Installation Manual

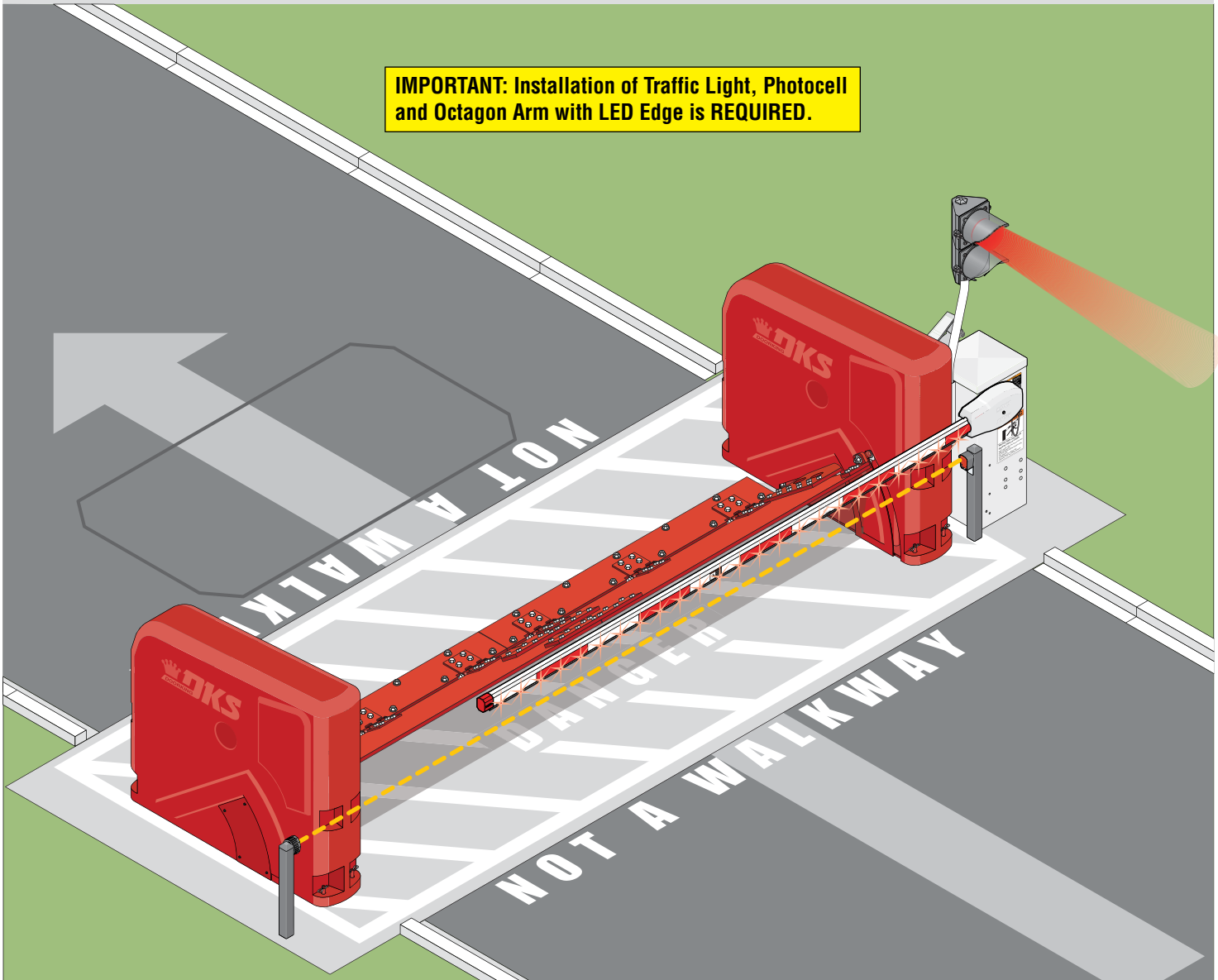
1625 Wedge Barrier

Surface Mount Vehicular Wedge Barrier Accessory

Use this manual for circuit board 1601-010 Revision AK or higher.

1625-065-J-12-24

IMPORTANT: Installation of Traffic Light, Photocell and Octagon Arm with LED Edge is REQUIRED.



WARNING pre-stressed concrete may be used in multi-level parking garages. Cutting a tensioned cable, or tendon, can endanger the contractor and compromise the structural integrity of the floor. Contact the building structural engineer for specific instructions and information BEFORE drilling or saw cutting into the floor.

INSTALLATION AND USE OF THE WEDGE BARRIER IN AREAS SUBJECT TO FREEZING WEATHER WITH POTENTIAL FOR SNOW AND ICE ACCUMULATION IS NOT RECOMMENDED.

THIS PRODUCT IS TO BE INSTALLED AND SERVICED BY A TRAINED GATE/DOOR SYSTEMS TECHNICIAN ONLY.
Visit **www.doorking.com/dealer-locator** to find a professional installing and servicing dealer in your area.

The 1625 wedge barrier is not a stand-alone product. It must be used with a 1602-590 Barrier Gate Operator (sold separately). The 1625 is crash rated (ASTM F2656 PU-30-(P1, P2). It is intended to provide a more formidable barrier in conjunction with a standard barrier arm operator system. The 1625 is ideally used to control passenger vehicles and lightduty trucks.

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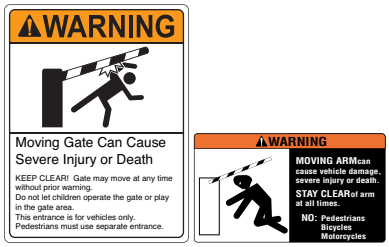
DoorKing Safety for Wdge Barrier



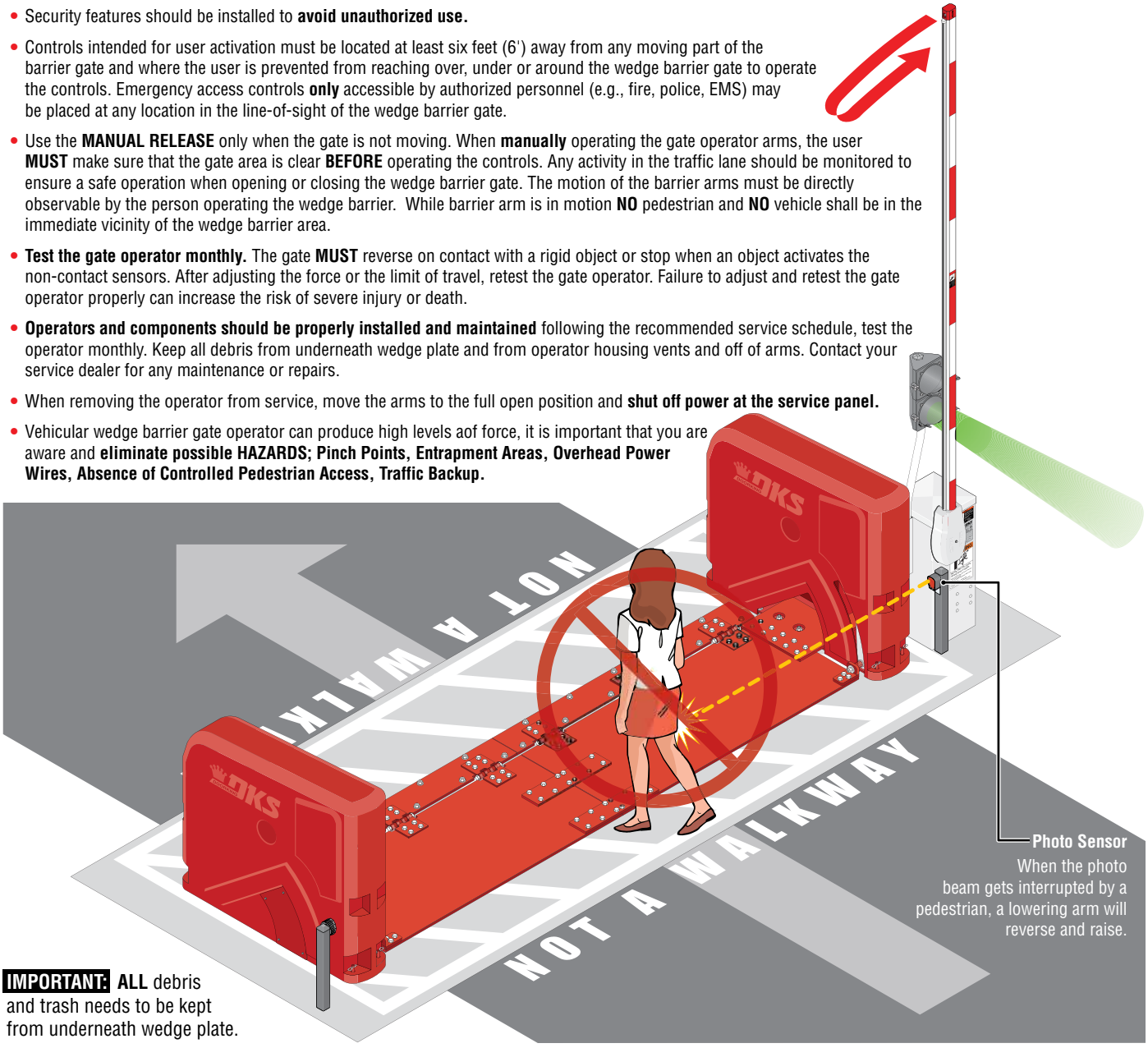
- DKS Wedge Barrier System is crash rated (ASTM F2656 PU-30-(P1, P2). It is intended to provide a formidable barrier to help prevent **passenger vehicles** and **light-duty trucks** from driving through a controlled traffic lane.
- Wedge barrier **MUST** have reverse/LED edge on arm, traffic light and photoelectric cell **functioning** or **remove wedge barrier from service** until repairs have been made.
- Make sure all warning signs are on operator and arm. They **MUST** be easily visible.
- **Do not install the operator in such a way that the arms moves within 16 inches of a rigid object or 10 feet from high voltage power wires with arm in the raised position.**
- **Speed limit through barrier area is 5 MPH.** Install speed bumps, warning signs and hazard stripes where visible in the area of the wedge barrier gate, failure to do so may result in injury, damage to operator and vehicle.
- Users should be familiar with proper use of operator, these include; hardware operation, reversing functions and testing, reversing loops, inherent reversing system, electric edges, photoelectric cells related external devices and possible hazards.
- **Keep adults, children and objects away from operator and HAZARD ZONES.**
- **Automotive ONE-WAY traffic only - No bicycles or motorcycles.**

Pedestrians MUST be provided with separate access.

- All electrical connections should be made in accordance with local electrical codes.
- Security features should be installed to **avoid unauthorized use.**
- Controls intended for user activation must be located at least six feet (6') away from any moving part of the barrier gate and where the user is prevented from reaching over, under or around the wedge barrier gate to operate the controls. Emergency access controls **only** accessible by authorized personnel (e.g., fire, police, EMS) may be placed at any location in the line-of-sight of the wedge barrier gate.
- Use the **MANUAL RELEASE** only when the gate is not moving. When **manually** operating the gate operator arms, the user **MUST** make sure that the gate area is clear **BEFORE** operating the controls. Any activity in the traffic lane should be monitored to ensure a safe operation when opening or closing the wedge barrier gate. The motion of the barrier arms must be directly observable by the person operating the wedge barrier. While barrier arm is in motion **NO** pedestrian and **NO** vehicle shall be in the immediate vicinity of the wedge barrier area.
- **Test the gate operator monthly.** The gate **MUST** reverse on contact with a rigid object or stop when an object activates the non-contact sensors. After adjusting the force or the limit of travel, retest the gate operator. Failure to adjust and retest the gate operator properly can increase the risk of severe injury or death.
- **Operators and components should be properly installed and maintained** following the recommended service schedule, test the operator monthly. Keep all debris from underneath wedge plate and from operator housing vents and off of arms. Contact your service dealer for any maintenance or repairs.
- When removing the operator from service, move the arms to the full open position and **shut off power at the service panel.**
- Vehicular wedge barrier gate operator can produce high levels aof force, it is important that you are aware and **eliminate possible HAZARDS; Pinch Points, Entrapment Areas, Overhead Power Wires, Absence of Controlled Pedestrian Access, Traffic Backup.**

IMPORTANT: A wedge barrier gate operator installed **WITHOUT** any external safety sensors **CANNOT** sense a person under the raised arm and can strike them while the arm is lowering.

