

# 3-PIECE OCTAGON ARM WITH REVERSE/LED EDGE KIT INSTALL

These Reverse/LED Edge kits are designed **ONLY** for the 1602 model barrier gate operator using a 3-Piece **OCTAGON** arm.

DoorKing Part Numbers:

**1602-282**  
20 ft Arm and Hardware Only  
**AND**  
**1602-982**  
20 ft Reverse/LED Edge Kit

**1602-284**  
24 ft Arm and Hardware Only  
**AND**  
**1602-984**  
24 ft Reverse/LED Edge Kit

**1602-287**  
27 ft Arm and Hardware Only  
**AND**  
**1602-987**  
27 ft Reverse/LED Edge Kit

**IMPORTANT NOTE:** Installation of arms **WITHOUT** Reverse/LED Edge kit see pages 7-9.

## Overview of Installation

Prior to beginning the installation of the 3-piece arms **WITH** Reverse/LED edge kit, see pages 1-6. We suggest that you **become familiar** with the instructions, illustrations, and wiring guidelines **BEFORE** beginning. General **hardware** parts are shown on page 7. **Individual replacement part numbers** are listed throughout manual.

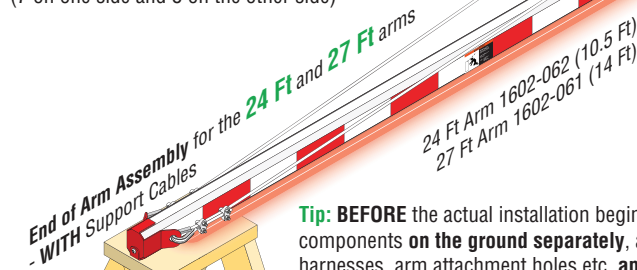
### COUNTERWEIGHT PLATE TOTAL AMOUNTS:

(Additional plates come with the Reverse/LED Edge kits to counteract the extra weight of the reverse/LED edges)

**20 Ft arm** with Reverse/LED Edge kit: **9 plates TOTAL**  
(4 on one side and 5 on the other side)

**24 Ft arm** with Reverse/LED Edge kit: **12 plates TOTAL**  
(6 on each side)

**27 Ft arm** with Reverse/LED Edge kit: **15 plates TOTAL**  
(7 on one side and 8 on the other side)



**Tip:** **BEFORE** the actual installation begins, layout **ALL** the components **on the ground separately**, all hardware, wire harnesses, arm attachment holes 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.

**Tip:** Liquid soap will help reverse edges slide **ON** arms easier and 2-Ft arm inserts slide **IN** arms easier.

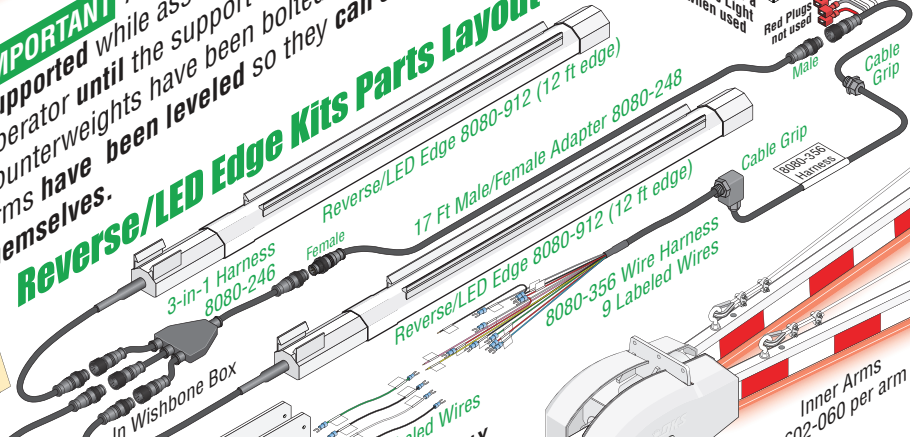
Outer Arm Reverse/LED Edge (Different Lengths)  
20 Ft Arm - 8080-305 (5 ft edge)  
24 Ft Arm - 8080-309 (9 ft edge)  
27 Ft Arm - 8080-912 (12 ft edge)

Aluminum Stopper (Outer arm ONLY)  
Additional Counterweight Plates (number varies per kit)

End of Arm Assembly for the **20 Ft arm ONLY** - NO Support Cables  
20 Ft Arm 1602-063 (7 Ft)  
Red Plastic End Cap

**IMPORTANT:** Arms **MUST** be temporarily supported while assembling them on the operator until the support cables and counterweights have been bolted on **AND** the arms have been leveled so they can support themselves.

## Reverse/LED Edge Kits Parts Layout



# General Installation Procedure

Bolt hubs on operator. Test **UP** and **DOWN** hub positions, **THEN TURN POWER OFF** to continue.

