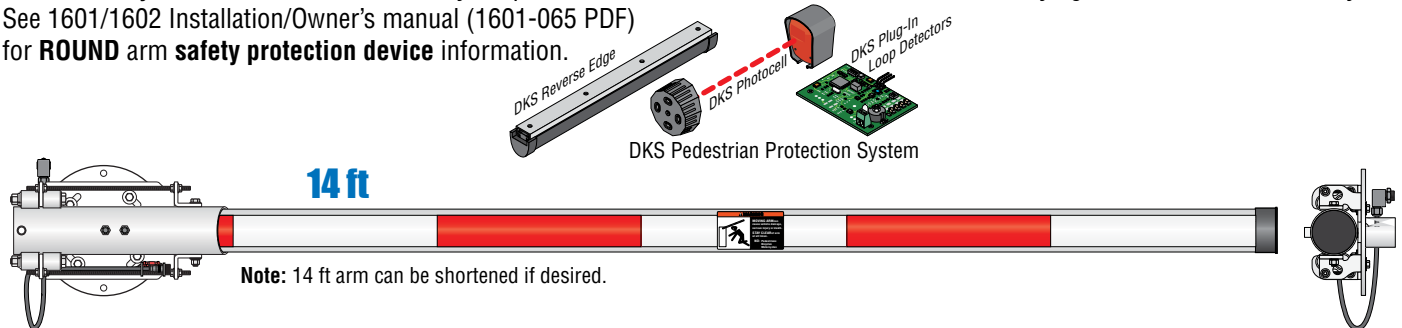


BREAK-AWAY ROUND ARM KIT for a 1601

DoorKing Part Number

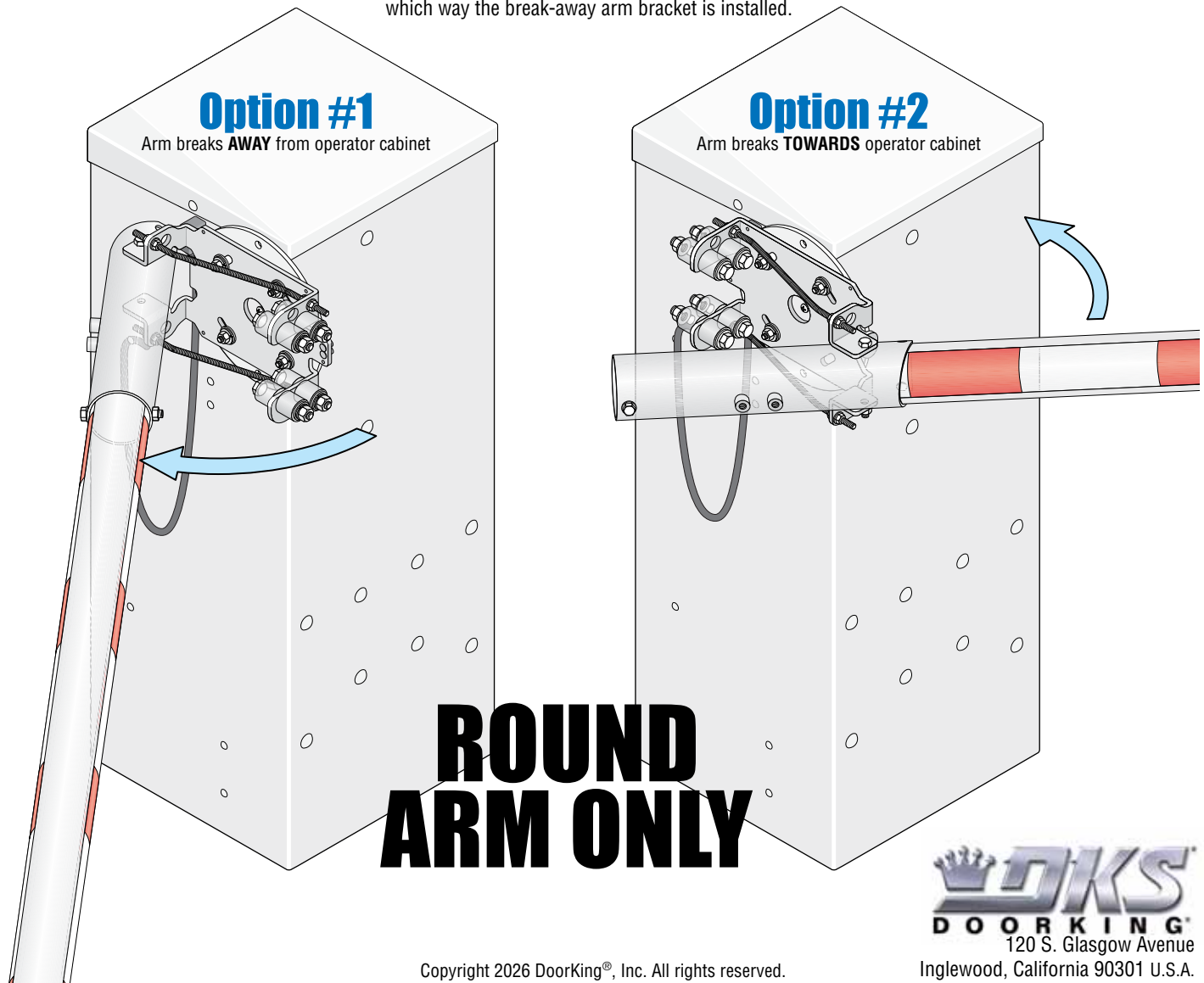
8080-295

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.