This scenario is VERY DANGEROUS and MUST NEVER OCCUR!!



IMPORTANT: ALL debris and trash needs to be kept from underneath wedge plate.

Safety and Traffic Management for Wedge Barrier System

Vehicular wedge barrier gate operator can produce high levels of force. It is important that you are aware and eliminate possible HAZARDS; Pinch Points, Entrapment Areas, Overhead Power Wires, Absence of Controlled Pedestrian Access, and Traffic Management.

Pedestrians MUST be provided with separate access.

A **Separate Pedestrian Entrance:** Located so pedestrians **CANNOT** come in contact with the wedge barrier system.

B **Warning Signs:** Permanently mounted on operator and arm and easily visible.

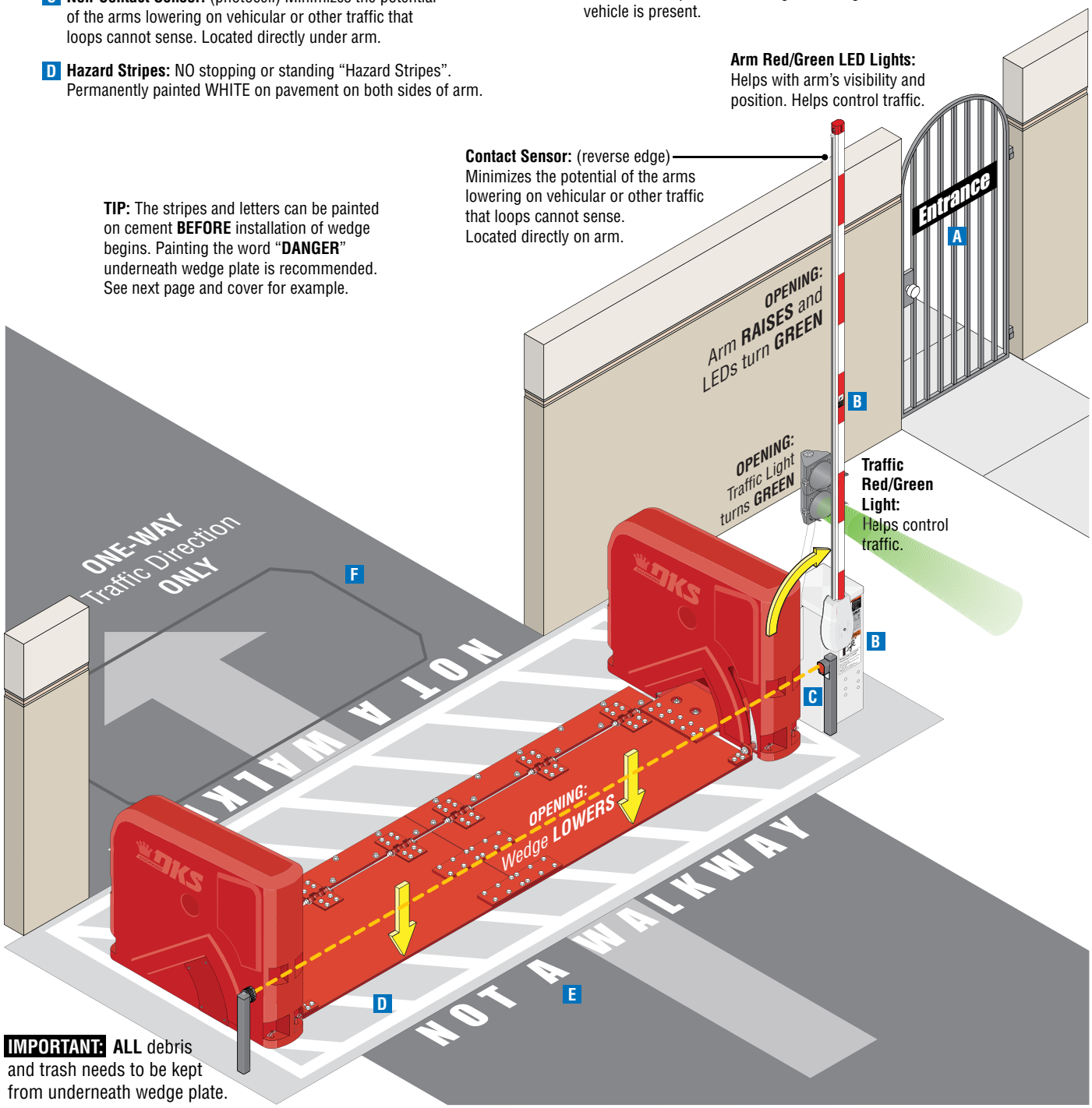
C **Non-Contact Sensor:** (photocell) Minimizes the potential of the arms lowering on vehicular or other traffic that loops cannot sense. Located directly under arm.

D **Hazard Stripes:** NO stopping or standing "Hazard Stripes". Permanently painted WHITE on pavement on both sides of arm.

E **Pedestrian Alert Warning:** "**NOT A WALKWAY**" pavement marking facing both directions, permanently painted WHITE on pavement.

F **In-Ground Loops:** Minimizes the potential of the gate closing when a vehicle is present.

TIP: The stripes and letters can be painted on cement **BEFORE** installation of wedge begins. Painting the word "**DANGER**" underneath wedge plate is recommended. See next page and cover for example.

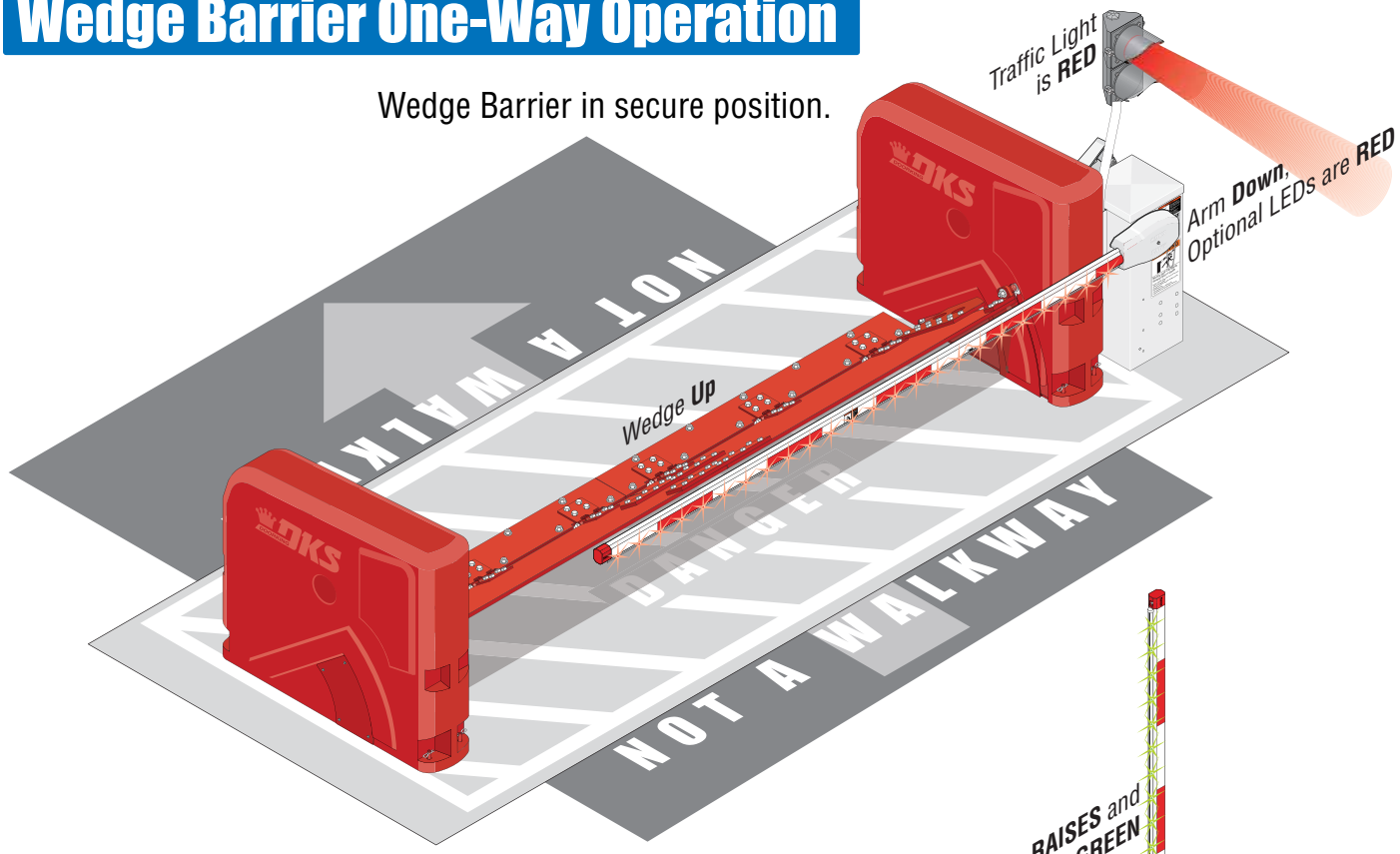


IMPORTANT: **ALL** debris and trash needs to be kept from underneath wedge plate.

