

OCTAGON FOLDING ARM for a 1601/1603/1620/1625

DoorKing Part Numbers:

1601-812

2-6ft Folding Octagon Arms

1601-242

Standard Mount Hardware Kit

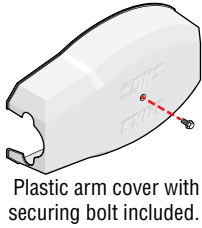
8080-922

2-Reverse/LED Edges Kit

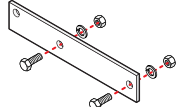
8080-089

Rubber Bumper

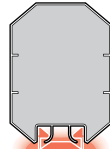
This folding arm is designed **ONLY** for the **1601, 1603** auto-spikes, **1620** lane barrier (1603-580) and the **1625** wedge barrier (1602-590) **with** or **without Reverse/LED Edge** or a **Rubber Bumper**. It can **NOT** be used on the 1602. The **Reverse/LED edge** is sold separately and is **HIGHLY recommended** for safety. This arm is recommended for low headroom applications.



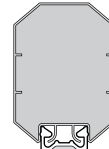
Plastic arm cover with securing bolt included.



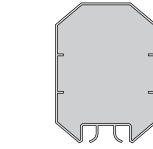
REVERSE Folding Arm Direction Kit
Reverses arm's horizontal direction from the factory setup.
P/N 1601-545 (sold separately)



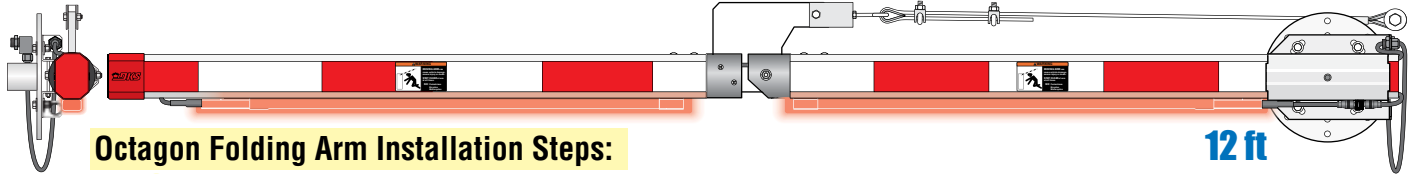
OPTIONAL
Reverse/LED Edge
(HIGHLY Recommended)



OPTIONAL
Rubber Bumper
(Minimal Protection)



Nothing
(NOT Recommended)

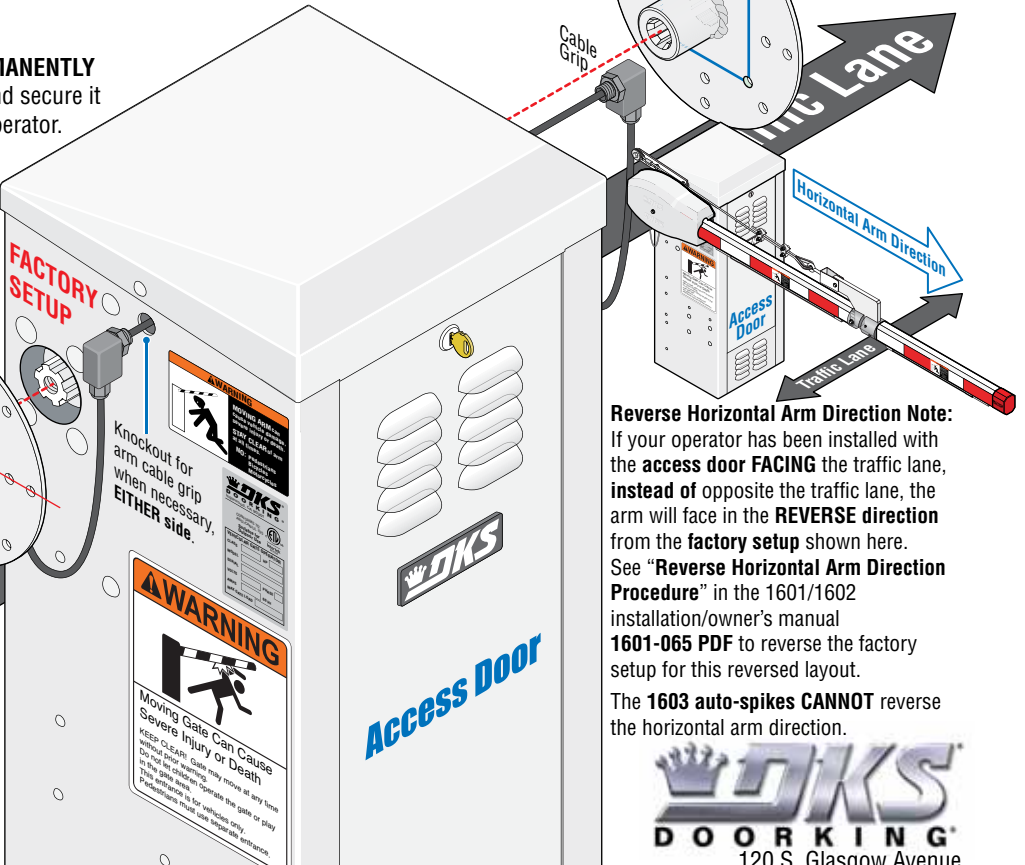
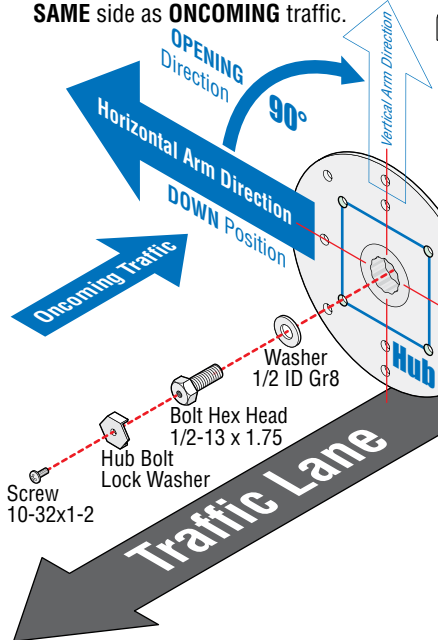


Octagon Folding Arm Installation Steps:

- | | |
|--|-----|
| 1 Install Hub | 1 |
| • 12 Ft Layout OR Shortening Arms Information | 2-3 |
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| 3 Attach Arm to Hub | 5 |
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| 5 Attach Support Cable | 6 |
| 6 Attach Wire Harness to Arm Bracket (For 8080-922 kit) | 6 |
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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. 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.

The **1603 auto-spikes CANNOT** reverse the horizontal arm direction.



