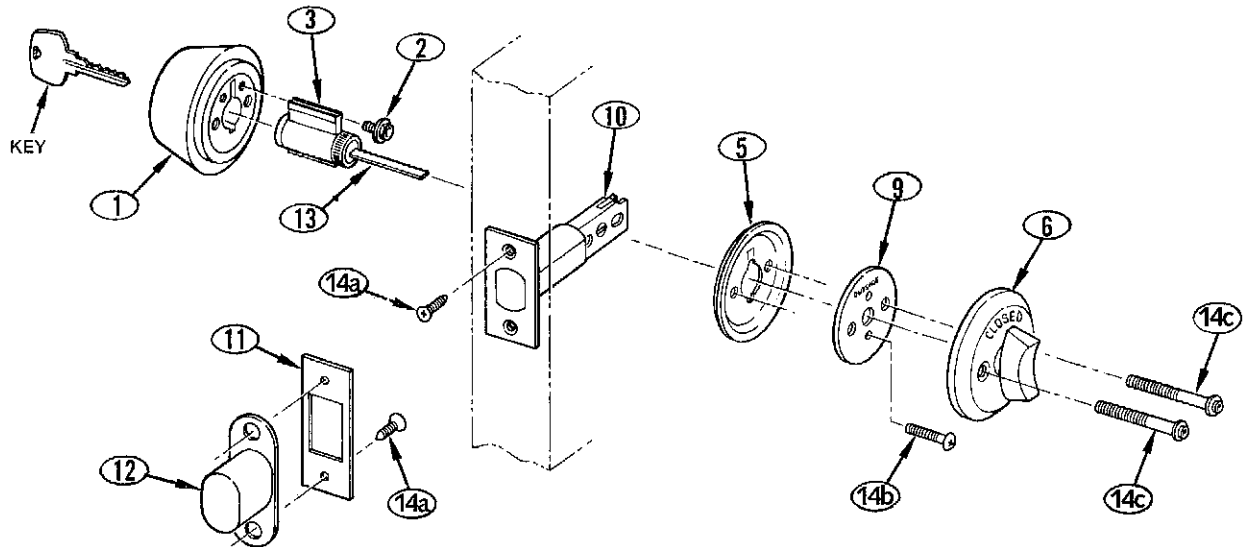
# SARGENT 484 Double Cylinder Deadlock



ITEM #	PART #	DESCRIPTION	QUANTITY
1	16-2175	Outside Cylinder Housing	1
2	01-1162	Cylinder Clamp Screw & Washer	1
3	VA-C480	V-10 Cylinder	2
4	16-2177	Inside Cylinder Housing	1
5	16-0301	Mounting Plate	1
10	16-2149	Deadbolt Assembly, 2 3/4" B.S.	1
11	404	Strike	1
12	16-0277	Strike Box	1
13	13-0878	Tailpiece	2
14a,b,c	16-2202	Screw Pack Containing: 1/2 x 3/4" Qty 4 (14a in Diagram) 1/2 x 1 1/8" Qty 2 (14b in Diagram) 1/4-20 2" Qty 2 (14c in Diagram)	1