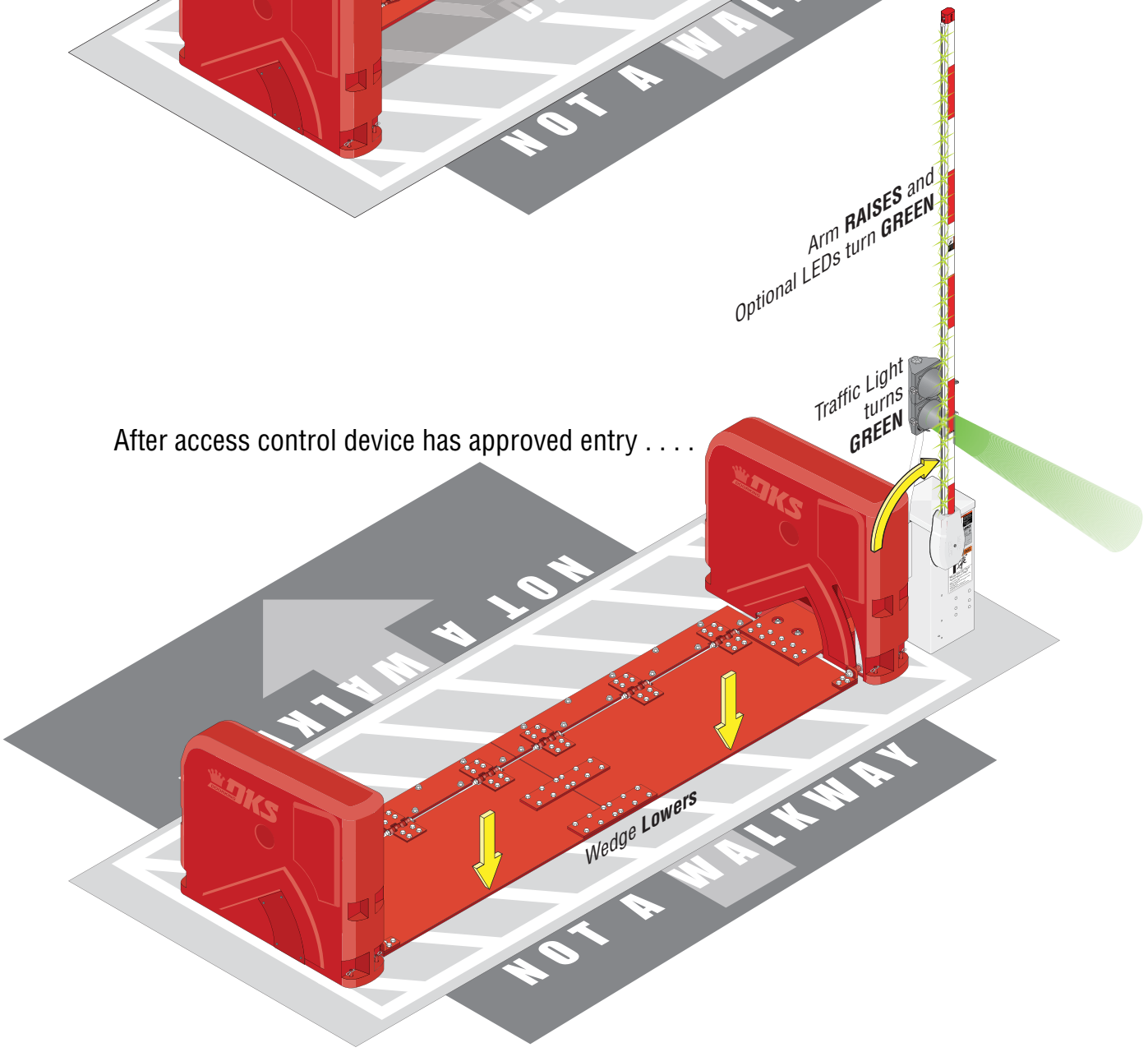
1625-065-J-12-24

Wedge Barrier One-Way Operation

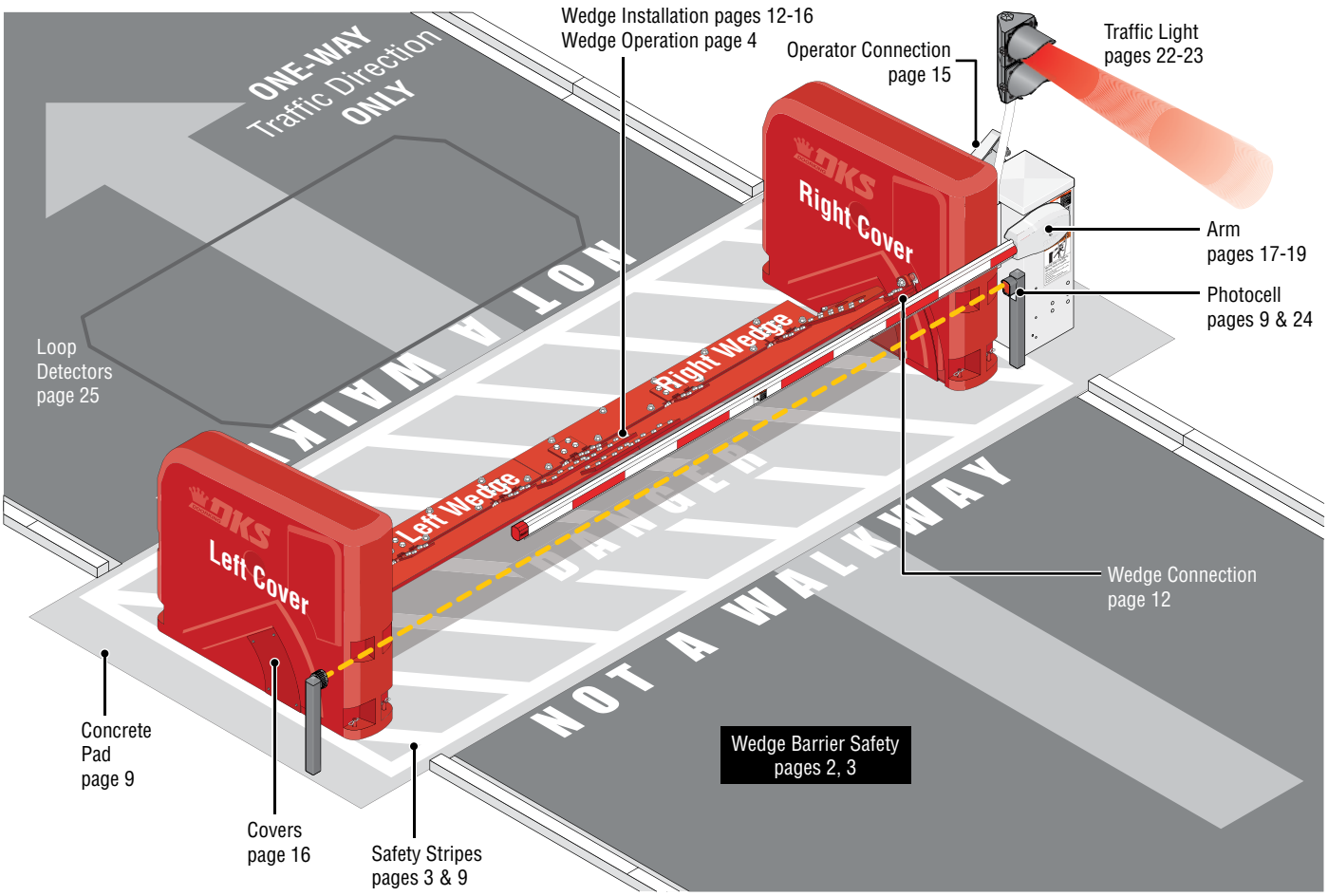
Wedge Barrier in secure position.



After access control device has approved entry . . . .



Wedge Barrier and 1602-590 Operator Overview



Use this manual for the Model 1602-590 wedge barrier operators with circuit board 1601-010 Rev AK or higher ONLY.

1602-590 Wedge Barrier Operator

Class of Operation UL 325 Class II, III, IV – ETL Listed

Type of Gate - Use with 1625 Series Wedge Barriers Only

Gate Cycles - Low Cycle

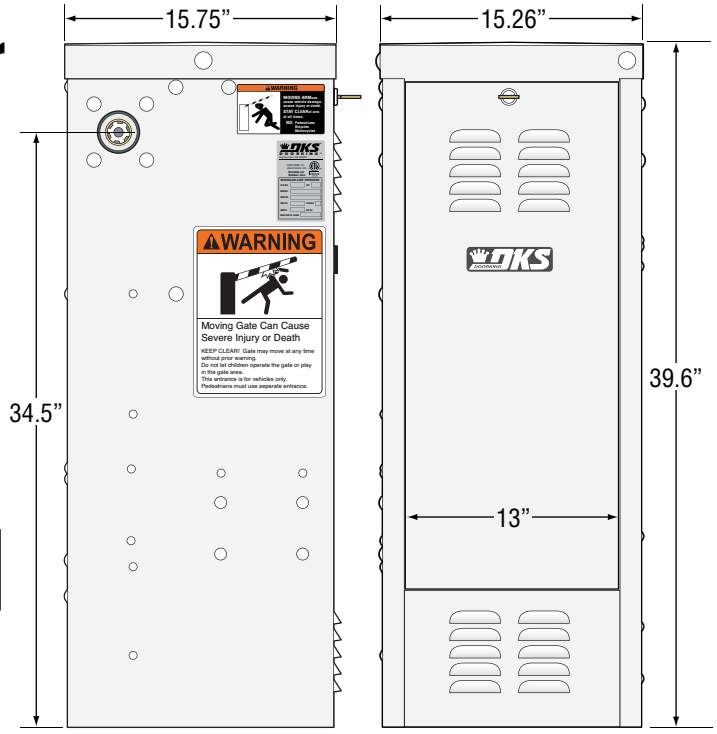
Pedestrian Protection -

Inherent entrapment sensing system (Type A)
Provision for connection of a non-contact sensor (Type B1) and/or contact sensor (Type B2)

Model #	Convenience Open	Horsepower - Volts	Amp	Max Arm Length	Speed 90°
1602-590	No	1 HP - 115 VAC	9.7	17 Ft.	3.5 Sec

Note: 208/230/460/575 VAC input voltage can be connected to the operator by installing an "**Optional**" High Voltage Kit (P/N 2600-266).

Type of wiring to be used on ALL external devices:
A) Type **CL2**, **CL2P**, **CL2R**, or **CL2X**.
B) Other cable with **equivalent** or **better** electrical, mechanical, and flammability ratings.



Refer to the 1601-065 Manual for ALL information about the 1602-590 Operator

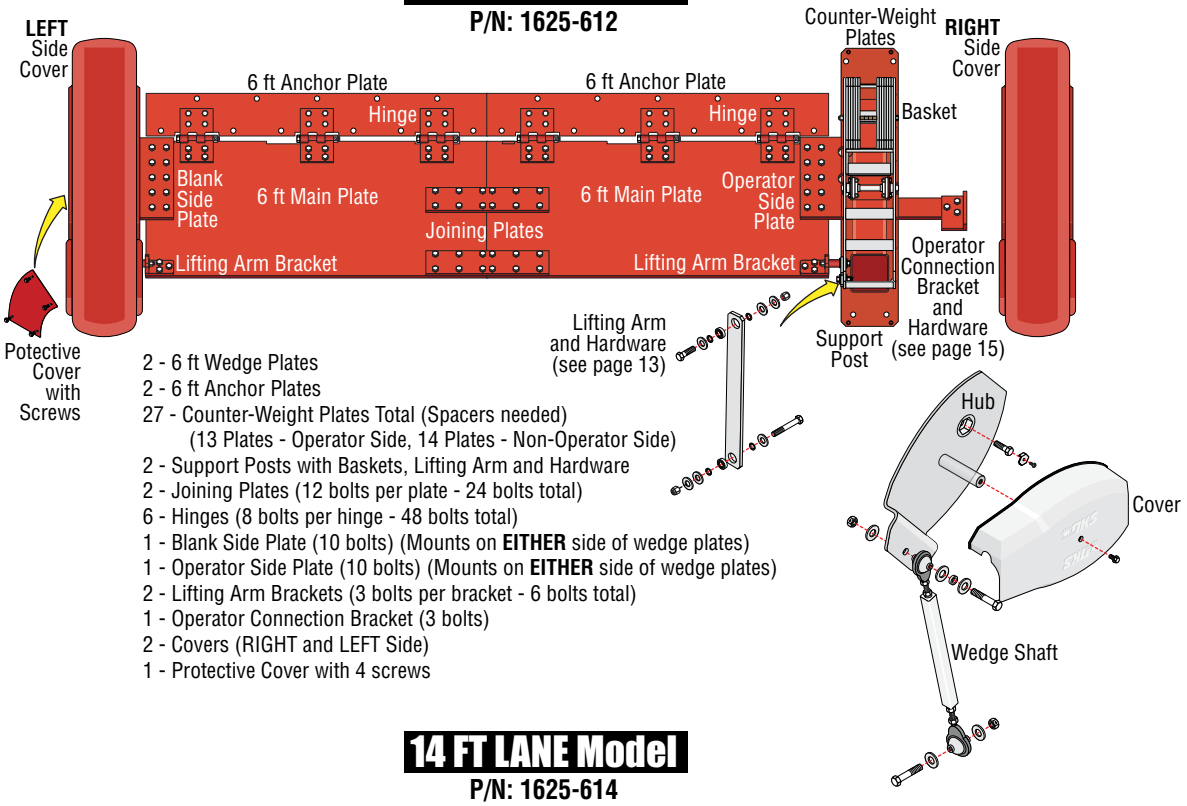
Wedge Barrier Model Parts Configuration

Prior to beginning the installation of the wedge barrier, we suggest that you become familiar with the instructions, illustrations, and wiring guide-lines in this manual. This will help insure that your installation is performed in an efficient and professional manner.

