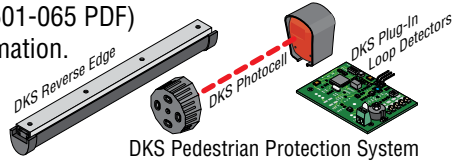


# BREAK-AWAY ROUND ARM KIT for a 1601

DoorKing Part Number

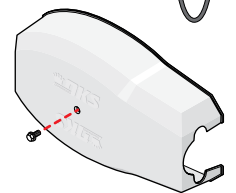
**8080-295**

This kit is designed for a 1601 barrier gate operator **ONLY**. It **CANNOT** be used with a 1602, 1603 auto-spikes, 1620 lane barrier or a 1625 wedge barrier. The kit provides a breakaway bracket assembly for a **ROUND ARM ONLY**. Arm will reverse if lowering and an obstruction is encountered. If the arm is struck and breaks away (pivots 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. See 1601/1602 Installation/Owner's manual (1601-065 PDF) for **ROUND arm safety protection device** information.



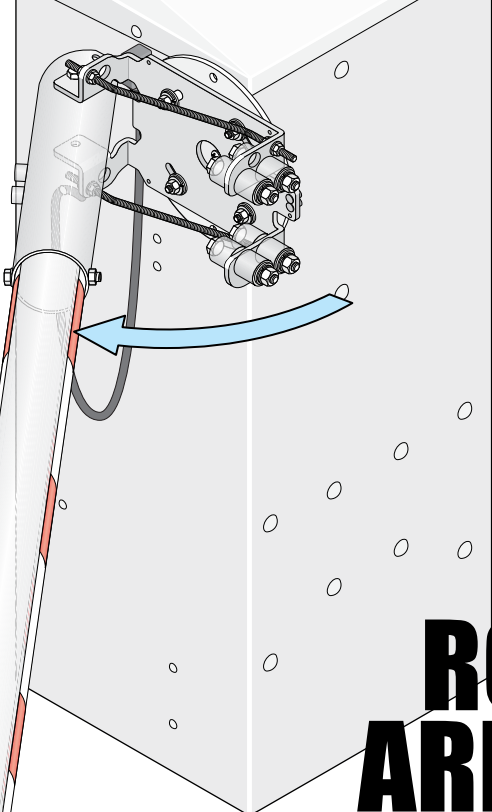
## Break-Away ROUND Arm Bracket Direction Options

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



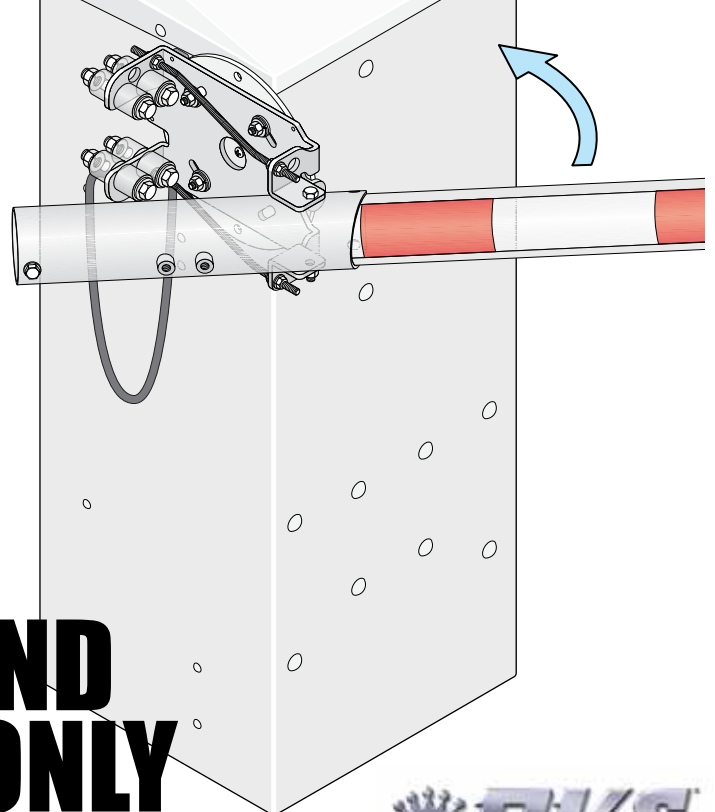
### Option #1

Arm breaks **AWAY** from operator cabinet



### Option #2

Arm breaks **TOWARDS** operator cabinet



# ROUND ARM ONLY



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

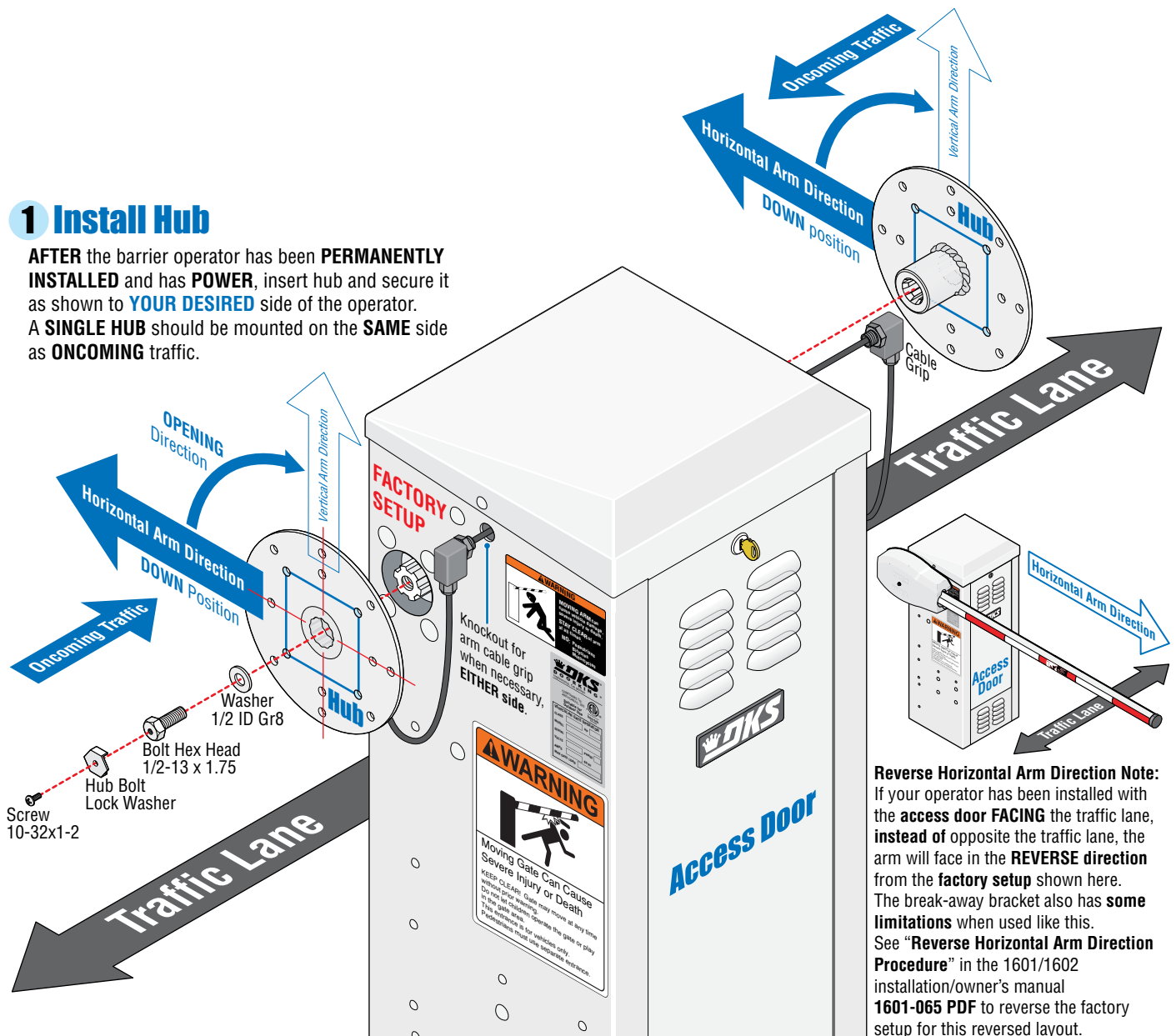
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## Break-Away ROUND Arm Bracket Installation Steps:

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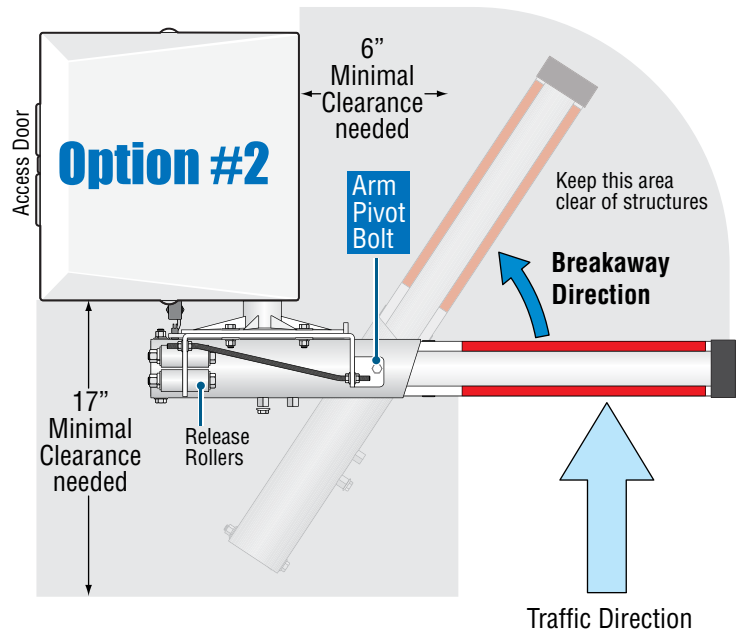
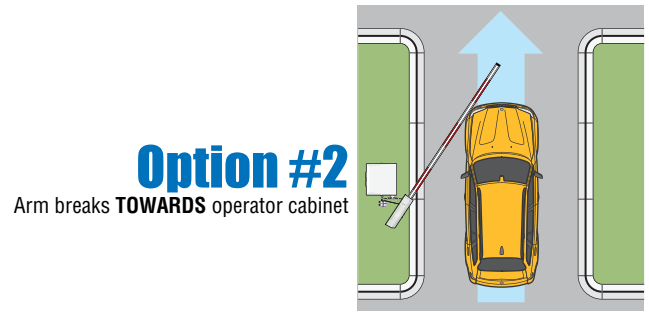
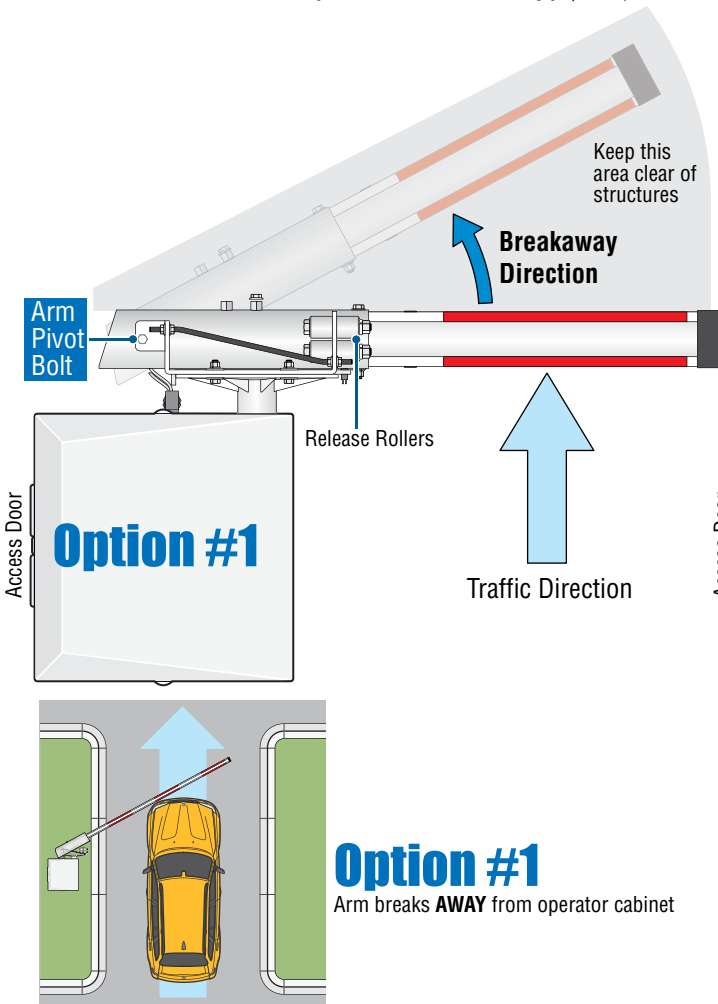
### 1 Install Hub