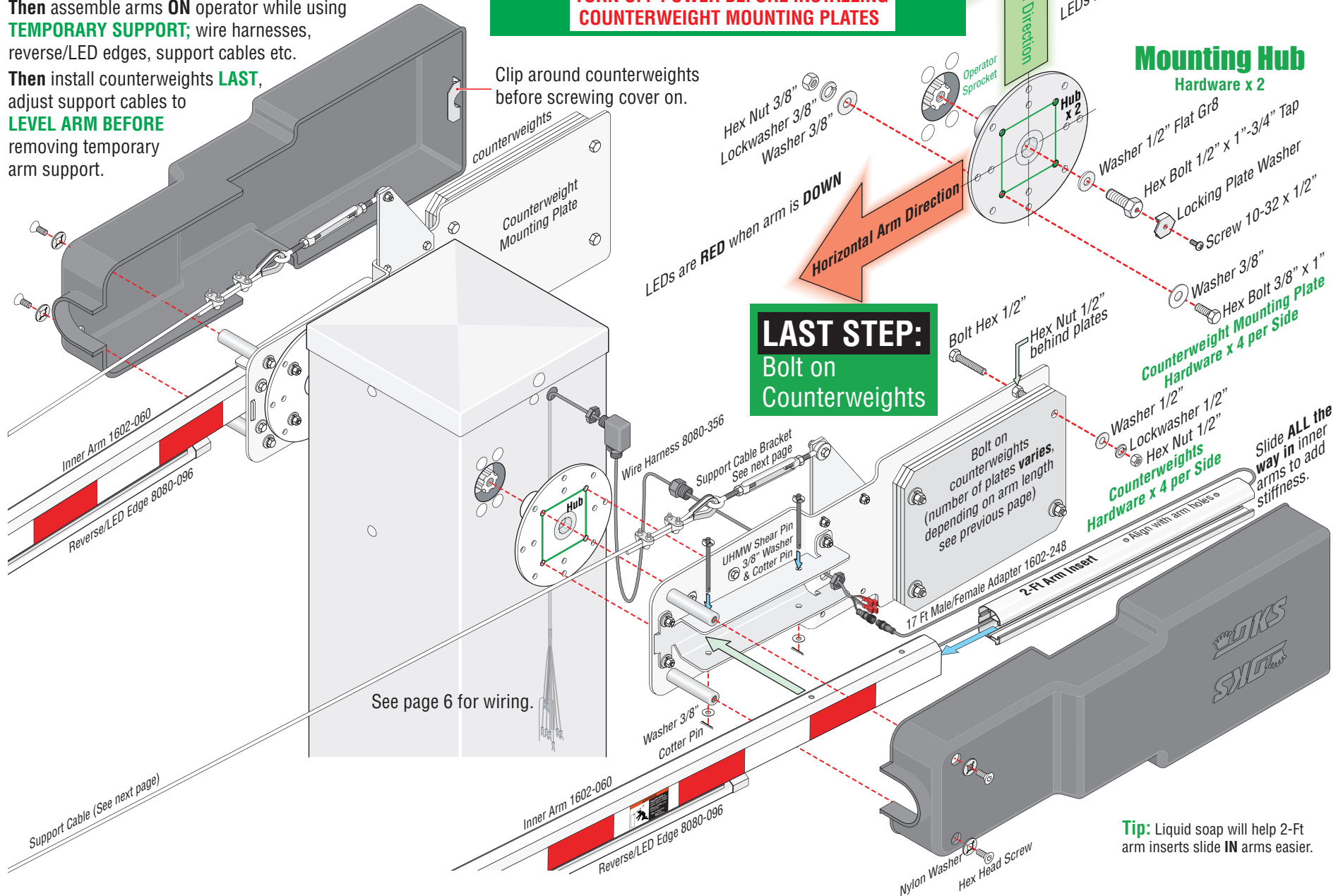
Bolt counterweight mounting plates on hubs.

**Then** assemble arms **ON** operator while using **TEMPORARY SUPPORT**; wire harnesses, reverse/LED edges, support cables etc.

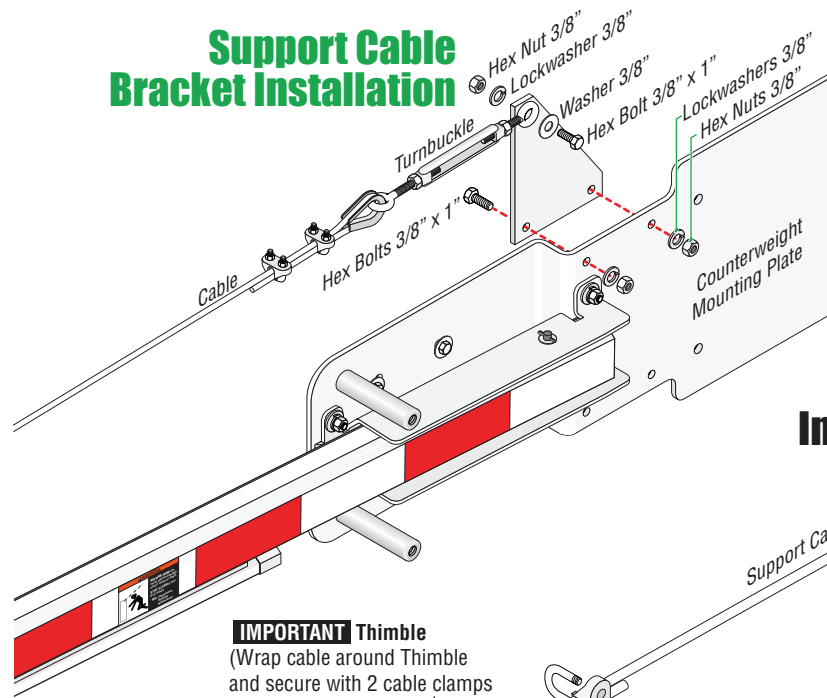
**Then** install counterweights **LAST**, adjust support cables to **LEVEL ARM BEFORE** removing temporary arm support.

**IMPORTANT** Test the hub's **UP** and **DOWN** positions on the operator **BEFORE** installing counterweight mounting plates.

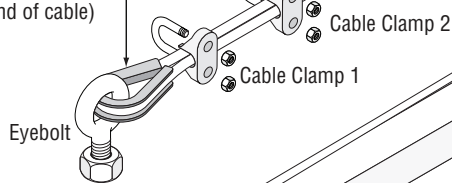
**TURN OFF POWER BEFORE INSTALLING COUNTERWEIGHT MOUNTING PLATES**



## Support Cable Bracket Installation

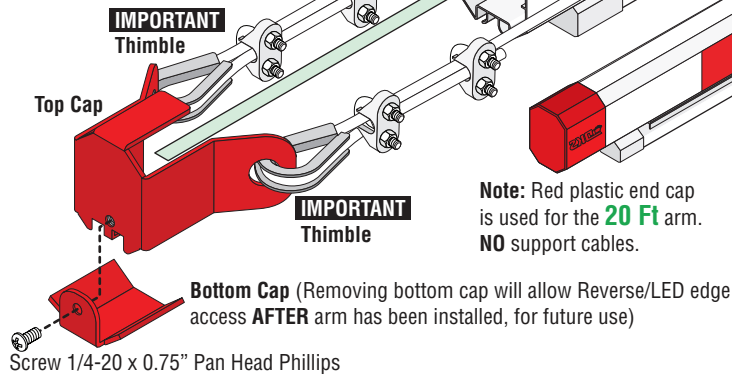


**IMPORTANT Thimble**  
(Wrap cable around Thimble and secure with 2 cable clamps at each end of cable)



## End of Arm Assembly

24 Ft & 27 Ft arms ONLY



### Locking Turnbuckle Operation

Loosen or tighten nut positions

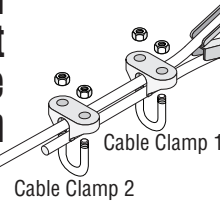
Locked nut positions, turnbuckle will NOT twist

Use cable clamps to adjust arms approximately level. Use turnbuckles to "fine-tune" arms to completely level.

