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**AO19 Clock Spring Replacement Kit, p/n 105433**

P/N 12603 Clock Spring, AO19

NOTE: This spring is used for PUSH or PULL, RIGHT or LEFT hand openers.

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**Tools required:**

- Safety glasses
- Phillips screwdriver
- Small flat blade screwdriver
- Hammer
- 1/8" Hex wrench
- Pliers

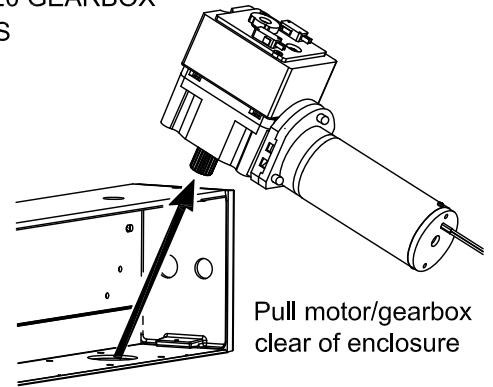
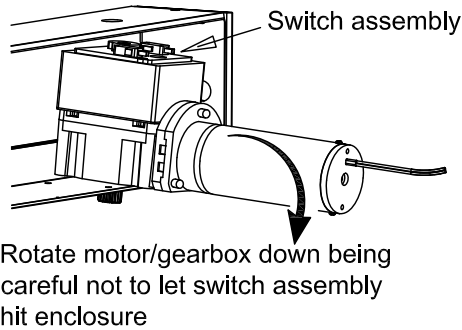
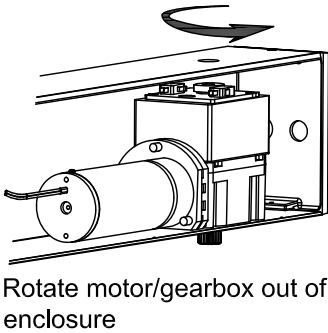
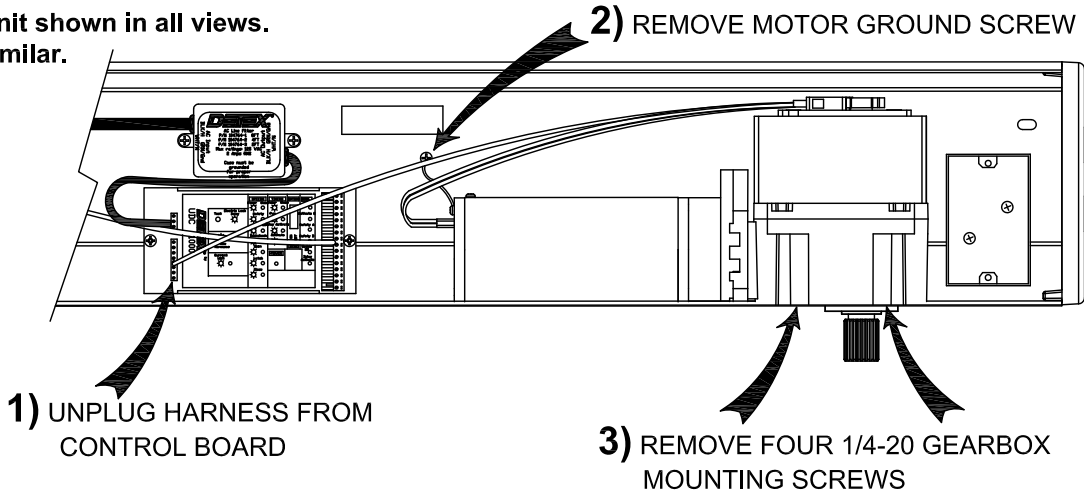
For device installation videos,  
scan code below or  
go to detex.com



**GEAR MOTOR REMOVAL:**

Remove front cover & remove push/pull arm for gear motor to be removed.  
(views for reference only, component appearance & position may vary slightly)

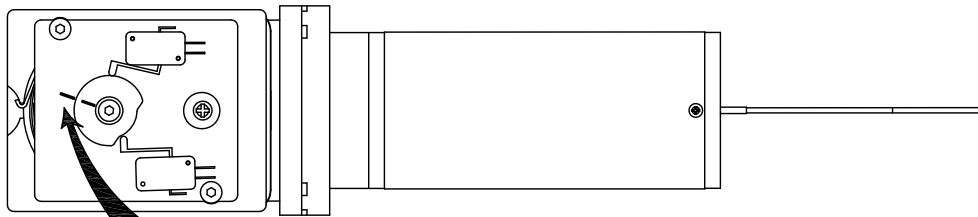
**RH unit shown in all views.  
LH similar.**



