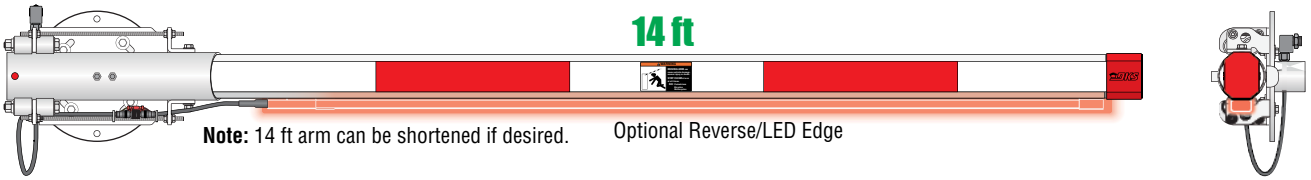
BREAK-AWAY OCTAGON ARM KIT for a 1601 / 1602

DoorKing Part Number
8080-295

This kit is designed for the 1601 **OR** a 1602 with a 17 ft arm **ONLY** barrier gate operators**.** It **CANNOT** be used with a 1603 auto-spikes, 1620 lane barrier or 1625 wedge barrier. The kit provides a **break-away bracket assembly** for a **OCTAGON arm** with **OR** without **Reverse/LED edge**, sold separately. Arm will reverse if lowering and a obstruction is encountered. If the arm is struck and breaks away (will pivot in **ONE DIRECTION ONLY**, see below), gate operator will **automatically** shut down. The arm manually snaps back into the release rollers to function normally again. **NO reset** is necessary.

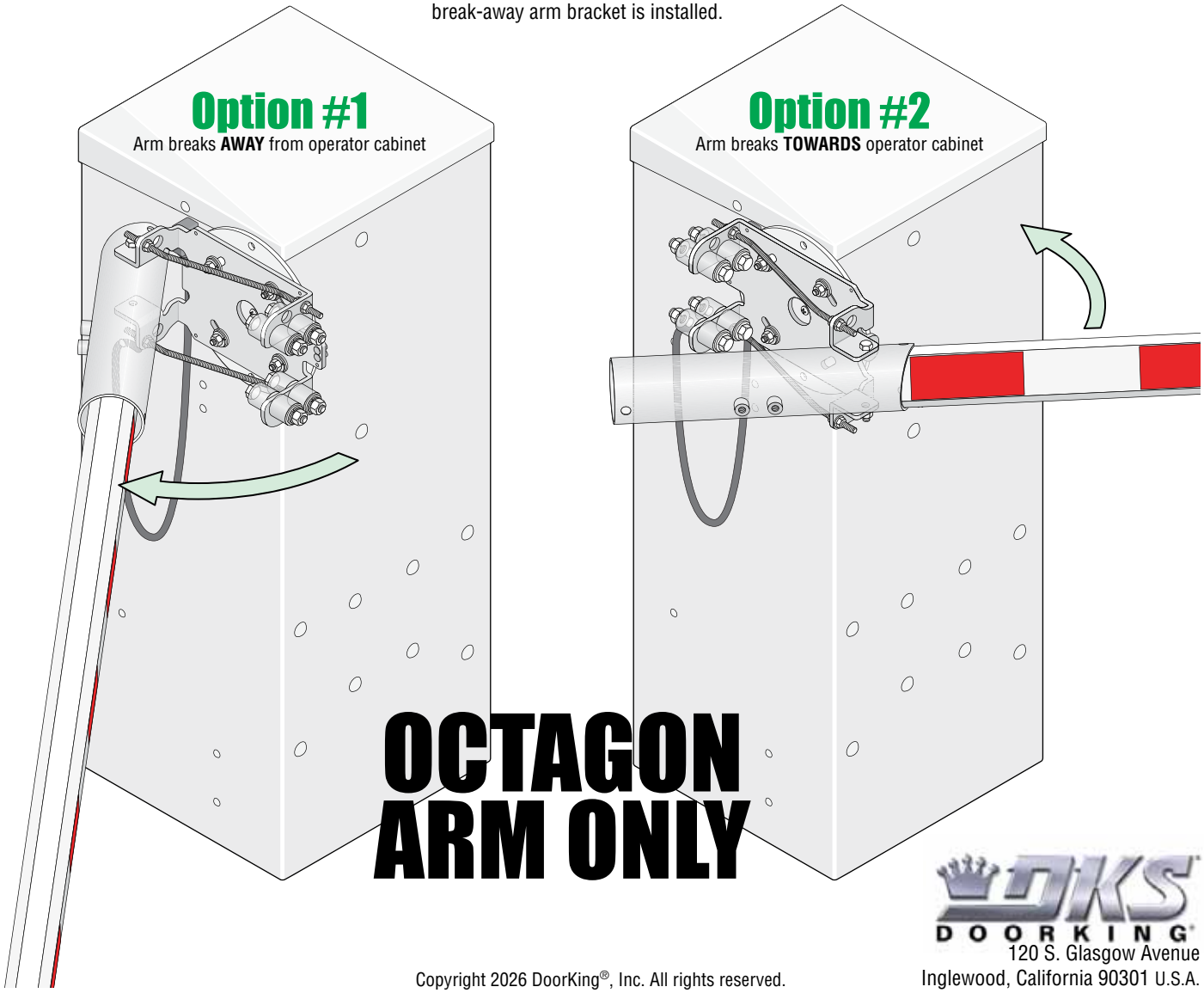




Note: 14 ft arm can be shortened if desired.

Break-Away OCTAGON Arm Bracket Direction Options

Break-Away arm bracket will only pivot in **ONE DIRECTION** depending on which way the break-away arm bracket is installed.



OCTAGON ARM ONLY

DOORKING
120 S. Glasgow Avenue
Inglewood, California 90301 U.S.A.

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Table of Contents

DoorKing Part Number
8080-295

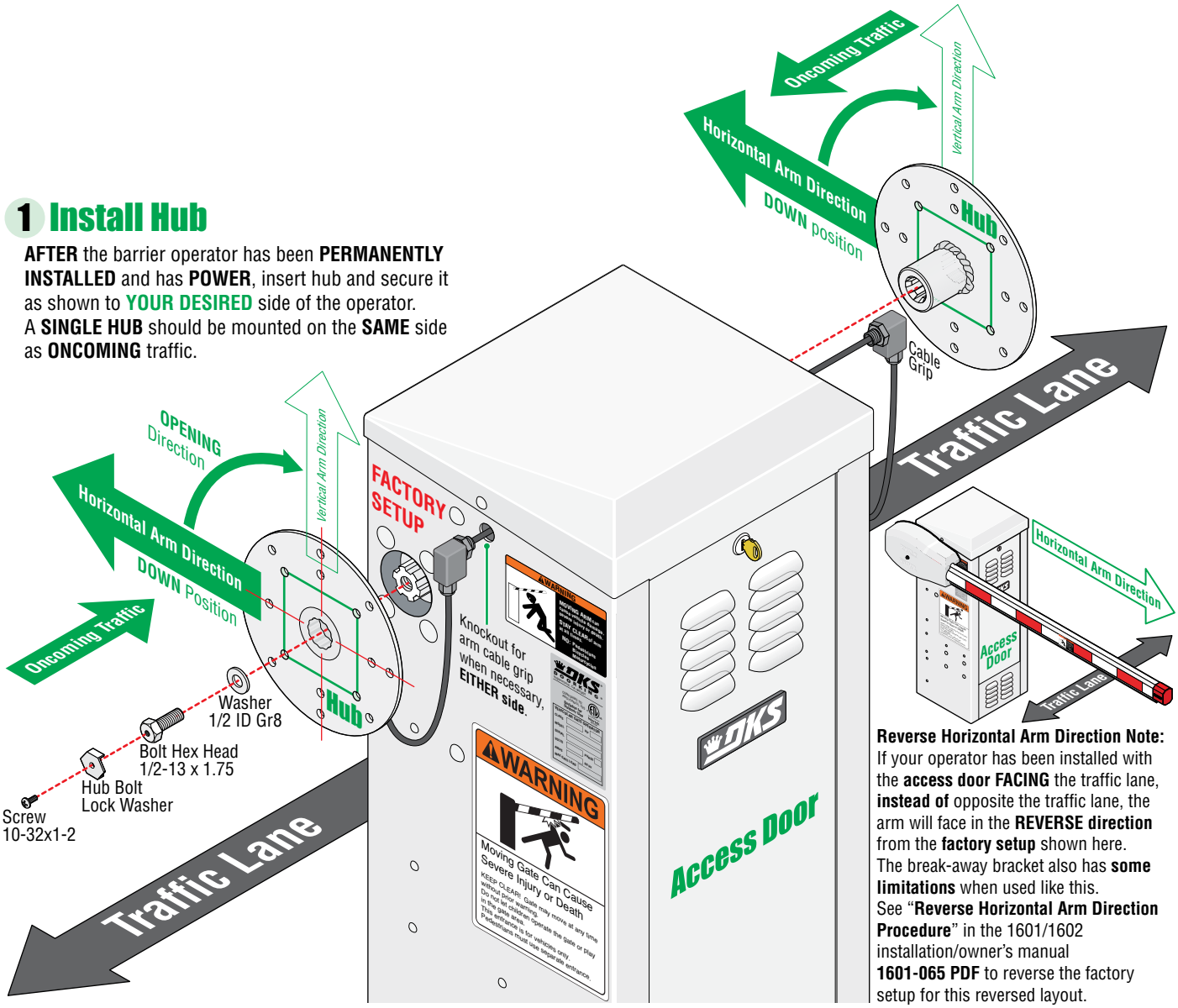
Break-Away OCTAGON Arm Bracket Installation Steps:

1 Install Hub 2
2 Install Break-Away Bracket 3
3 Install Arm (Octagon) 4
4 Install Wire Harness (8080-356) 4
5 Attach Wire Harness to Break-Away Bracket 5
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7 Connect Wire Harness to Operator . . . and Wiring OPTIONS 7
8 Connect Arm to Wire Harness 8
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- Reverse Edge or Reverse/LED Edge Installation (Optional) (Sold Separately) 10
- 14 Ft Rubber Bumper Installation (Optional) (Sold Separately) 11
- Shortening a Octagon Arm to 7 FT, 8 Ft, 11 Ft (If Using Shorter Length Reverse Edge) 12
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1 Install Hub