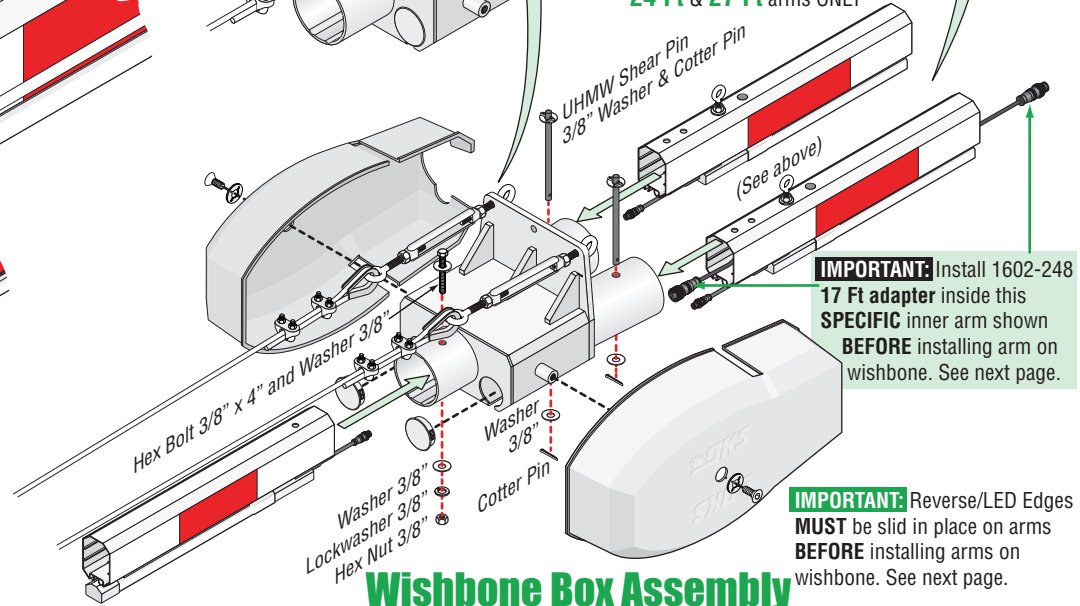
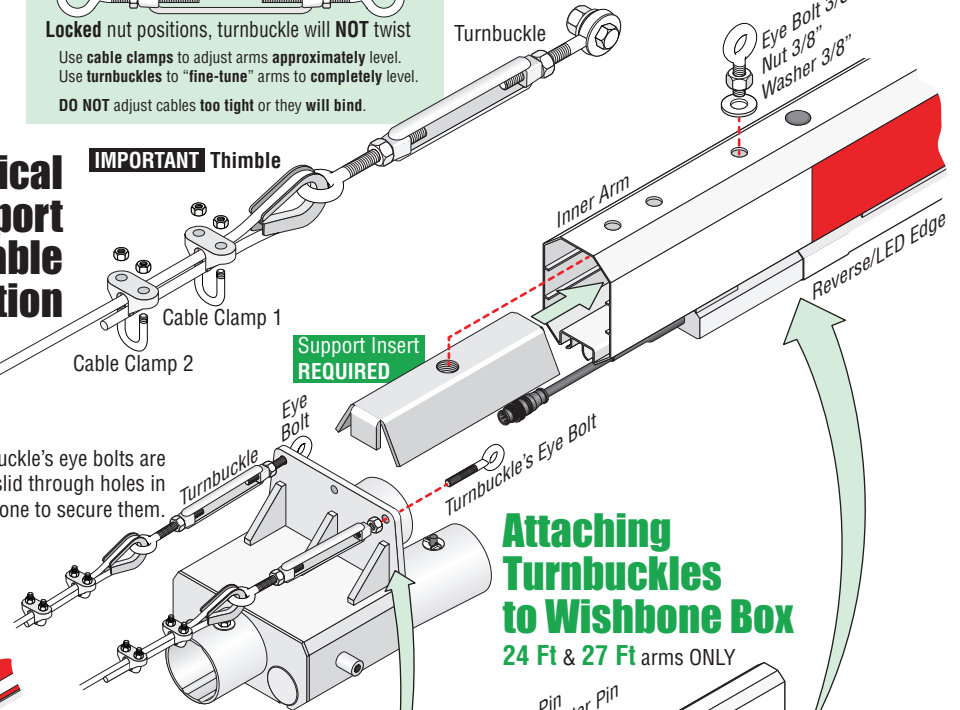
DO NOT adjust cables too tight or they will bind.

## Typical Support Cable Installation

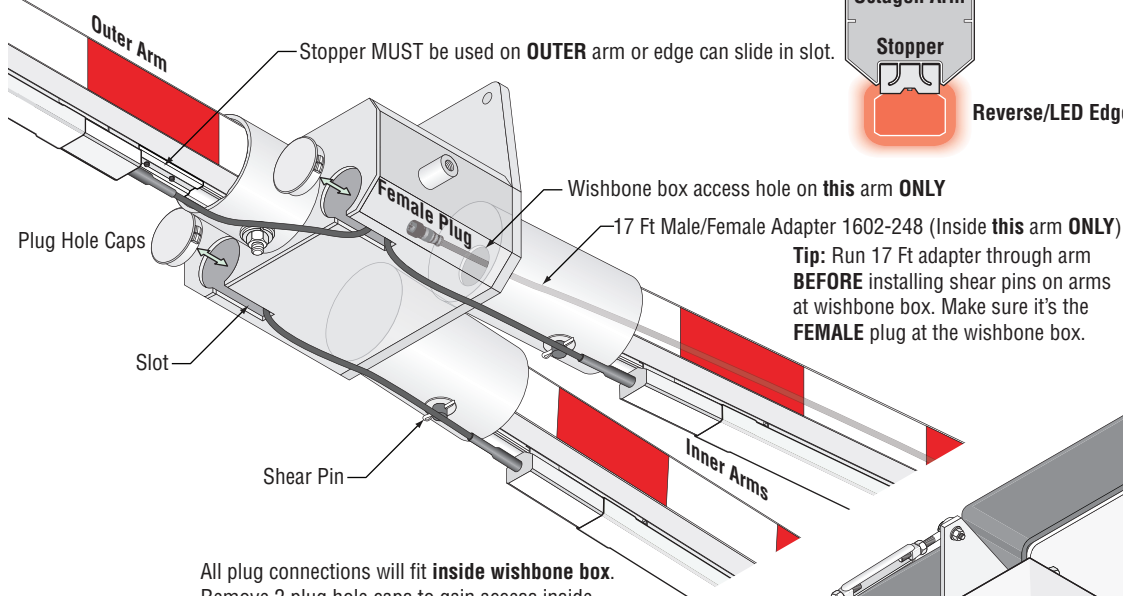
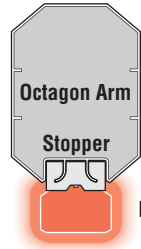
**IMPORTANT Thimble**