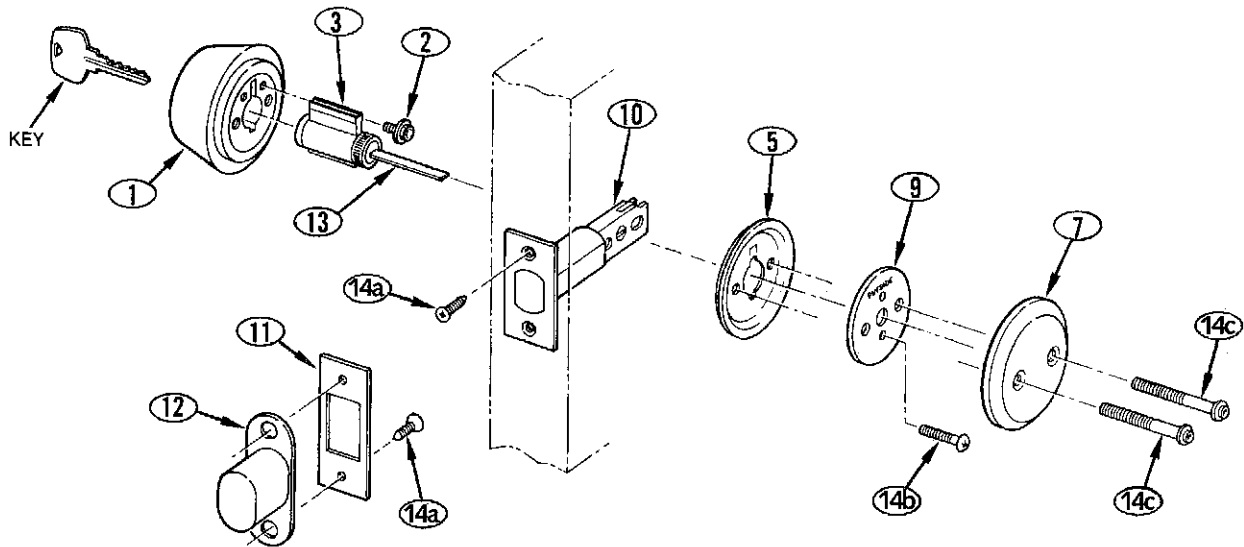


# SARGENT 485 Single Cylinder Deadlock and 487 Classroom Deadlock



ITEM #	PART #	DESCRIPTION	QUANTITY
1	16-2175	Outside Cylinder Housing	1
2	01-1162	Cylinder Clamp Screw & Washer	1
3	VA-C480	V-10 Cylinder	1
5	16-0301	Mounting Plate	1
6	16-2039	Inside Turnpiece	1
9	16-0302	Support Plate	1
10	16-2149	Deadbolt Assembly, 2 3/4" B.S.	1
11	404	Strike	1
12	16-0277	Strike Box	1
13	13-0880	Tailpiece	1
14a,b,c	16-2202	Screw Pack Containing: 3/32 x 3/4" Qty 4 (14a in Diagram) 3/32 x 7/8" Qty 2 (14b in Diagram) 1/4-20 2" Qty 2 (14c in Diagram)	1