Barrier operator 1602-590 can be installed on either side of wedge plates

12 FT LANE Model

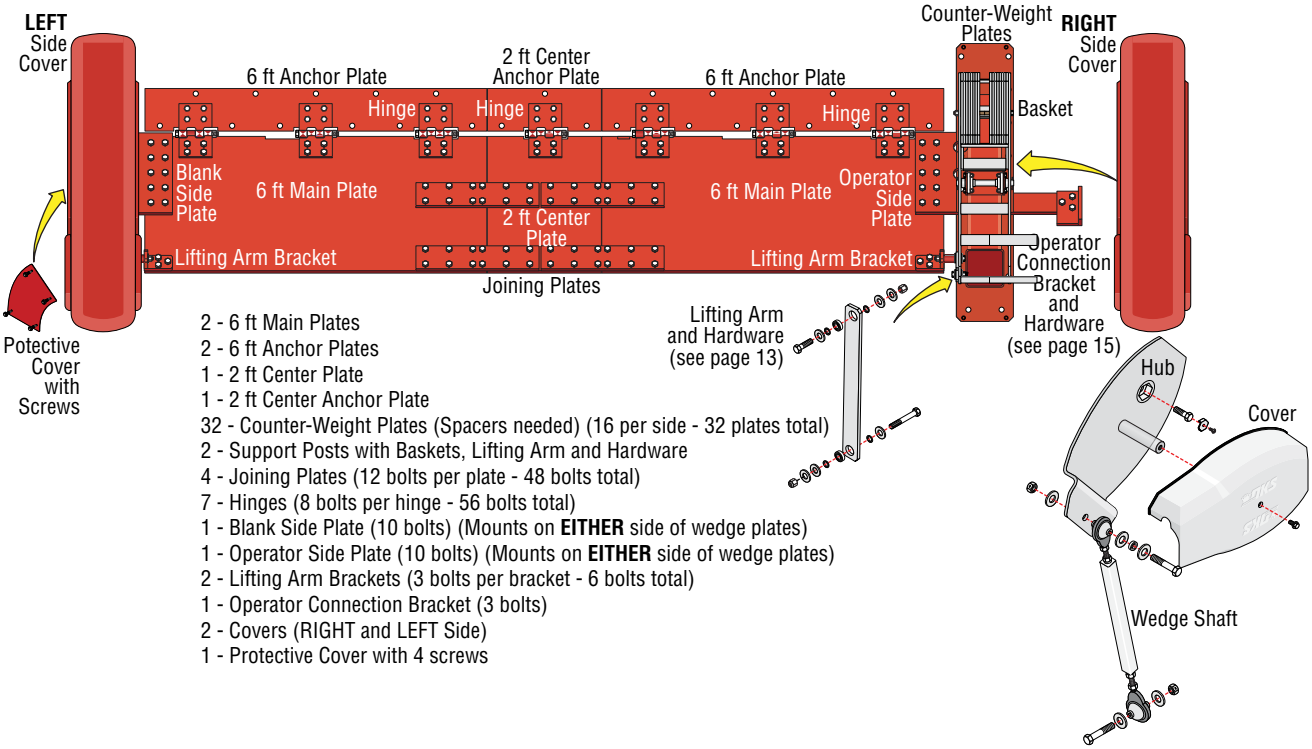
P/N: 1625-612



2 - 6 ft Wedge Plates
2 - 6 ft Anchor Plates
27 - Counter-Weight Plates Total (Spacers needed)
(13 Plates - Operator Side, 14 Plates - Non-Operator Side)
2 - Support Posts with Baskets, Lifting Arm and Hardware
2 - Joining Plates (12 bolts per plate - 24 bolts total)
6 - Hinges (8 bolts per hinge - 48 bolts total)
1 - Blank Side Plate (10 bolts) (Mounts on **EITHER** side of wedge plates)
1 - Operator Side Plate (10 bolts) (Mounts on **EITHER** side of wedge plates)
2 - Lifting Arm Brackets (3 bolts per bracket - 6 bolts total)
1 - Operator Connection Bracket (3 bolts)
2 - Covers (RIGHT and LEFT Side)
1 - Protective Cover with 4 screws

14 FT LANE Model

P/N: 1625-614



2 - 6 ft Main Plates
2 - 6 ft Anchor Plates
1 - 2 ft Center Plate
1 - 2 ft Center Anchor Plate
32 - Counter-Weight Plates (Spacers needed) (16 per side - 32 plates total)
2 - Support Posts with Baskets, Lifting Arm and Hardware
4 - Joining Plates (12 bolts per plate - 48 bolts total)
7 - Hinges (8 bolts per hinge - 56 bolts total)
1 - Blank Side Plate (10 bolts) (Mounts on **EITHER** side of wedge plates)
1 - Operator Side Plate (10 bolts) (Mounts on **EITHER** side of wedge plates)
2 - Lifting Arm Brackets (3 bolts per bracket - 6 bolts total)
1 - Operator Connection Bracket (3 bolts)
2 - Covers (RIGHT and LEFT Side)
1 - Protective Cover with 4 screws

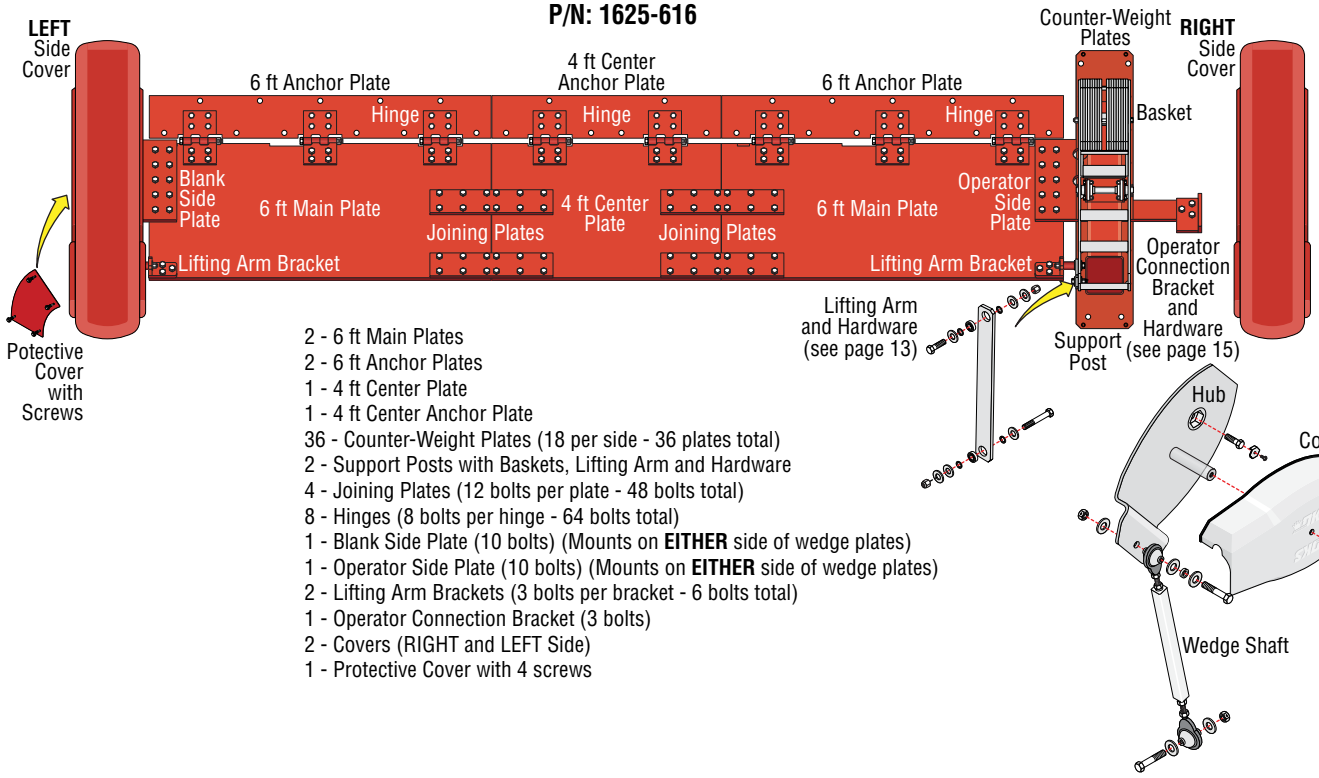
Wedge Barrier Model Parts Configuration Continued

Prior to beginning the installation of the wedge barrier, we suggest that you become familiar with the instructions, illustrations, and wiring guide-lines in this manual. This will help insure that your installation is performed in an efficient and professional manner.

Barrier operator 1602-590 can be Installed on either side of wedge plates

16 FT LANE Model

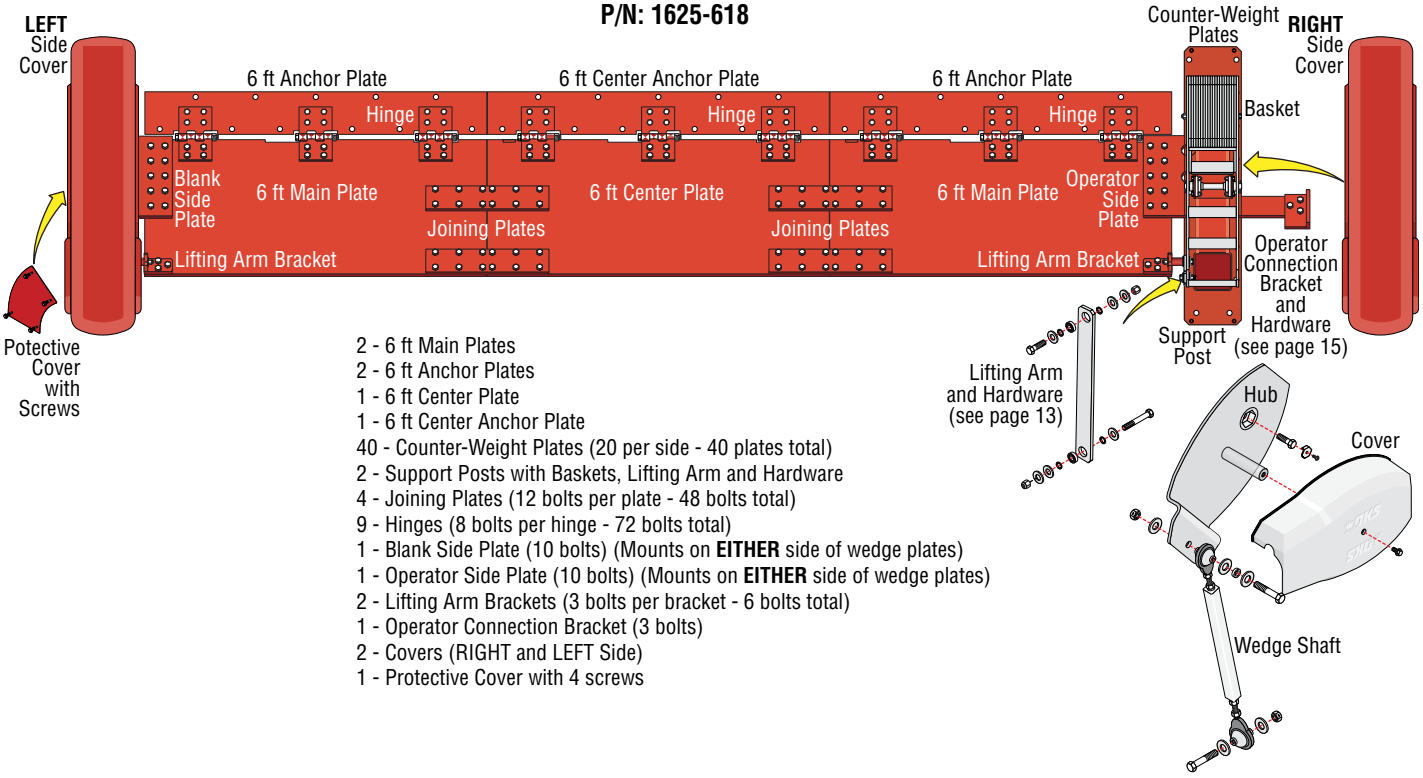
P/N: 1625-616



2 - 6 ft Main Plates
2 - 6 ft Anchor Plates
1 - 4 ft Center Plate
1 - 4 ft Center Anchor Plate
36 - Counter-Weight Plates (18 per side - 36 plates total)
2 - Support Posts with Baskets, Lifting Arm and Hardware
4 - Joining Plates (12 bolts per plate - 48 bolts total)
8 - Hinges (8 bolts per hinge - 64 bolts total)
1 - Blank Side Plate (10 bolts) (Mounts on **EITHER** side of wedge plates)
1 - Operator Side Plate (10 bolts) (Mounts on **EITHER** side of wedge plates)
2 - Lifting Arm Brackets (3 bolts per bracket - 6 bolts total)
1 - Operator Connection Bracket (3 bolts)
2 - Covers (RIGHT and LEFT Side)
1 - Protective Cover with 4 screws

