

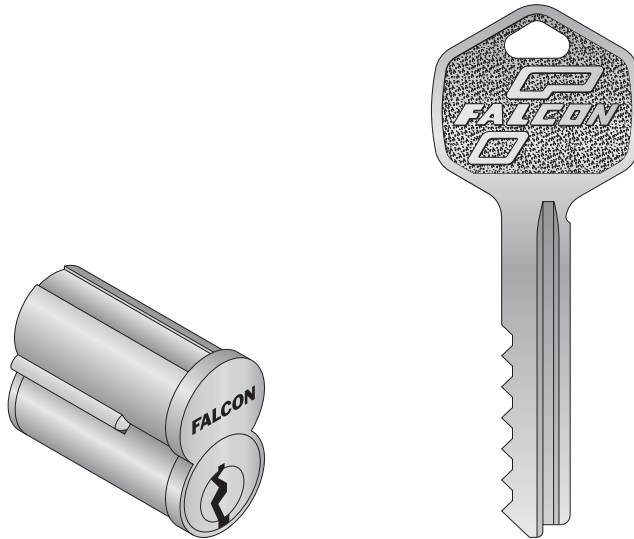


002381-000-70

Keying Falcon Interchangeable Cores

FALCON[®]

Installation Instructions



Preparation

Before keying or rekeying an interchangeable core, all pins and springs within the core must be removed. This is accomplished by removal of the brass spring cover from the top of the core. Removal of the spring cover is accomplished through the use of the ejector tool (Part No.1405) from your FALCON Service Kit. Insert the ejector tool into the small hole on the bottom of the core at the back and push up on the stack of pins to dislodge the spring cover. Grip the cover

with a pair of needle nose pliers and remove by peeling it from the dovetail enclosure carefully. Do not attempt to save the spring cover; always use a new one. After the spring cover is off, remove all the pins and springs from the core. Use your ejector tool to be certain all cells are empty. **ALL PIN CELLS MUST BE EMPTY BEFORE STARTING TO REKEY.**

Definitions

Bottom Pins: The first pins inserted in the core. They are the pins that contact the key. Never use them as wafers. They are Part Nos. 12636-0 thru -9.

Change Key: The key which will open or operate one core. (It will operate more than one only if they are "keyed alike.")

Control Key: The key which operates only the Sleeve (B), thus rotating the locking lug, allowing the insertion or removal of a core from its lock.

Control Shear Line:
The area where the Shell (A) and Sleeve (B) meet. Where all the pins must be level when the control key is inserted in order to rotate the locking lug. (See Figure 2).

Locking Lug: The portion of the Sleeve (B in Figure 1) which is

rotatable only by the control key. It is the portion of the core which retains it in the lock.

Master Key: The key which will operate a group of cylinders, each of which is operated by its own individual change key.

Operating Shear Line:
The area where the Sleeve (B) and the Plug (C) meet. Where all pins must be level when the change key or master key is inserted in order to operate the core. (See Figure #2).

Pin Cells: The holes within the Shell (Figure 1a), Sleeve (B) and the Plug (C).

Wafers: The pins which are used as master pins, control pins and driver pins. They are Part Nos. 12635-2 thru -19.



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WORK SHEET AND PINNING CHART FOR FALCON INTERCHANGEABLE CORE CYLINDERS

Before proceeding to pin up the core, FALCON Form 2381A should be completed. When completed, the form shows exactly which pins to put into the core as well as providing a permanent record of your work. Reproducible copies accompany these instructions. Feel free to copy them for your use.

Our sample work sheet will be used to pin a core to Master Key 452760, Change Key 458326 and Control Key 496520.

Very little instruction is necessary to use Form 2381A. Follow directions as given from Section A1 thru C4. For those not experienced in Master Keying, the following explanation of A3 and A4 is offered.

At A3, the bottom pin will always be the smaller of the two numbers between A1, the Master Key and A2, the Change Key. See our sample form.

At A4, the Master Pin number will be the difference between the bottom pin number and the highest number in A1 and A2, whichever is greatest.

Where no master pin is required (Columns 1 & 2 of the example form), place a dash (—) as shown. NEVER USE A 0 (zero) TO INDICATE NO MASTER PIN.

Upon completion of Section D, D5 should read 23 for each column. If it does not, go back and check each step. It must total 23 before you can use this chart to pin your core. The total 23 assures us that every stack of pins is of equal length. This is a must.

Upon completion of Section D you now have a Plug Set-Up chart from which you can pin your core. File these sheets in a 3-ring notebook for a complete job record.