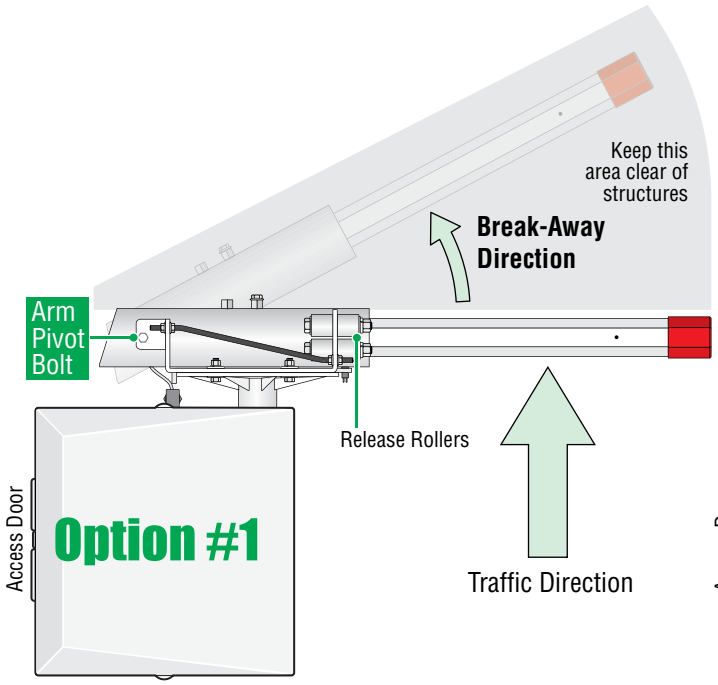
AFTER the barrier operator has been **PERMANENTLY INSTALLED** and has **POWER**, insert hub and secure it as shown to **YOUR DESIRED** side of the operator.
A **SINGLE HUB** should be mounted on the **SAME** side as **ONCOMING** traffic.

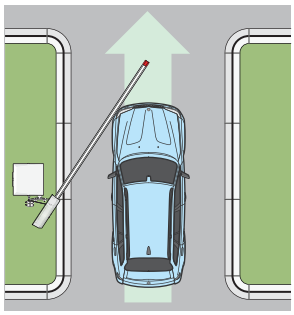


Reverse Horizontal Arm Direction Note:
If your operator has been installed with the **access door FACING** the traffic lane, **instead of** opposite the traffic lane, the arm will face in the **REVERSE direction** from the **factory setup** shown here. The break-away bracket also has **some limitations** when used like this. See "**Reverse Horizontal Arm Direction Procedure**" in the 1601/1602 installation/owner's manual **1601-065 PDF** to reverse the factory setup for this reversed layout.

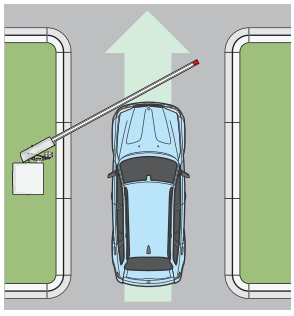
Break-Away Arm Direction Options

Arm will only pivot in **ONE DIRECTION** depending on which way the break-away arm bracket is installed. **Choose the desired break-away direction** and install break-away arm bracket accordingly (note position of **arm pivot bolt** and release rollers).

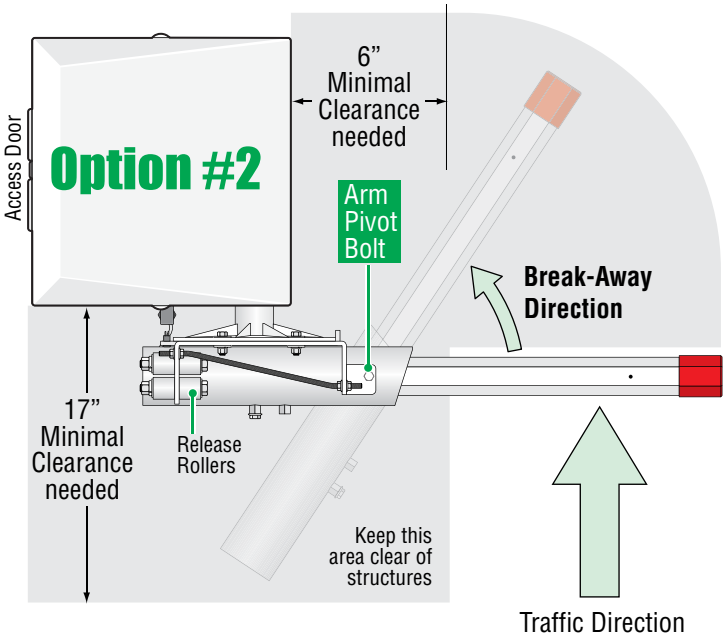




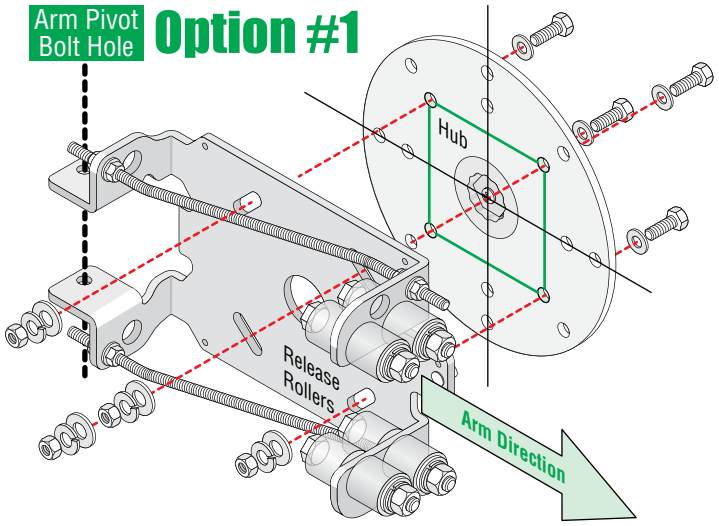
Option #2
Arm breaks **TOWARDS** operator cabinet

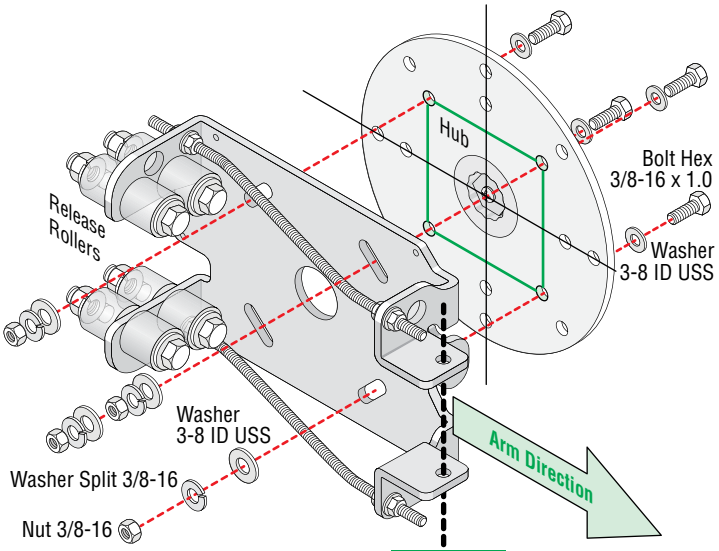


Option #1
Arm breaks **AWAY** from operator cabinet



2 Install Break-Away Bracket





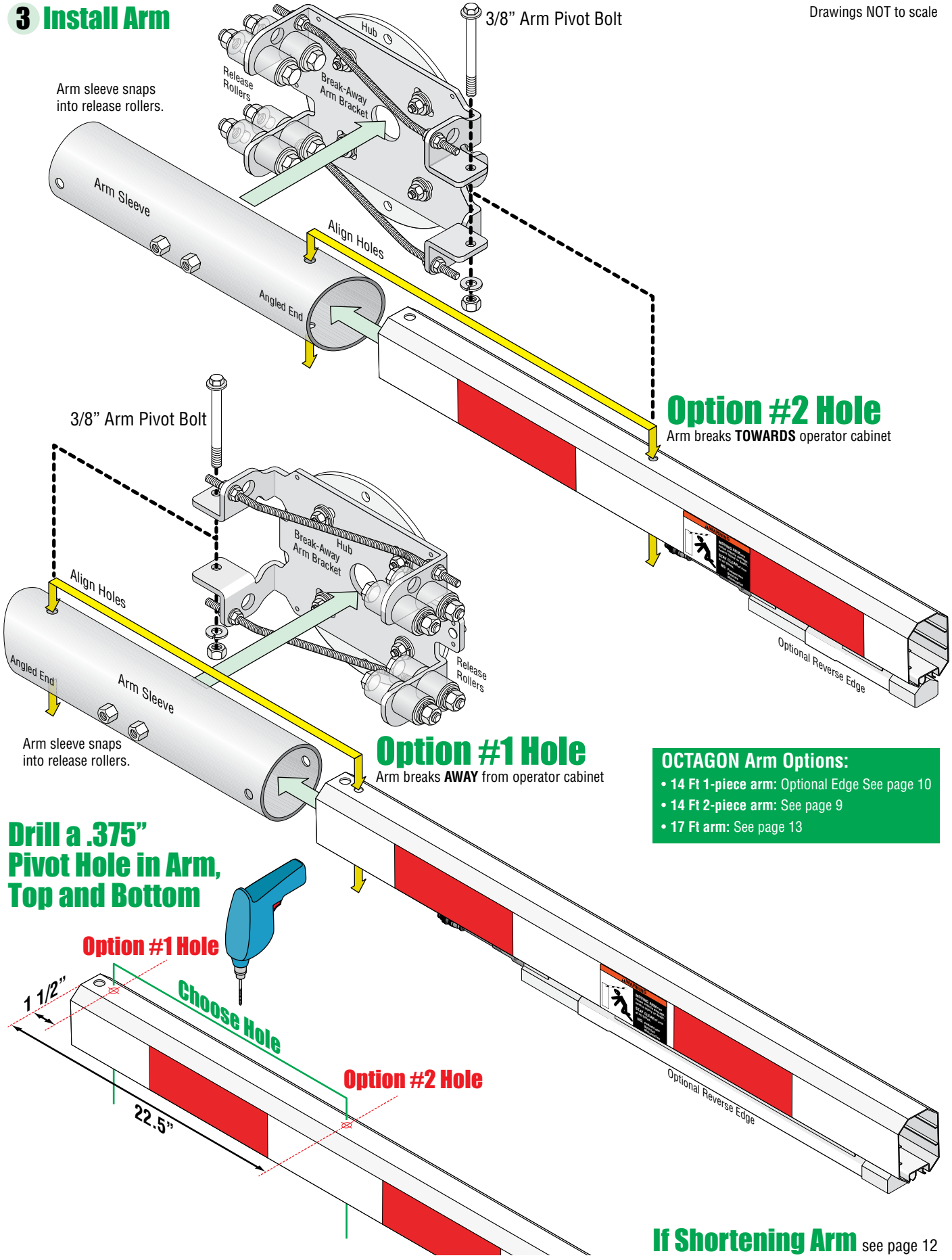
Option #2 Arm Pivot Bolt Hole

IMPORTANT Test the hub's **UP** and **DOWN** positions on the operator **BEFORE** installing arm bracket.