**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.

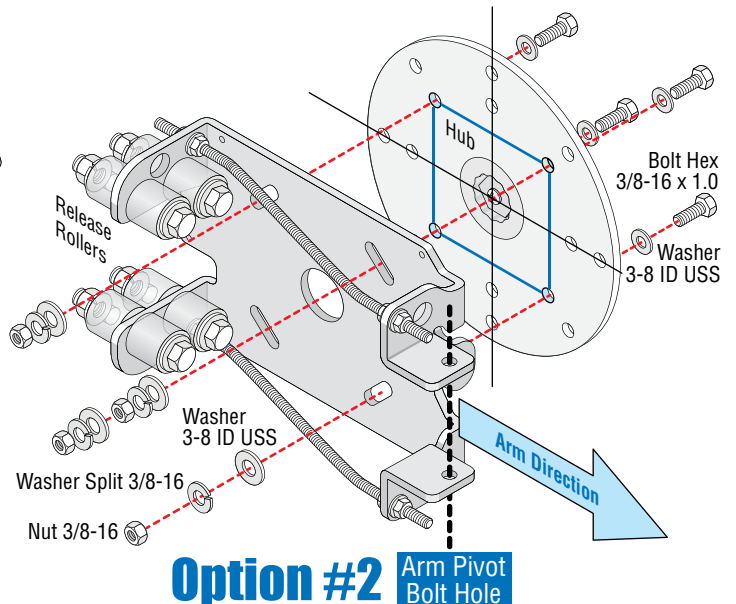
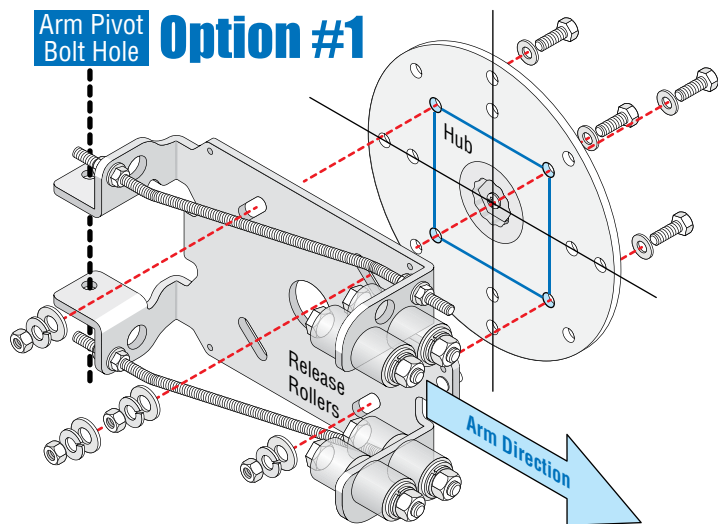