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

12 Ft Layout Information

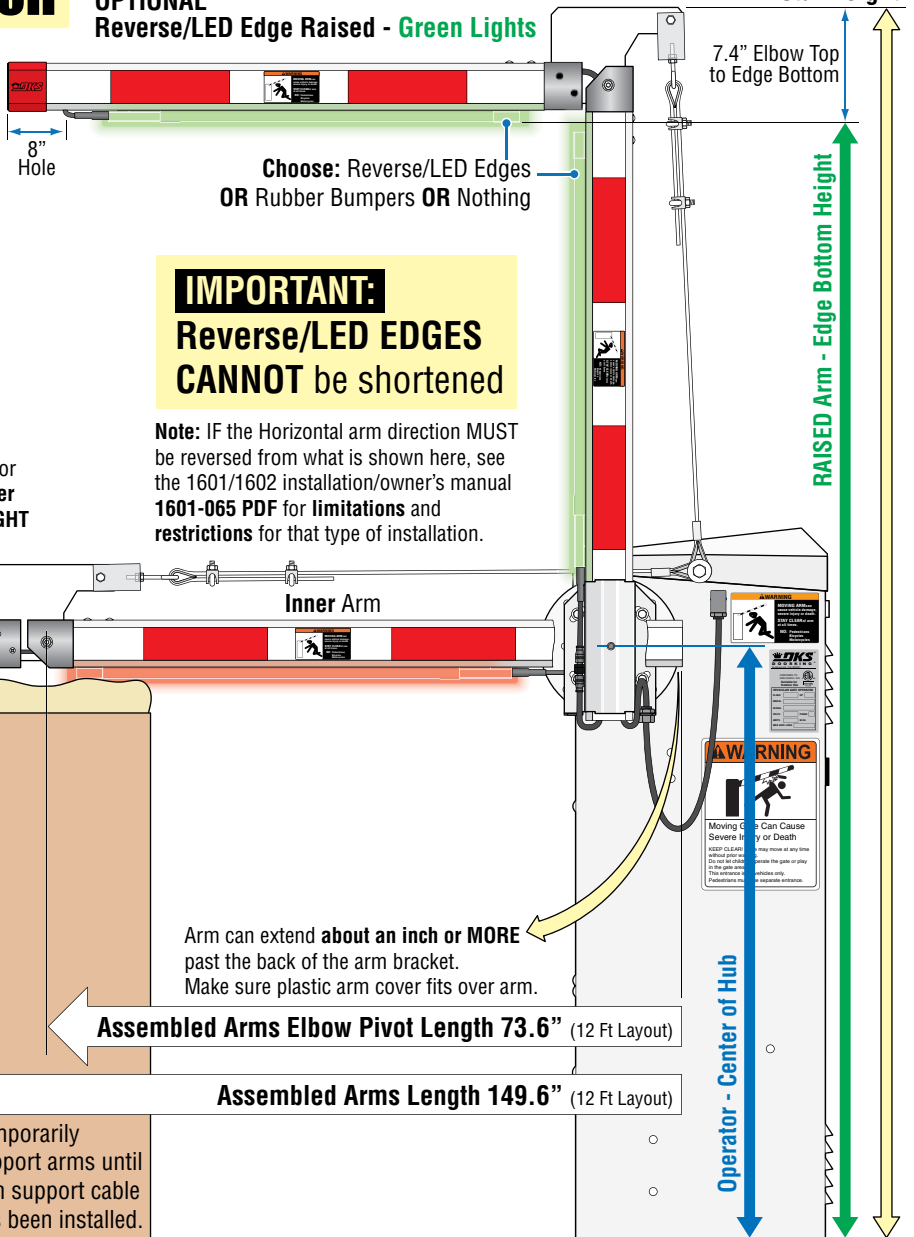
1601 (1601-380/480)
 102.5" Total Height
 34.5" Operator - Center of Hub Height
 95.1" RAISED Arm - Bottom of Edge Height

1603 Auto-Spikes (1603-380)
1620 Lane Barrier (1603-580)
 106.5" Total Height
 38.5" Operator - Center of Hub Height
 99.1" RAISED Arm - Edge Bottom Height

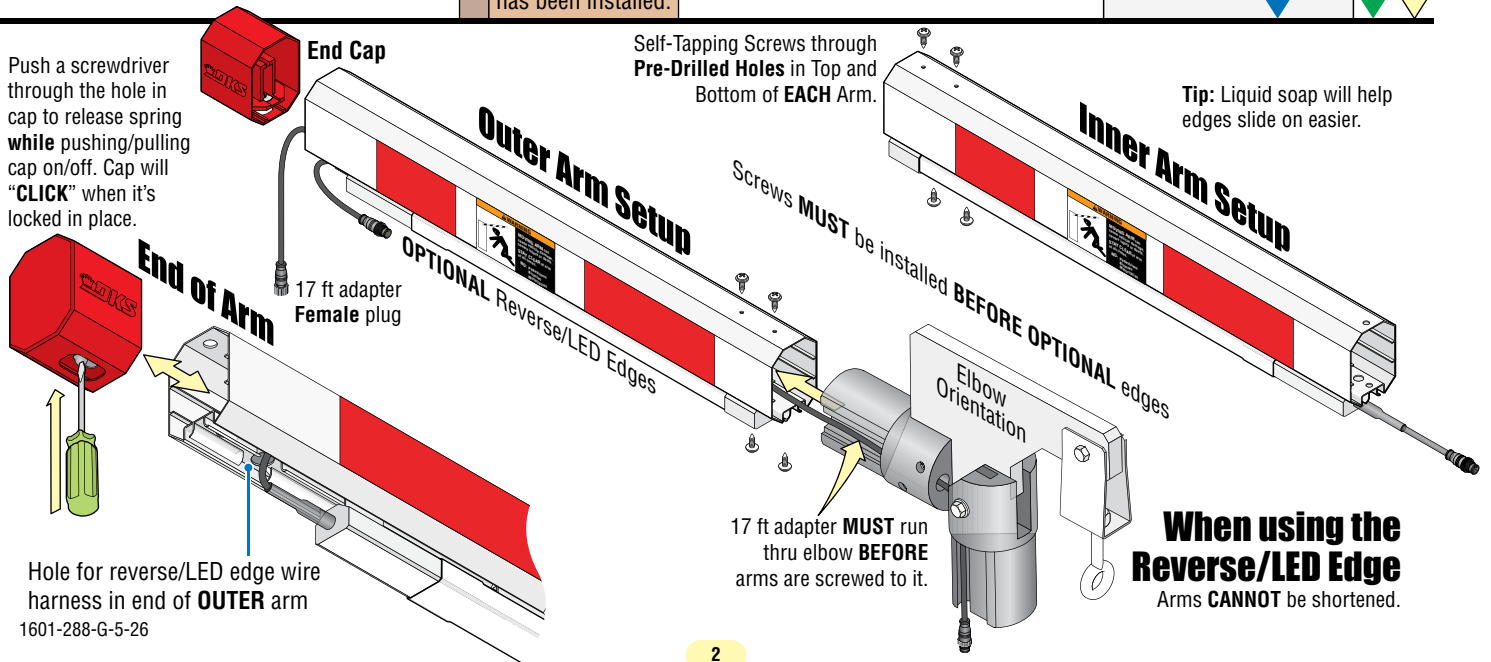
IMPORTANT

Height Measurement Note:
 Arm is positioned 1" beyond the back of the arm bracket for these height measurements. Arm can be positioned greater or less than 1" beyond the arm bracket if desired but HEIGHT measurements WILL change accordingly.

OPTIONAL Reverse/LED Edge Raised - Green Lights



Push a screwdriver through the hole in cap to release spring while pushing/pulling cap on/off. Cap will "CLICK" when it's locked in place.



IF Shortening Arm

Arms can be **shortened** if desired. Typically because of **height restrictions**. Use these measurements to help you determine **YOUR Specific arm lengths** needed because of **limitations** and **restrictions** for **YOUR** installation. Follow the procedure below.

Note: IF the Horizontal arm direction **MUST** be reversed from what is shown here, see the 1601/1602 installation/owner's manual **1601-065 PDF** for **limitations** and **restrictions** for that type of installation.

IMPORTANT: Reverse/LED EDGES CANNOT be used when shortening arms, **ONLY** Rubber Bumper

1601 (1601-380/480)