18 FT LANE Model

P/N: 1625-618



2 - 6 ft Main Plates
2 - 6 ft Anchor Plates
1 - 6 ft Center Plate
1 - 6 ft Center Anchor Plate
40 - Counter-Weight Plates (20 per side - 40 plates total)
2 - Support Posts with Baskets, Lifting Arm and Hardware
4 - Joining Plates (12 bolts per plate - 48 bolts total)
9 - Hinges (8 bolts per hinge - 72 bolts total)
1 - Blank Side Plate (10 bolts) (Mounts on **EITHER** side of wedge plates)
1 - Operator Side Plate (10 bolts) (Mounts on **EITHER** side of wedge plates)
2 - Lifting Arm Brackets (3 bolts per bracket - 6 bolts total)
1 - Operator Connection Bracket (3 bolts)
2 - Covers (RIGHT and LEFT Side)
1 - Protective Cover with 4 screws

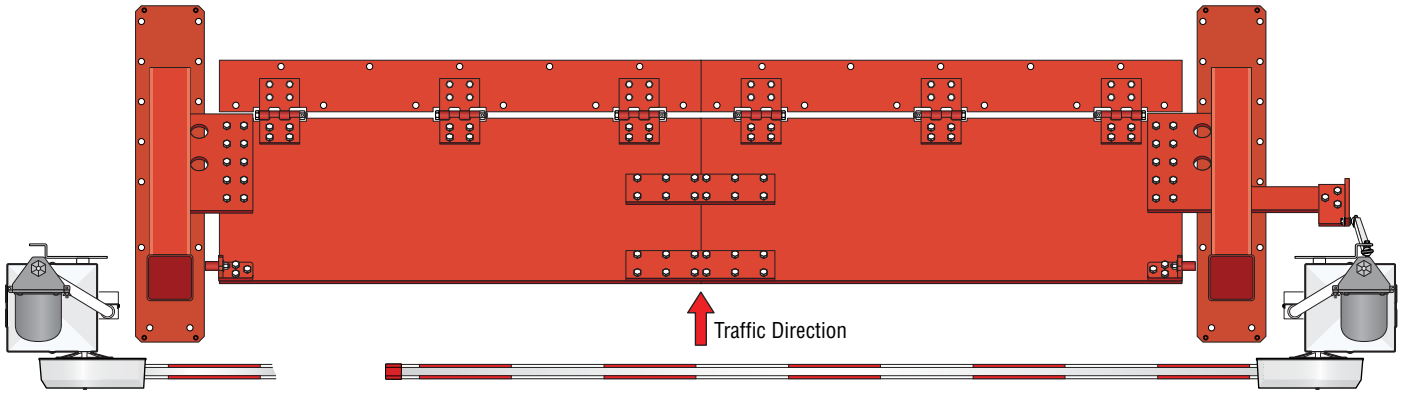
Concrete Pad Setup

EXISTING Concrete

WARNING for Precast Concrete: Drilling into precast concrete is **NOT recommended** without professional advice or assistance. If you don't know where the prestressed wire strands are located, **you risk damaging the structural integrity of the precast concrete** and the drilling equipment you use. If you need to drill into precast concrete to anchor the wedge barrier to it, you must contact the building engineer before proceeding.

NEW Concrete Pad

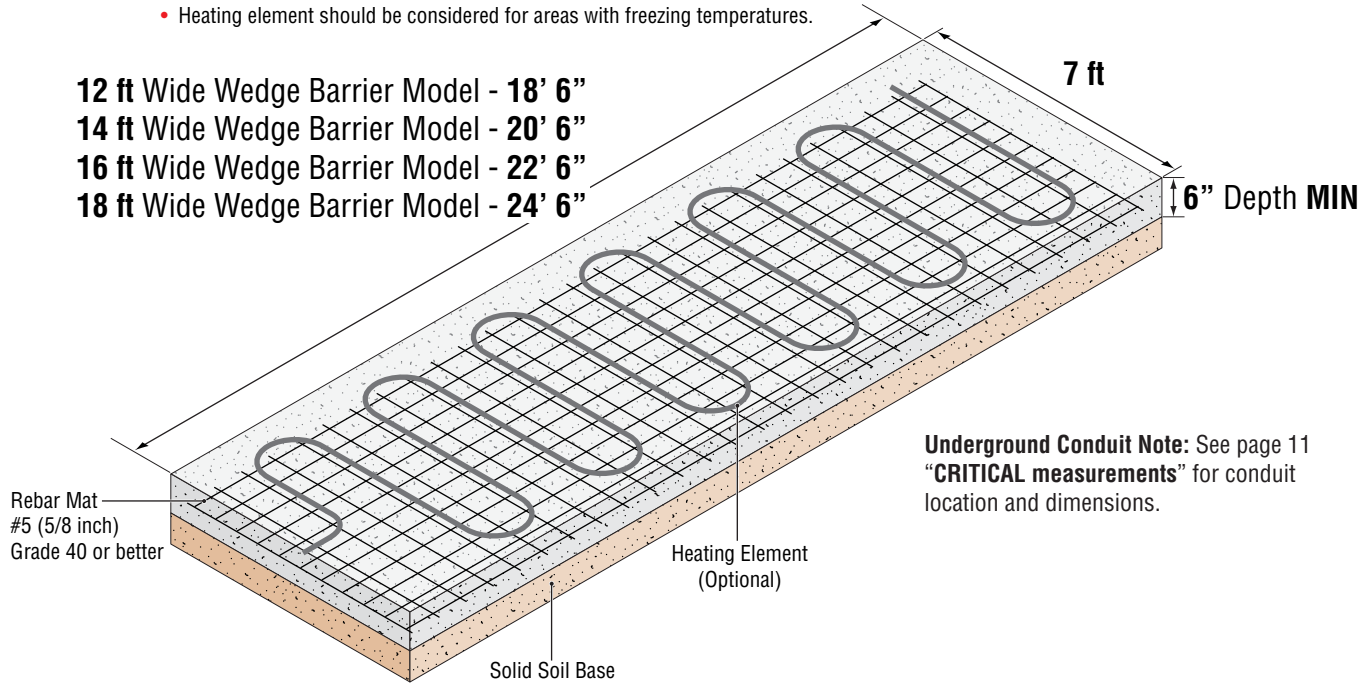
Select which side of wedge barrier the operator will be installed on (manual shows installation on the **RIGHT side** of wedge. To install operator on **LEFT side** of wedge, simply flip measurements to the opposite side of concrete pad throughout manual.



Concrete Requirements and Dimensions

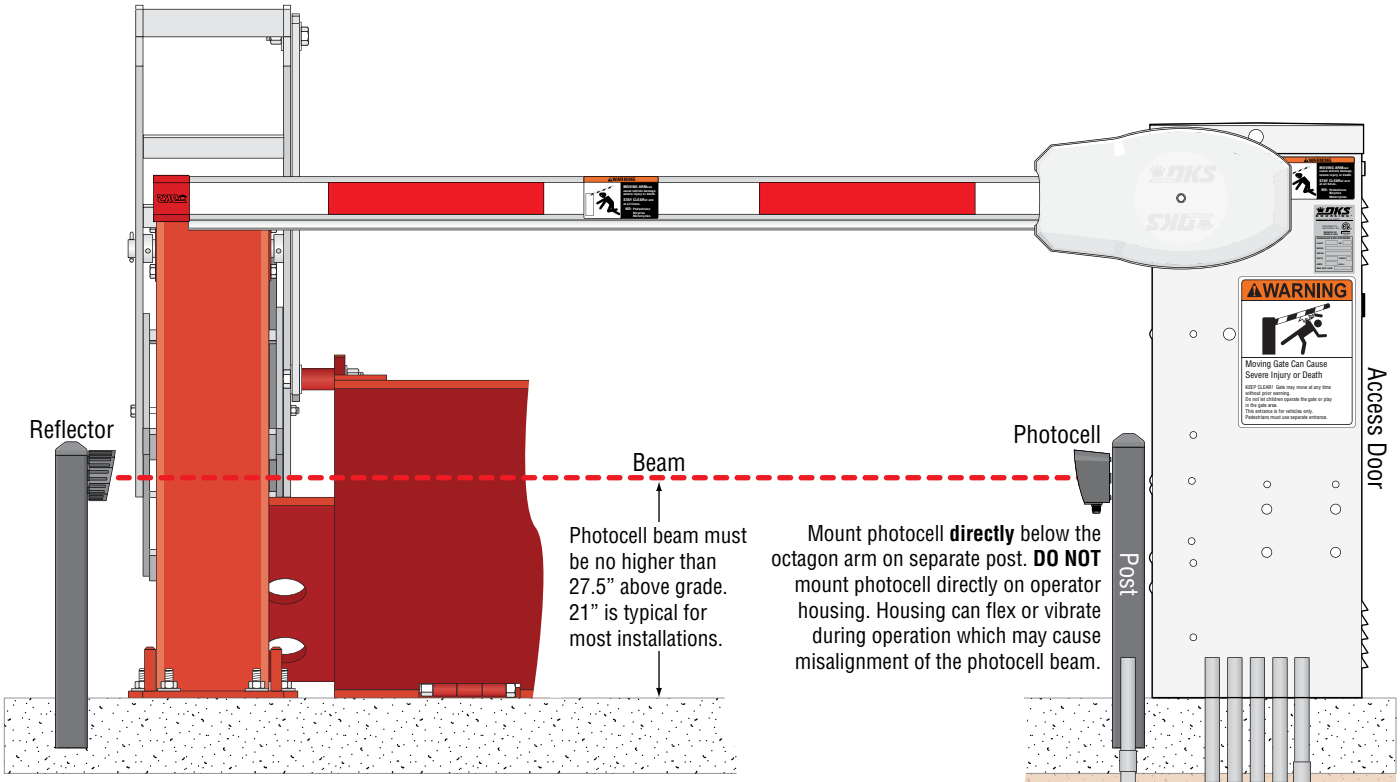
- Concrete Pad 4,000 PSI. At least 6" deep.
- Soil compression under and around the foundation shall be compacted to a soil density of 95% of standard ASTM-698.
- Add gravel where necessary to insure a solid base. Soil must be stable and able to support the weight of the concrete pad.
- The 1625 Wedge Barrier must be installed on a **flat and level concrete surface on grade with the roadway surface**.
- Place one layer **rebar mat** at eight (8) inch on-center. Use #5 (5/8 inch) Grade 40 or better.
- Cure concrete properties 4000 psi (minimum) with smooth finish and proper drainage.
- Heating element should be considered for areas with freezing temperatures.

12 ft Wide Wedge Barrier Model - **18' 6"**
14 ft Wide Wedge Barrier Model - **20' 6"**
16 ft Wide Wedge Barrier Model - **22' 6"**
18 ft Wide Wedge Barrier Model - **24' 6"**



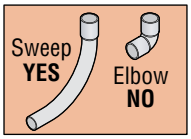
Underground Conduit Note: See page 11 "**CRITICAL measurements**" for conduit location and dimensions.

Underground Conduit and Photocell Position

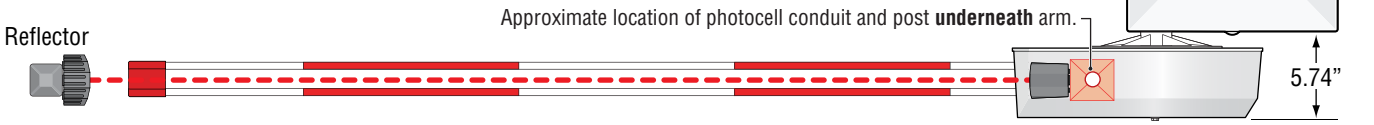


- The conduit requirements are for a typical barrier gate operator installation. The conduit requirements for your application may vary from this depending on your specific needs.
- Use only sweeps for conduit bends. **Do not use 90° elbows as this will make wire pulls very difficult and can cause damage to wire insulation.**
- DoorKing recommends using 3/4-inch conduit.
- Be sure that all conduits are installed in accordance with local codes.
- **Never** run low voltage rated wire insulation in the same conduit as high voltage rated wire insulation.