# Break-Away Arm Direction Options

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).

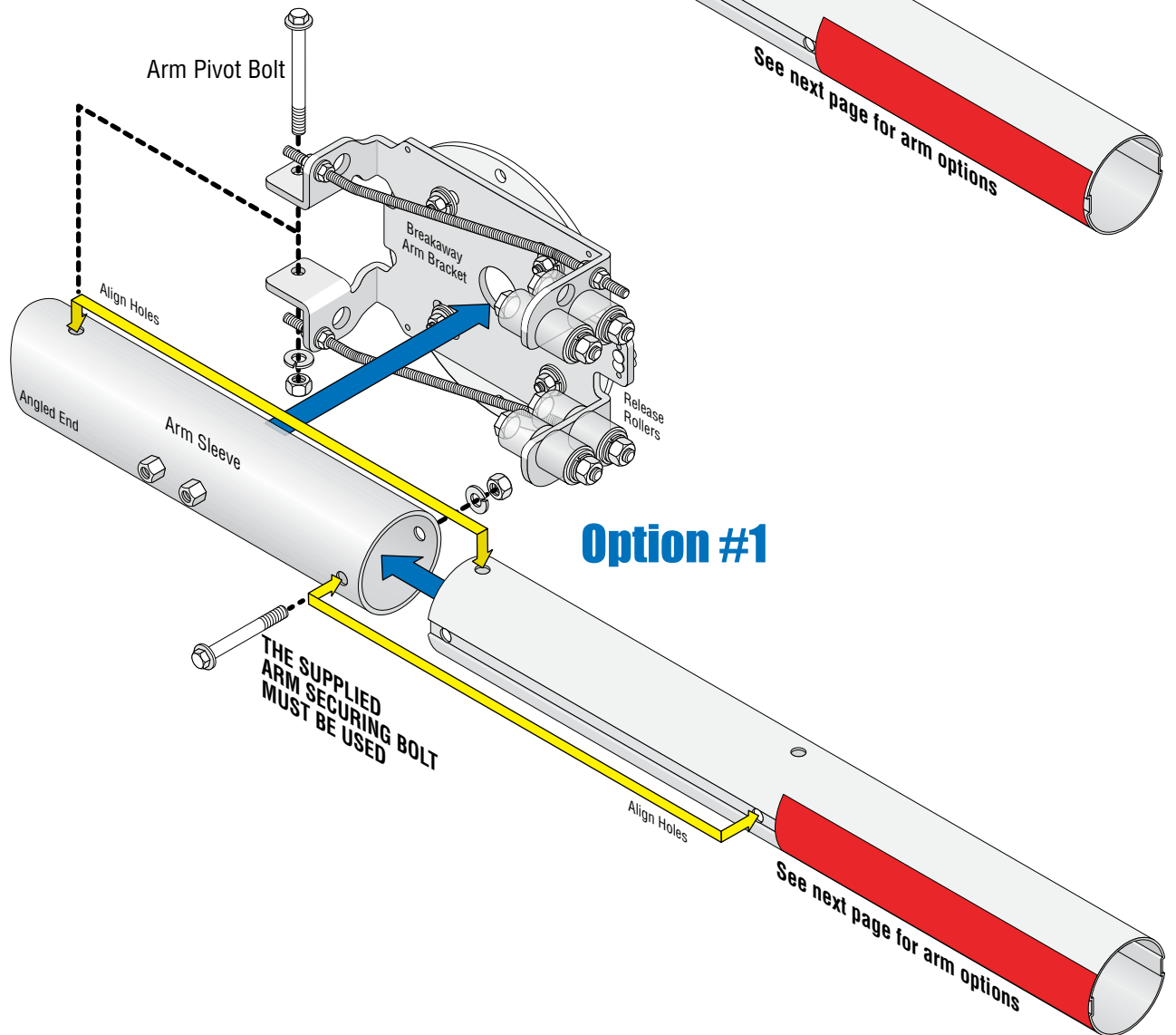
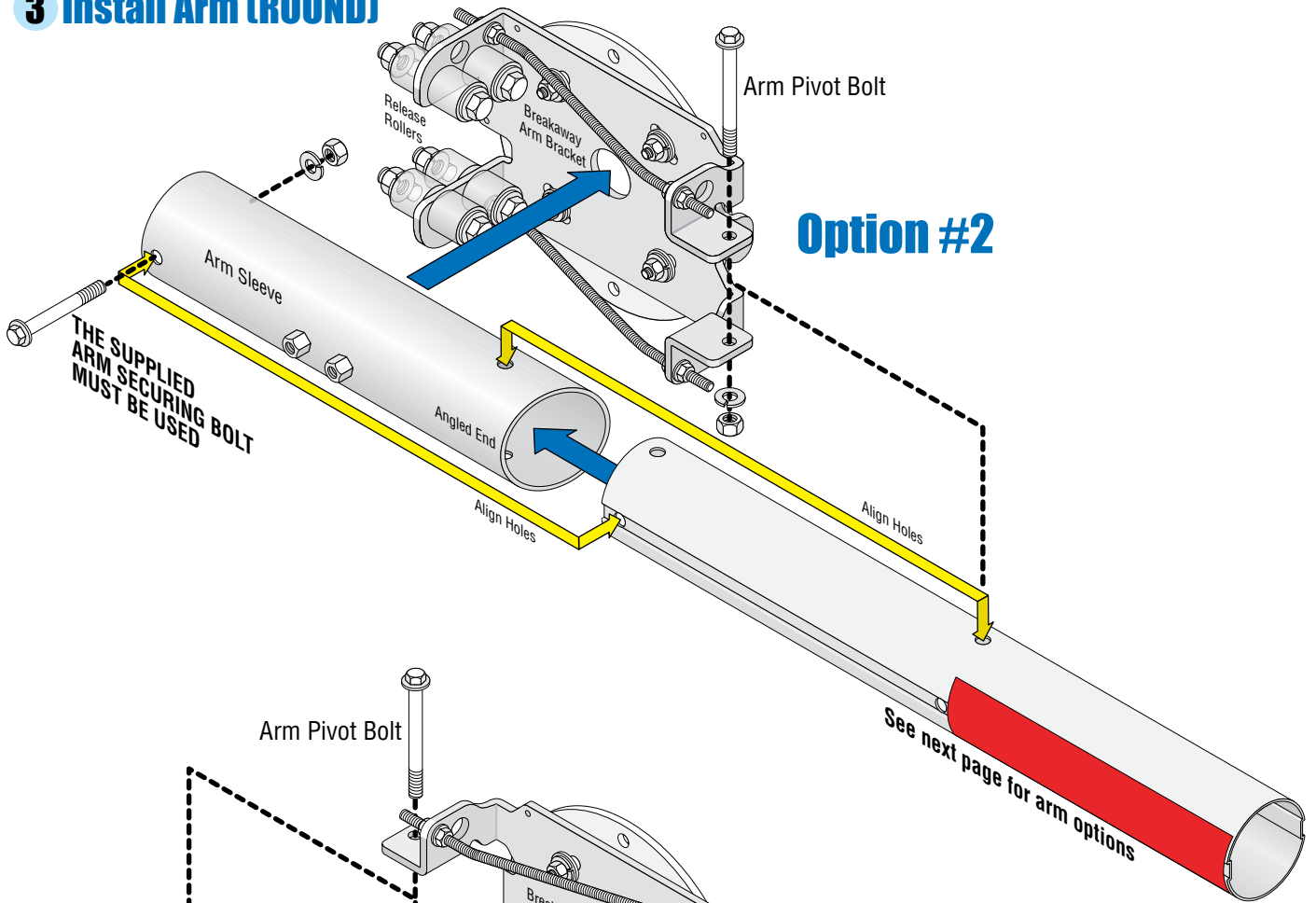