TURN OFF POWER BEFORE INSTALLING BRACKET

3 Install Arm

Drawings NOT to scale



OCTAGON Arm Options:

- **14 Ft 1-piece arm:** Optional Edge See page 10
- **14 Ft 2-piece arm:** See page 9
- **17 Ft arm:** See page 13

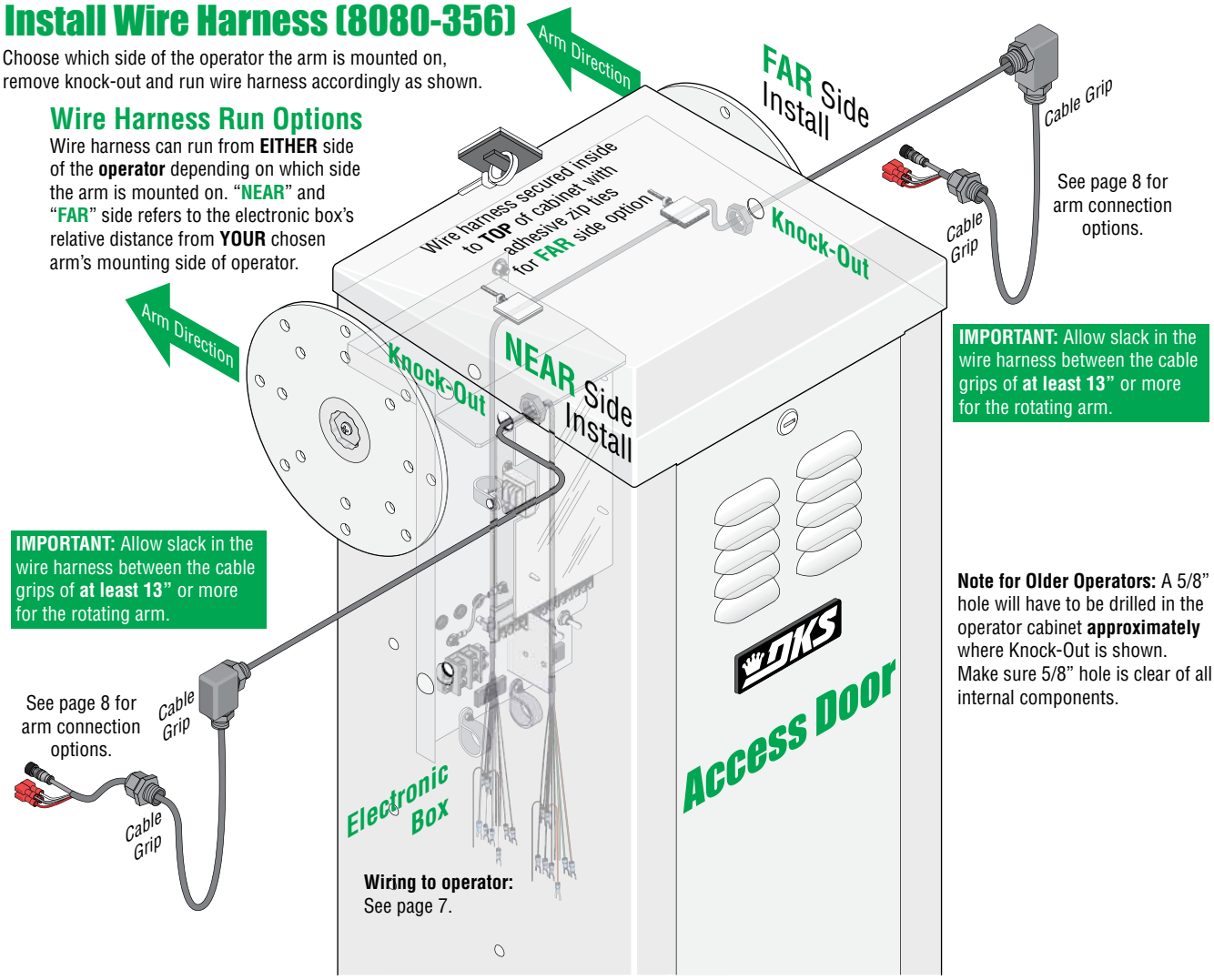
If Shortening Arm see page 12

4 Install Wire Harness (8080-356)

Choose which side of the operator the arm is mounted on, remove knock-out and run wire harness accordingly as shown.

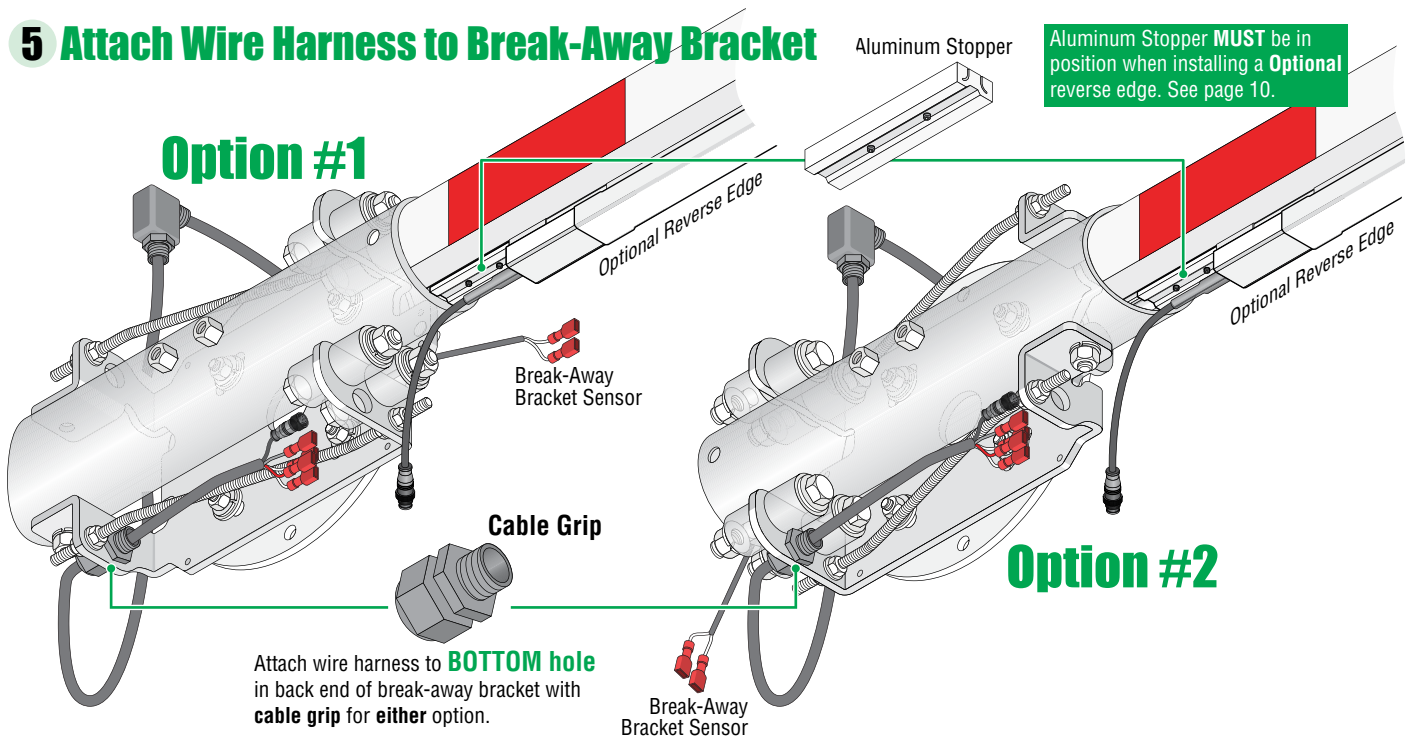
Wire Harness Run Options

Wire harness can run from **EITHER** side of the **operator** depending on which side the arm is mounted on. "**NEAR**" and "**FAR**" side refers to the electronic box's relative distance from **YOUR** chosen arm's mounting side of operator.