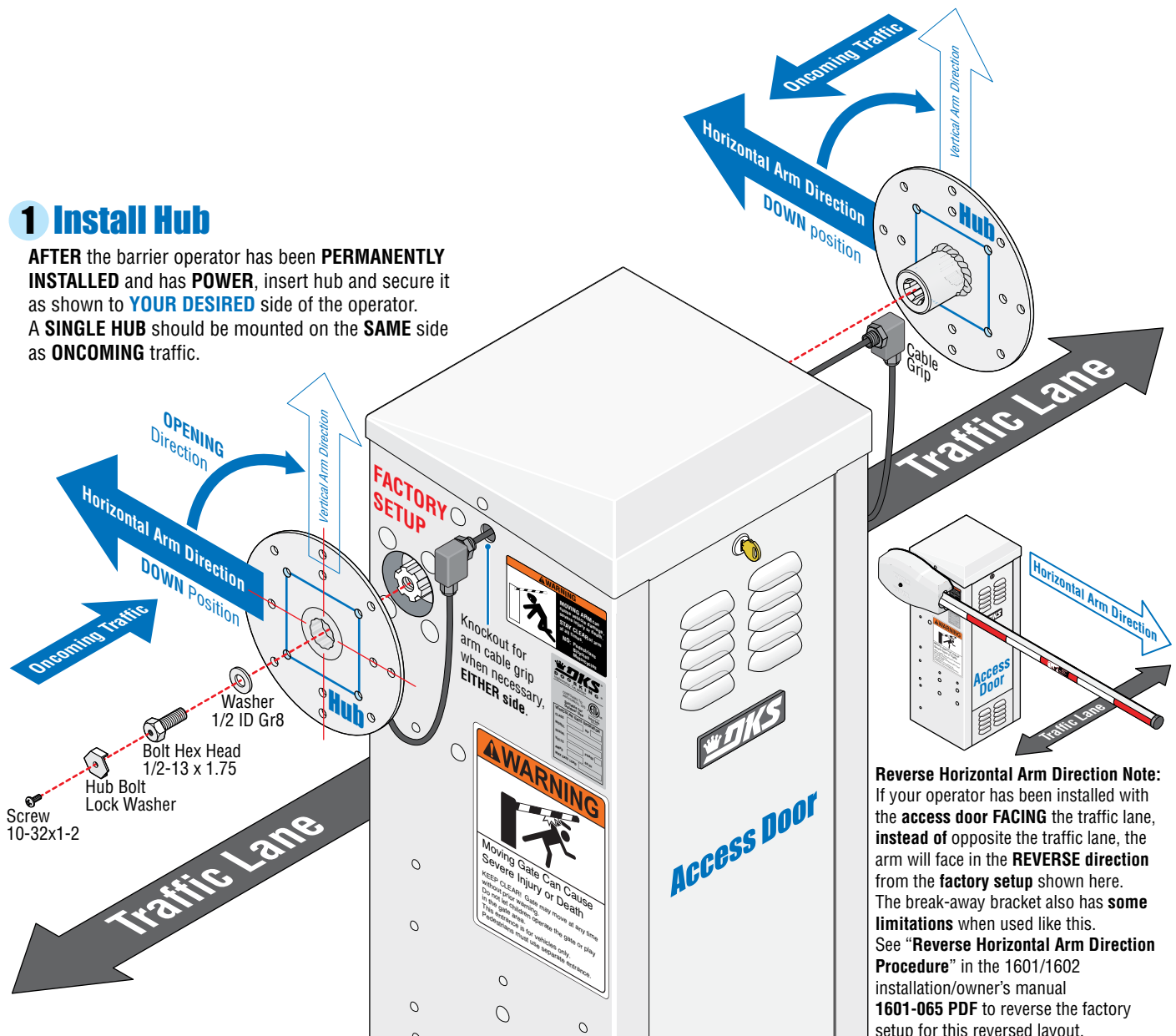


Break-Away ROUND Arm Bracket Installation Steps:

1 Install Hub	2
2 Install Break-Away Bracket	3
3 Install Arm (ROUND)	4
14 Ft ROUND Arm Options	5
4 Install Wire Harness (8080-356)	5
5 Attach Wire Harness to Break-Away Bracket	6
6 Mount Power Supply and Relay	7
7 Connect Wire Harness to Operator . . . and Wiring OPTIONS	8
8 Connect Arm to Wire Harness	9
9 Secure Wires to Break-Away Bracket	9
10 Break-Away Arm Reset Procedure	9