Turnbuckle's eye bolts are slid through holes in wishbone to secure them.

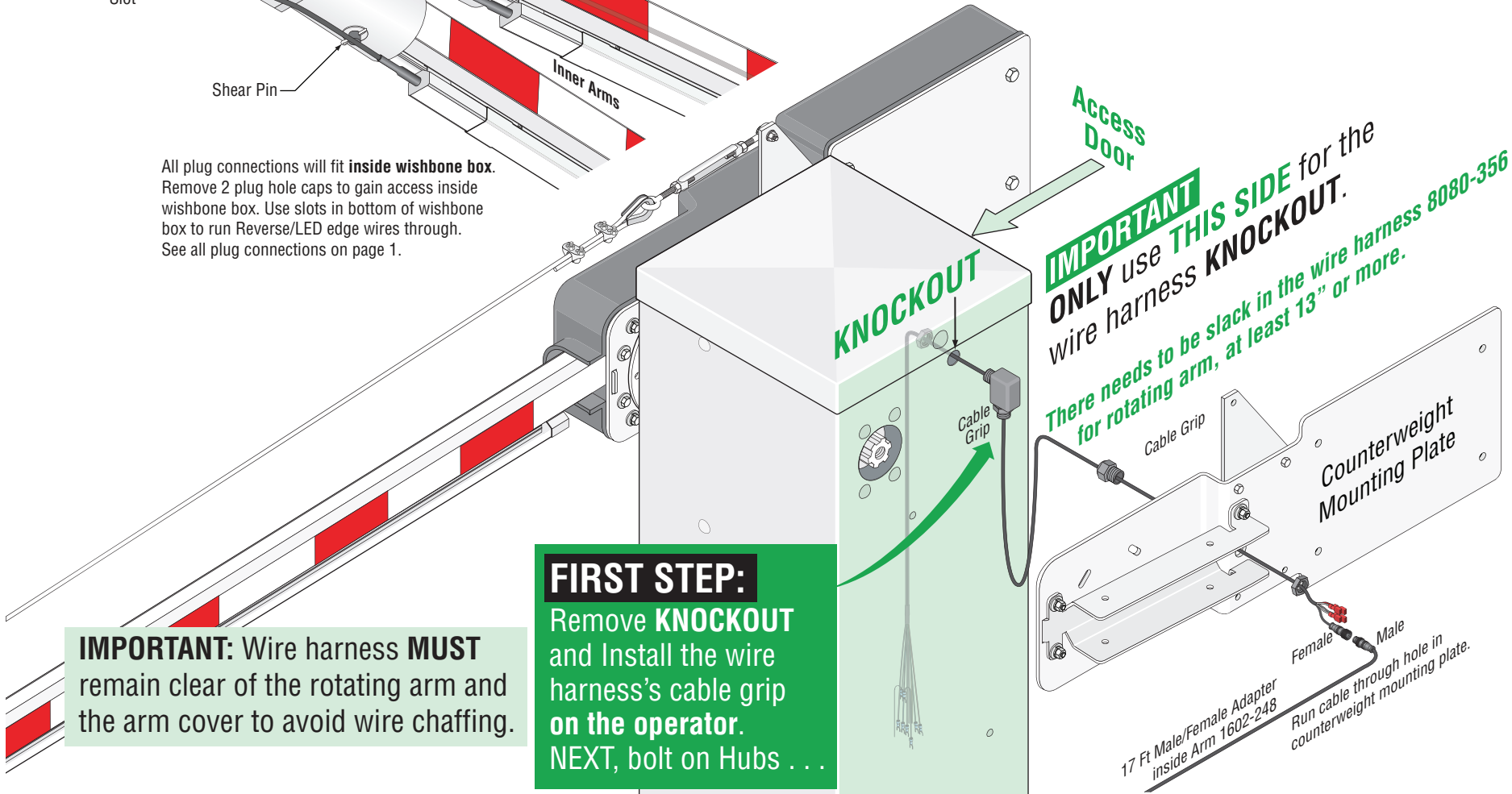


# Reverse/LED Edge Wiring at Wishbone Box



**Tip:** Run 17 Ft adapter through arm **BEFORE** installing shear pins on arms at wishbone box. Make sure it's the **FEMALE** plug at the wishbone box.