102.5" Total Height with UNCUT Arms

34.5" Operator - Center of Hub Height

96" RAISED Arm - Bottom of UNCUT Arm Height

1603 Auto-Spikes (1603-380)

1620 Lane Barrier (1603-580)

106.5" Total Height with UNCUT Arms

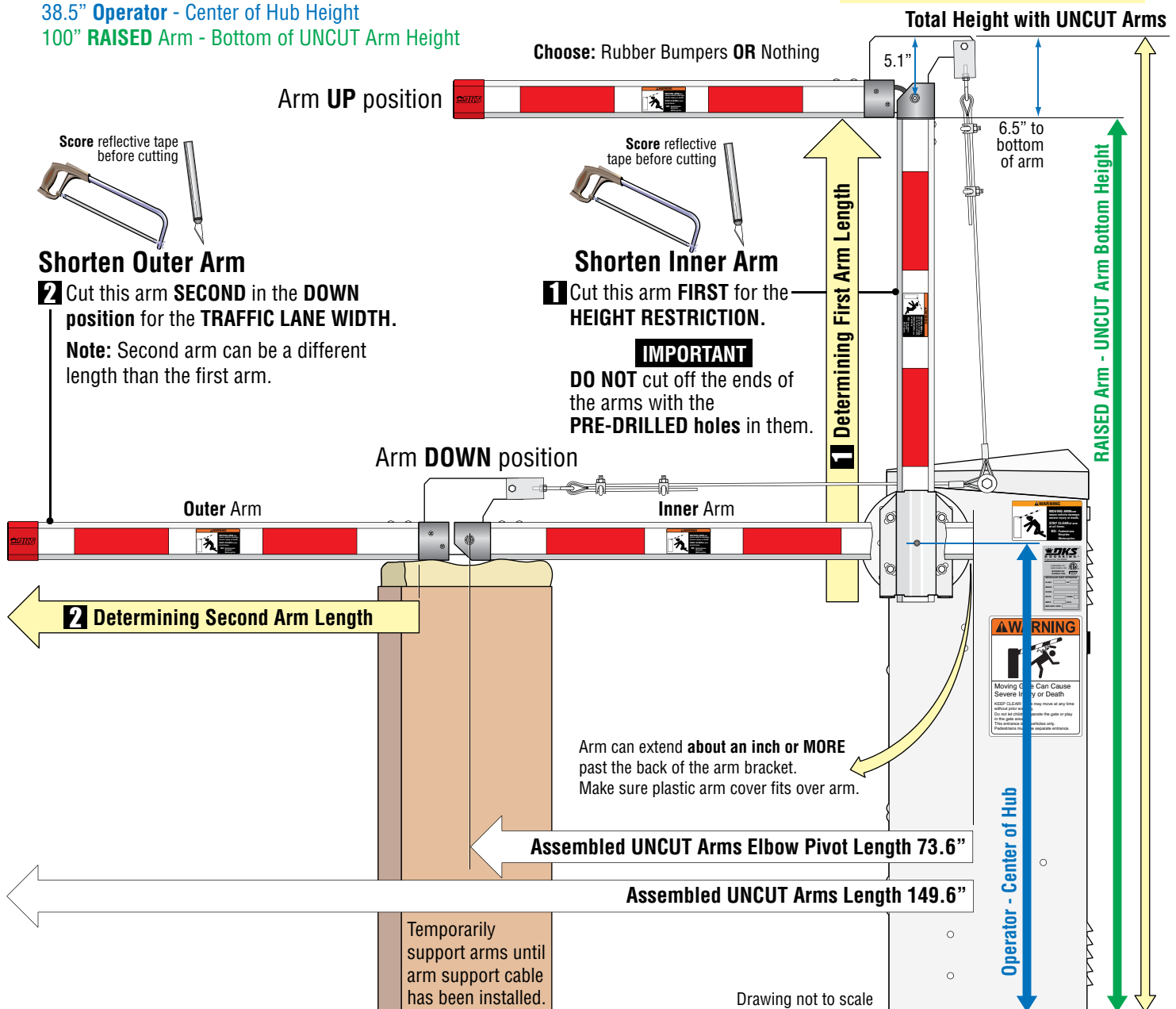
38.5" Operator - Center of Hub Height

100" RAISED Arm - Bottom of UNCUT Arm Height

SHORTENED Arm Installation WITHOUT Reverse/LED Edge Note:

The installation is the same without **ANY** of the wiring.

ONLY STEPs 1, 2, 3, 5 and 10 are needed. Rubber Bumper **CAN** be installed if desired, see page 11.



2 Arm Assembly with Reverse Edge

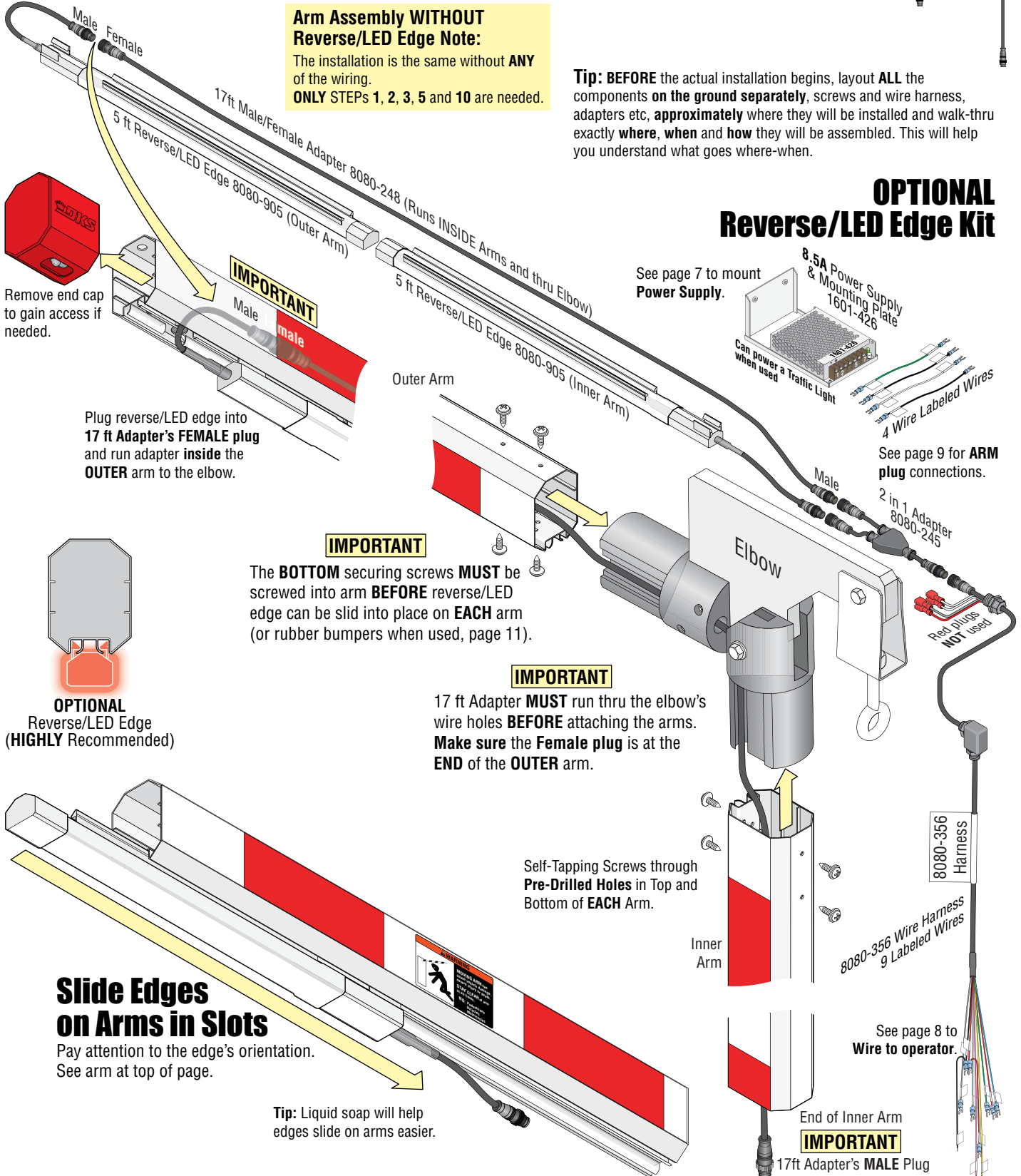
Assembled arm without support cable

The **EASIEST** way to install the arm is to **assemble it on the ground** without the support cable. **THEN** carefully lift and attach it to the operator **hub** using **temporary support** under the arm to hold it in place (Step 3). **Attach** and **adjust** the support cable (Step 5). Pay attention to the **IMPORTANT** parts below to avoid installing parts of the arm **BEFORE** they should be installed.

Arm Assembly WITHOUT Reverse/LED Edge Note:
The installation is the same without **ANY** of the wiring.
ONLY STEPS 1, 2, 3, 5 and 10 are needed.

Tip: **BEFORE** the actual installation begins, layout **ALL** the components **on the ground separately**, screws and wire harness, adapters etc, **approximately** where they will be installed and walk-thru exactly **where, when** and **how** they will be assembled. This will help you understand what goes where-when.