(note: for clarity, switch wires not shown in views)

**CAM REMOVAL:**

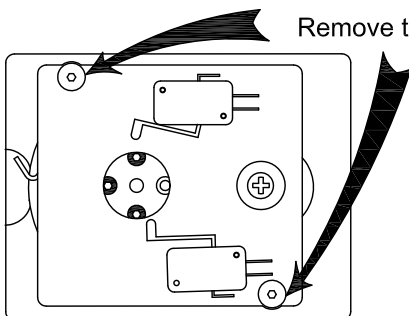
Position the unit with the motor to the right as shown below



Mark Cam position in relation to switch plate.  
If no parts are broken this will aid in the reassembly process.  
Remove the 1/8" 10-32 Allen head Cam screw.  
Remove the cam.  
NOTE: RH unit shown for reference only.

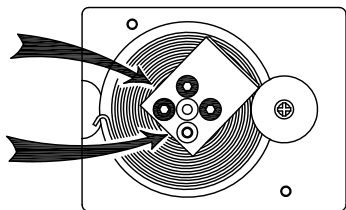
**MICROSWITCH PLATE AND HARNESS REMOVAL:**

(Cam must be removed before plate removal)



**SQUARE STOP REMOVAL:**

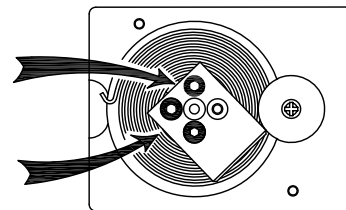
**LH unit shown**



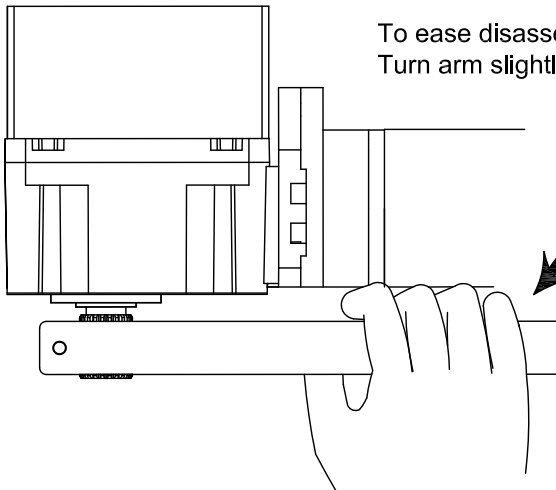
Note plate orientation and screw placement.

Remove the three 1/8" 10-32 Allen head mounting screws and remove the Square Stop Plate.

**RH unit shown**



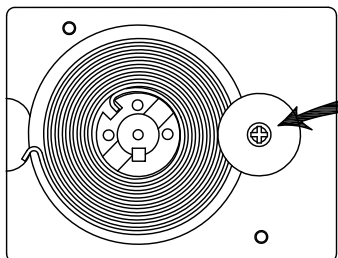
To ease disassembly & reassembly, reattach the operator arm.  
Turn arm slightly to relieve any spring pressure when removing Stop Plate.



(operator arm may differ from that shown)

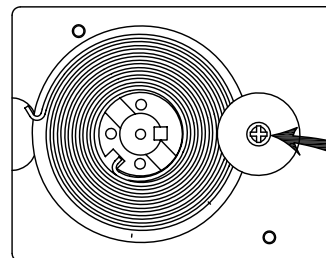
**ROUND STOP REMOVAL:**

**LH unit shown**



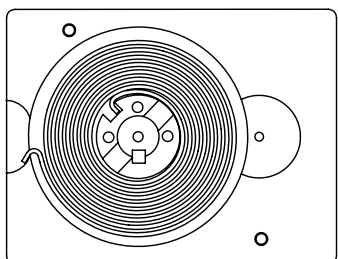
Remove the 10-32 screw and two Round Stops.