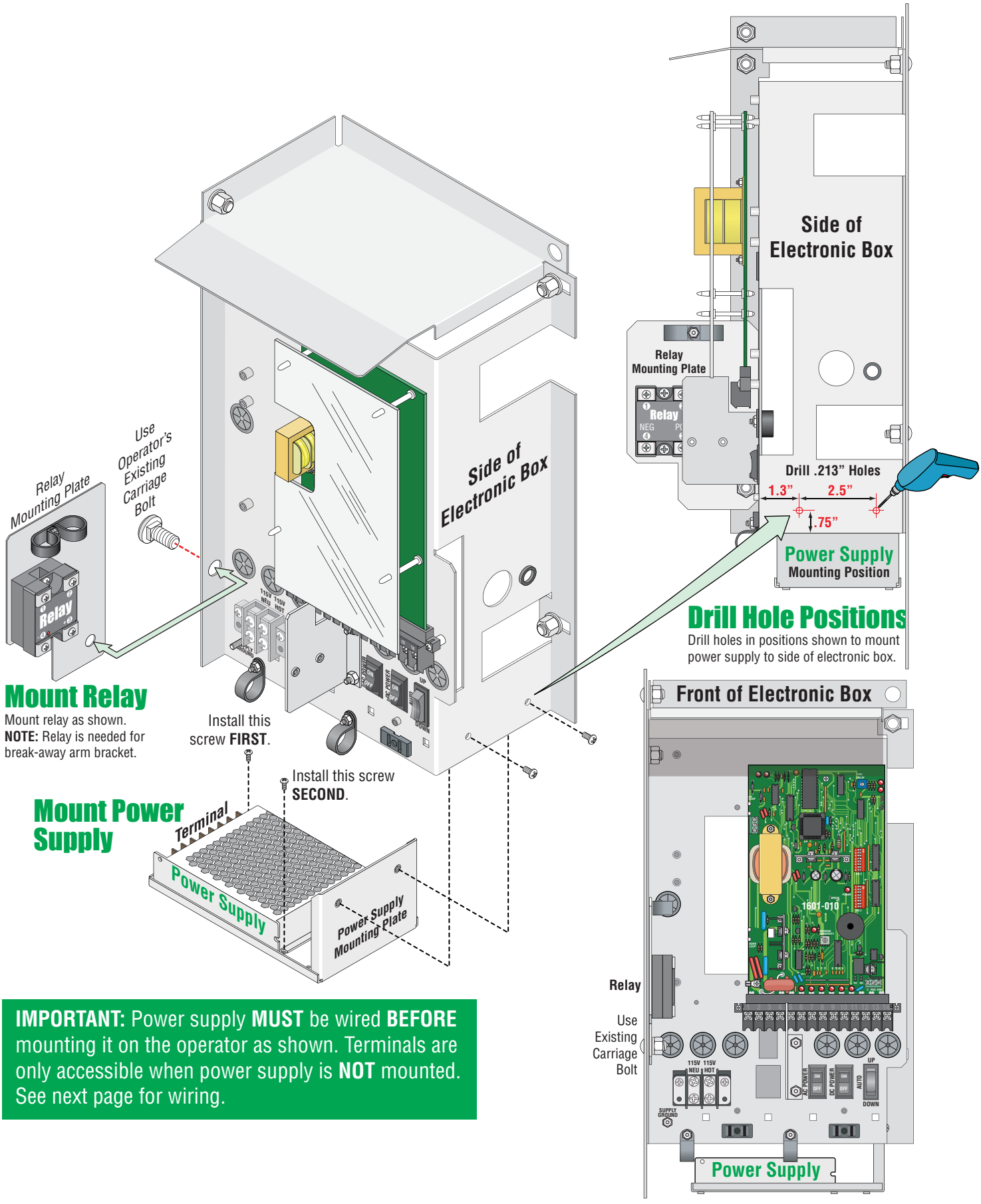
Note for Older Operators: A 5/8" hole will have to be drilled in the operator cabinet **approximately** where Knock-Out is shown. Make sure 5/8" hole is clear of all internal components.

5 Attach Wire Harness to Break-Away Bracket



See page 8 for arm connection **options** and **securing wires** to break-away bracket.

6 Mount Power Supply and Relay

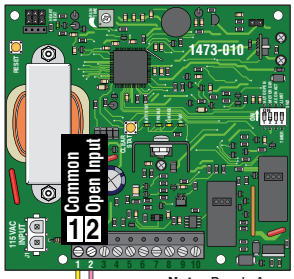


IMPORTANT: Power supply **MUST** be wired **BEFORE** mounting it on the operator as shown. Terminals are only accessible when power supply is **NOT** mounted. See next page for wiring.

7 Connect Wire Harness to Operator . . . . and Wiring OPTIONS

MAKE SURE ALL POWER IS TURNED OFF TO OPERATOR!

Convenience Open 1473 On **SOME** Model Operators



Terminal 1 Battery Backup PCB Breakaway Sensor NC C9 L15

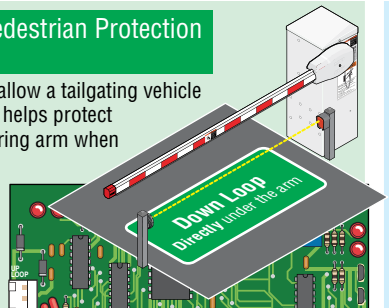
Terminal 2 Battery Backup PCB Breakaway Sensor NC C8 L13

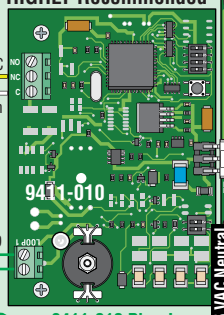
Note: Break-Away arm will **NOT** work with older model barrier operator with 2340-010 convienence open circuit board.

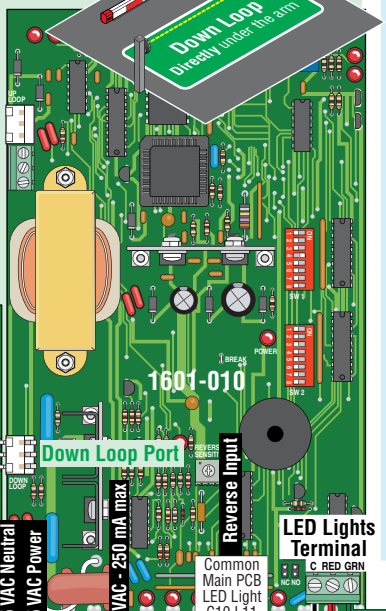
OPTIONAL DKS Pedestrian Protection System Set-up

Note: The arm will **NOT** allow a tailgating vehicle unauthorized entry, **BUT** helps protect pedestrians from a lowering arm when they are in the arm's swing path.
(Sold Separately)

Devices Required:
Plug-in Single Channel Loop Detector with Auxiliary Relay
P/N 9411-010
DKS Photocell
P/N 8080-057
See 1601-065 PDF for more info **when used**.
HIGHLY Recommended







8080-057 DKS Photocell



REQUIRED

Down Loop (In-Ground)

9411-010 Plug-In Loop Detector

Yellow NC

White Com

White to #9

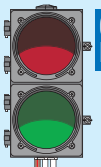
White to #14

Red to #5

Black to #14

OPTIONAL LED Traffic Light

Different Kits Available



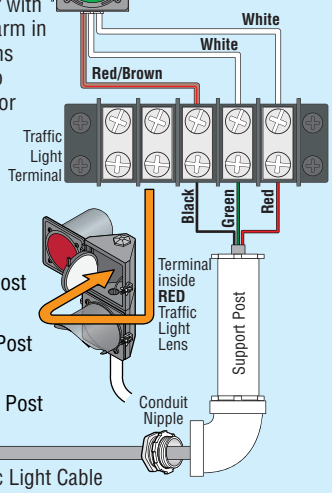
Note: The traffic light is wired together with the break-away arm in **some** installations when desired, so it's shown here for wiring reference. See Traffic Light 1603-264 PDF for more info **when used**.

Recommended

6 Ft Cable / No Post
P/N 1603-221

6 Ft Cable / 35" Post
P/N 1603-222

11 Ft Cable / 95" Post
P/N 1603-223



V+ Power Supply - Black
NC - Close - Red
NO - Open - Green

N-Open Main PCB Green Light C2 L2 — Green
N-Close Main PCB Red Light C1 L1 — Red

Wire Harness
9 labeled wires

8080-356 Harness

Terminal 14 Main PCB Reverse Edge C4 L4 — Grey

Com

Terminal 1 - Neutral Circuit Board L20

Terminal 2 Main PCB 110VAC HOT L14 — Black

Terminal 9 Main PCB Reverse Edge C5 L5 — Grey/Pink

SUPPLY GND

Ground Panel Stud L24

Required

EXISTING Black Wire

Common Main PCB 12V Negative C7 L12

L - Line Transformer L21 — Black

N - Neutral Transformer L22 — White

Ground Transformer L23 — Green

110VAC HOT Solid State Relay L16

V- 12V Transformer 8.5A L18

V+ Transformer 8.5A L17 — Red/Blue

Black

1601-426 Power Supply 8.5A

Power for reverse/LED edge and traffic light for octagon arm **ONLY**

L N ⏚ V- V+

Remove **EXISTING** wire **FROM** Main PCB Terminal 2 and connect it **TO Relay #1**

Relay

for Break-Away Sensors

NEG 4 POS 3

Keep wires clear of all moving parts.