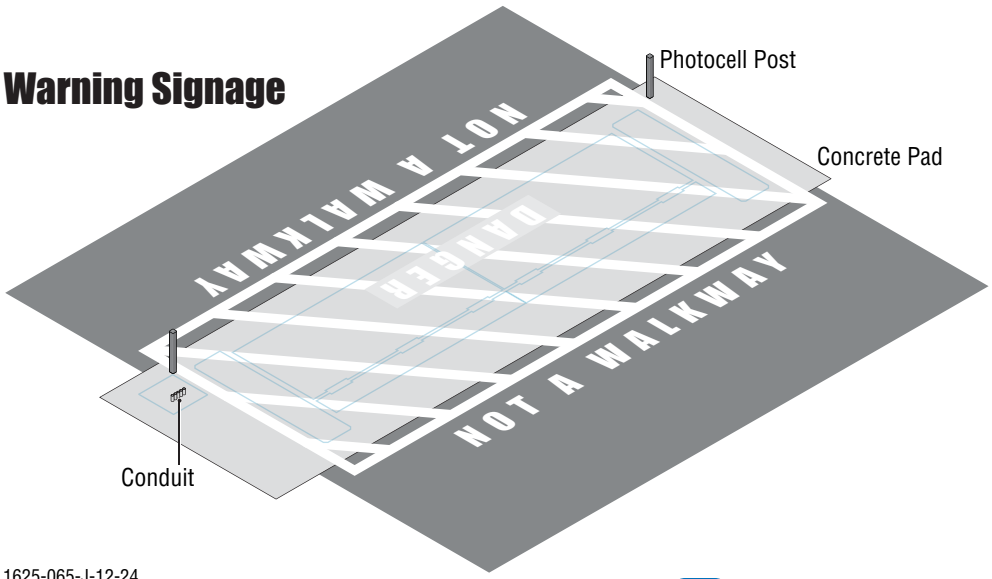
Operator Conduit Note: See next page for operator conduit locations.



Conduit Options:
- AC Power
- Low Voltage Accessories
- Earth Ground
- Vehicle Loops
- Photocell



Warning Signage



AFTER concrete pad has been poured but **BEFORE** wedge and operator have been installed, warning stripes and verbage can be painted on the surface to discourage pedestrians from walking in the general area. It’s much easier to paint now rather than after the installation. “**DANGER**” can be painted underneath the wedge plates that only shows when wedge plates are raised for better safety awareness. Chalk lines can be snapped on the concrete to layout where all components will be located to help when striping.
See **CRITICAL measurements** on page 11 to help layout chalk lines.

Anchoring Wedge Barrier to Concrete Pad Detail

Wedge Barrier Model's Anchor Requirements

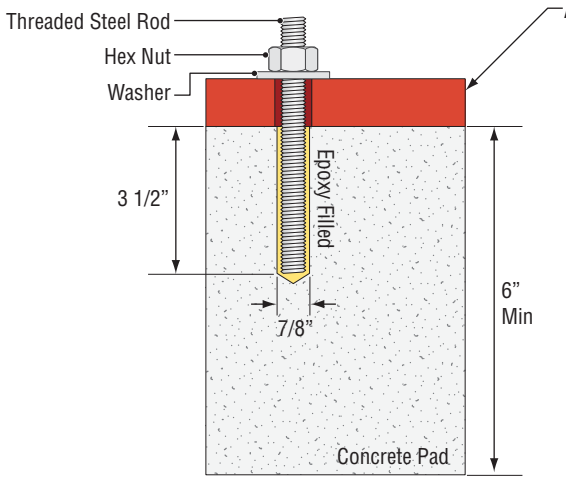
Total number of threaded rods needed for each wedge barrier model's anchor plates and support posts to secure them to the concrete pad.

12 ft Wide Wedge Barrier Model - **Threaded Steel Rods Needed: 54**
14 ft Wide Wedge Barrier Model - **Threaded Steel Rods Needed: 57**
16 ft Wide Wedge Barrier Model - **Threaded Steel Rods Needed: 61**
18 ft Wide Wedge Barrier Model - **Threaded Steel Rods Needed: 65**

NOTE: An **additional 6 anchors** are needed to secure the operator to the concrete pad. However, these can be **simple sleeve anchors** if desired as the barrier operator offers **NO crash resistance** for the wedge system, see page 12.

IMPORTANT: Anchor Specifications

Certification to ASTM F2656-23, PU-30 (P1,P2). A vehicle weighing 5,070 lbs. traveling at 30 mph will not shear or budge the 1625 Wedge on direct impact when **using these specifications** to anchor wedge barrier.



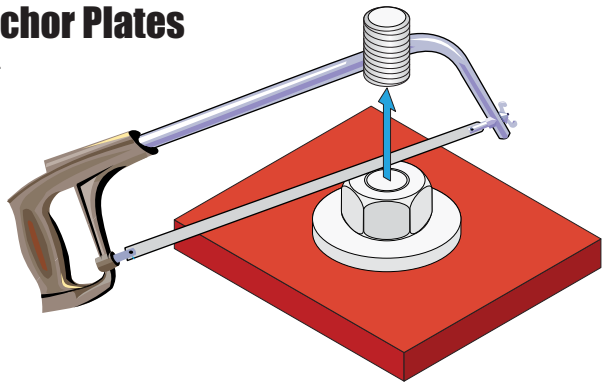
Anchor Specifications		
Item	**Description**	**McMaster-Carr P/N**
Threaded Steel Rod	Grade B7 Steel- ¾"-10 x 5½"	98750A315
Washer	Grade 8 Steel - 2" O.D.	98026A036
Hex Nut	Grade 5 Steel - ¾"-10	95505A608
Epoxy	HIT-RE500 Epoxy Adhesive	

IMPORTANT: Torque hex nuts to 100 Ft Lbs.

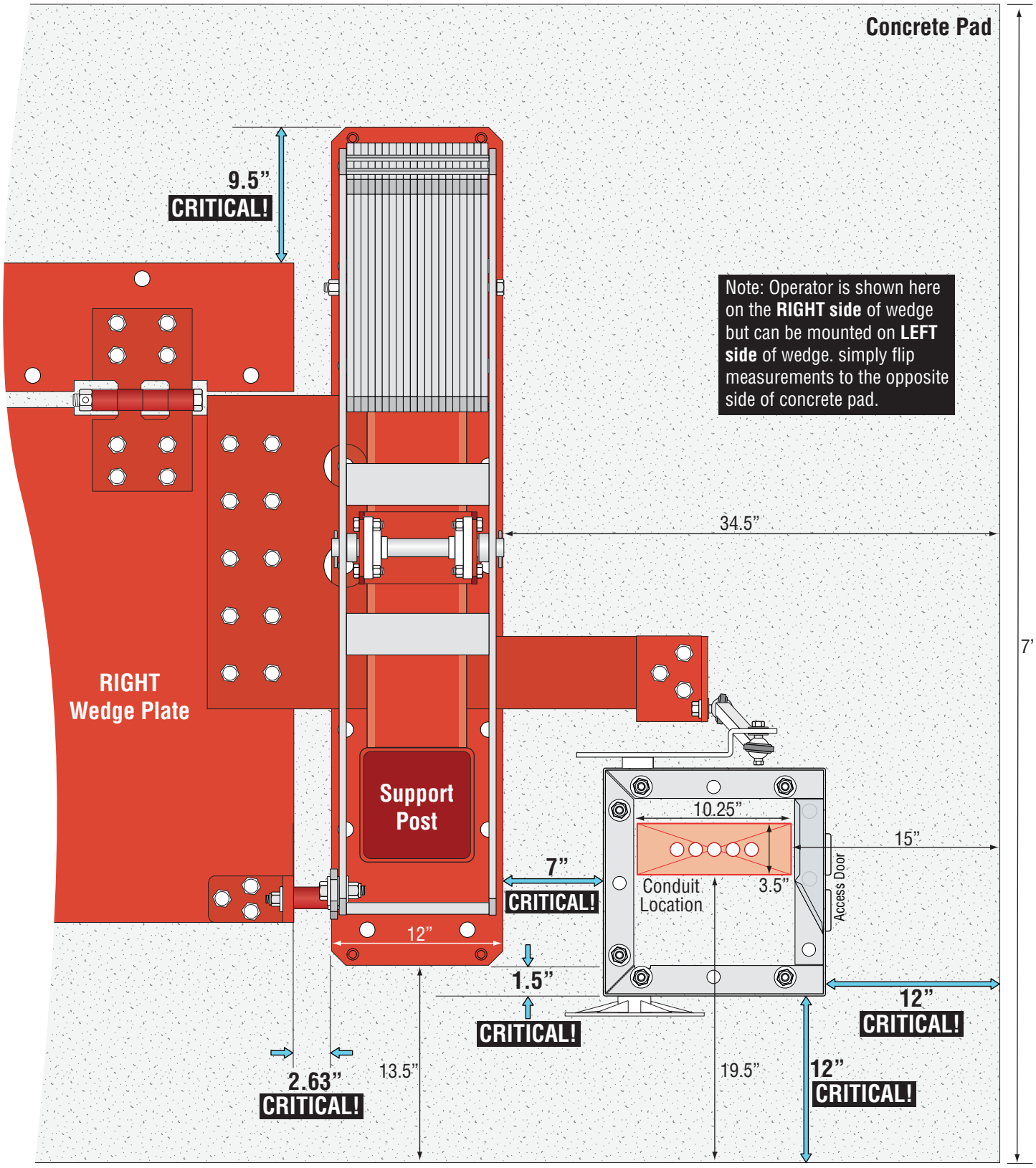
- Drill 7/8-inch holes to anchor the **support posts** and **anchor plates** to a depth of 3-½ inches.
- Use a ¼-inch bit to drill pilot holes if necessary.
- Use **Grade B7 ¾-inch threaded steel rod (5.5 inch length)** and **HIT-RE500 Epoxy adhesive**. Follow epoxy manufacturer's instructions. Epoxy requires minimum 12 hours to cure.
- After the required cure time, install **washers** and **nuts** onto the threaded steel rods and torque to 100 Ft Lbs.

Cut Off Excess Threaded Rod on the Anchor Plates

To protect vehicle tires, grind or cut any steel rod extending past the nuts.



Critical Measurements

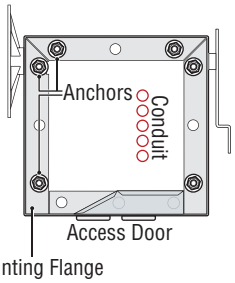


Mounting Operator and Wedge on Concrete Pad Steps

1 Permanently Mount Operator

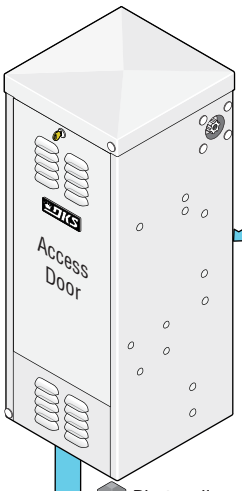
Permanently mount operator to concrete pad using the **CRITICAL measurements** on page 11.

The installation shown has the operator mounted on the **RIGHT SIDE** of the wedge but the operator can be mounted on **either side** of the wedge depending on the Side Plates position.
See "**Bolt plates Together**" on page 13.



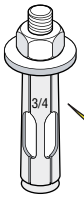
Mounting Flange

At least 6 anchors are needed to secure the operator to the concrete pad.



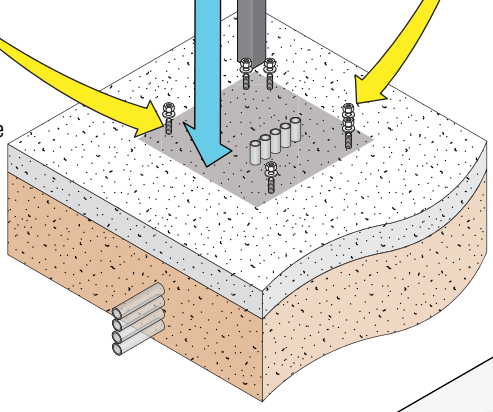
Traffic Light Installation Note: A hole **MUST** be drilled into operator housing to install traffic light. Access will be limited to drill hole **AFTER** support post has been installed next to operator (see page 22 for traffic light hole location).