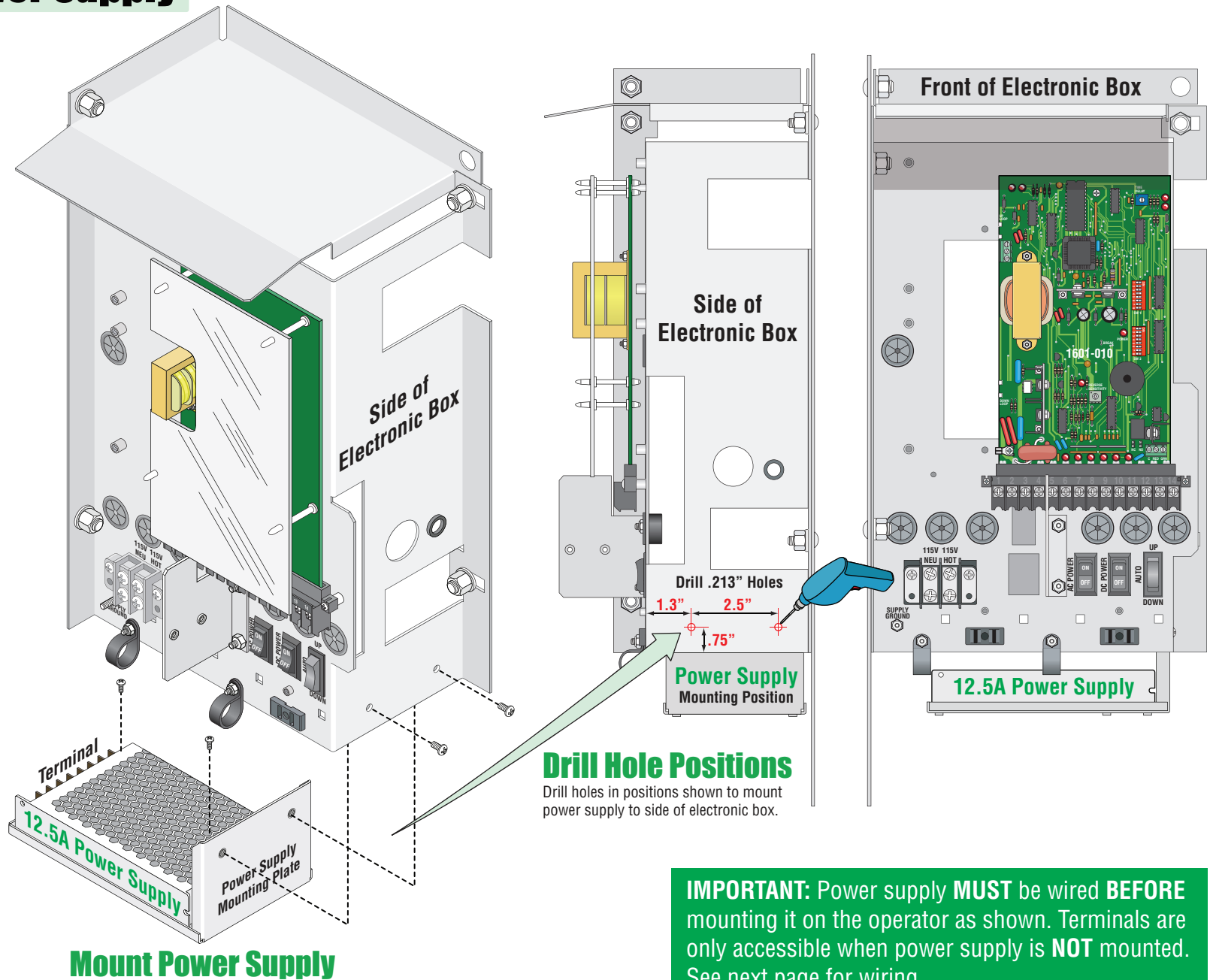
All plug connections will fit **inside wishbone box**. Remove 2 plug hole caps to gain access inside wishbone box. Use slots in bottom of wishbone box to run Reverse/LED edge wires through. See all plug connections on page 1.



**IMPORTANT:** Wire harness **MUST** remain clear of the rotating arm and the arm cover to avoid wire chaffing.

**FIRST STEP:**  
Remove **KNOCKOUT** and Install the wire harness's cable grip **on the operator**.  
**NEXT, bolt on Hubs . . .**

# Mount Power Supply



# Connect Wire Harness . . . . and Wiring OPTIONS

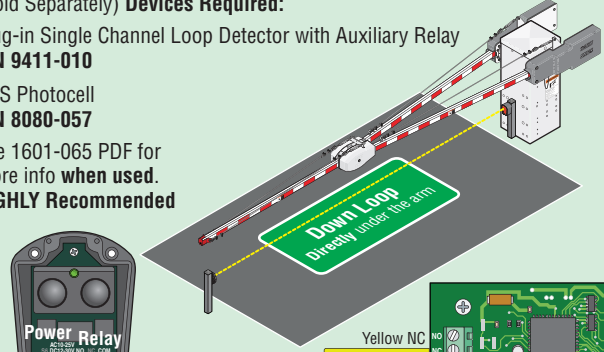
## OPTIONAL DKS Pedestrian Protection System Set-up

**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:**

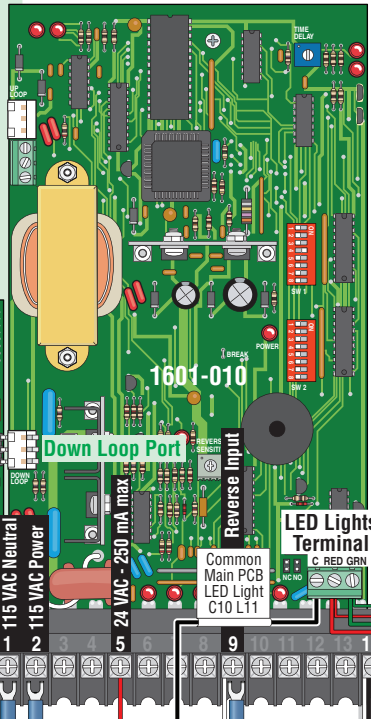
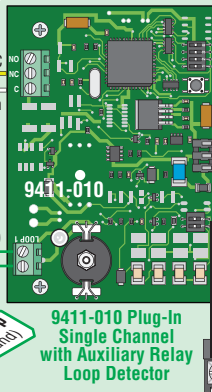
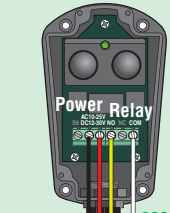
Plug-in Single Channel Loop Detector with Auxiliary Relay  
**P/N 9411-010**

DKS Photocell  
**P/N 8080-057**

See 1601-065 PDF for more info **when used.**  
**HIGHLY Recommended**



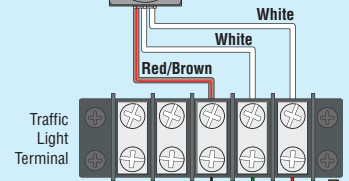
**Keep wires clear of all moving parts.**