OPTIONAL Reverse/LED Edge Kit



Remove end cap to gain access if needed.

Plug reverse/LED edge into 17 ft Adapter's FEMALE plug and run adapter **inside** the OUTER arm to the elbow.

OPTIONAL Reverse/LED Edge (HIGHLY Recommended)

IMPORTANT
The **BOTTOM** securing screws **MUST** be screwed into arm **BEFORE** reverse/LED edge can be slid into place on **EACH** arm (or rubber bumpers when used, page 11).

IMPORTANT
17 ft Adapter **MUST** run thru the elbow's wire holes **BEFORE** attaching the arms. **Make sure** the **Female plug** is at the **END** of the **OUTER** arm.

Self-Tapping Screws through **Pre-Drilled Holes** in Top and Bottom of **EACH** Arm.

Slide Edges on Arms in Slots

Pay attention to the edge's orientation. See arm at top of page.

Tip: Liquid soap will help edges slide on arms easier.

See page 7 to mount **Power Supply**.

8.5A Power Supply & Mounting Plate 1601-426
Can power a Traffic Light
4 Wire Labeled Wires

See page 9 for **ARM plug** connections.

2 in 1 Adapter 8080-245

Red Plugs **NOT** Used

8080-356 Harness

8080-356 Wire Harness 9 Labeled Wires

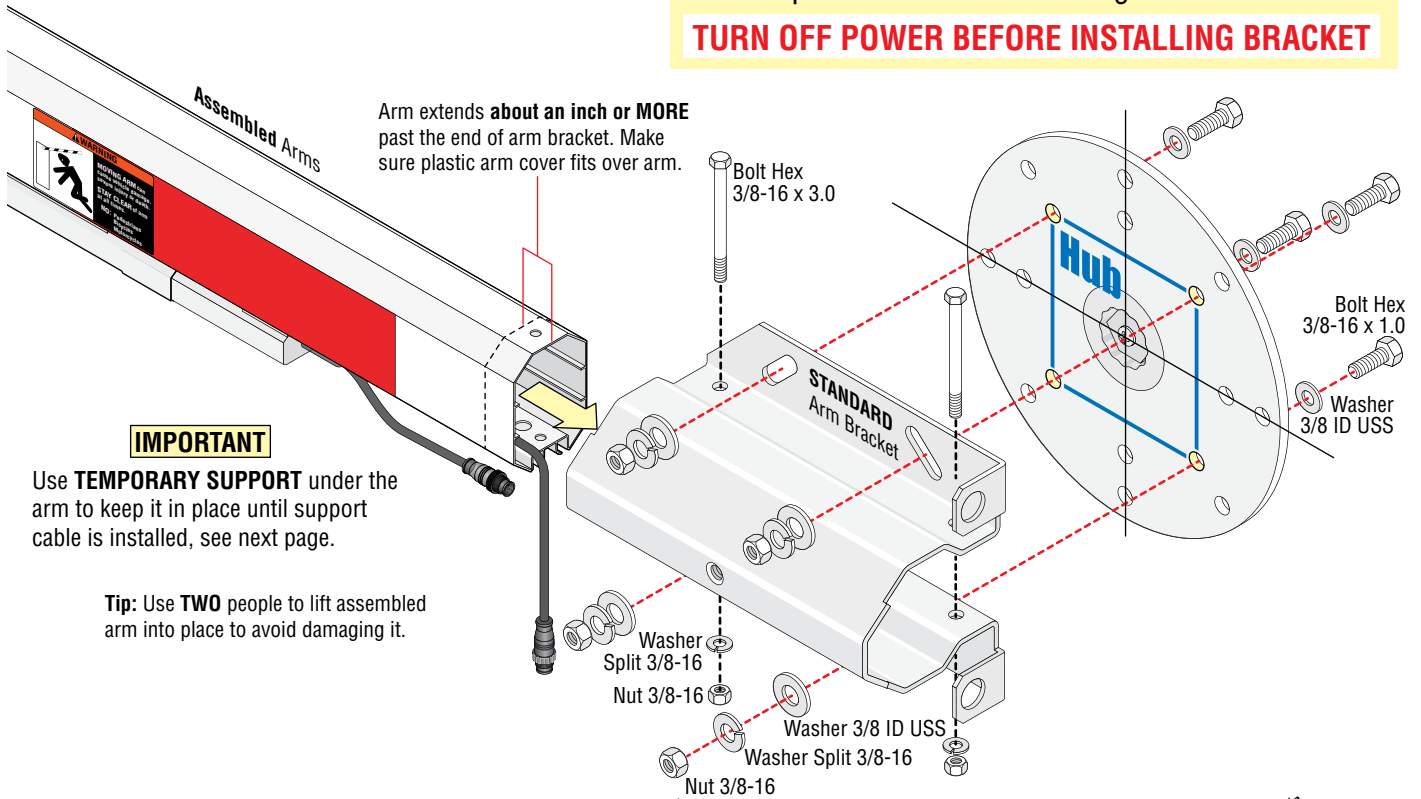
See page 8 to **Wire to operator**.

End of Inner Arm
IMPORTANT
17ft Adapter's MALE Plug

3 Attach Arm to Hub

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

TURN OFF POWER BEFORE INSTALLING BRACKET

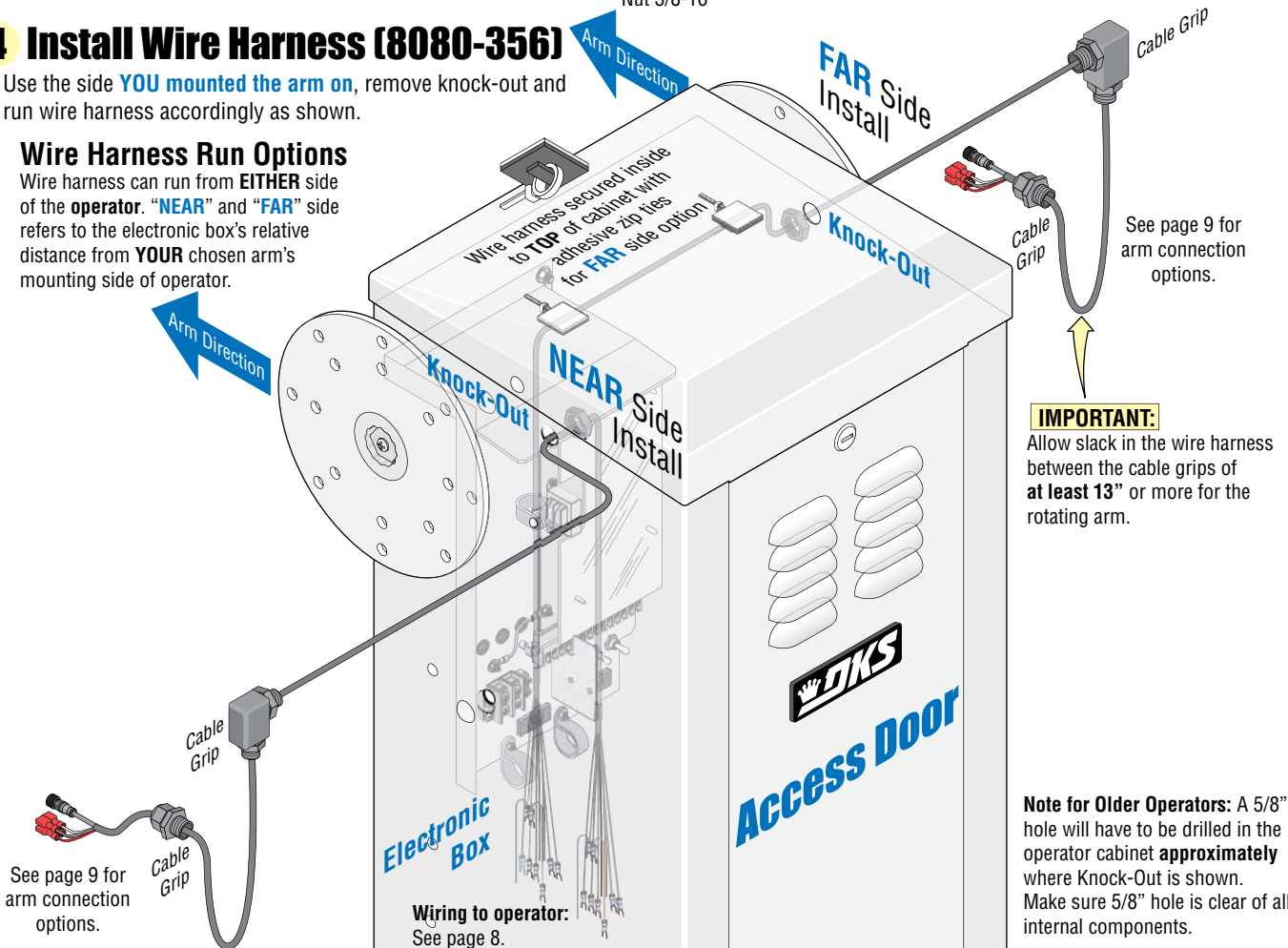


4 Install Wire Harness (8080-356)

Use the side **YOU** mounted the arm on, remove knock-out and run wire harness accordingly as shown.