		1	2	3	4	5	6	7
A	1. Write MASTER KEY biting.	4	5	2	7	6	0	
	2. Write CHANGE KEY biting.	4	5	8	3	2	6	
	3. Select Bottom Pin	4	5	2	3	2	0	
	4. Select Master Pin	-	-	6	4	4	6	
	5. Record Bottom and Master Pins at D ¹ & D ²							

B	1. Write CONTROL KEY biting.	4	9	6	5	2	0	10
	2. ADD (+) 10 to CONTROL KEY biting	10	10	10	10	10	10	10
	3. This is your CONTROL NUMBER	14	19	16	15	12	10	10
	4. Add A ³ & A ⁴ ; Write here.	4	5	8	7	6	6	
	5. SUBTRACT B ⁴ from B ³ . These are the CONTROL PINS.	10	14	8	8	6	4	
	6. Record Control Pins at D ³							

C	1. Total Allowable Pins	23	23	23	23	23	23	23
	2. Write Control Number from B ³	14	19	16	15	12	10	10
	3. Subtract C ² from C ¹ . These are the DRIVER PINS.	9	4	7	8	11	13	
	4. Record Driver Pins at D ⁴							

PINNING CHART								
D	1. BOTTOM PINS	4	5	2	3	2	0	
	2. MASTER PINS	-	-	6	4	4	6	
	3. CONTROL PINS	10	14	8	8	6	4	
	4. DRIVER (Top) PINS	9	4	7	8	11	13	
	5. Sum of D ¹ , D ² , D ³ & D ⁴ should equal 23. Verify	23	23	23	23	23	23	

JOB: _____ CYLINDER IDENTIFICATION _____ SHEET _____ OF _____ BY WHOM: _____ DATE OF WORKSHEET _____

Before loading any pins into the core, align the Shell (A) and Sleeve (B) holes by rotating the Sleeve (B) until the Locking Lug is projecting out of the core assembly. Rotate the Plug (C) so the holes DO NOT line up with those of the Shell and Sleeve. (See Figure 1). Insert the core assembly into the pinning block, making certain the Locking Lug remains projecting.

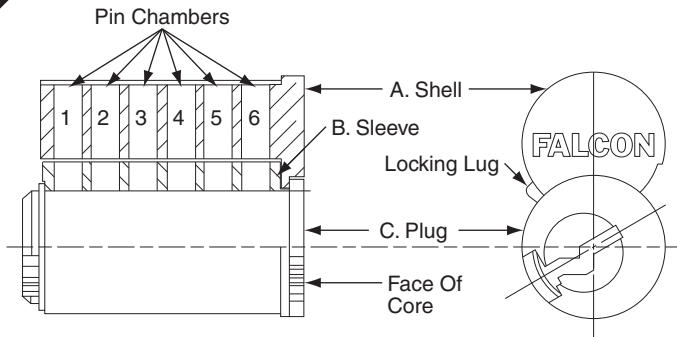


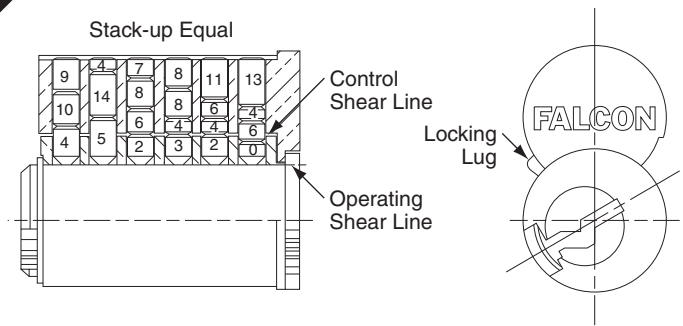
FIGURE 1

3

Now load your pins into the core through the cell holes in the top of the Shell. Always load the core from back to front. The #1 cell hole is at the back of the Plug. The #1 position on the Key is at the tip.

Using Section D (Pinning Chart) of your completed Form 2381A as your guide, pin up your core. Always load them directly from the Pin Kit into the cell hole to prevent possible mix-up by selecting them and laying them out in your pin tray. Completely load one cell hole at a time.

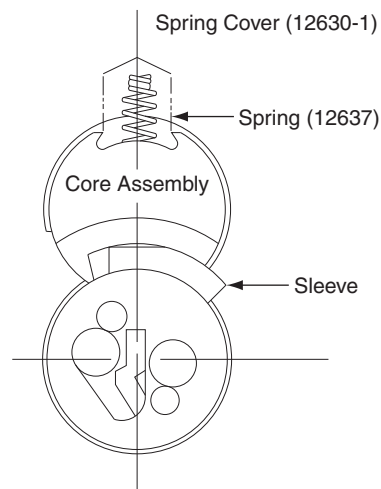
When all of the pins have been loaded into the core, check to see that they are all at the same level, as shown in Figure 2. If any stack is higher or lower than the others unload that stack only, check it and repin it. Using a wrong pin or wafer can cause the stack to be too high or low.