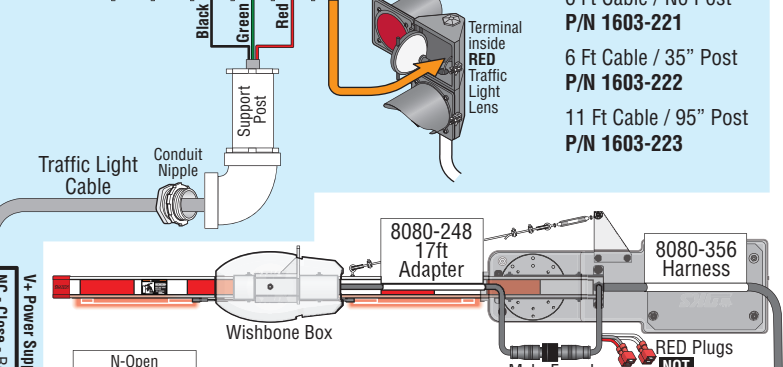
## OPTIONAL LED Traffic Light

Different Kits Available

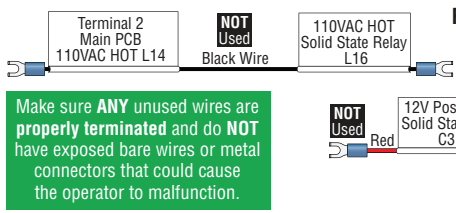
**Note:** The traffic light is wired together with the break-away arm in **some** installations when desired, so it's shown here for wiring reference. See Traffic Light 1603-264 PDF for more info **when used.**  
**Recommended**



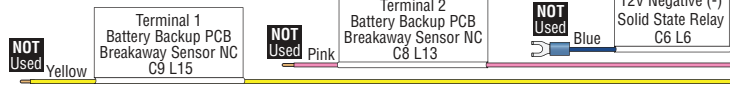
- 6 Ft Cable / No Post  
**P/N 1603-221**
- 6 Ft Cable / 35" Post  
**P/N 1603-222**
- 11 Ft Cable / 95" Post  
**P/N 1603-223**



**MAKE SURE ALL POWER IS TURNED OFF TO OPERATOR!**



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.



1602-158-J-4-26

# 3-PIECE OCTAGON ARM WITHOUT REVERSE/LED EDGE KIT INSTALL

These 3-Piece “Arm and Hardware ONLY” kits are designed **ONLY** for the 1602 model barrier gate operator using a 3-Piece **OCTAGON** arm.

DoorKing Part Numbers:

**1602-282**

20 ft Arm and Hardware Only

**1602-284**

24 ft Arm and Hardware Only

**1602-287**

27 ft Arm and Hardware Only

**IMPORTANT NOTE:** Installation of arms **WITH** Reverse/LED Edge kit see pages 1-6.

## Overview of Installation

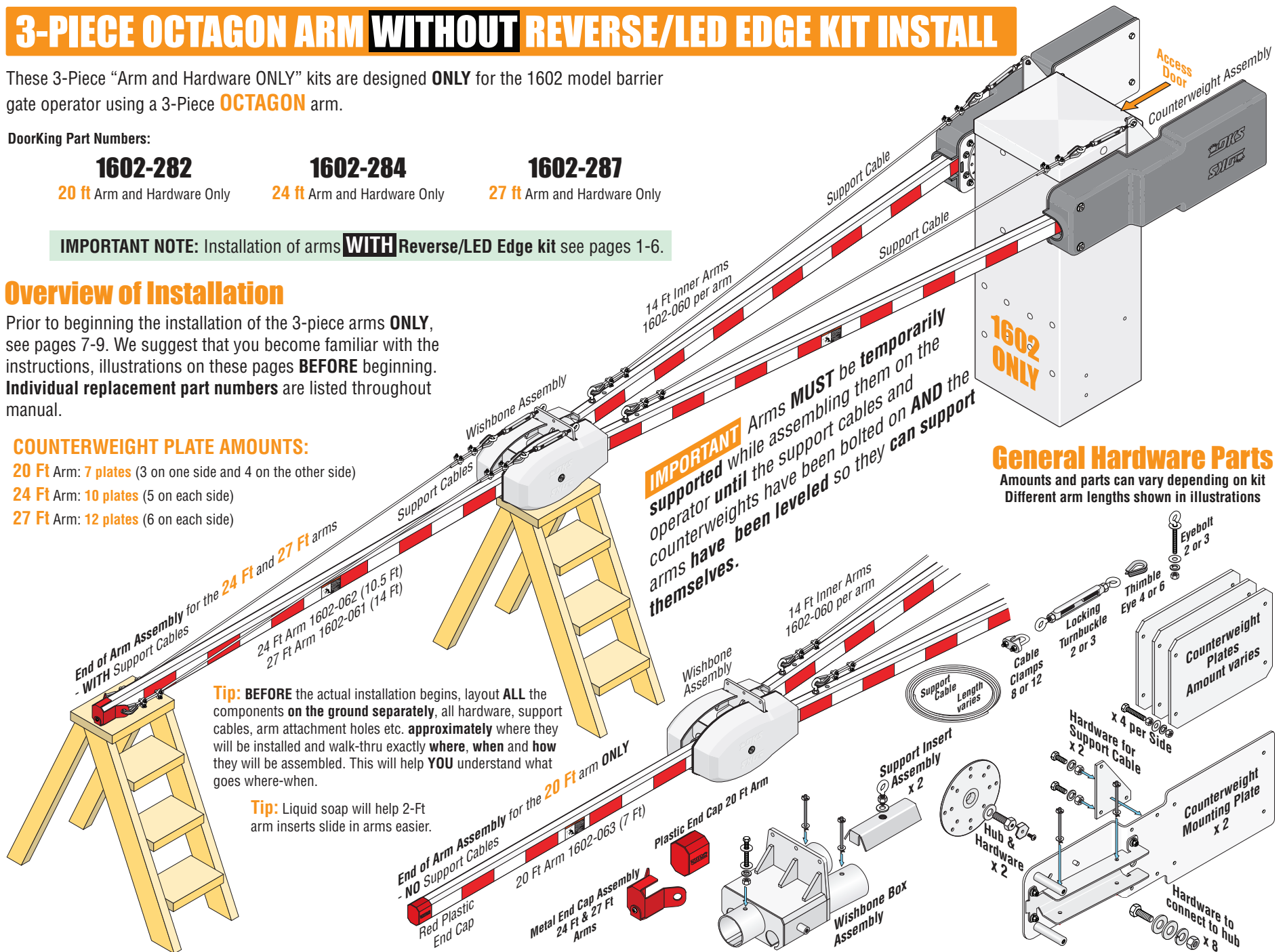
Prior to beginning the installation of the 3-piece arms **ONLY**, see pages 7-9. We suggest that you become familiar with the instructions, illustrations on these pages **BEFORE** beginning. **Individual replacement part numbers** are listed throughout manual.