12V Positive (+) Solid State Relay C3 L3 — Red

12V Negative (-) Solid State Relay C6 L6 — Blue

Pink

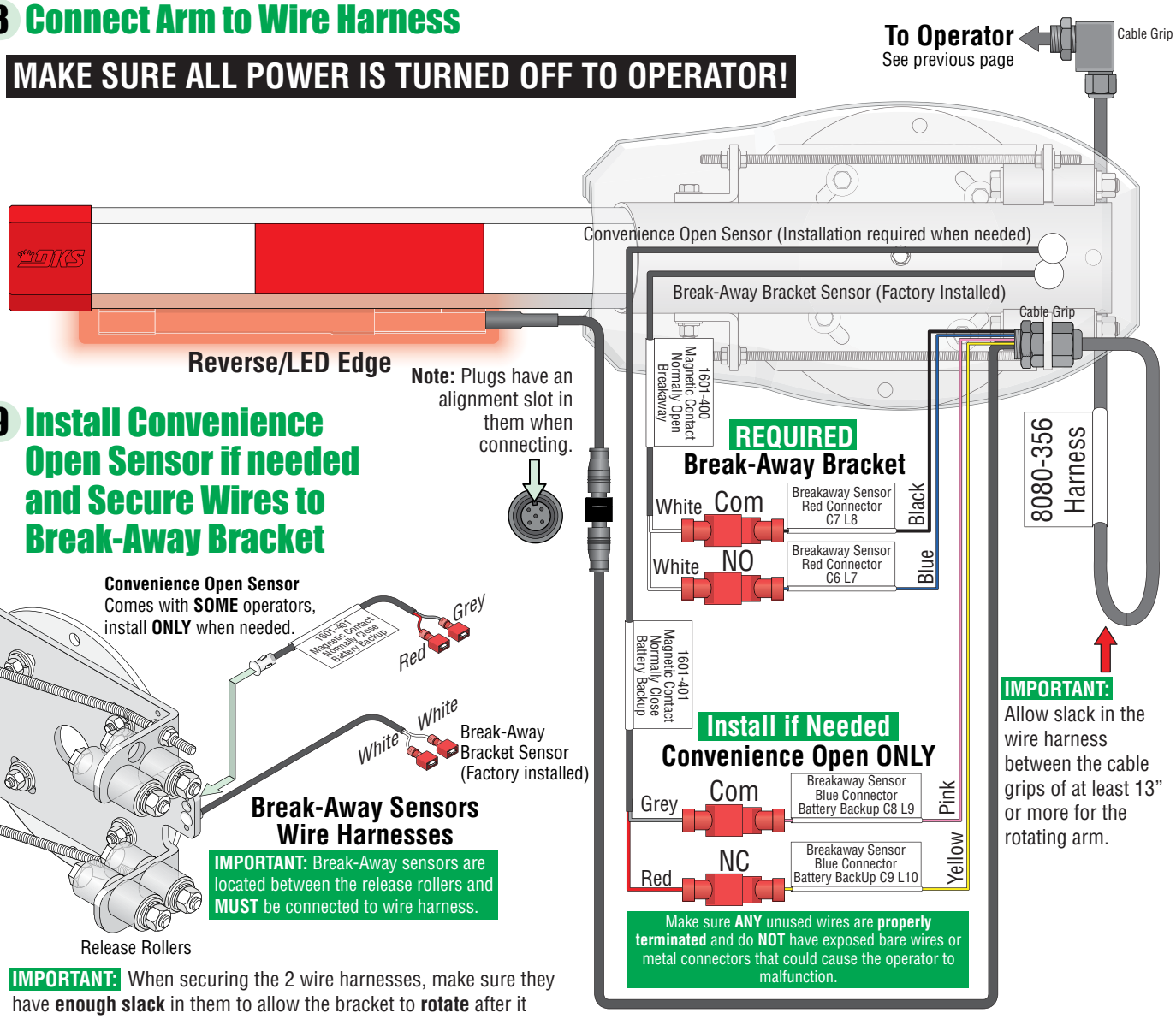
Yellow

Make sure **ANY** unused wires (Example: Convenience open **NOT** on your operator so wires are not used) are **properly terminated** and do **NOT** have exposed bare wires or metal connectors that could cause the operator to malfunction.

To Arm See next page

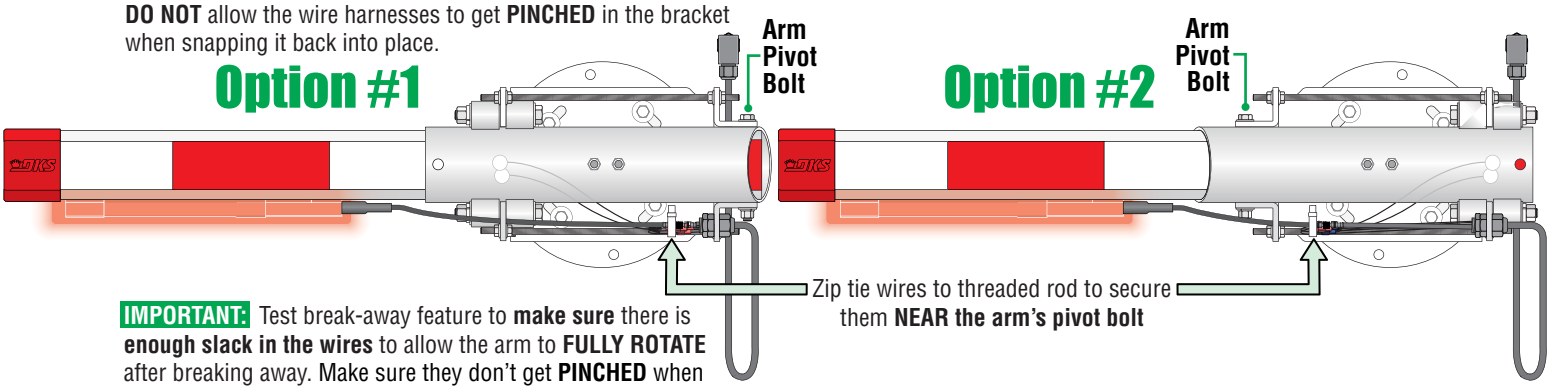
8 Connect Arm to Wire Harness

MAKE SURE ALL POWER IS TURNED OFF TO OPERATOR!



9 Install Convenience Open Sensor if needed and Secure Wires to Break-Away Bracket

IMPORTANT: When securing the 2 wire harnesses, make sure they have **enough slack** in them to allow the bracket to **rotate** after it breaks away. Don't zip tie them so tightly to the bracket that they **PREVENT** the bracket from **FULLY rotating** when it breaks away. **DO NOT** allow the wire harnesses to get **PINCHED** in the bracket when snapping it back into place.



IMPORTANT: Test break-away feature to **make sure** there is **enough slack in the wires** to allow the arm to **FULLY ROTATE** after breaking away. Make sure they don't get **PINCHED** when snapping the arm back in to place. Make sure the **plastic arm cover** fits over the wires and everything operates **smoothly**.

10 Break-Away Arm Reset Procedure

If arm gets struck and breaks away, gate operator will automatically **SHUT DOWN** (Break-away sensors are tripped). Snap arm back into the release rollers. Make sure all wires are out of the way of the arm when snapping arm back in position. **NO Reset is necessary**. Normal operation can continue.

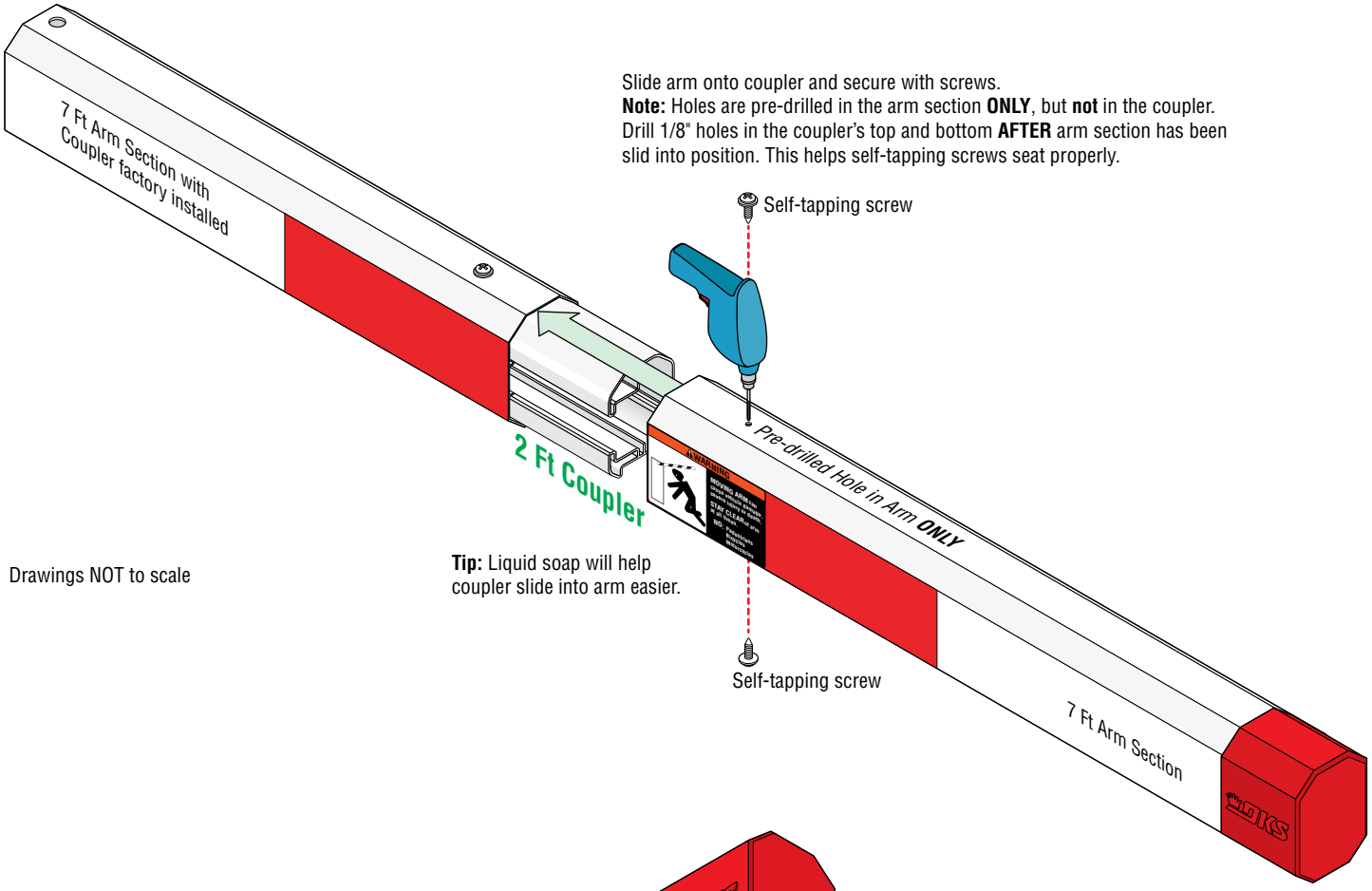
DO NOT OPERATE ARM WITHOUT BREAK-AWAY SENSORS FUNCTIONING.

14 Ft 2-Piece Octagon Arm Assembly

DoorKing Part Number
1601-567
14 Ft 2-Piece Octagon Arm Kit

This kit is designed for use on a 1601 barrier gate operator **ONLY**. It has TWO 7 ft arm sections that assemble into a 14 ft arm.
A reverse edge **SHOULD** be installed on this arm. It is sold separately but **highly recommended** for safety, see next page.