## 2 Install Break-Away Bracket



**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 (ROUND)



# 14 Ft ROUND Arm Options

## 2-Piece Arm P/N 1601-528

DoorKing Part Numbers:

**1601-528**

2-Piece Round 14-ft Break-Away Arm

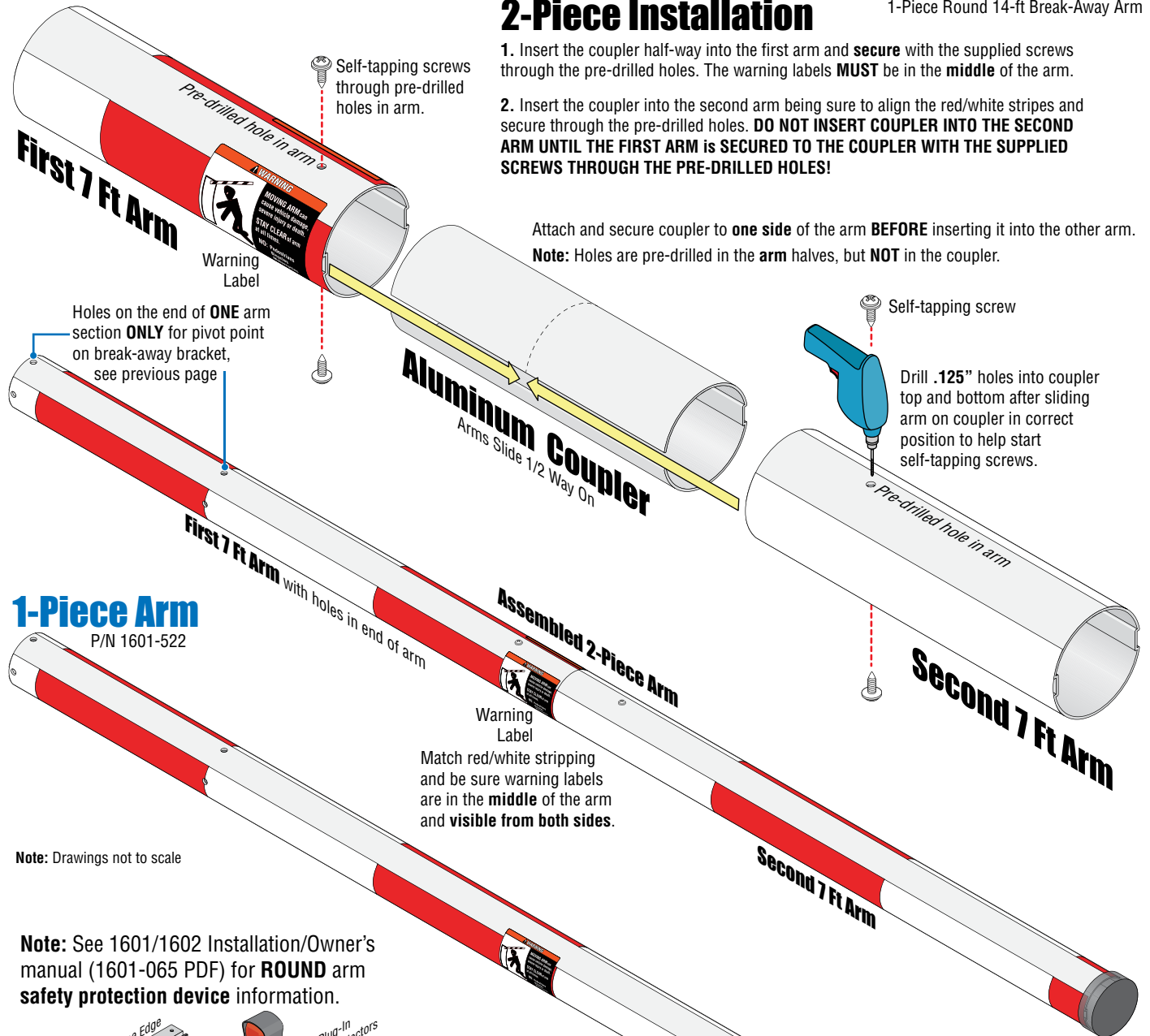
**1601-522**

1-Piece Round 14-ft Break-Away Arm

## 2-Piece Installation

1. Insert the coupler half-way into the first arm and **secure** with the supplied screws through the pre-drilled holes. The warning labels **MUST** be in the **middle** of the arm.
2. Insert the coupler into the second arm being sure to align the red/white stripes and secure through the pre-drilled holes. **DO NOT INSERT COUPLER INTO THE SECOND ARM UNTIL THE FIRST ARM IS SECURED TO THE COUPLER WITH THE SUPPLIED SCREWS THROUGH THE PRE-DRILLED HOLES!**

Attach and secure coupler to **one side** of the arm **BEFORE** inserting it into the other arm.  
**Note:** Holes are pre-drilled in the **arm halves**, but **NOT** in the coupler.

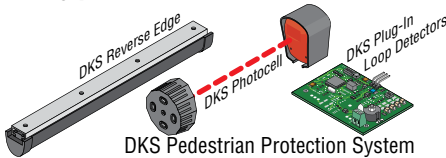


## 1-Piece Arm P/N 1601-522

Match red/white stripping and be sure warning labels are in the **middle** of the arm and **visible from both sides**.

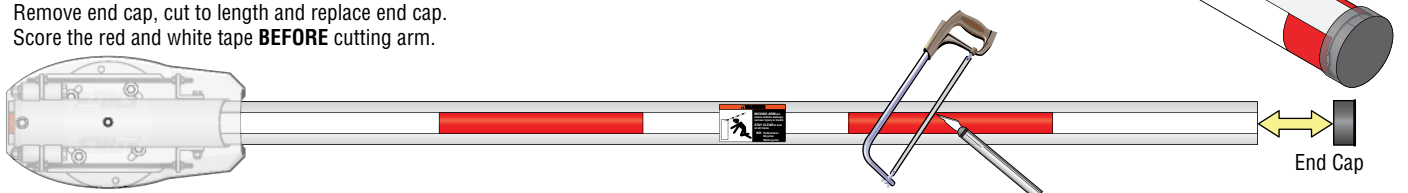
**Note:** Drawings not to scale

**Note:** See 1601/1602 Installation/Owner's manual (1601-065 PDF) for **ROUND** arm safety protection device information.



## Shortening Arm

Either style arm can be cut down to any desired length. Remove end cap, cut to length and replace end cap. Score the red and white tape **BEFORE** cutting arm.



## 4 Install Wire Harness (8080-356)

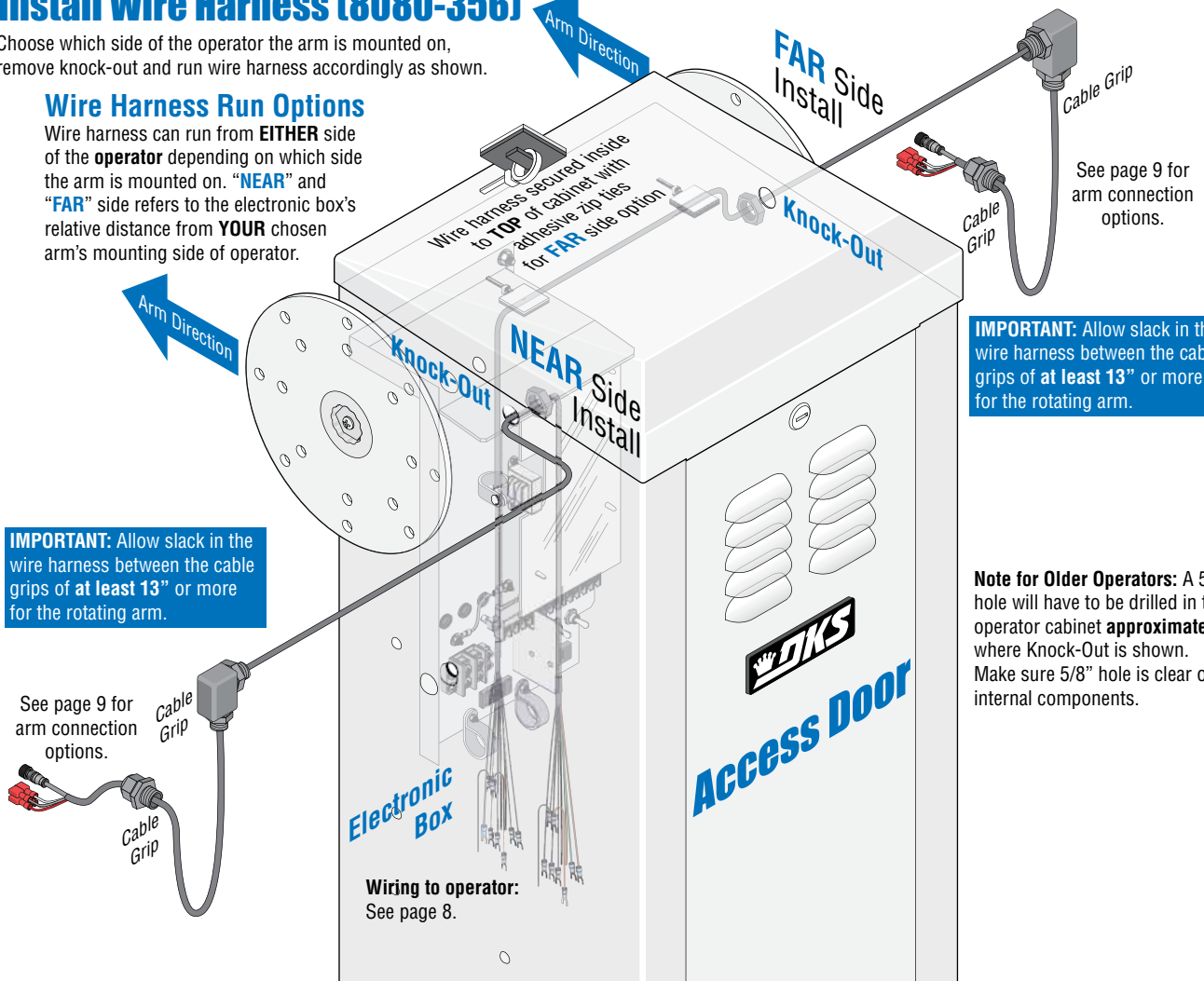
Choose which side of the operator the arm is mounted on, remove knock-out and run wire harness accordingly as shown.

