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)

1) UNPLUG HARNESS FROM CONTROL BOARD

2) REMOVE MOTOR GROUND SCREW

3) REMOVE FOUR 1/4-20 GEARBOX MOUNTING SCREWS

Rotate motor/gearbox out of enclosure

Switch assembly

Rotate motor/gearbox down being careful not to let switch assembly hit enclosure

Pull motor/gearbox clear of enclosure

(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)

Remove the two 1/8" 10-32 Allen head mounting screws and lift off the Microswitch plate.
SQUARE STOP REMOVAL:

Note plate orientation and screw placement.

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

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

(round operator arm may differ from that shown)

ROUND STOP REMOVAL:

LH unit shown

RH unit shown

Remove the 10-32 screw and two Round Stops.

CLOCK SPRING REMOVAL:

LH unit shown

RH unit shown

Rotate Arm

Note CLOCK SPRING orientation BEFORE removing

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.

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

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REASSEMBLY:

FOR LH 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.

FOR RH UNITS

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.

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

FOR LH PUSH OR PULL UNITS
ATTACH STOP PLATE ORIENTED AS SHOWN USING THREE SCREWS

FOR RH PUSH OR PULL UNITS
POSITION OF SPRING ARBOR IN RELAXED POSITION FOR RH UNITS
ATTACH STOP PLATE ORIENTED AS SHOWN USING THREE SCREWS
REASSEMBLY:

FOR LH 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.

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

FOR RH UNITS
SWITCHPLATE
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.