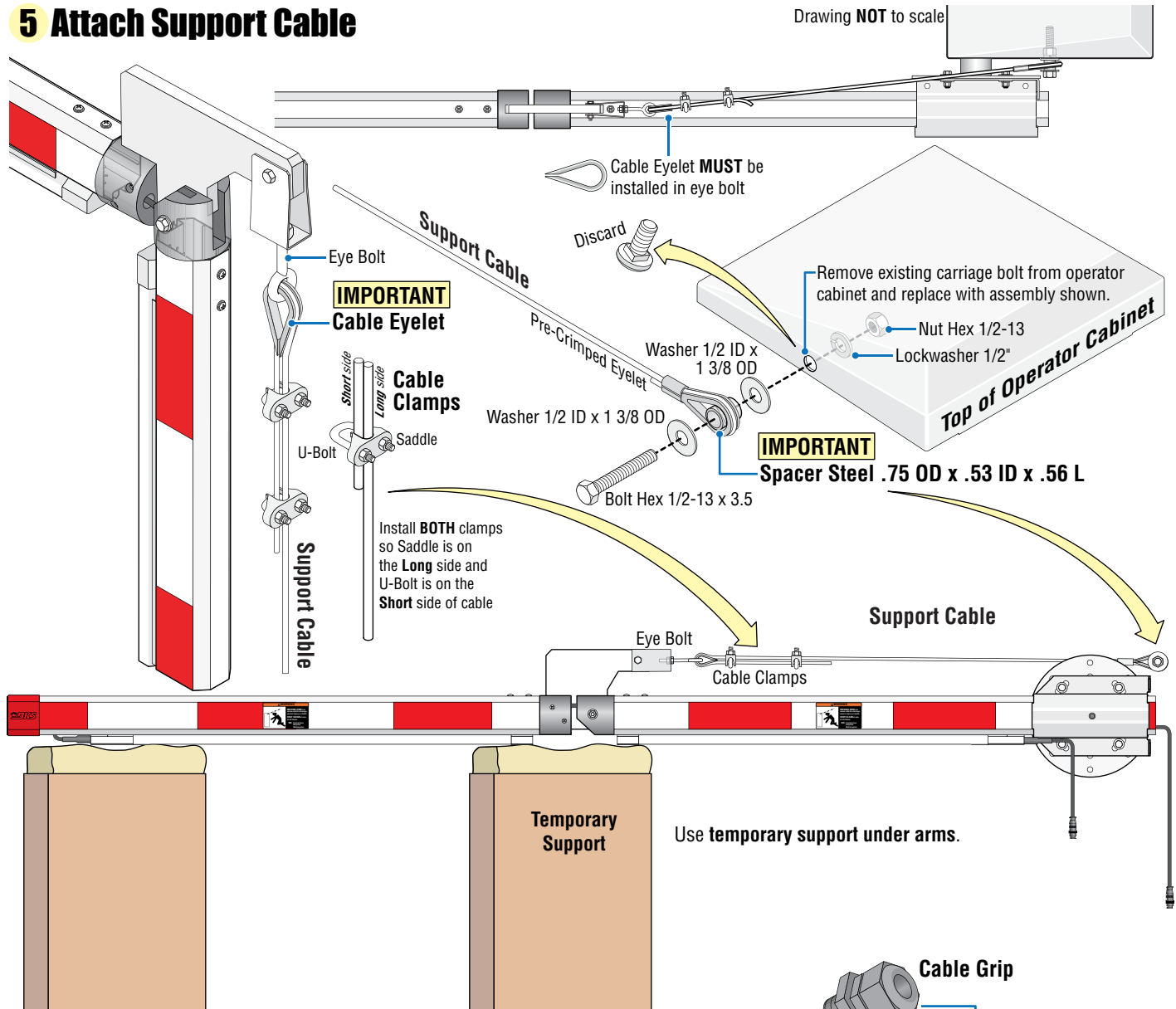
Wire Harness Run Options

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



5 Attach Support Cable

Drawing NOT to scale

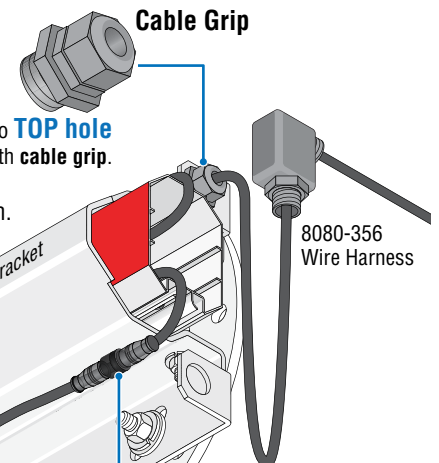


6 Attach Wire Harness to Arm Bracket

Tip: Stuff a "CLEAN" shop rag or two inside the end of the arm **AFTER** all the wires have been put in to keep them from **moving around**. Then wrap **heavy duty tape** over the end of the arm to keep everything securely inside. This will help keep the wires and plugs from getting damaged from movement over time.

Secure All wires and adapters INSIDE end of arm. Make sure plastic arm cover will fit over the wires and it doesn't **RUB** any wires during operation.

Attach wire harness to **TOP hole** in end of bracket with **cable grip**.