**RH unit shown**



**CLOCK SPRING REMOVAL:**

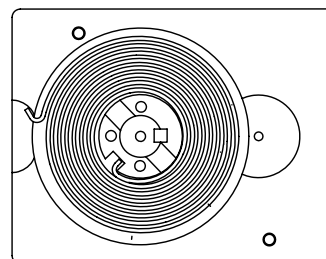
**LH unit shown**



**ROTATE ARM**

Turn the operator arm in direction shown for LH or RH to unwind the Clock Spring. Once pressure is relieved from the Spring, lift it out.

**RH unit shown**



**ROTATE ARM**

Note CLOCK SPRING orientation BEFORE removing

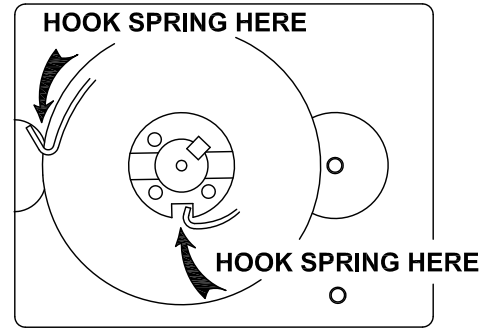
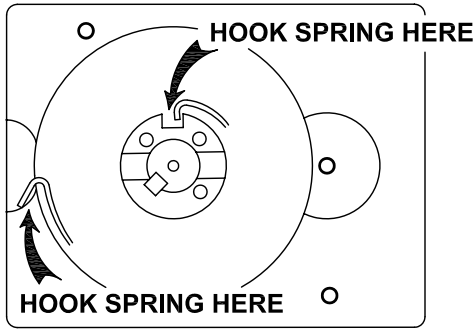
**CAUTION:** If the spring is broken it will need to be pried out. The spring does not expand more than approximately 3/8".

**REASSEMBLY:**

**FOR LH UNITS**

**FOR RH UNITS**

TO EASE CLOCK SPRING INSTALLATION, ROTATE THE OPERATOR ARM UNTIL THE ARBOR SLOT IS IN THE APPROXIMATE POSITION SHOWN BELOW

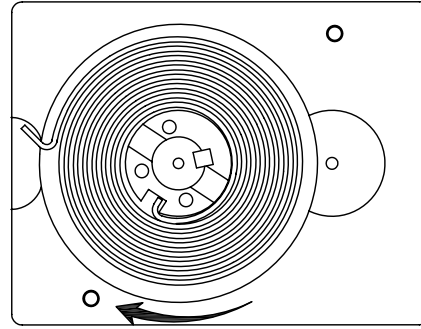
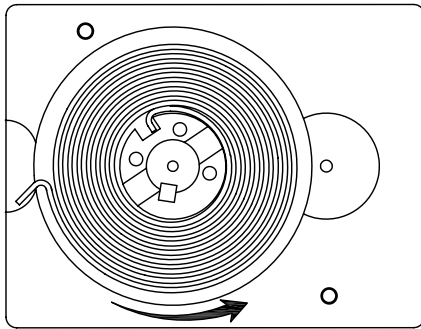


INSERT SPRING, MAKING SURE TO ENGAGE THE SPRING ENDS AS SHOWN.

ROTATE THE OPERATOR ARM 1/2 TURN IN DIRECTION SHOWN BELOW TO PRELOAD THE SPRING, THEN ALLOW THE SPRING TO RETURN TO THE RELAXED POSITION.

**FOR LH UNITS**

**FOR RH UNITS**



**ROTATE ARM**

**ROTATE ARM**

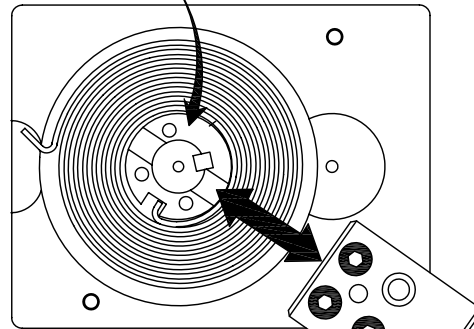
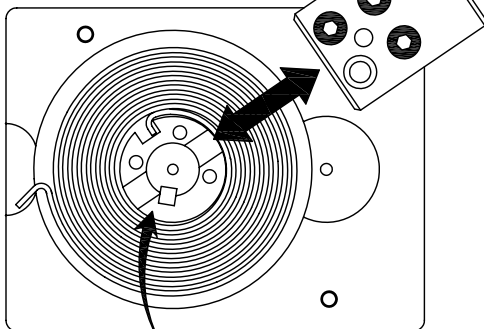
INSTALL STOP PLATE: NOTE POSITIONS FOR LEFT OR RIGHT HAND ASSEMBLIES.