### 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.

**IMPORTANT:** Allow slack in the wire harness between the cable grips of **at least 13”** or more for the rotating arm.

See page 9 for arm connection options.

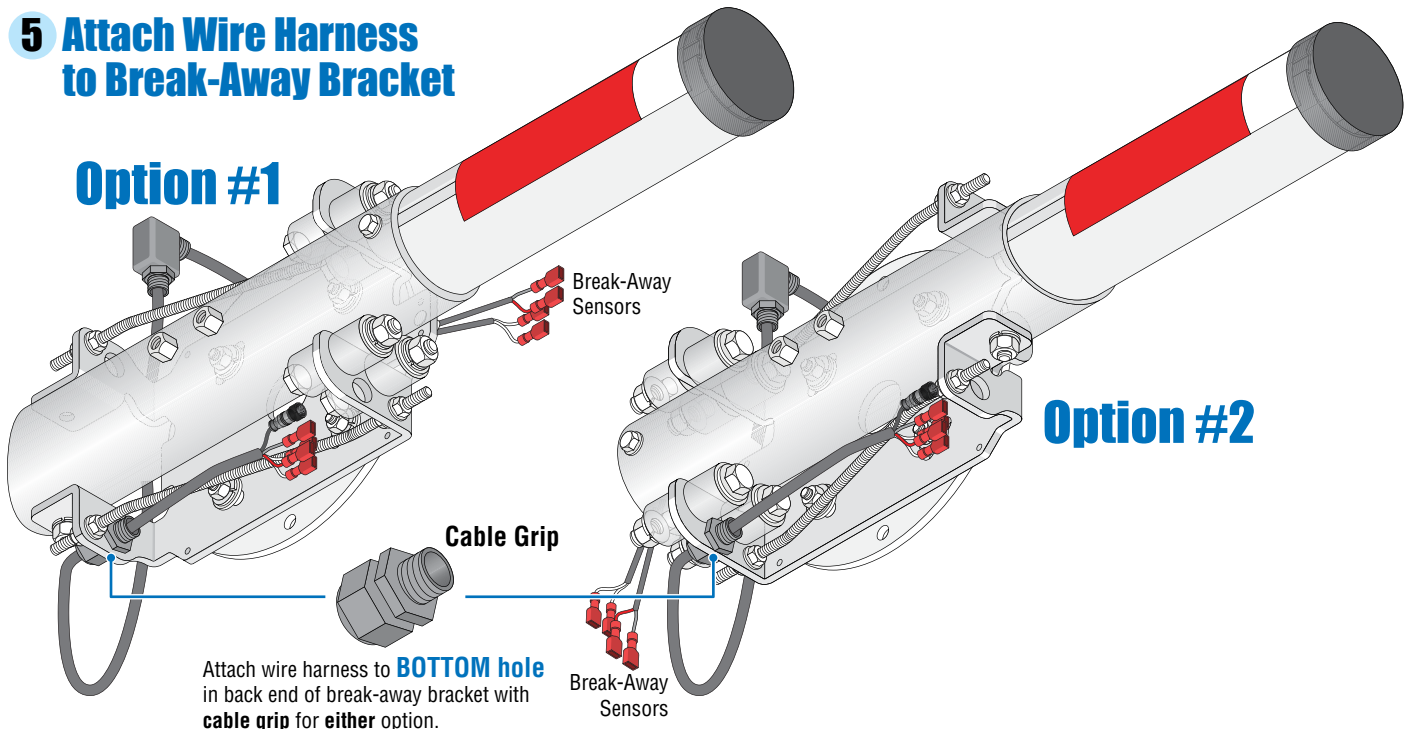


**IMPORTANT:** Allow slack in the wire harness between the cable grips of **at least 13”** or more for the rotating arm.

**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.

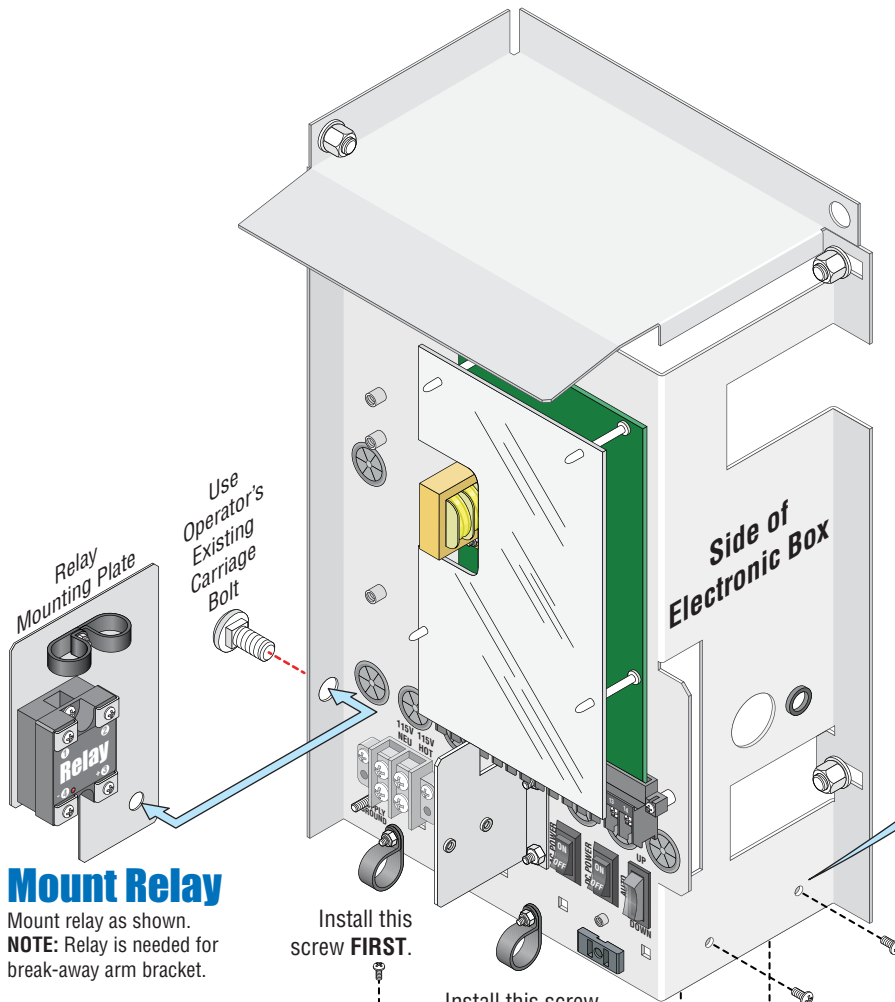
## 5 Attach Wire Harness to Break-Away Bracket

### Option #1



Attach wire harness to **BOTTOM** hole in back end of break-away bracket with **cable grip** for either option.