**FIGURE 2****4**

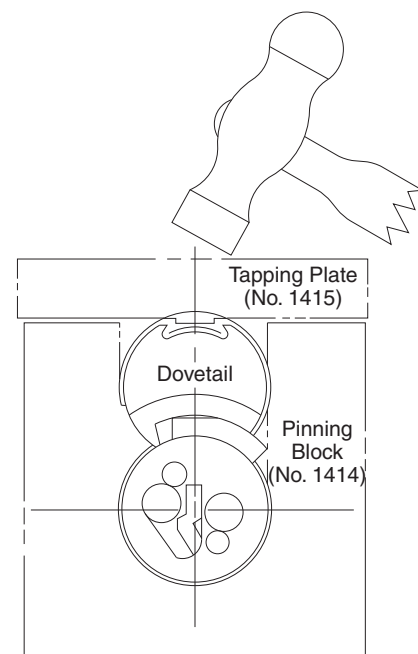
Once the core is loaded properly, turn the Plug back to its neutral position, keyway straight up and down. This will allow all pins to drop into the plug. With your Tamping Tool (Part No. 1405), be sure all pins are seated properly in the Plug. Now place a spring on top of each stack of pins. As shown in Figure 3, place a Spring Cover of the proper length over the Springs.

Place your Tapping Plate (Part No. 1415) over the Spring Cover (rib side down) and strike it firmly with a small hammer to wedge it properly into the dovetail slot. Check to see that it is firmly seated and cannot be moved. (Figure 4).

Last but not least, check all of your keys to see that they operate the core properly. One last suggestion, just prior to loading the Springs into the cells, add just a drop of DRY powdered graphite on the top of each stack of pins.

**FIGURE 3**

Rear View of Core Assembly

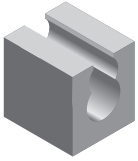
**FIGURE 4**

**WHEN REORDERING PARTS FOR YOUR KIT
USE THE FOLLOWING PART NUMBERS:**

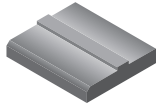
- No. 1404 Keying Kit, Complete (Wood Case)
- No. 1405 Ejector Tool
- No. 1407 Mortise Cylinder Installation Wrench
- No. 1411 Pinning Block Set
- No. 1414 Pinning Block
- No. 1415 Tapping Plate
- No. 12612 Key Gauge
- No. 12630-1 Spring Cover, 6 Pin
- No. 12630-2 Spring Cover, 7 Pin
- No. 12635 Wafer, #2 through #19
- No. 12636 Bottom Pin, #0 through #9
- No. 12637 Tumbler Springs
- No. 12646A 6 Pin Core, not pinned.
- No. 12647A 7 Pin Core, not pinned.
- No. 2381 Keying Instructions

No. 1411 PINNING BLOCK SET CONSISTS OF:

No. 1414 Block



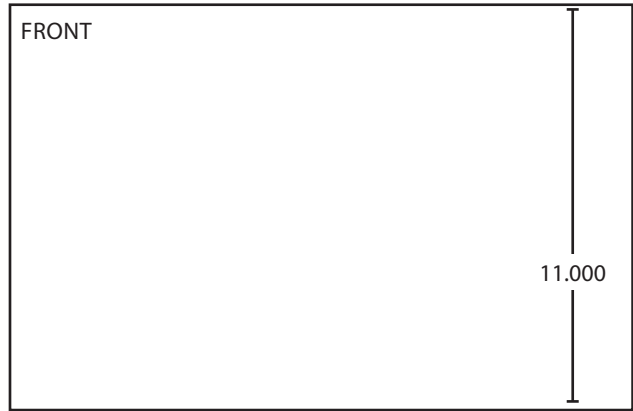
No. 1415 Plate



No. 1405
Ejector and Tamping
Tool

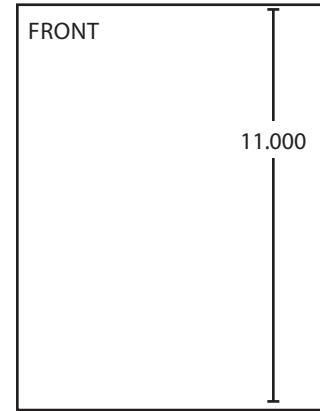


17.000



BEGINNING SHEET

8.500



FOLDED SHEET

Additional Notes:
1. None

Revision History						Revision Description: D > Revised artwork					
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