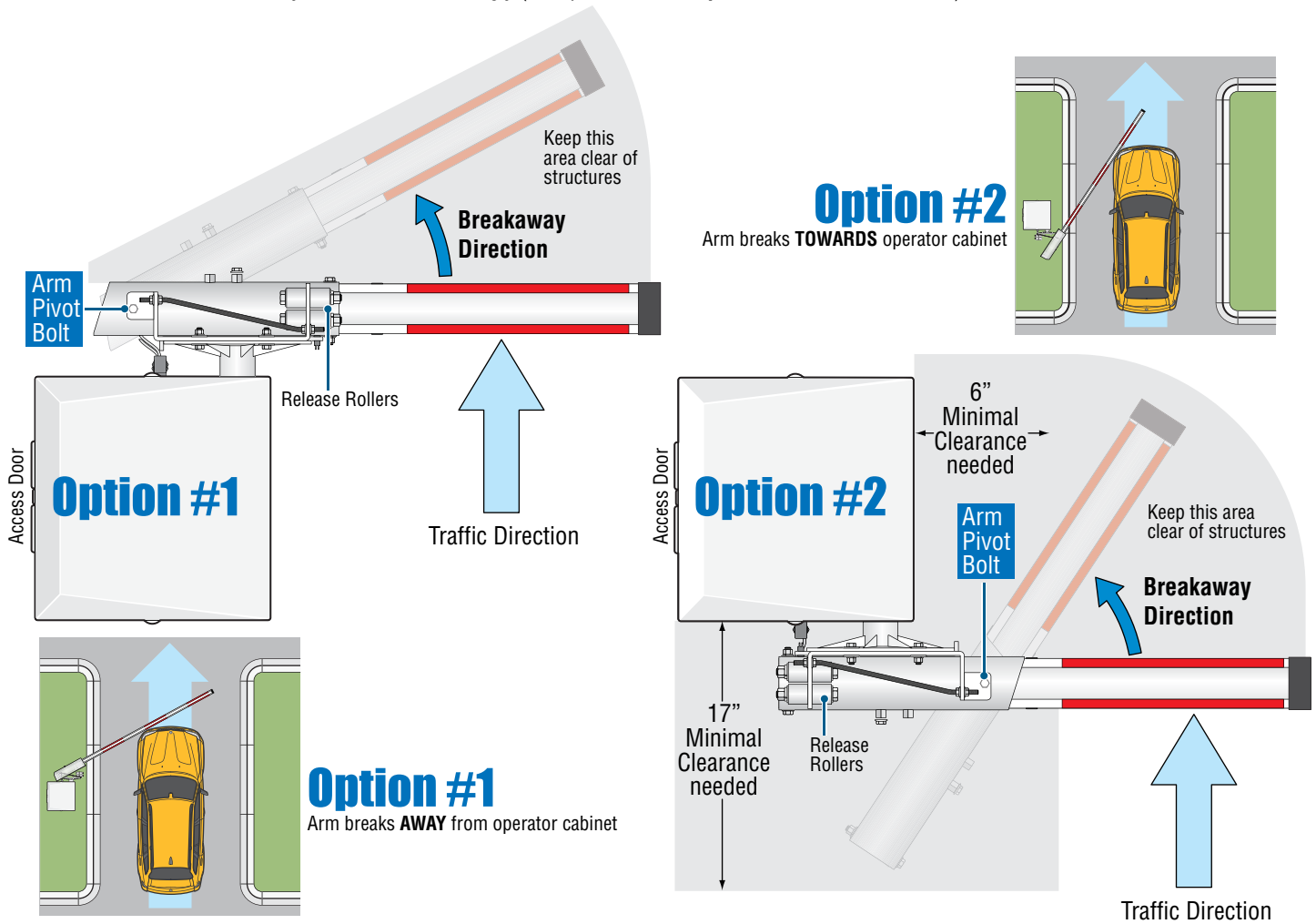
1 Install Hub

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.

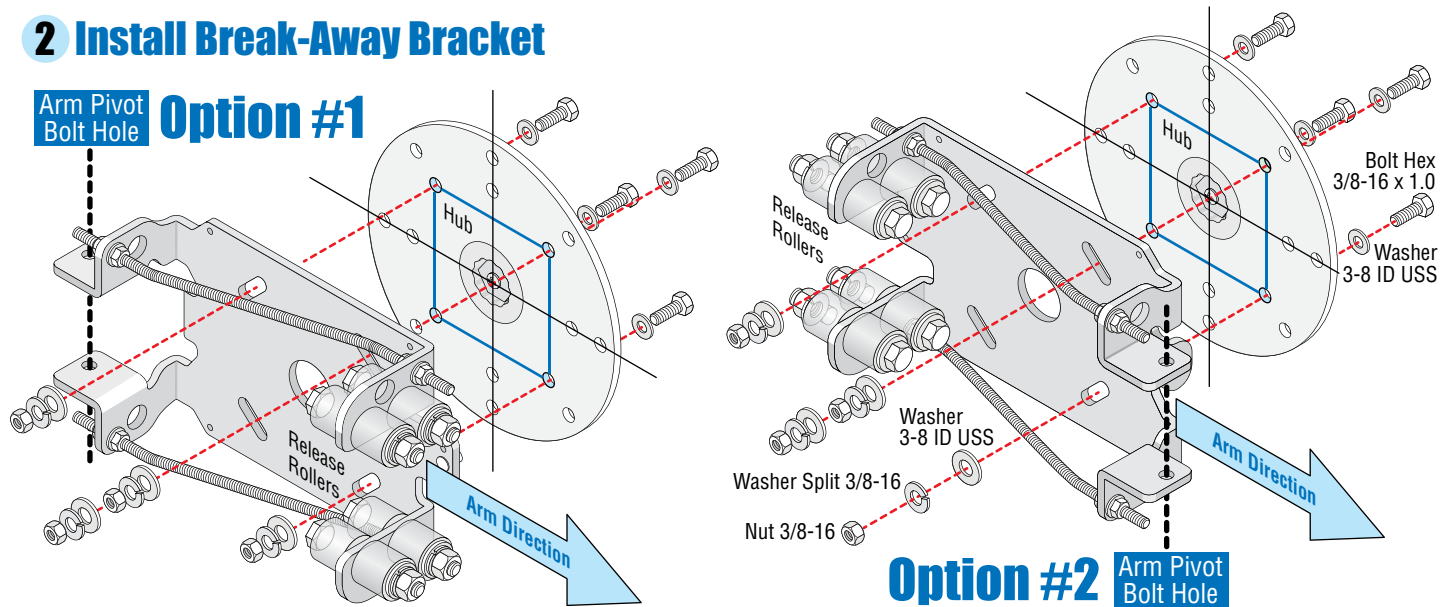


Break-Away Arm Direction Options

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).