**FOR LH PUSH OR PULL UNITS**

**FOR RH PUSH OR PULL UNITS**

ATTACH STOP PLATE  
ORIENTED AS SHOWN  
USING THREE SCREWS

POSITION OF SPRING ARBOR IN  
RELAXED POSITION FOR RH UNITS



POSITION OF SPRING ARBOR IN  
RELAXED POSITION FOR LH UNITS

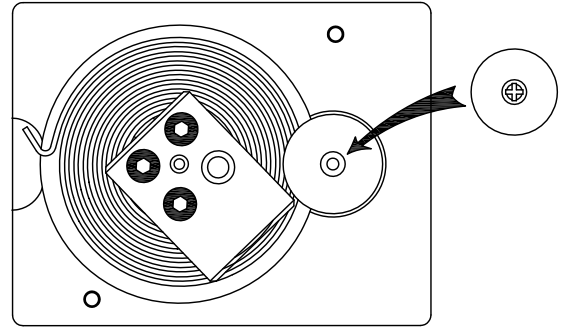
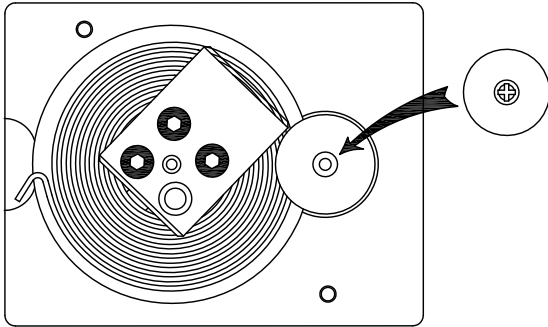
ATTACH STOP PLATE  
ORIENTED AS SHOWN  
USING THREE SCREWS

**REASSEMBLY:**

FOR **LH** PUSH OR PULL UNITS

FOR **RH** PUSH OR PULL UNITS

INSTALL THE TWO ROUND STOPS BY ROTATING THE OPERATOR ARM SO THAT THE ROUND STOPS CLEAR THE STOP PLATE, THEN TIGHTEN THE 10-32 SCREW.

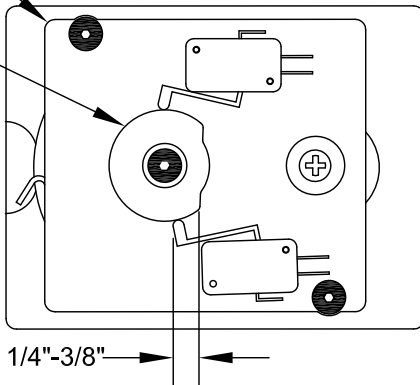


ATTACH MICROSWITCH PLATE & HARNESS THEN ATTACH CAM. NOTE ORIENTATION OF CAM.

SWITCHPLATE

FOR **LH** UNITS

CAM

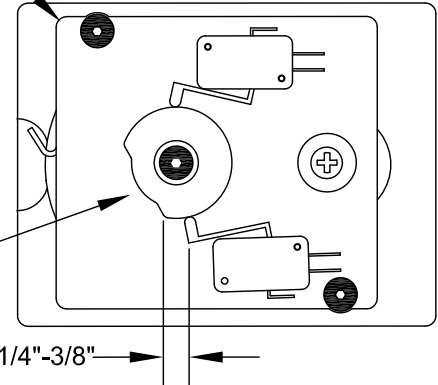


CAM ORIENTATION  
IN FULL CLOSED  
POSITION  
104709-1 LH PUSH  
104709-2 LH PULL

SWITCHPLATE

FOR **RH** UNITS

CAM



CAM ORIENTATION  
IN FULL CLOSED  
POSITION  
104709-3 RH PUSH  
104709-4 RH PULL

REINSTALL GEAR MOTOR ASSEMBLY BY REVERSING ORIGINAL REMOVAL STEPS ON PAGE 2.