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

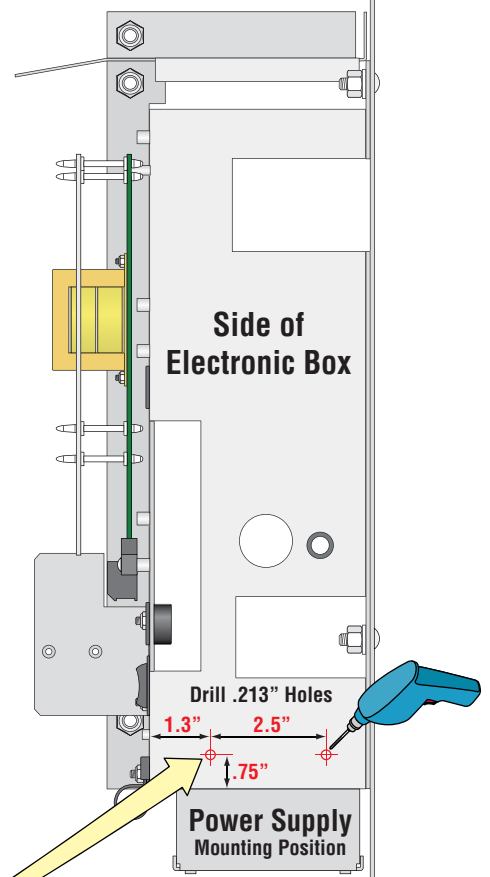
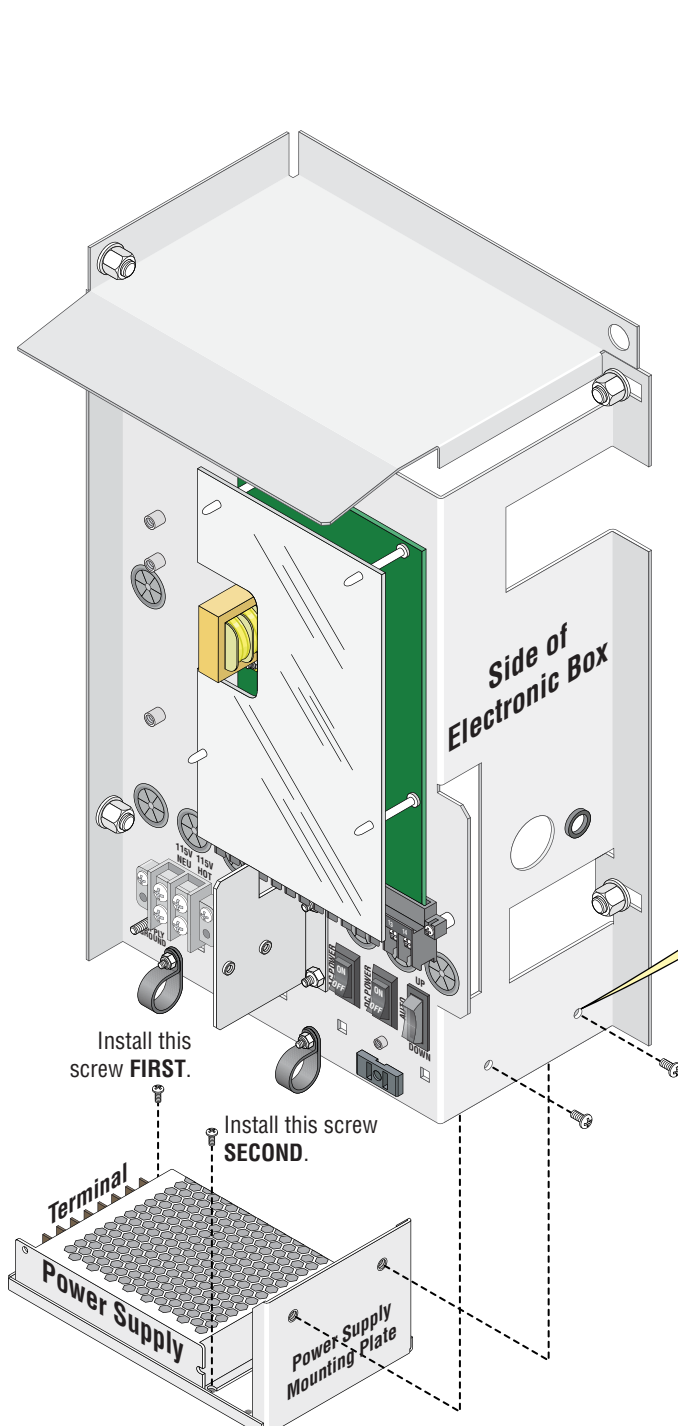
ALL Plugs have an alignment slot for connections. See pages 4 and 9 for **ALL** arm plug connections.

7 Mount Power Supply

DoorKing Part Number:

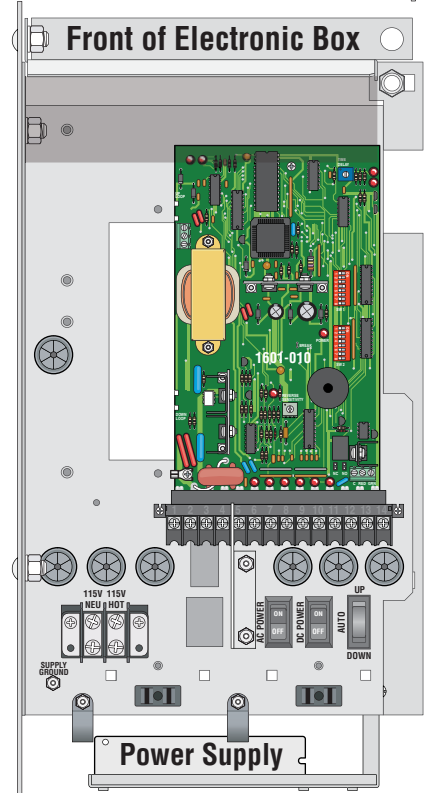
8080-922

2-Reverse Edge & LEDs Kit



Drill Hole Positions

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



Mount Power Supply

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.

8 Connect Wire Harness to Operator and Wiring OPTIONS

MAKE SURE ALL POWER IS TURNED OFF TO OPERATOR!

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

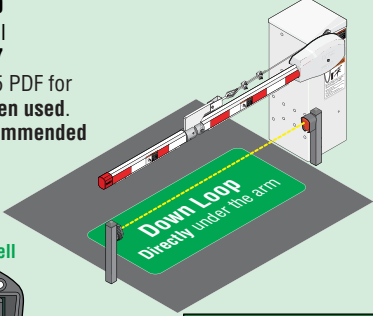
P/N 9411-010

DKS Photocell

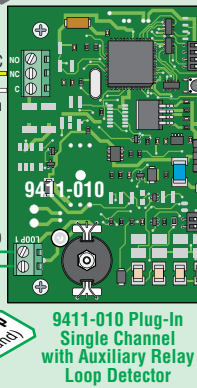
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See 1601-065 PDF for more info when used.

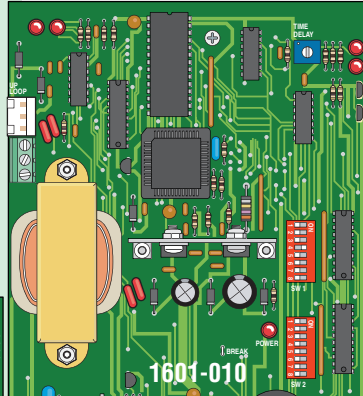
HIGHLY Recommended



8080-057
DKS Photocell



9411-010 Plug-In
Single Channel
with Auxiliary Relay
Loop Detector



1601-010

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

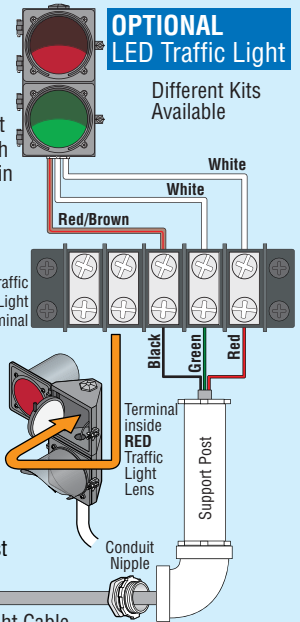
P/N 1603-221

6 Ft Cable / 35" Post

P/N 1603-222

11 Ft Cable / 95" Post

P/N 1603-223



OPTIONAL
LED Traffic Light

Different Kits Available

Traffic Light Cable

Wire Harness

9 labeled wires

8080-356
Harness

To Arm See next page

Keep wires clear of all moving parts.