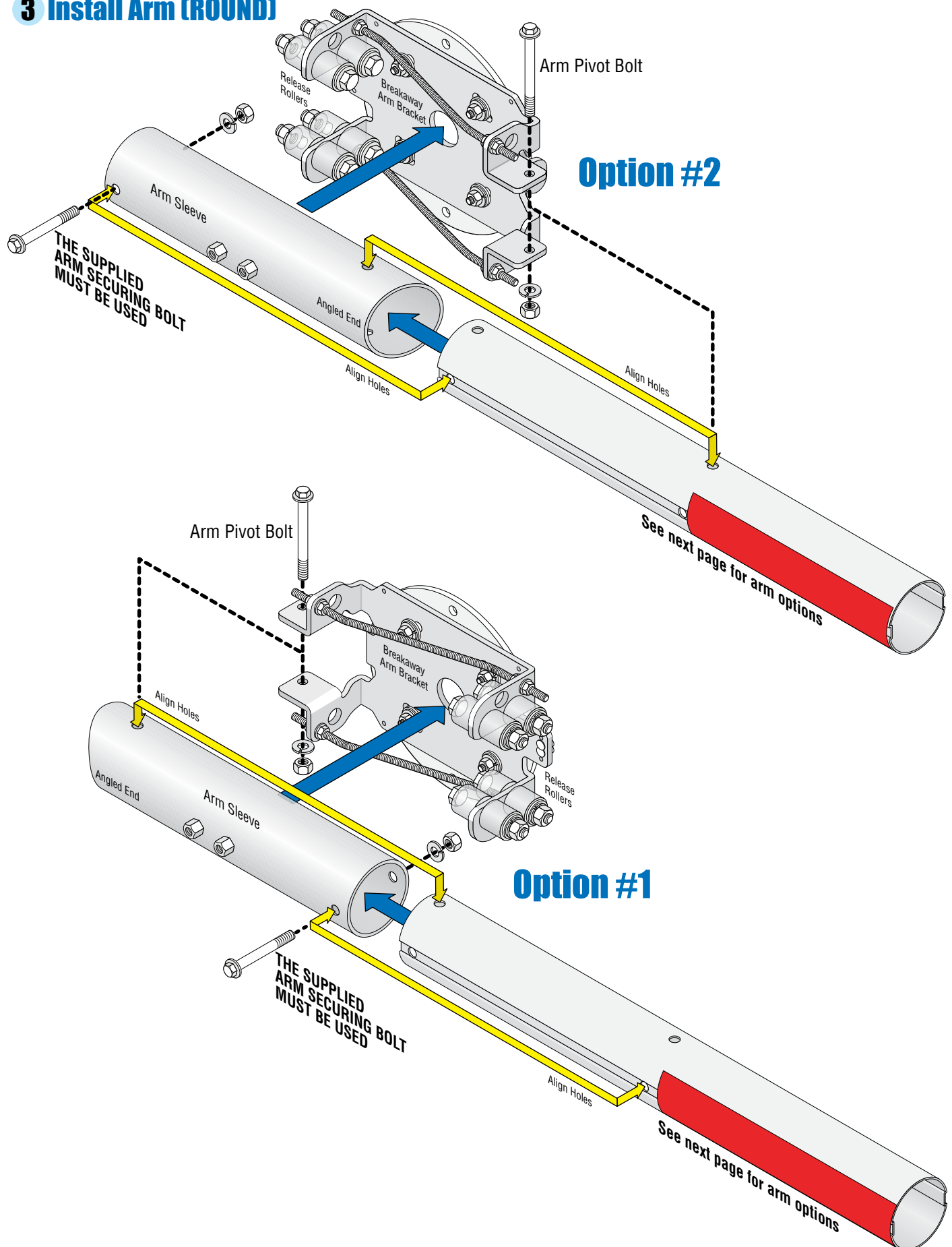
2 Install Break-Away Bracket



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

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 Arm

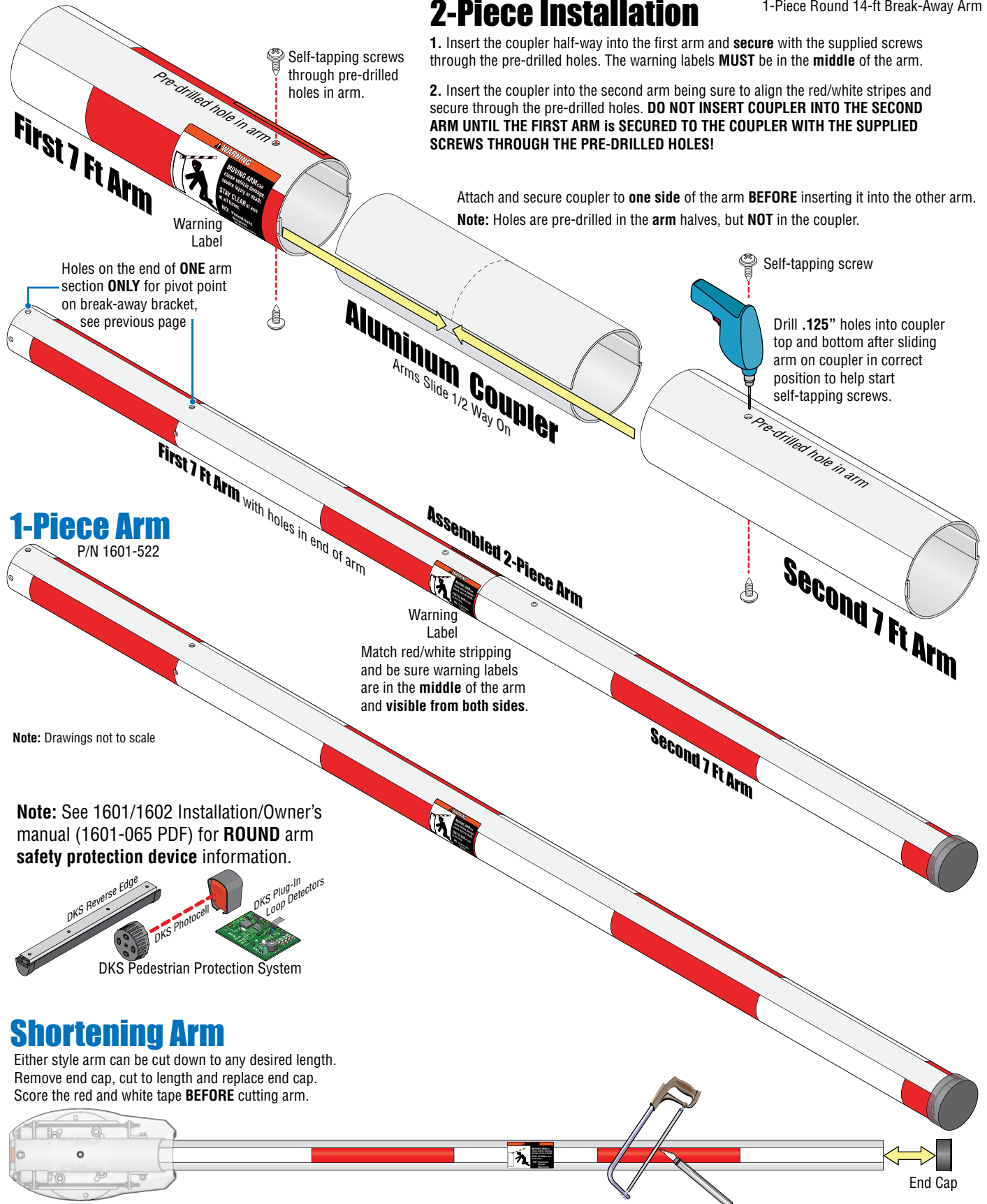
P/N 1601-528

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.

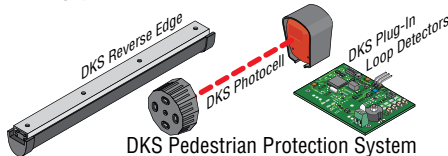