Assemble 2-Piece Arm



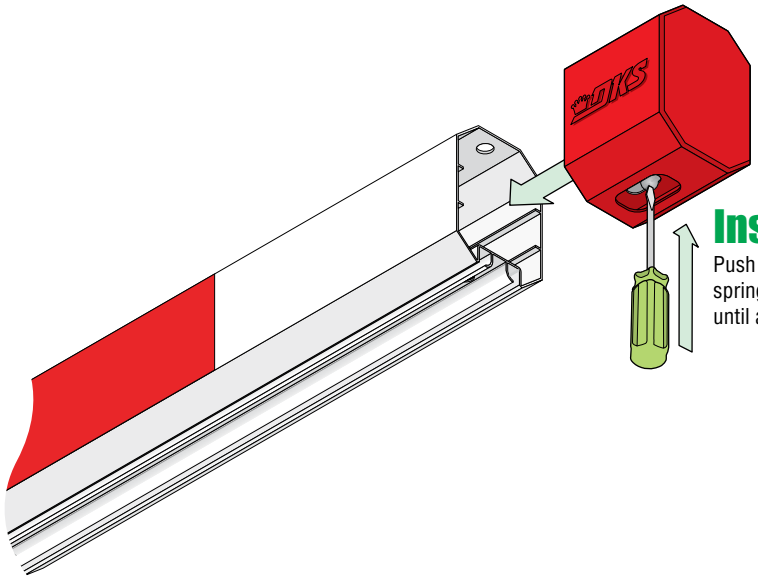
Slide arm onto coupler and secure with screws.
Note: Holes are pre-drilled in the arm section **ONLY**, but **not** in the coupler. Drill 1/8" holes in the coupler's top and bottom **AFTER** arm section has been slid into position. This helps self-tapping screws seat properly.

Self-tapping screw

Self-tapping screw

Drawings NOT to scale

Tip: Liquid soap will help coupler slide into arm easier.



Install End Cap

Push a screwdriver through the hole in cap to release spring **while** pushing cap on. Keep pushing cap on until a "**CLICK**" is heard, locking it in place.

If Shortening Arm see page 12

Reverse Edge - Reverse/LED Edge Installation

These kits are designed to install on a **Break-Away** 14 ft 1-piece **or** 2-piece and a 17 ft **OCTAGON arm** (**14 ft arm** can be shortened if desired) on a 1601 or 1602 barrier gate operator. They **CANNOT** be used on a 1603 auto-spikes, 1620 lane barrier or 1625 wedge barrier operators.

Note: DO NOT operate arm with a **malfunctioning** reverse edge.

DoorKing Part Numbers:

Reverse Edge

(14 ft Arm cut to 7 ft) **5 ft Reverse edge** P/N 8080-605
(14 ft Arm cut to 8 ft) **6 ft Reverse edge** P/N 8080-606
(14 ft Arm cut to 11 ft) **9 ft Reverse edge** P/N 8080-609
(14 ft Arm) **12 ft Reverse edge** P/N 8080-612

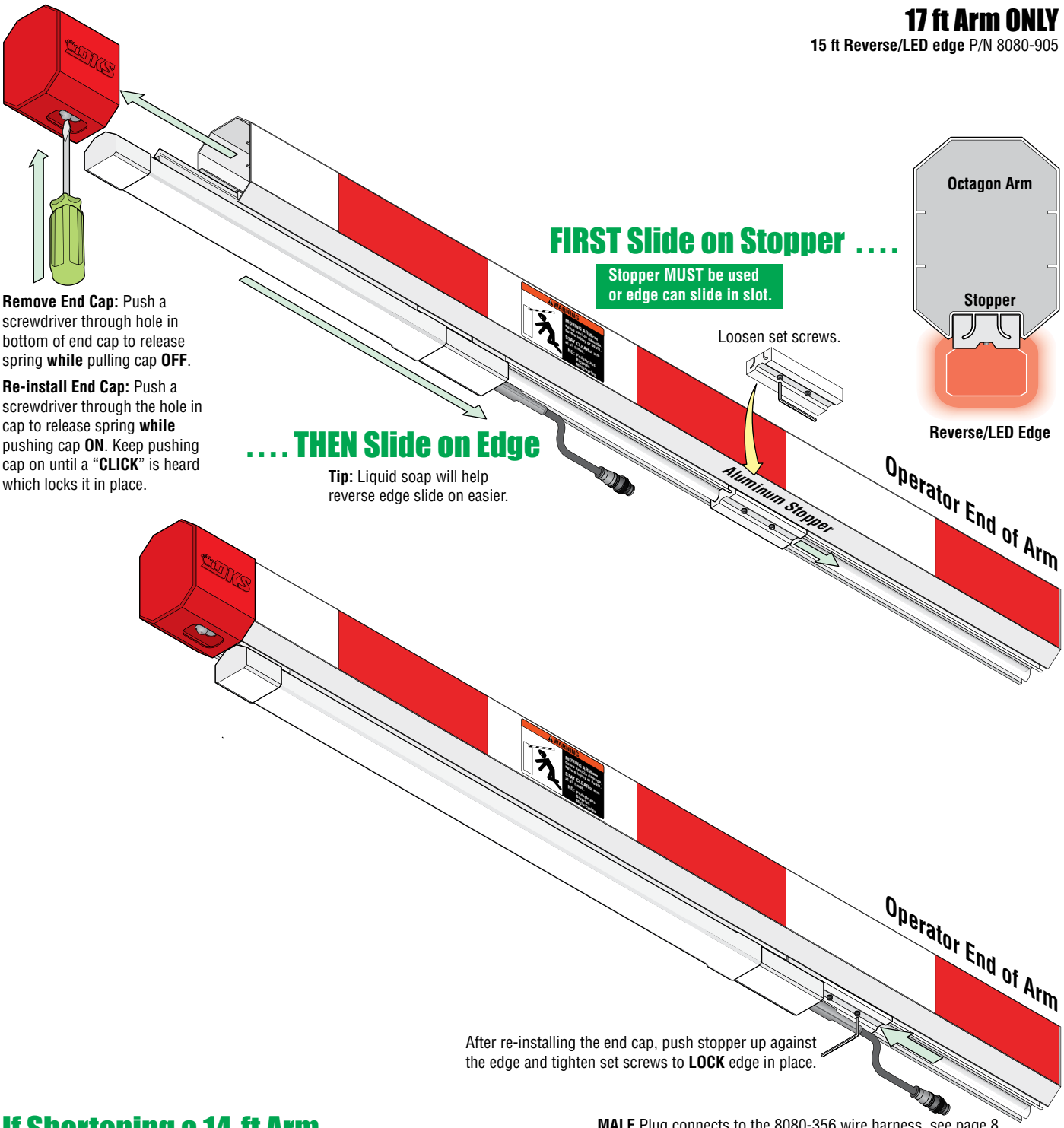
Reverse/LED Edge

(14 ft Arm cut to 7 ft) **5 ft Reverse/LED edge** P/N 8080-905
(14 ft Arm cut to 8 ft) **6 ft Reverse/LED edge** P/N 8080-906
(14 ft Arm cut to 11 ft) **9 ft Reverse/LED edge** P/N 8080-909
(14 ft Arm) **12 ft Reverse/LED edge** P/N 8080-912

17 ft Arm ONLY

15 ft Reverse/LED edge P/N 8080-905

Installation



Remove End Cap: Push a screwdriver through hole in bottom of end cap to release spring **while** pulling cap **OFF**.

Re-install End Cap: Push a screwdriver through the hole in cap to release spring **while** pushing cap **ON**. Keep pushing cap on until a "**CLICK**" is heard which locks it in place.

After re-installing the end cap, push stopper up against the edge and tighten set screws to **LOCK** edge in place.

MALE Plug connects to the 8080-356 wire harness. see page 8.

If Shortening a 14-ft Arm see page 12

14 Ft Rubber Bumper Installation

DoorKing Part Number
8080-089
14 Ft Rubber Bumper

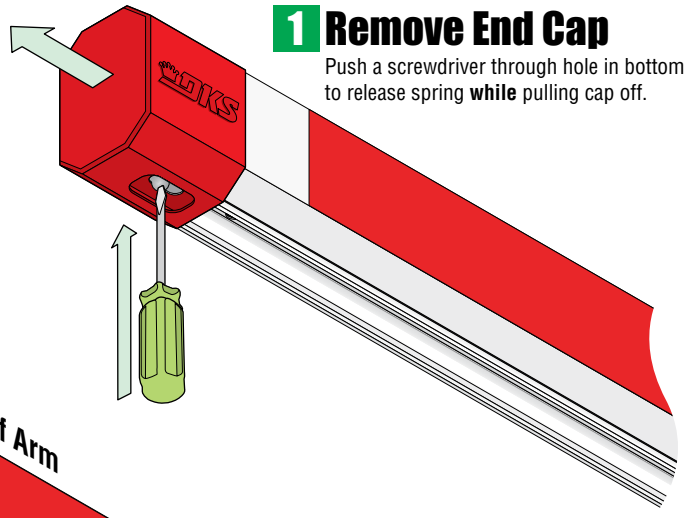
This rubber bumper is designed to install on a 14 ft 1-piece **or** 2-piece **octagon arm** (not included) for a 1601, 1603 auto-spikes, 1620 lane barrier or a 1625 wedge barrier gate operator.
It **CANNOT** be used on a 1602 operator. it offers **MINIMAL** safety protection.