Required

Ground Panel Stud L24

Green

Terminal 1 - Neutral Circuit Board L20

Terminal 9 Reverse Edge C5 L5

Terminal 14 Main PCB Reverse Edge C4 L4

Common Main PCB LED Light C10 L11

Common Main PCB 12V Negative C7 L12

L - Line Transformer L21

N - Neutral Transformer L22

Ground Transformer L23

V- Transformer 8.5A L18

V+ Transformer 8.5A L17

Black

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Grey/Pink

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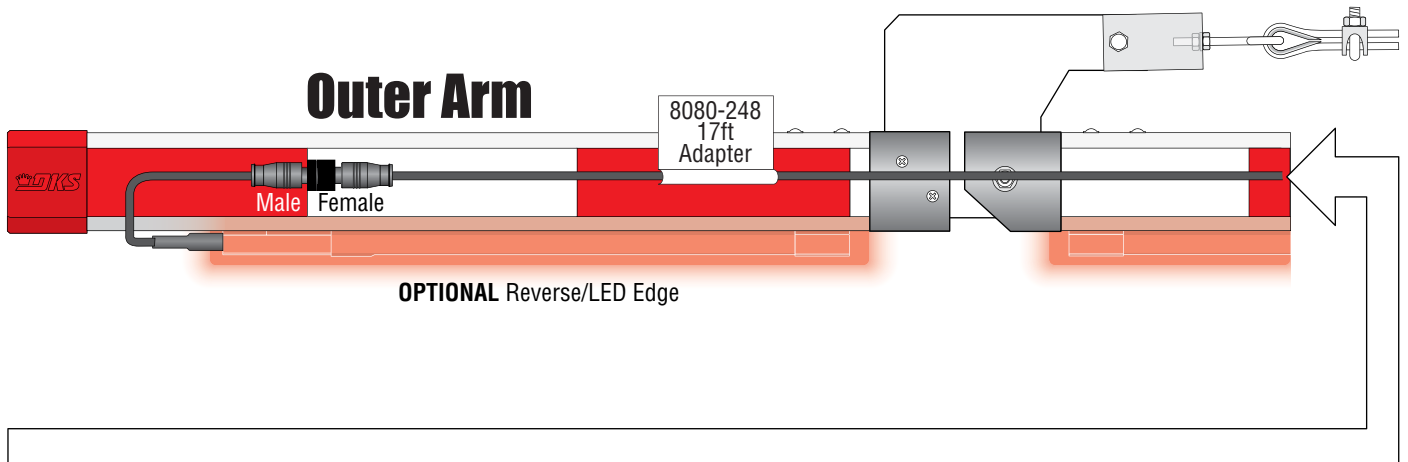
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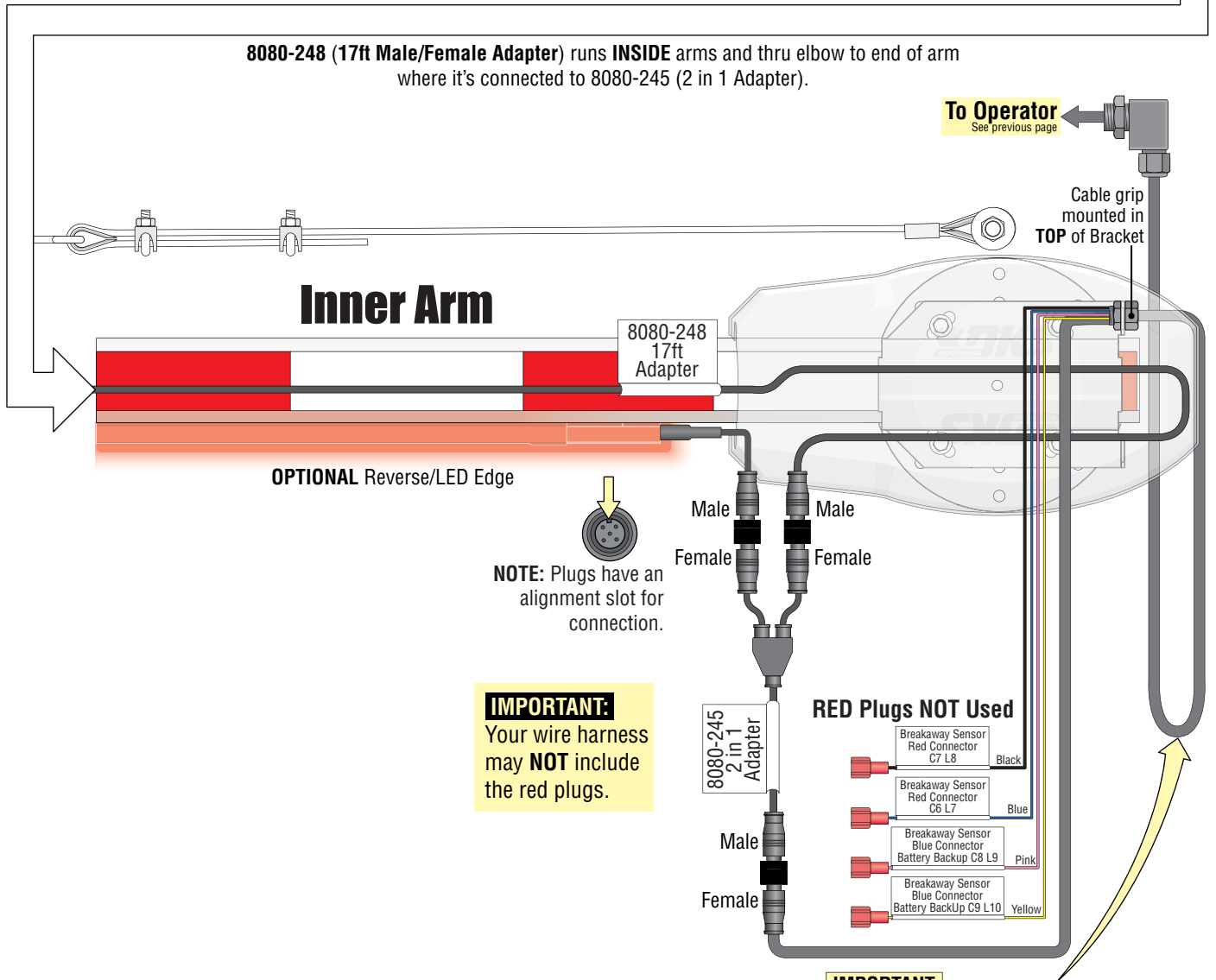
Black

9 Connect Wire Harness to Folding Arm

MAKE SURE ALL POWER IS TURNED OFF TO OPERATOR!



8080-248 (17ft Male/Female Adapter) runs **INSIDE** arms and thru elbow to end of arm where it's connected to 8080-245 (2 in 1 Adapter).



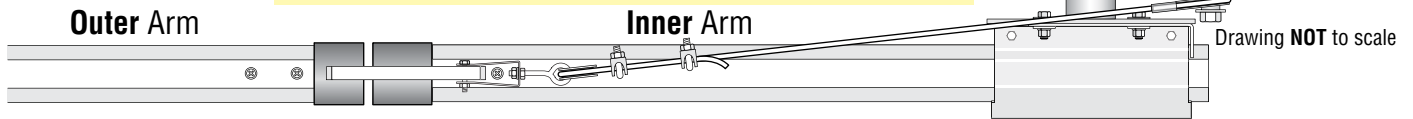
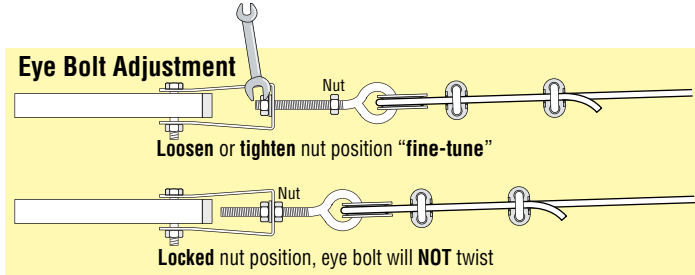
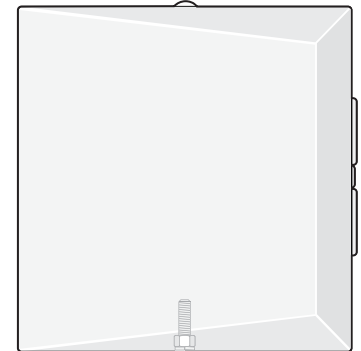
IMPORTANT: Allow slack in the wire harness between the cable grips of **at least 13"** or more for the rotating arm.