1-Piece Arm

P/N 1601-522

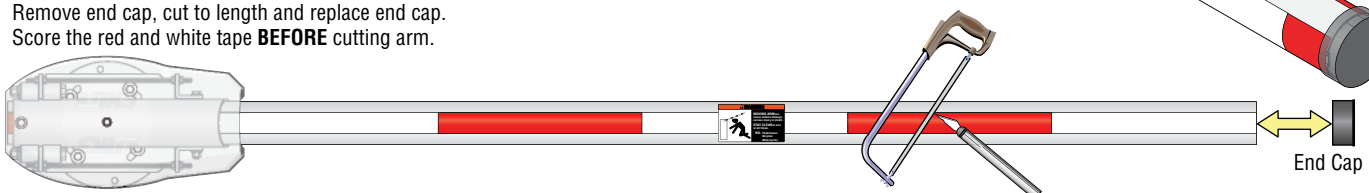
Note: Drawings not to scale

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)

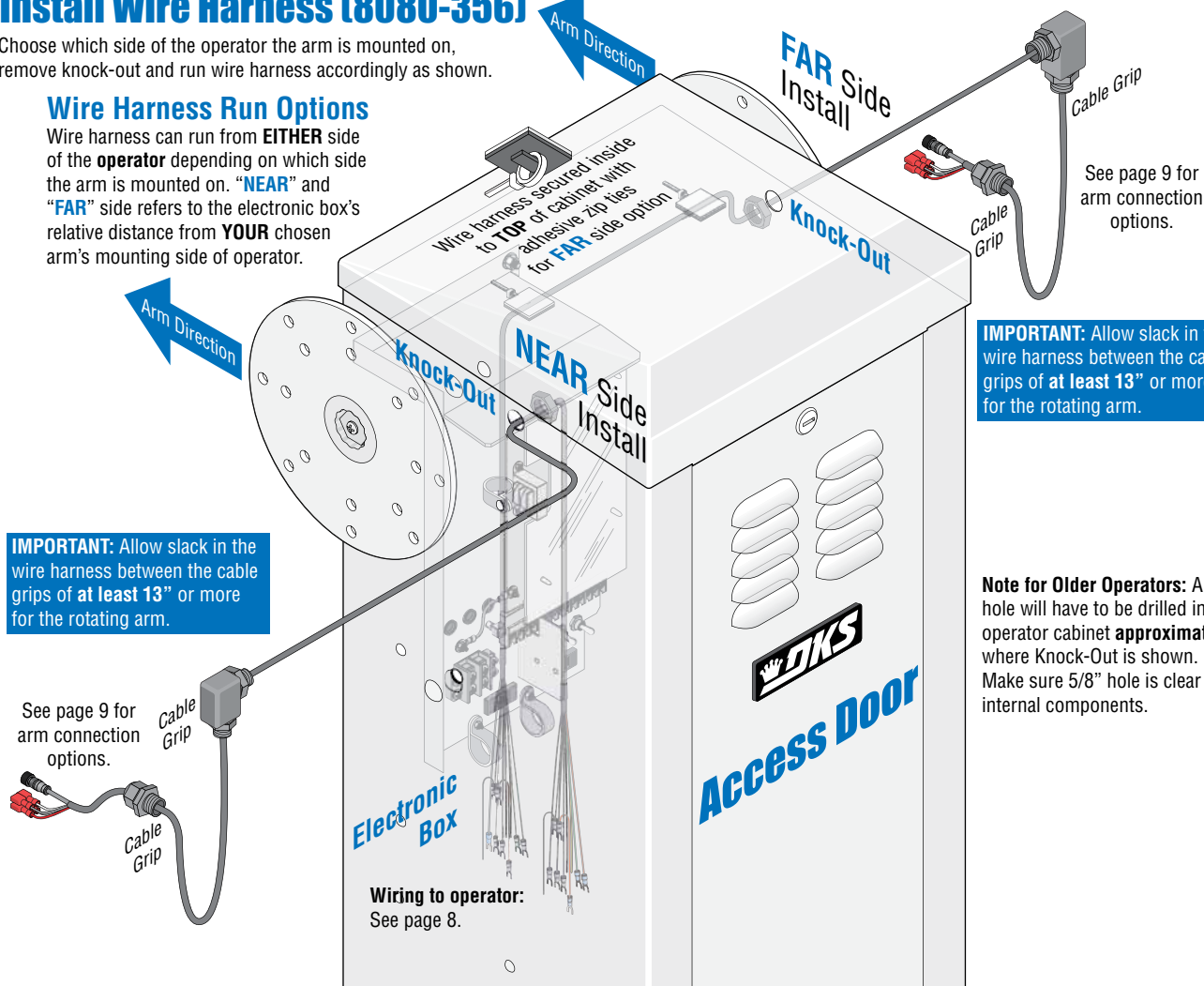
Choose which side of the operator the arm is mounted on, remove knock-out and run wire harness accordingly as shown.