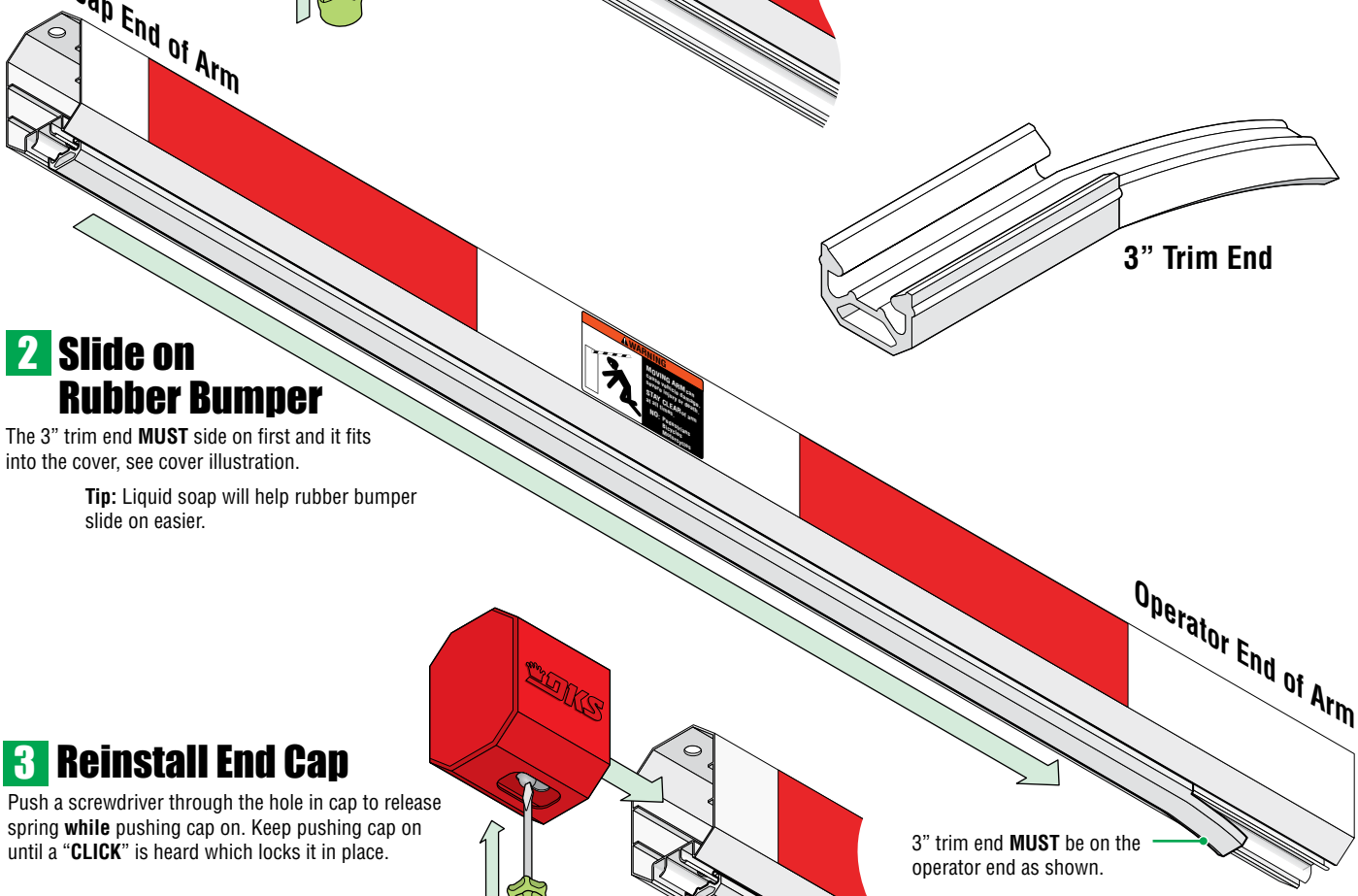
Installation

Drawings NOT to scale

1 Remove End Cap

Push a screwdriver through hole in bottom of end cap to release spring **while** pulling cap off.





2 Slide on Rubber Bumper

The 3" trim end **MUST** side on first and it fits into the cover, see cover illustration.

Tip: Liquid soap will help rubber bumper slide on easier.

3 Reinstall End Cap

Push a screwdriver through the hole in cap to release spring **while** pushing cap on. Keep pushing cap on until a "**CLICK**" is heard which locks it in place.

3" trim end **MUST** be on the operator end as shown.

If using a shortened arm rubber bumper can be cut to length

Shortening a 14-Ft Octagon Arm to 7-Ft, 8-Ft, 11-Ft

A 14 ft 1-piece **OR** 2-piece arm can be shortened to fit **different** length reverse edges. The shortened arm lengths are shown **depending on the length of the reverse edge chosen**. Follow the diagrams below depending on which style arm you have selected to shorten.

Note: Reverse edges **CANNOT** be cut down. They **MUST** remain intact.

DoorKing Part Numbers:

Reverse Edge

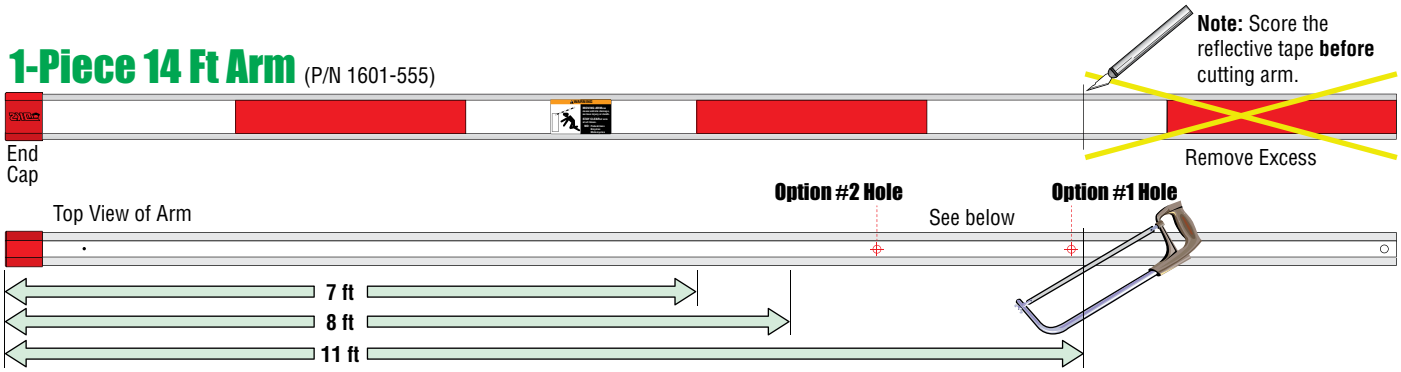
(Arm cut to 7 ft) **5 ft Reverse edge** P/N 8080-605
(Arm cut to 8 ft) **6 ft Reverse edge** P/N 8080-606
(Arm cut to 11 ft) **9 ft Reverse edge** P/N 8080-609
(14 ft Arm) **12 ft Reverse edge** P/N 8080-612

Reverse/LED Edge

(Arm cut to 7 ft) **5 Reverse/LED edge** P/N 8080-905
(Arm cut to 8 ft) **6 ft Reverse/LED edge** P/N 8080-906
(Arm cut to 11 ft) **9 ft Reverse/LED edge** P/N 8080-909
(14 ft Arm) **12 ft Reverse/LED edge** P/N 8080-912

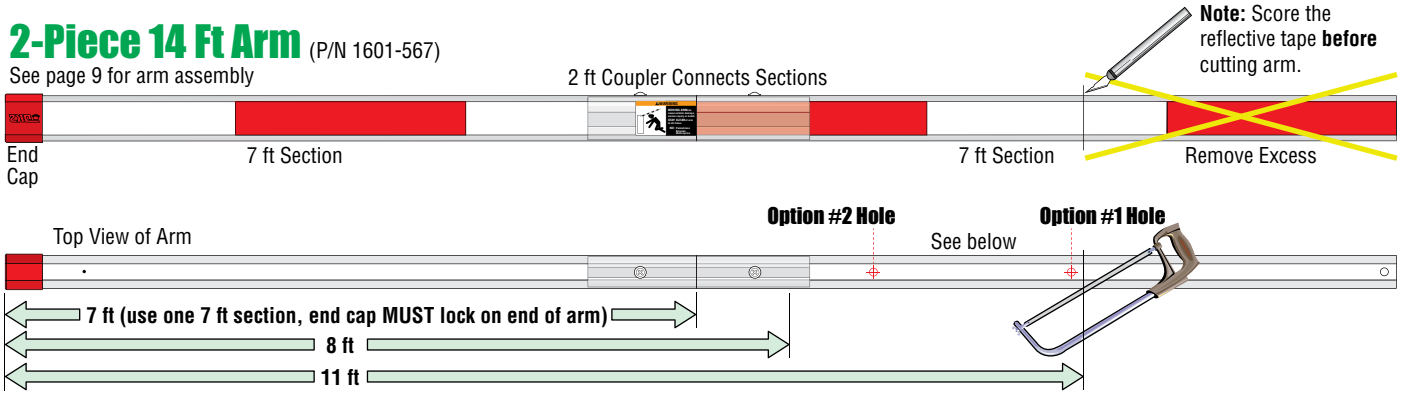
Drawings NOT to scale

1-Piece 14 Ft Arm (P/N 1601-555)



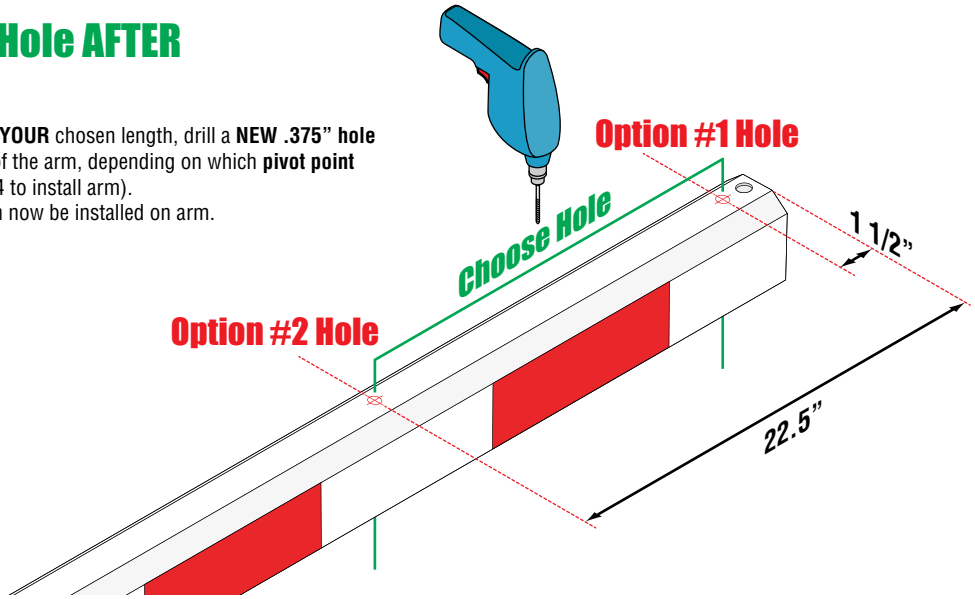
2-Piece 14 Ft Arm (P/N 1601-567)

See page 9 for arm assembly



Drill a .375" Pivot Hole AFTER Shortening Arm

AFTER cutting down arm to **YOUR** chosen length, drill a **NEW .375" hole** thru the **TOP** and **BOTTOM** of the arm, depending on which **pivot point** you have chosen (see page 4 to install arm).
Reverse edge or bumper can now be installed on arm.