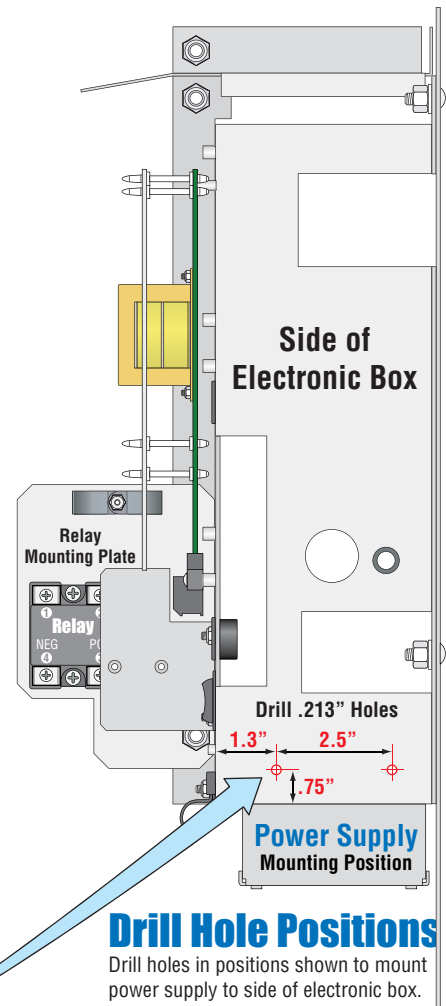
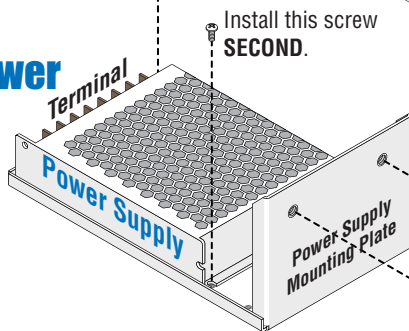
## 6 Mount Power Supply and Relay



### Mount Relay

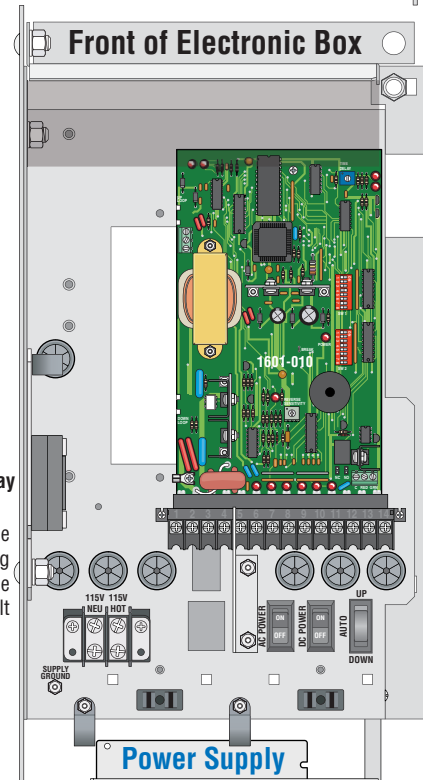
Mount relay as shown.  
**NOTE:** Relay is needed for break-away arm bracket.

### Mount Power Supply



### Drill Hole Positions

Drill holes in positions shown to mount power supply to side of electronic box.

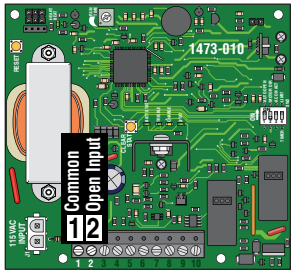


**IMPORTANT:** Power supply **MUST** be wired **BEFORE** mounting it on the operator as shown. Terminals are only accessible when power supply is **NOT** mounted. See next page for wiring.

# 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  
C8 L15

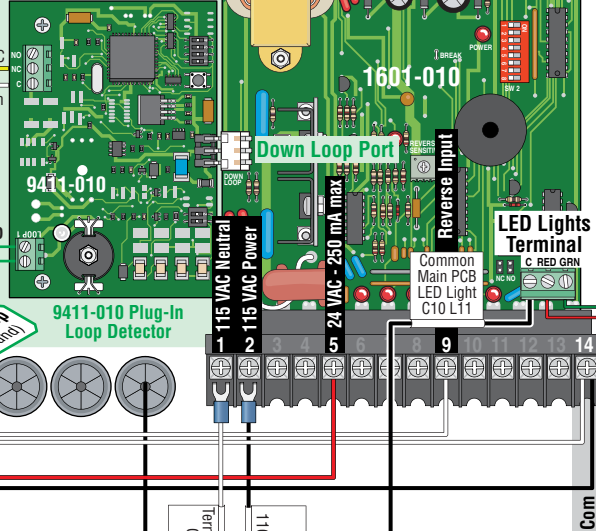
Terminal 2  
Battery Backup PCB  
Breakaway Sensor NC  
C8 L13

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

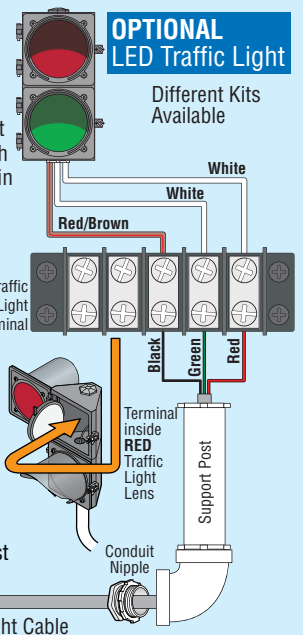
## OPTIONAL DKS Pedestrian Protection System Set-up