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.



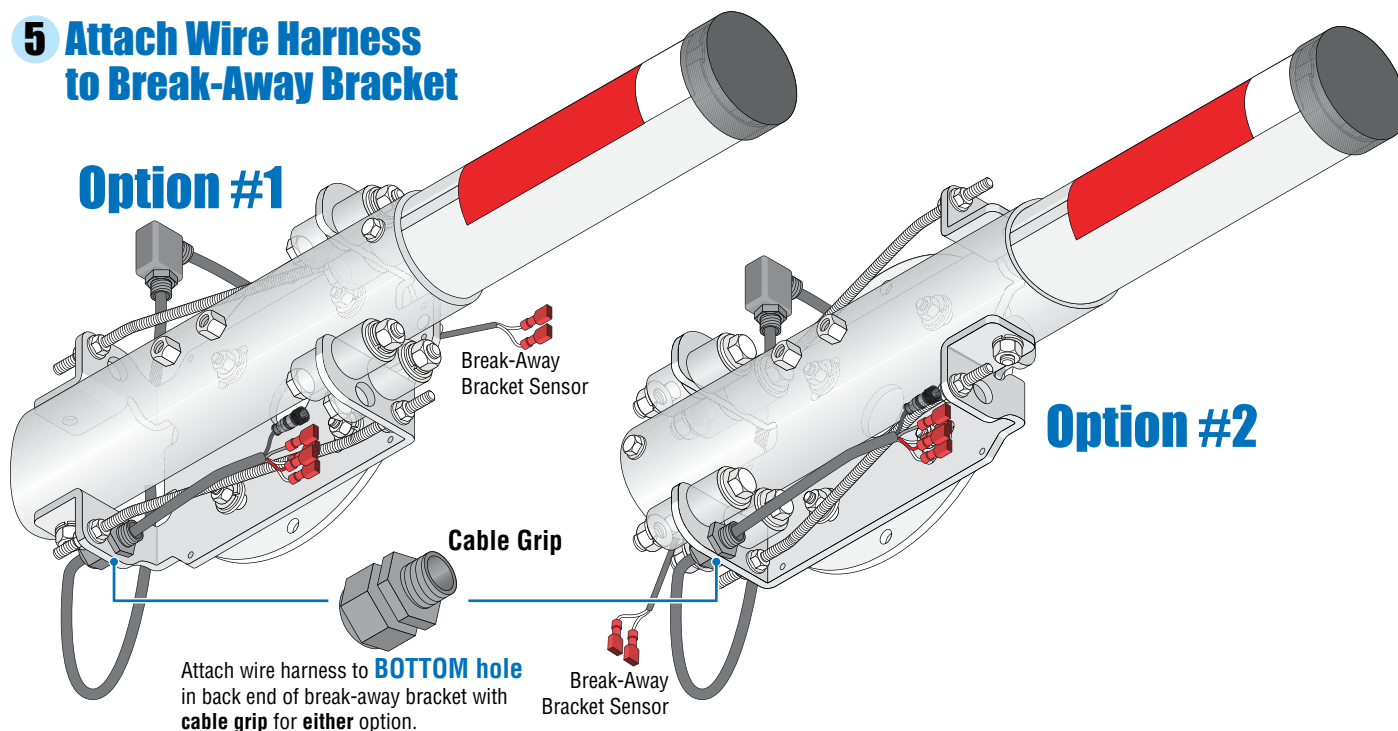
IMPORTANT: Allow slack in the wire harness between the cable grips of **at least 13”** or more for the rotating arm.

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.