10 Adjust Support Cable

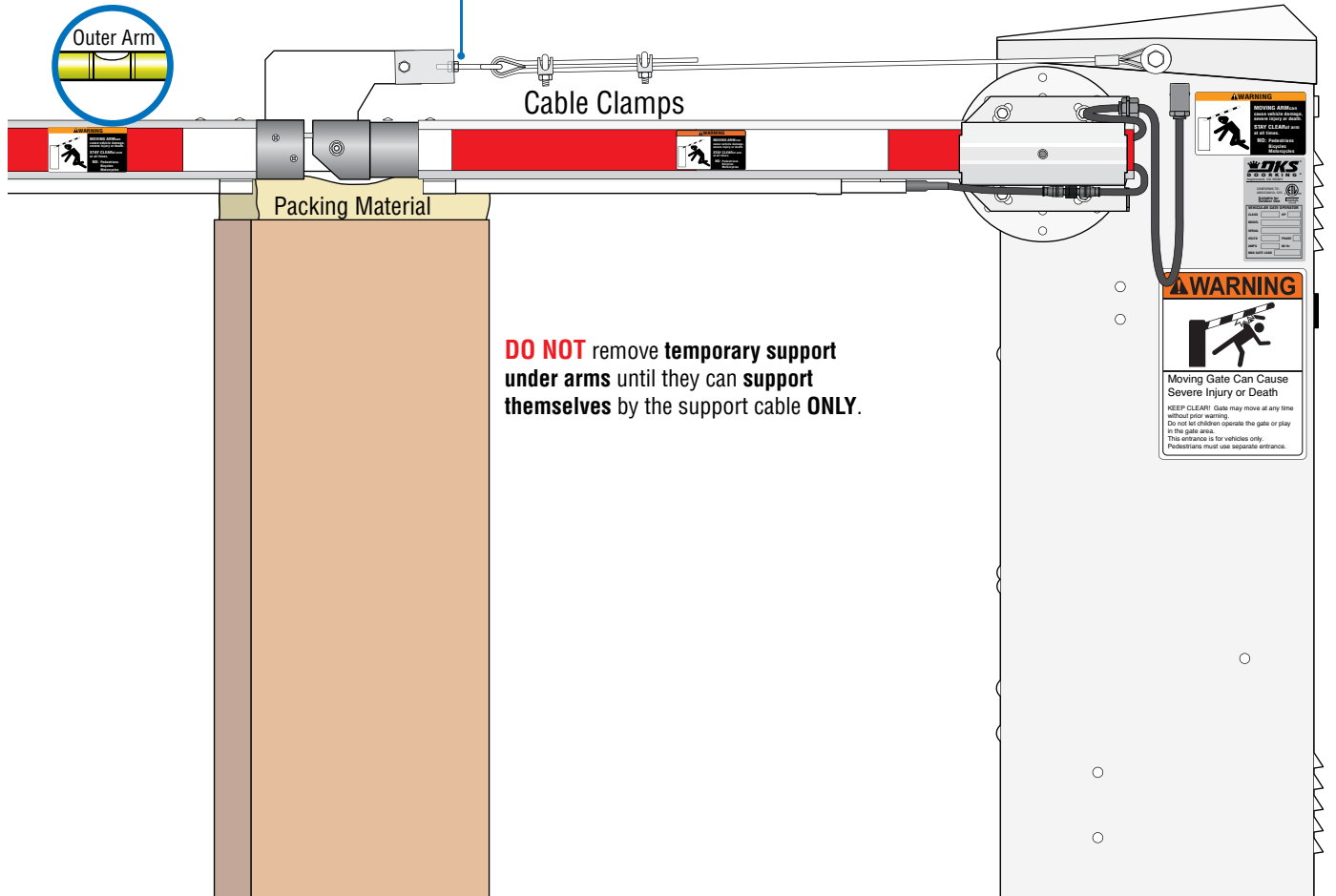
Important: Use **cable clamps** to adjust the outer arm **approximately** level. Adjust the **eye bolt** to **“fine-tune”** outer arm to **completely** level.

DO NOT adjust cable **too tight** or it **will bind**.

Rotate arm up and down a few times. Re-adjust cable tension with **eye bolt** to **re-level OUTER arm if necessary**. Make sure that cable assembly is **not binding** or **twisting** and everything moves freely while cycling.



Use **Eye Bolt** to **“fine tune”** outer arm level.
Lock eye bolt with nut to keep eye bolt from twisting.



DO NOT remove **temporary support** under arms until they can **support themselves** by the support cable **ONLY**.

Rubber Bumper Installation

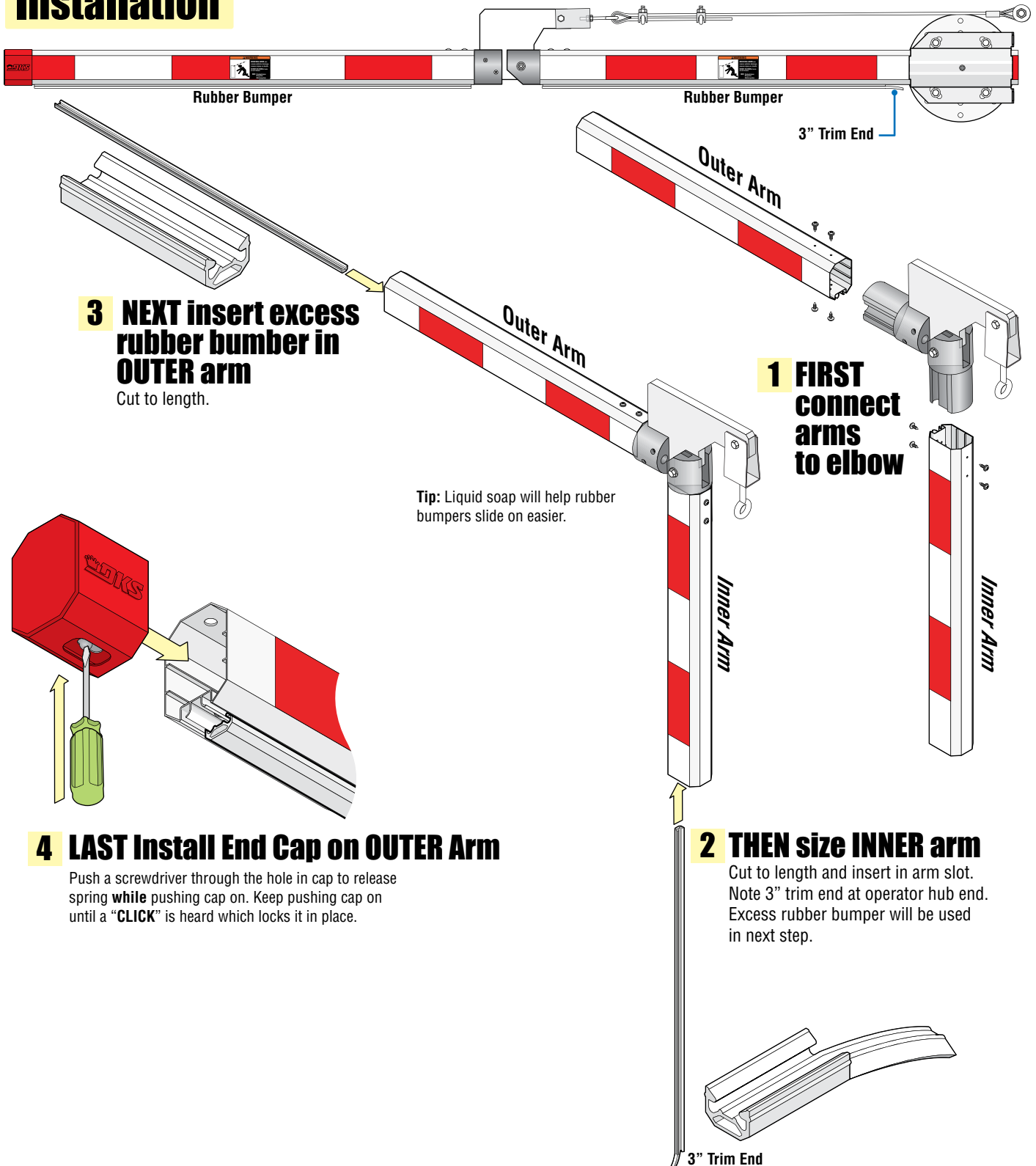
DoorKing Part Number

8080-089

14 Ft Rubber Bumper

This 14 ft rubber bumper is designed to install on a folding **octagon arm**. it offers **MINIMAL** safety protection.

Installation



3 NEXT insert excess rubber bumper in OUTER arm
Cut to length.

1 FIRST connect arms to elbow

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

4 LAST Install End Cap on OUTER Arm

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.

2 THEN size INNER arm

Cut to length and insert in arm slot. Note 3" trim end at operator hub end. Excess rubber bumper will be used in next step.

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