# SARGENT 486 Single Cylinder Deadlock

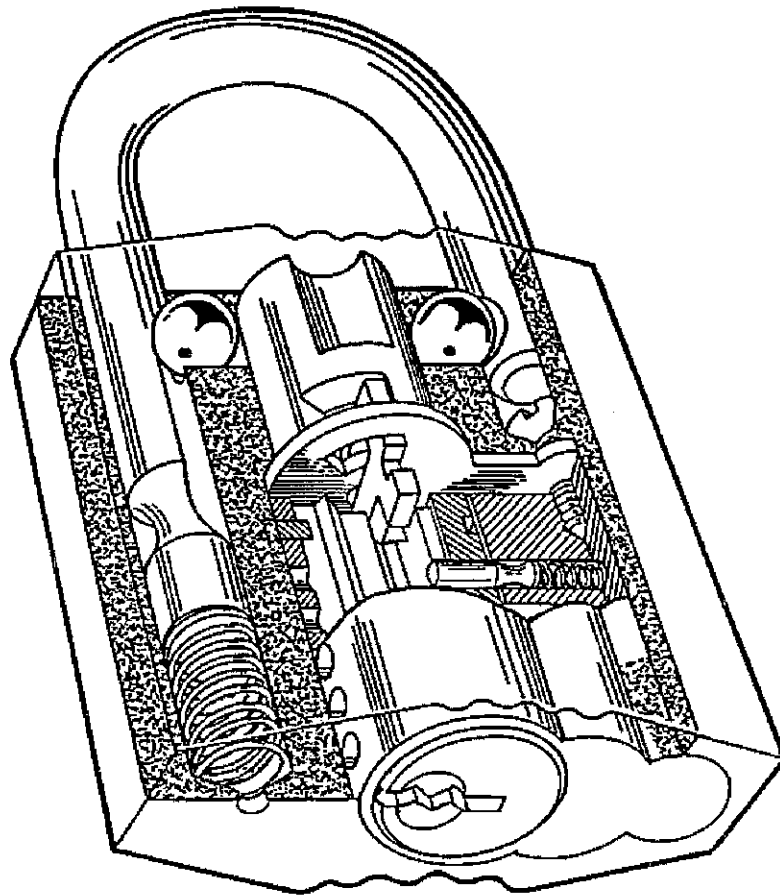


ITEM #	PART #	DESCRIPTION	QUANTITY
1	16-2175	Outside Cylinder Housing	1
2	01-1162	Cylinder Clamp Screw & Washer	1
3	VA-C480	V-10 Cylinder	2
5	16-0301	Mounting Plate	1
7	16-0306	Inside Mounting Plate	1
9	16-0302	Support Plate	1
10	16-2149	Deadbolt Assembly, 2 $\frac{3}{4}$ " B.S.	1
11	404	Strike	1
12	16-0277	Strike Box	1
13	13-0881	Tailpiece	1
14a,b,c	16-2202	Screw Pack Containing: $\frac{5}{32}$ x $\frac{3}{4}$ " Qty 4 (14a in Diagram) $\frac{5}{32}$ x $\frac{7}{8}$ " Qty 2 (14b in Diagram) $\frac{1}{4}$ -20 2" Qty 2 (14c in Diagram)	1

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## **7** Padlock Section

### **HIGH SECURITY PADLOCKS**



# Classification Requirements

The data below explains the "certified padlock classes" as tested by independent laboratories sponsored by the insurance companies in Scandinavia. The insurance institute requires specific security and strength levels which the insured must comply with in order to be covered. ASSA's range of padlocks meets or exceeds these levels in each respective class.

While these requirements are not standard in the North American market, the need for security is. ASSA padlocks provide superior strength and durability, along with functional advantages such as key retaining cylinders and master keying.

<b>SHACKLE LOCKING STRENGTH</b> Pulling strength measured in Lbf. (kn) minimum at a room temperature of approximately +60° F (+20° C)	<b>CLASS 2</b> Lbf 3375 (15)
<b>IMPACT RESISTANCE, (MINIMUM 5 BLOWS)</b> Impact energy is measured in Lbf-ft (Nm) minimum test temperature +60° F (+20° C)	Lbf-ft 22.5 (30) +60° F
<b>TORSION STRENGTH</b> Torsion Strength is measured in Lbf-ft (Nm) Temperature of approximately +60° F (+20° C)	Lbf-ft 187.5 (250)
<b>PICK RESISTANCE</b> Extra High	X
<b>HARDENED REQUIREMENTS</b> Shackle Only Shackle and Body	X X
<b>DRILL/SAW RESISTANCE</b>	NO
<b>CORROSION RESISTANCE</b>	NO

**VA-957 or VS-957**  
1" Shackle -Non-Key Retaining

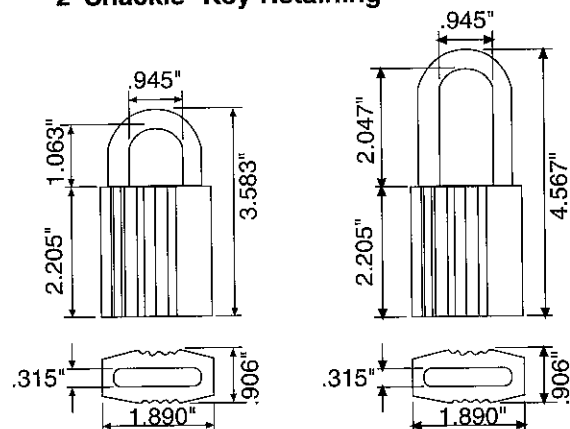
**VA-967 or VS-967**  
2" Shackle -Non-Key Retaining