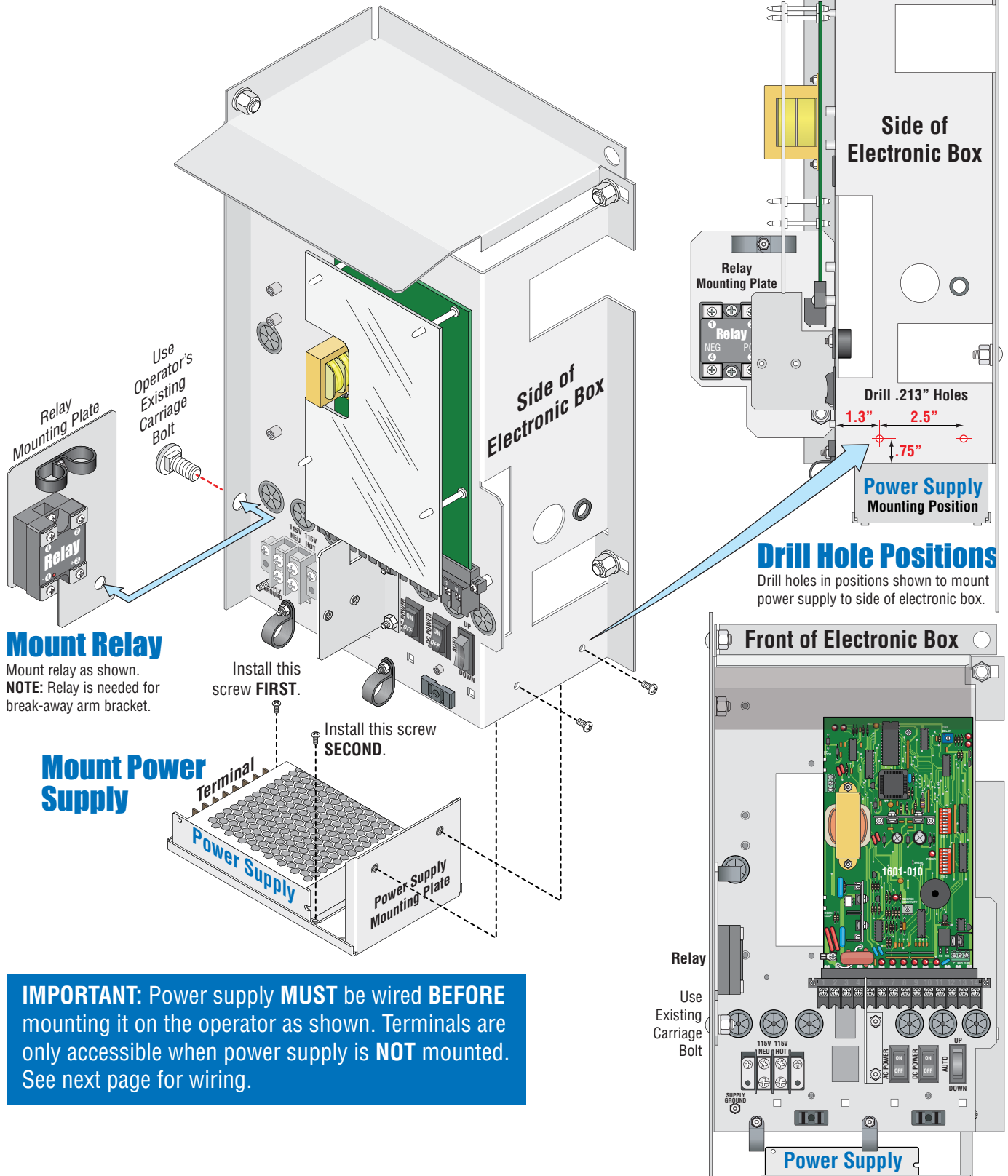
5 Attach Wire Harness to Break-Away Bracket

Option #1

Option #2



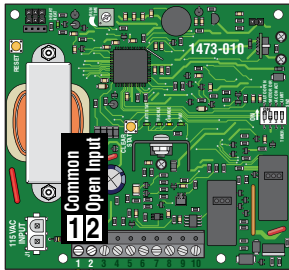
6 Mount Power Supply and Relay



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



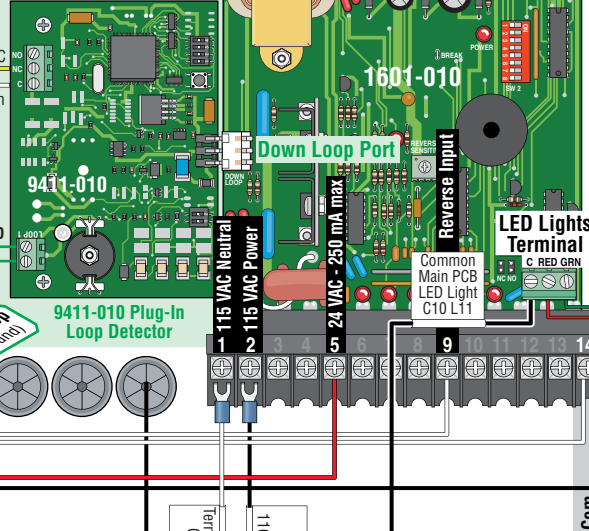
Note: Break-Away arm will **NOT** work with older model barrier operator with 2340-010 convenience open circuit board.