17 Ft Octagon Arm Assembly for a 1602 ONLY

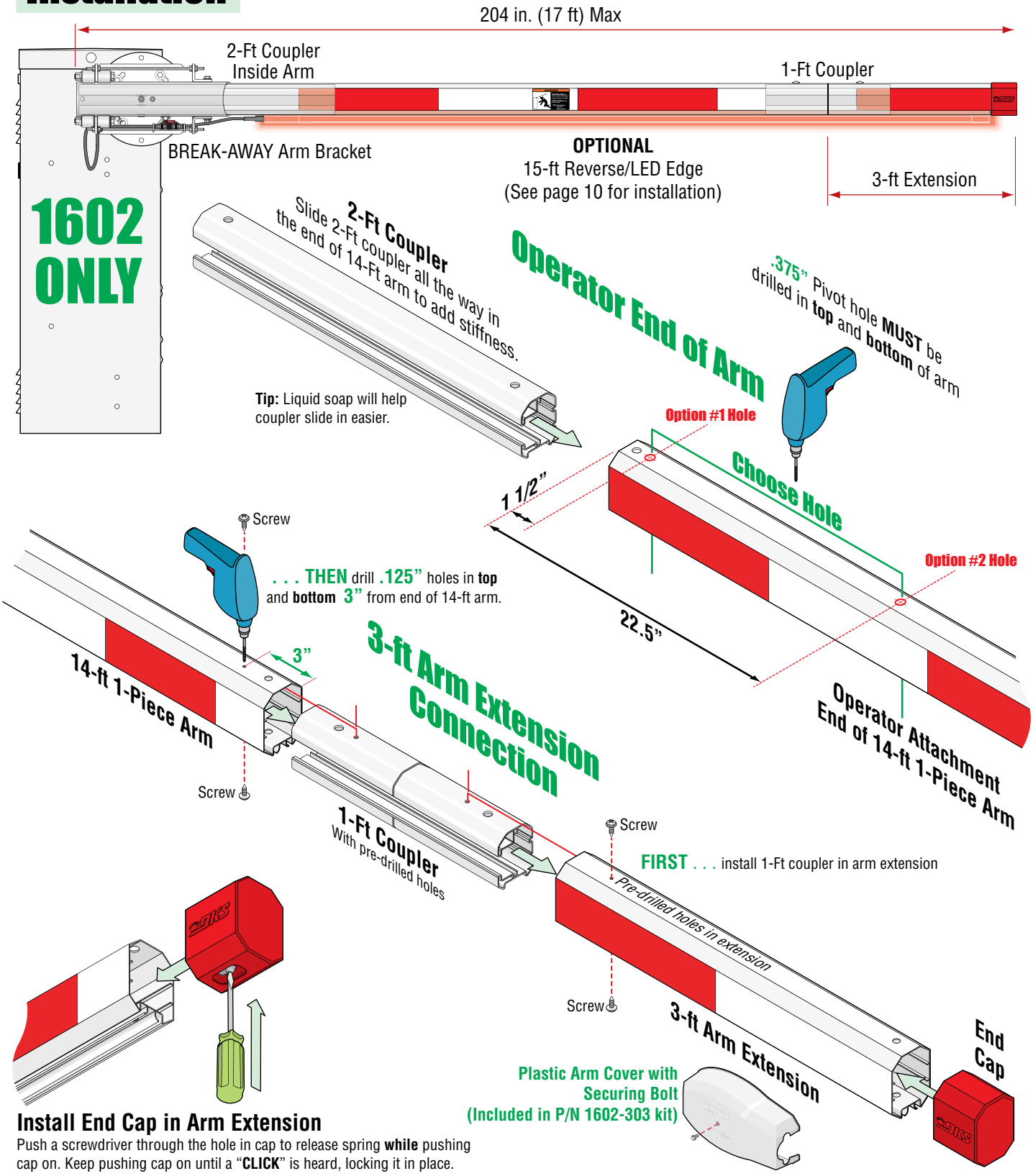
This kit is designed for a **1602** barrier gate operator **ONLY.** It **CANNOT** be used on a 1601 **OR** 1603 auto-spikes. It will extend a 14 ft octagonal arm an **extra three feet**. The 15 ft reverse edge is sold separately but **HIGHLY recommended** for safety when lowering this **very long arm**.

DoorKing Part Numbers:

1602-303
Octagon Arm 3-ft Extension with Plastic Arm Cover Kit

8080-915
15-ft Reverse/LED Edge (Sold Separately See page 10)

Installation

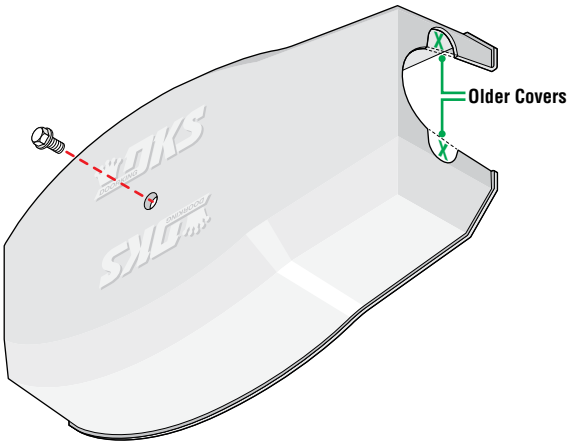


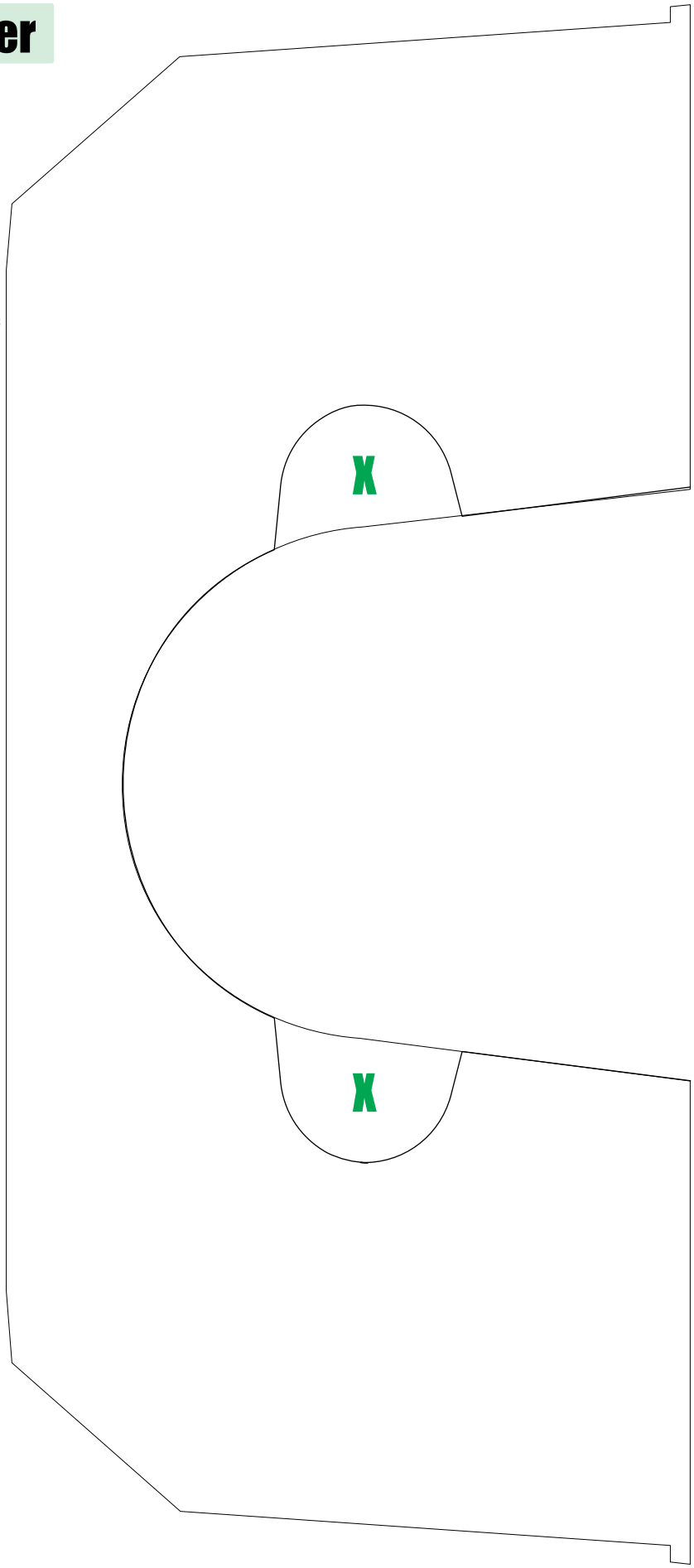
Install End Cap in Arm Extension

Push a screwdriver through the hole in cap to release spring **while** pushing cap on. Keep pushing cap on until a "**CLICK**" is heard, locking it in place.

Older Existing Arm Cover

Older existing plastic arm cover will need to have a notch cut out for a **OCTAGON** Arm's **Reverse Edge**. Only one side of the cover will need to be cut out depending on which side of the operator the arm is mounted on. Use this template as a guide to remove material from the cover.





Make sure your printer is set to 100% (Actual Size)
Drawing to scale

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