**VA-957-KR or VS-957-KR**  
1" Shackle -Key Retaining

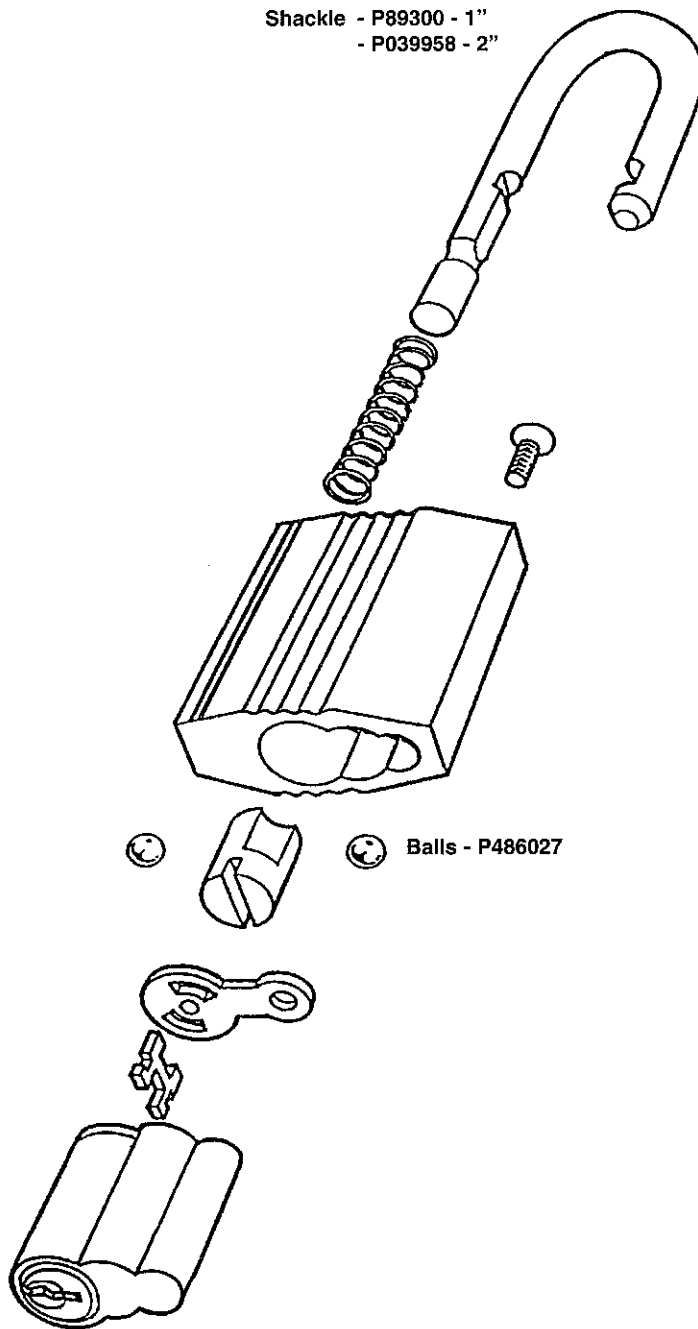
**VA-967-KR or VS-967-KR**  
2" Shackle -Key Retaining

- Padlock Body is extruded brass, black chrome plated
- Shackle is rustproofed hardened steel, 8mm diameter

Drainage holes prevent freezing.  
There are no external screws or rivets.  
The tensile strength is over 1½" tons.



# Padlock Parts Diagram



## ASSEMBLY:

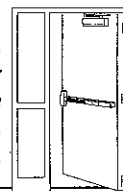
- 1) Drop spring into padlock housing. Then push in shackle, making sure that the shackle will move without undue friction.
- 2) Lubricate the two balls and insert them into the cross channels.
- 3) Push shackle all the way into the housing and at the same time slide blocking pin all the way into the housing from the cylinder side. Make sure that the deeper side of the blocking pin is positioned as shown in the exploded view to the left.
- 4) Slide follower plate into the housing as shown.
- 5) Slide cylinder, with tailpiece mounted on back, into the housing so that the tailpiece engages both the blocking plate and blocking pin.
- 6) Open the padlock with the key. Make sure that the cylinder remains in plate. Secure the cylinder with machine screw. Test for smooth operation.

Parts needed to change Key Retaining to Non-Key Retaining:

- 1) Blocking Plate Spring - P250487
- 2) Blocking Plate - P857012
- 3) Blocking Pin - P833018

**ASSA ABLOY**

*The  
ESSEX  
Total  
Openings  
People*



**CURRIES  
GRAHAM  
McKINNEY  
SARGENT**

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