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



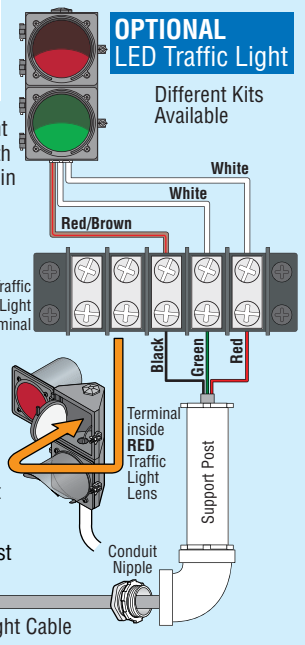
Note: The traffic light is wired together with the break-away arm in **some** installations when desired, so it's shown here for wiring reference.
See Traffic Light 1603-264 PDF for more info **when used.**

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



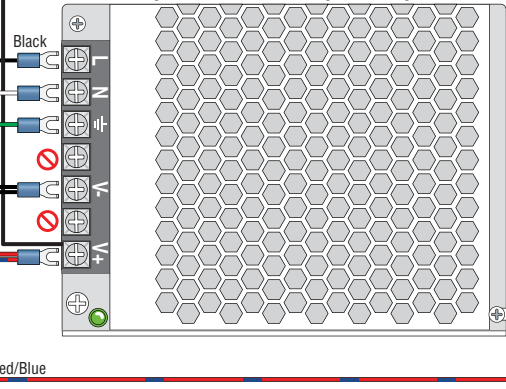
NOT USED (Black Plug wires)

- 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**



Wire Harness
9 labeled wires

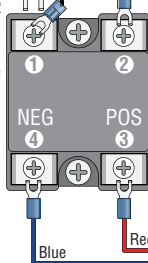
8080-356
Harness

See next page
To Arm

Keep wires clear of all moving parts.

Relay
for Break-Away Sensors

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



12V Positive (+)
Solid State Relay
C3 L3

12V Negative (-)
Solid State Relay
C6 L6

8 Connect Arm to Wire Harness

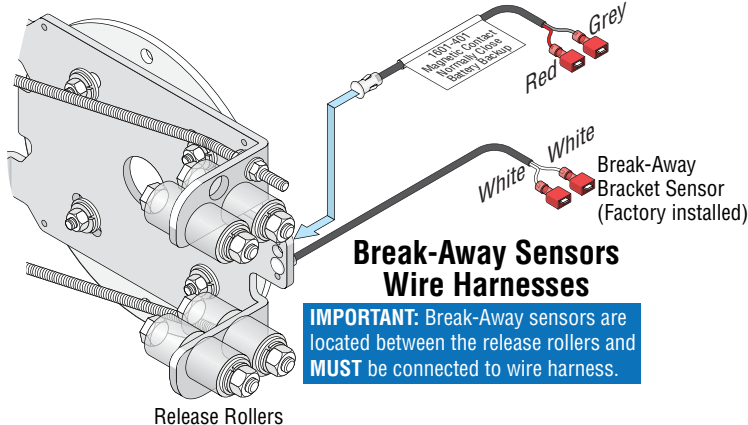
MAKE SURE ALL POWER IS TURNED OFF TO OPERATOR!

To Operator
See previous page

Round Arm

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.

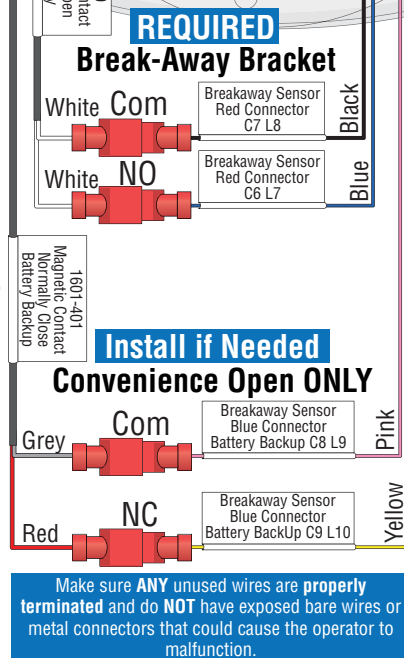


**Break-Away Sensors
Wire Harnesses**

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

Release Rollers

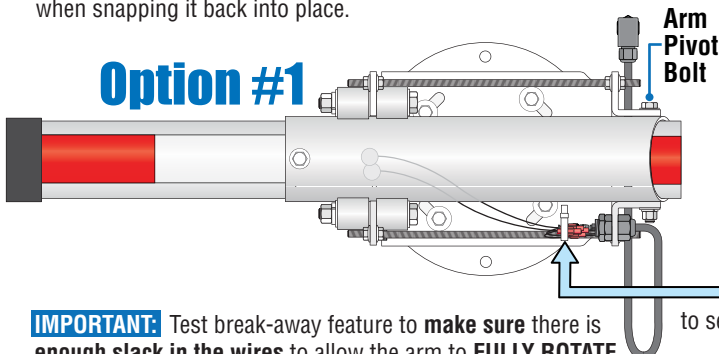
IMPORTANT: When securing the 2 wire harnesses, make sure they have **enough slack** in them to allow the bracket to **rotate** after it breaks away. Don't zip tie them so tightly to the bracket that they **PREVENT** the bracket from **FULLY rotating** when it breaks away. **DO NOT** allow the wire harnesses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



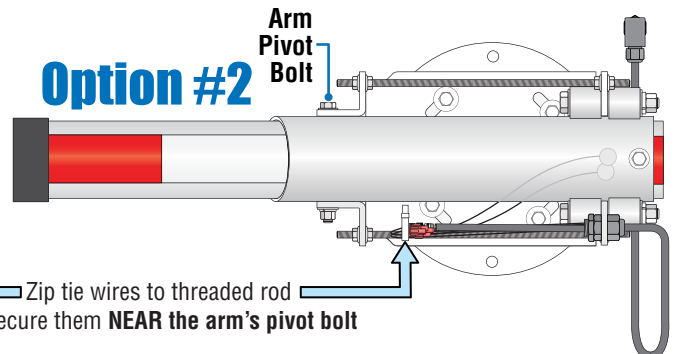
Black Plug Not Used

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

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.