### COUNTERWEIGHT PLATE AMOUNTS:

20 Ft Arm: **7 plates** (3 on one side and 4 on the other side)

24 Ft Arm: **10 plates** (5 on each side)

27 Ft Arm: **12 plates** (6 on each side)



**IMPORTANT** Arms **MUST** be temporarily supported while assembling them on the operator until the support cables and counterweights have been bolted on **AND** the arms have been leveled so they can support themselves.

### General Hardware Parts

Amounts and parts can vary depending on kit  
Different arm lengths shown in illustrations

- Eyebolt 2 or 3
- Thimble Eye 4 or 6
- Locking Turnbuckle 2 or 3
- Cable Clamps 8 or 12
- Counterweight Plates Amount varies
- Hardware for Support Cable x 4 per Side
- Counterweight Mounting Plate x 2
- Hardware to connect to hub x 8
- Hub & Hardware x 2
- Support Insert Assembly x 2
- Support Cable Length varies
- Wishbone Box Assembly
- Wishbone Assembly
- 14 Ft Inner Arms 1602-060 per arm
- 24 Ft Arm 1602-062 (10.5 Ft)
- 27 Ft Arm 1602-061 (14 Ft)
- 20 Ft Arm 1602-063 (7 Ft)
- Red Plastic End Cap
- Metal End Cap Assembly 24 Ft & 27 Ft Arms
- Plastic End Cap 20 Ft Arm

**Tip:** BEFORE the actual installation begins, layout ALL the components on the ground separately, all hardware, support cables, arm attachment holes 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.

**Tip:** Liquid soap will help 2-Ft arm inserts slide in arms easier.

## General Installation Procedure

Bolt hubs on operator. Test **UP** and **DOWN** hub positions, **THEN TURN POWER OFF** to continue.

Bolt counterweight mounting plates on hubs.

**Then** assemble arms **ON** operator while using **TEMPORARY SUPPORT**; wishbone box, support cables etc.

**Then** install counterweights **LAST**, adjust support cables to **LEVEL ARM BEFORE** removing temporary arm support.

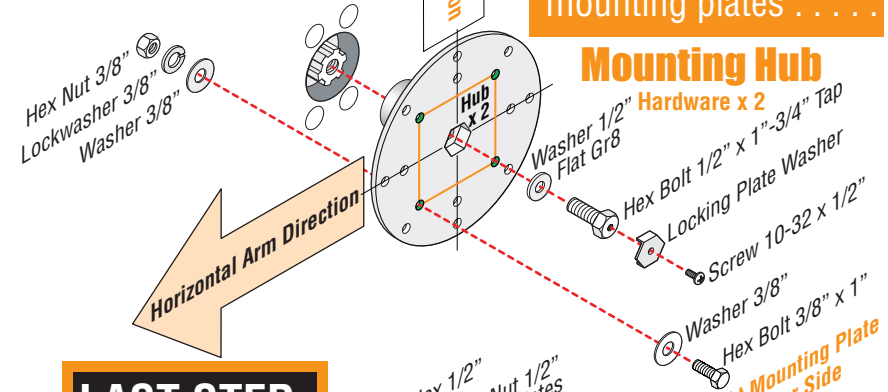
**IMPORTANT** Test the hub's **UP** and **DOWN** positions on the operator **BEFORE** installing counterweight mounting plates.

**TURN OFF POWER BEFORE INSTALLING COUNTERWEIGHT MOUNTING PLATES**

### FIRST STEP:

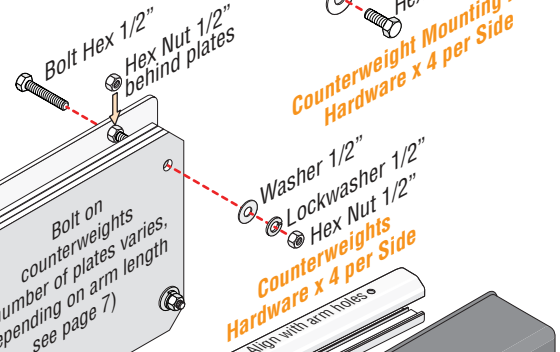
Bolt on hubs. NEXT, bolt on counterweight mounting plates . . . .

### Mounting Hub



### LAST STEP:

Bolt on Counterweights



Clip around counterweights before screwing cover on.

Counterweights

Counterweight Mounting Plate

Support arms during assembly until support cables have been installed and adjusted for level.

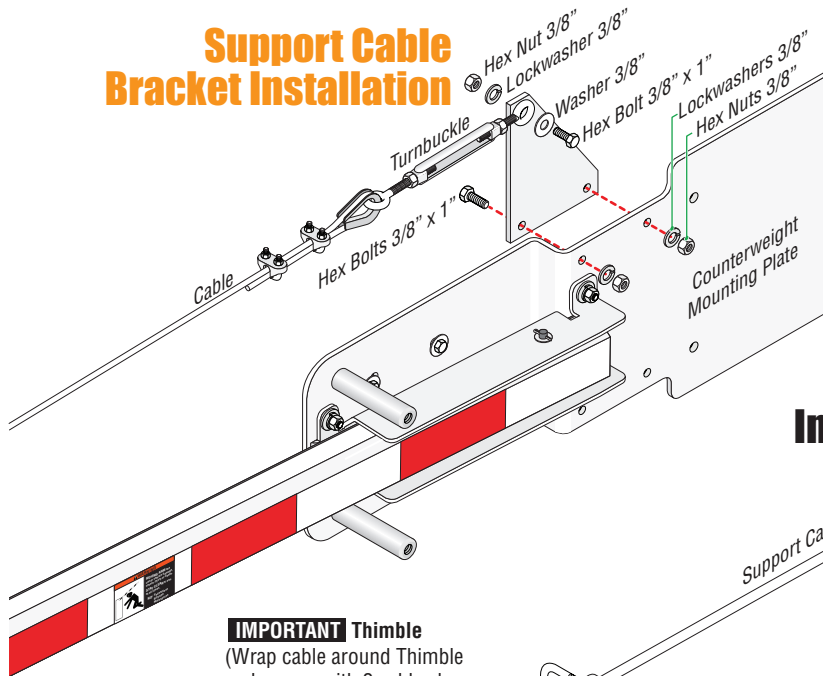
Support Cable (See next page)