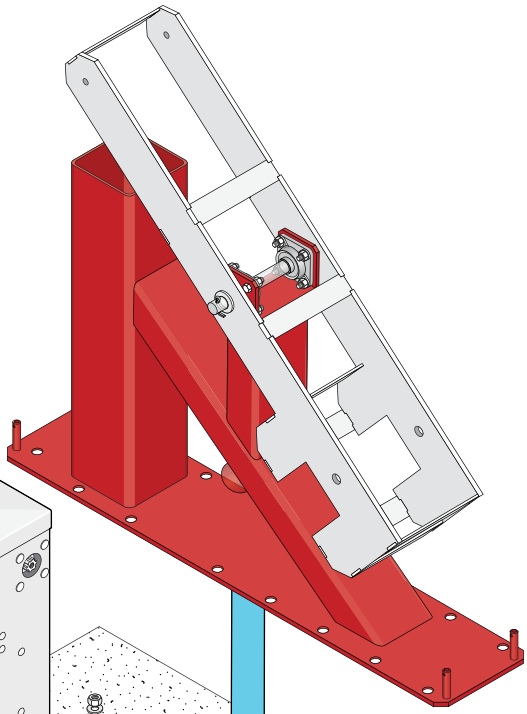
Sleeve Anchors **OR** Threaded Steel Rods can be used, see page 10 for more information.



When using sleeve anchors, secure the mounting flange to concrete pad with 3/4" x 3" **Min** (not supplied).

Photocell Post

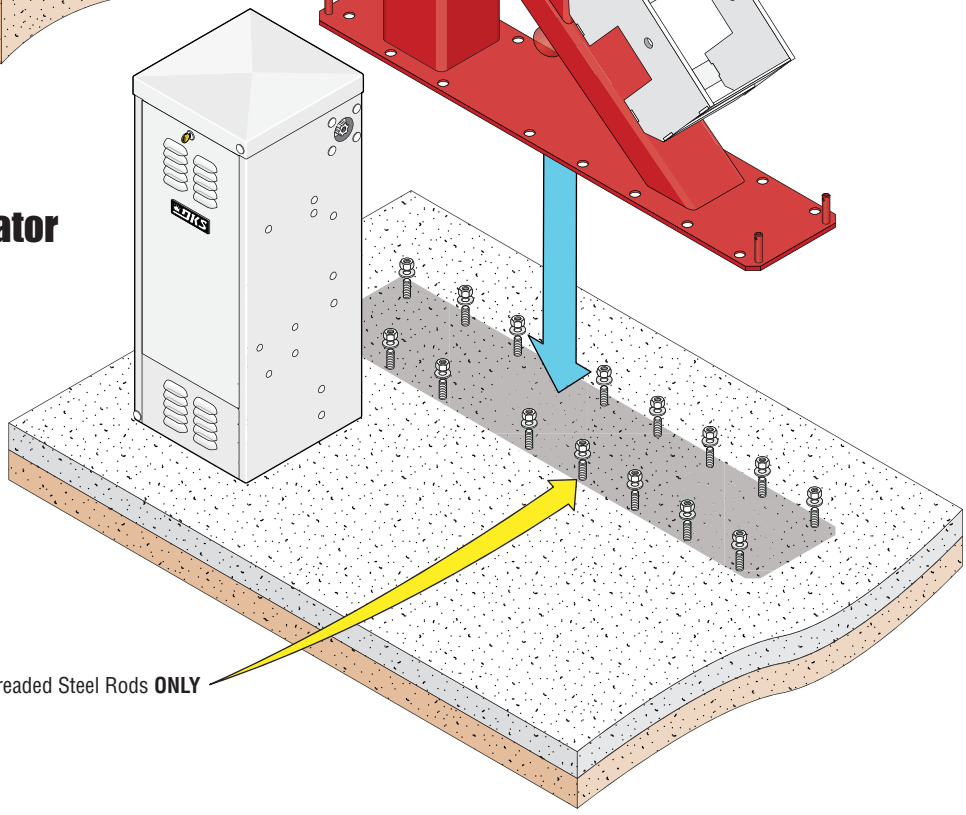




2 Permanently Mount Support Post Next to Operator

Use the **CRITICAL measurements** on page 11 for support post location.

ONLY use threaded steel rods to attach support post to concrete pad, see page 10 for more information.



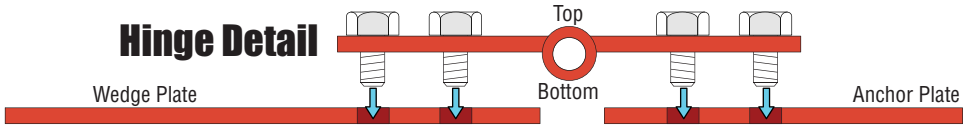
IMPORTANT: Threaded Steel Rods **ONLY**
See page 10.

3 Bolt Plates Together

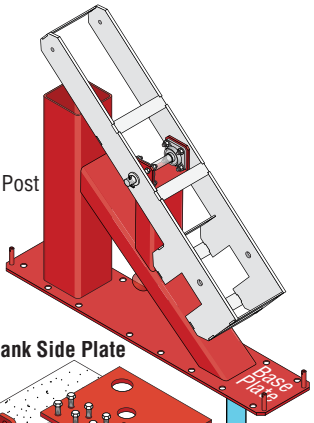
Position wedge plates and the other support post approximately where they will be located on concrete pad. Bolt the hinges, bar connectors, side plates etc. to the wedge plates depending on the model wedge barrier you have selected (see pages 6-7 for specific part configurations). The side plates lay on top of the support post base plate.

TIP: Use Lock-Tite to secure **ALL** bolts to help prevent them from loosening over time.

Hinge Detail

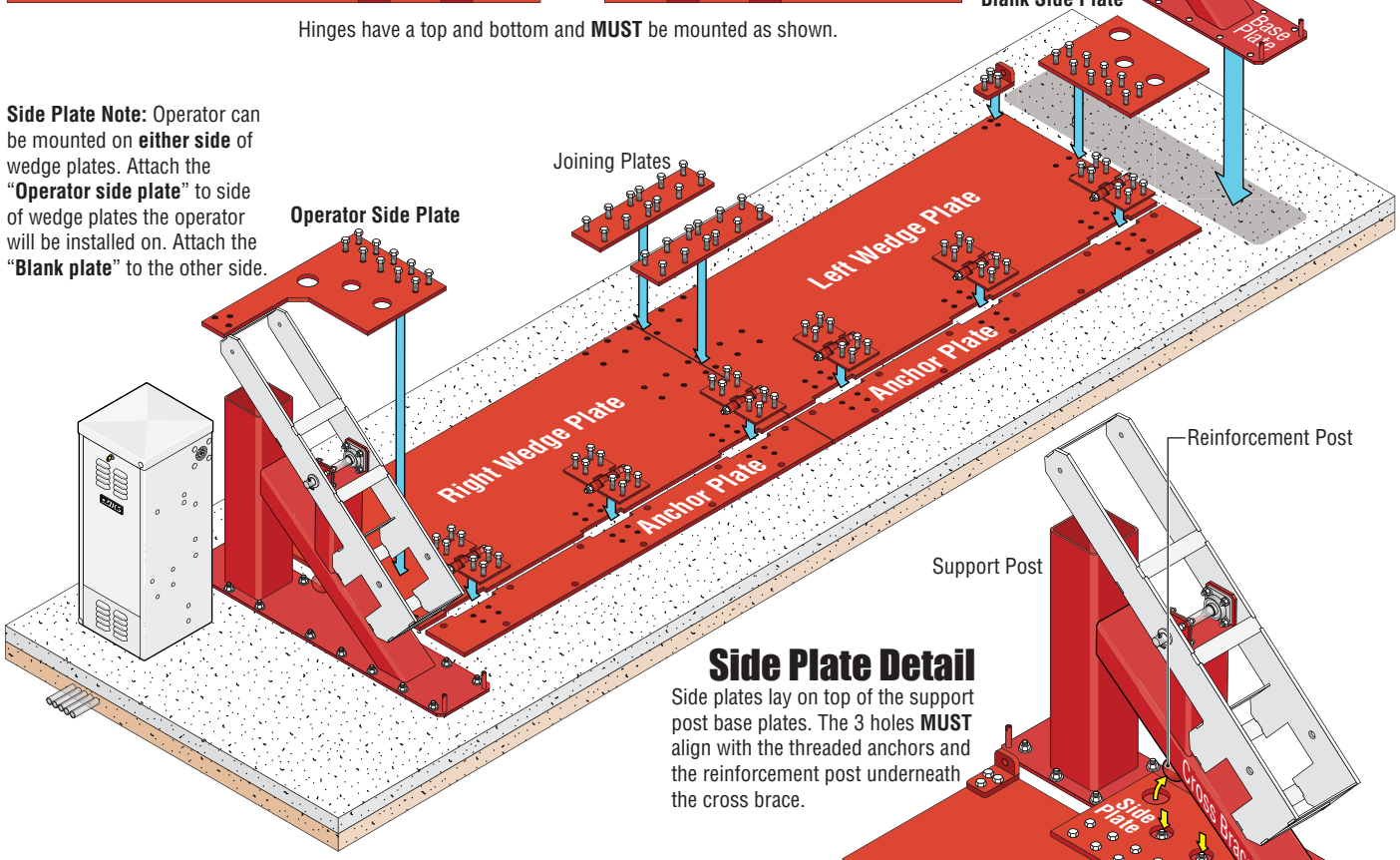


Hinges have a top and bottom and **MUST** be mounted as shown.



Blank Side Plate

Side Plate Note: Operator can be mounted on **either side** of wedge plates. Attach the "**Operator side plate**" to side of wedge plates the operator will be installed on. Attach the "**Blank plate**" to the other side.

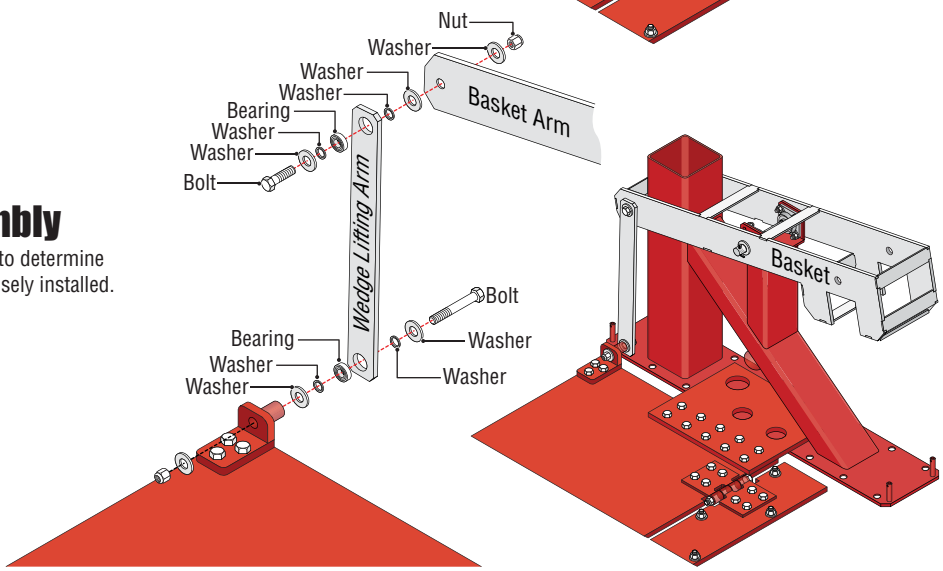


Side Plate Detail

Side plates lay on top of the support post base plates. The 3 holes **MUST** align with the threaded anchors and the reinforcement post underneath the cross brace.