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**



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



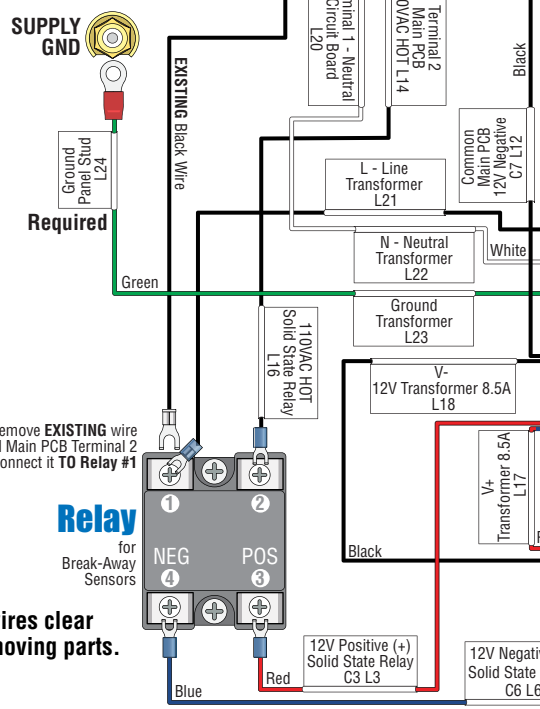
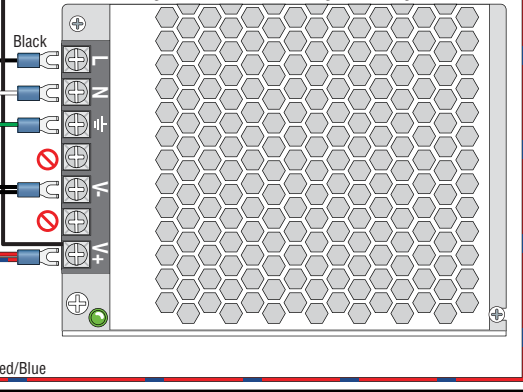
## NOT USED (Black Plug wires)

- N-Open Main PCB  
Green Light C2 L2 Green
- N-Close Main PCB  
Red Light C1 L1 Red
- Terminal 14 Main PCB  
Reverse Edge C4 L4 Grey
- Terminal 9 Main PCB  
Reverse Edge C5 L5 Grey/Pink

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.

## 1601-426 Power Supply 8.5A

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



**Keep wires clear of all moving parts.**

## Wire Harness

9 labeled wires

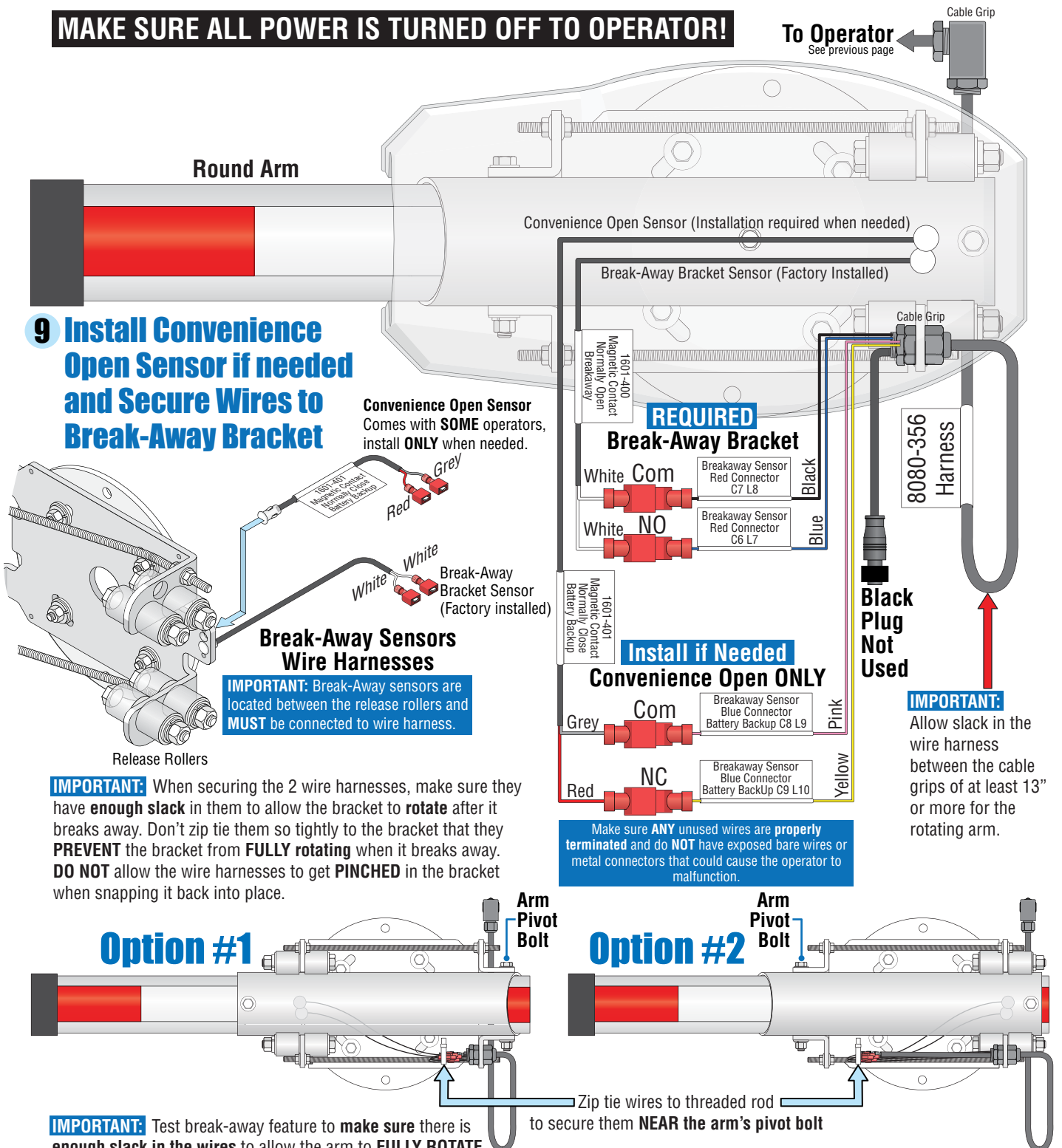
8080-356  
Harness

See next page  
**To Arm**

Pink  
Yellow

## 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

**Convenience Open Sensor**  
Comes with **SOME** operators, install **ONLY** when needed.

### Break-Away Sensors Wire Harnesses

**IMPORTANT:** Break-Away sensors are located between the release rollers and **MUST** be connected to wire harness.

**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:** Allow slack in the wire harness between the cable grips of at least 13" or more for the rotating arm.

Make sure **ANY** unused wires are **properly terminated** and do **NOT** have exposed bare wires or metal connectors that could cause the operator to malfunction.

### Option #1

### Option #2

**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**.

Zip tie wires to threaded rod to secure them **NEAR** the arm's pivot bolt

## 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.**