Inner Arm 1602-060

Nylon Washer

Hex Head Screw

## Support Cable Bracket Installation



### Turnbuckle Operation

Loosen or tighten nut position

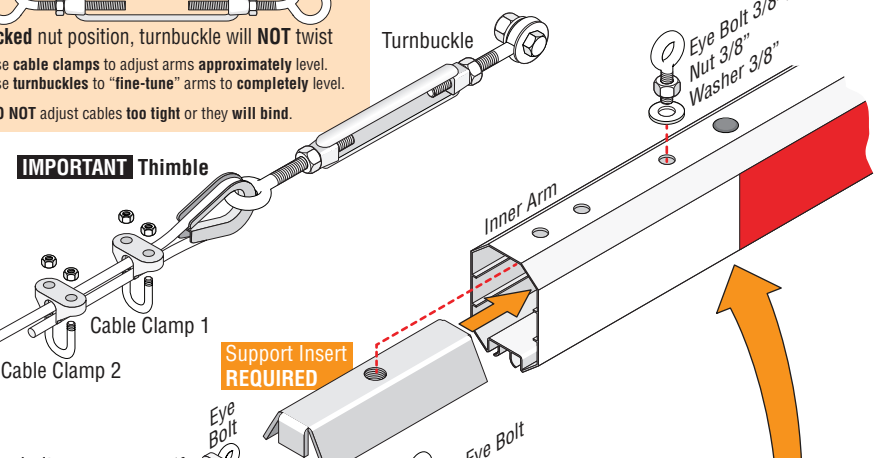
**Locked nut position, turnbuckle will NOT twist**

Use cable clamps to adjust arms approximately level.  
Use turnbuckles to "fine-tune" arms to completely level.

**DO NOT** adjust cables too tight or they will bind.

## Inner Arms Assembly (Wishbone End)

### Typical Support Cable Installation

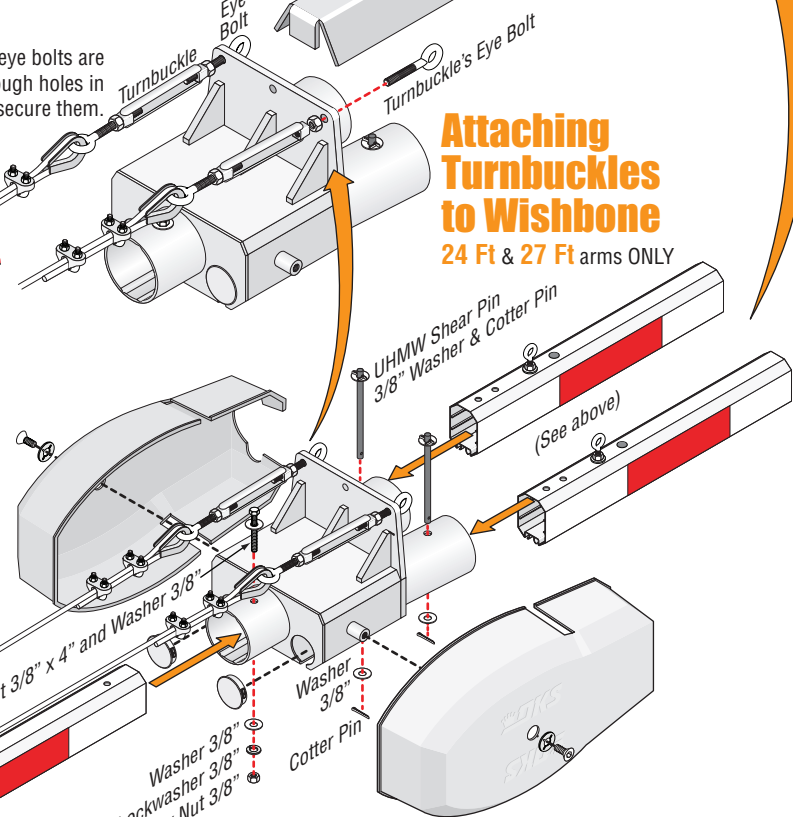


**IMPORTANT Thimble**  
(Wrap cable around Thimble and secure with 2 cable clamps at each end of cable)

Turnbuckle's eye bolts are slid through holes in wishbone to secure them.

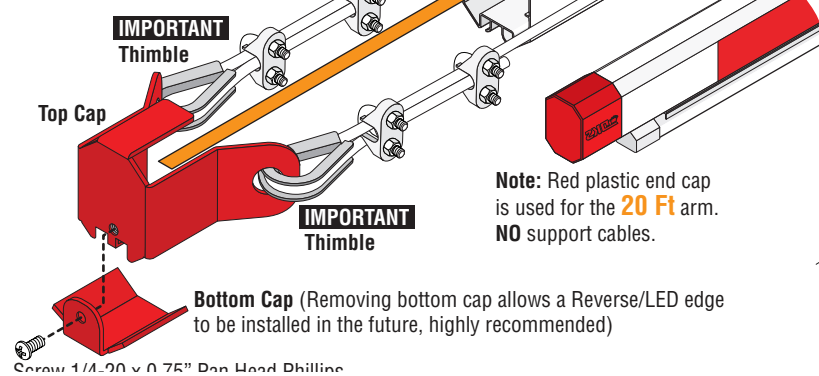
### Attaching Turnbuckles to Wishbone

24 Ft & 27 Ft arms ONLY



### End of Arm Assembly

24 Ft & 27 Ft arms ONLY



### Wishbone Assembly