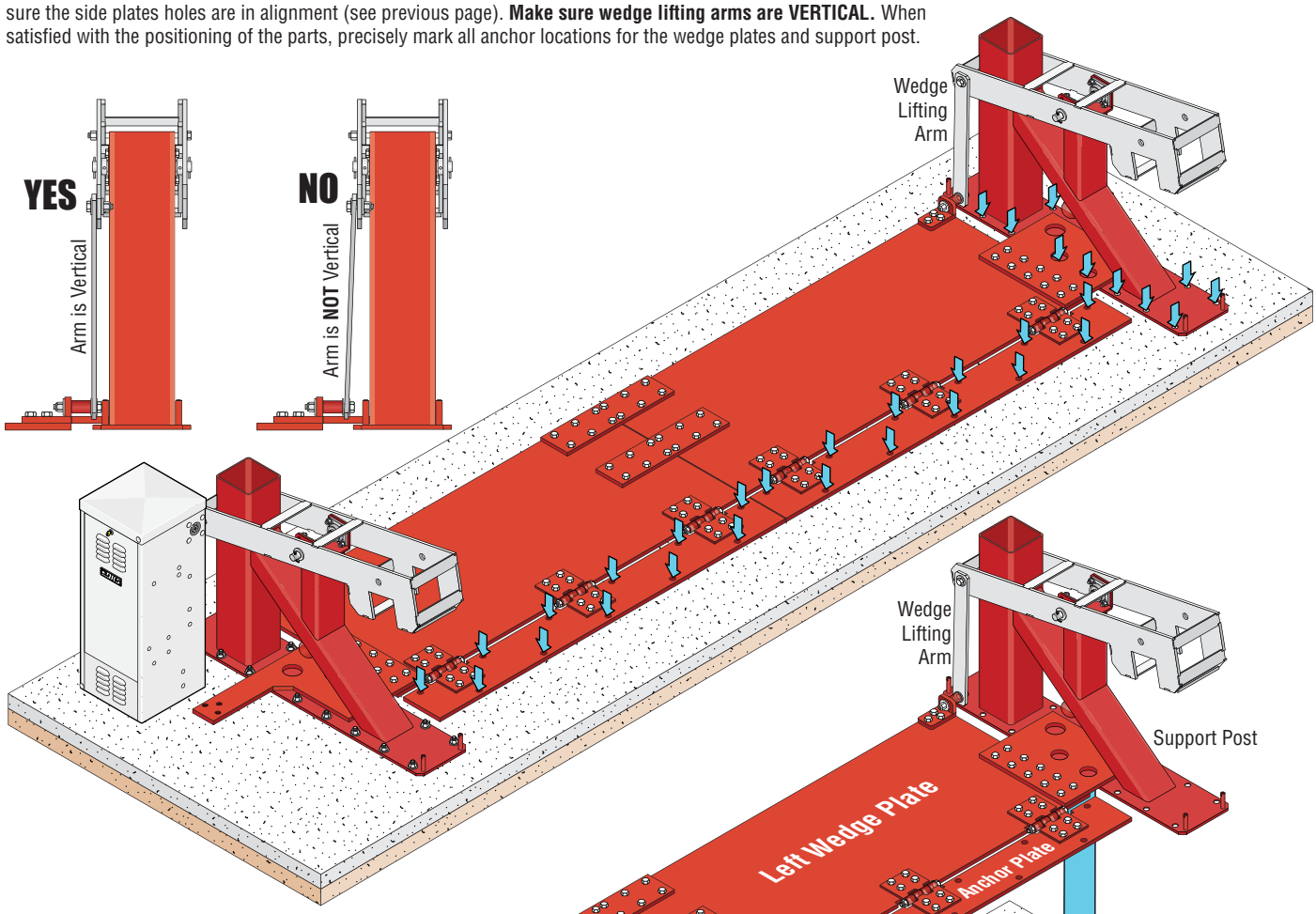
4 Wedge Lifting Arm Assembly

The wedge lifting arms **MUST** be temporally installed to determine where the wedge plates and support post will be precisely installed. **Wedge lifting arms MUST be vertical.**

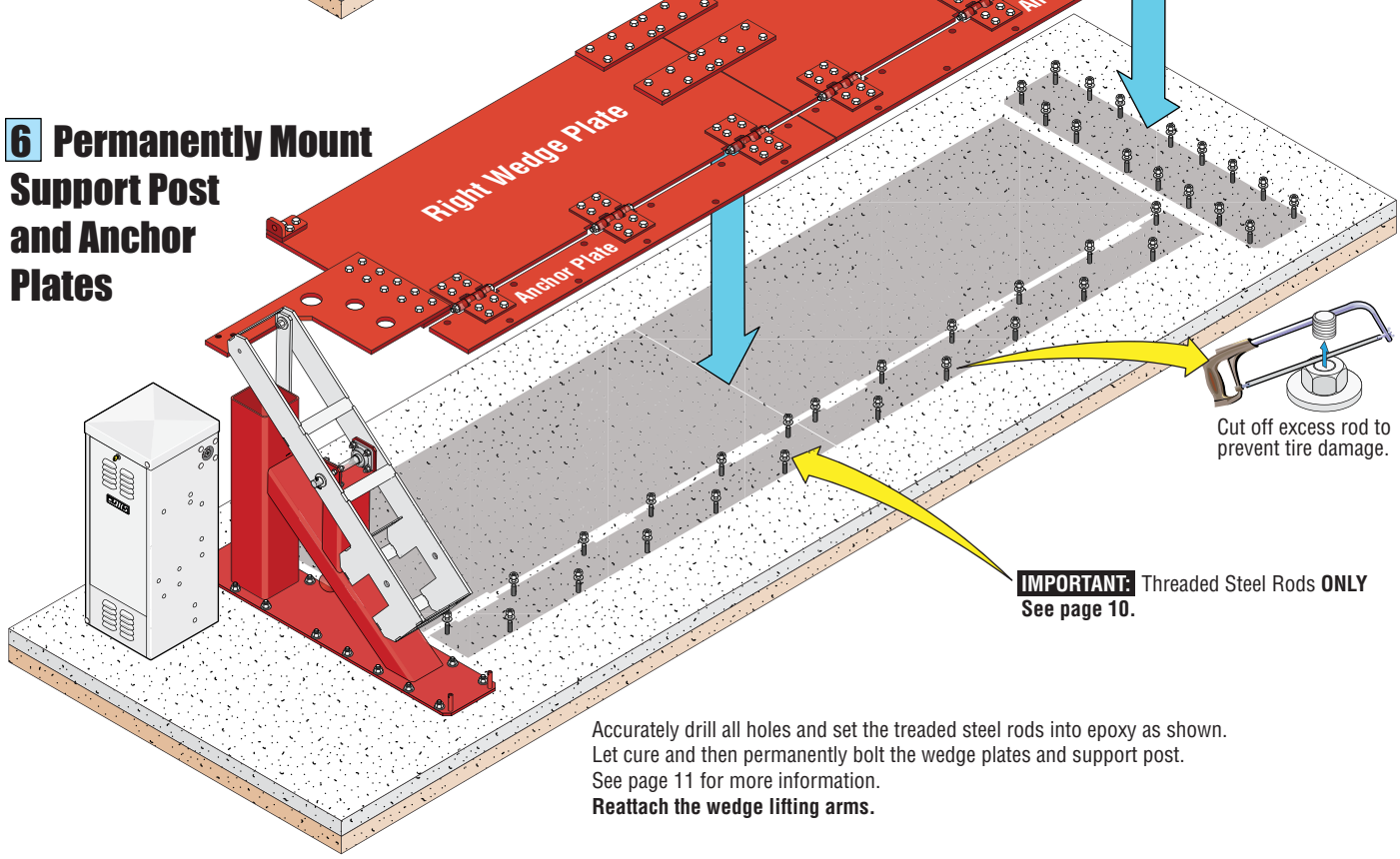


5 Precisely Mark Anchors

Fine tune the positions of the wedge plates and support post using the **CRITICAL measurements** (See page 11) making sure the side plates holes are in alignment (see previous page). **Make sure wedge lifting arms are VERTICAL.** When satisfied with the positioning of the parts, precisely mark all anchor locations for the wedge plates and support post.



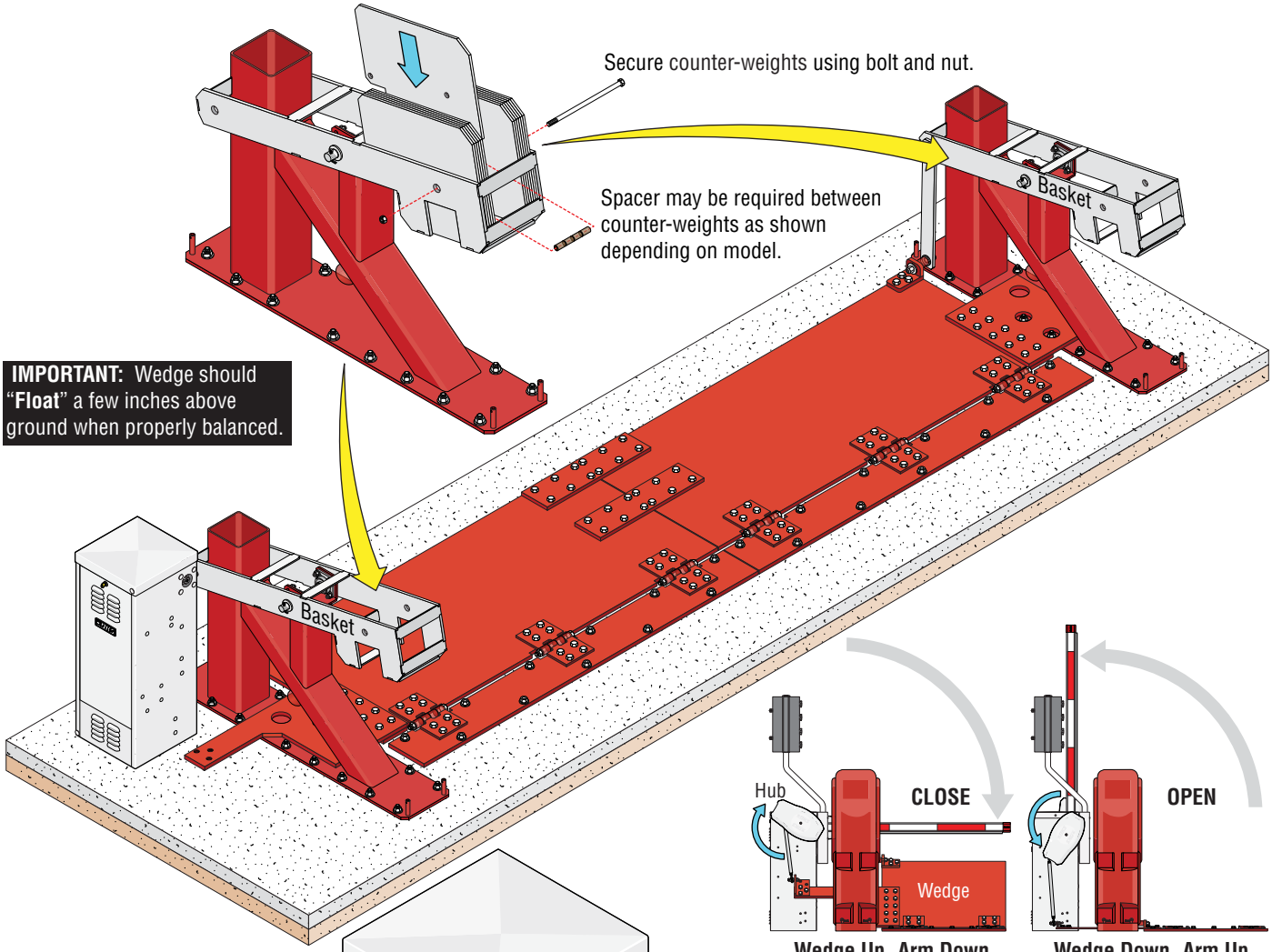
6 Permanently Mount Support Post and Anchor Plates



Accurately drill all holes and set the treaded steel rods into epoxy as shown. Let cure and then permanently bolt the wedge plates and support post. See page 11 for more information.
Reattach the wedge lifting arms.

7 Add Counter-Weights

Add counter-weights to baskets to counter-balance wedge. There are a different number of plates installed depending on the model wedge barrier you have selected (see pages 6-7 for specific part configurations).



IMPORTANT: Wedge should "**Float**" a few inches above ground when properly balanced.

Wedge Up, Arm Down **Wedge Down, Arm Up**

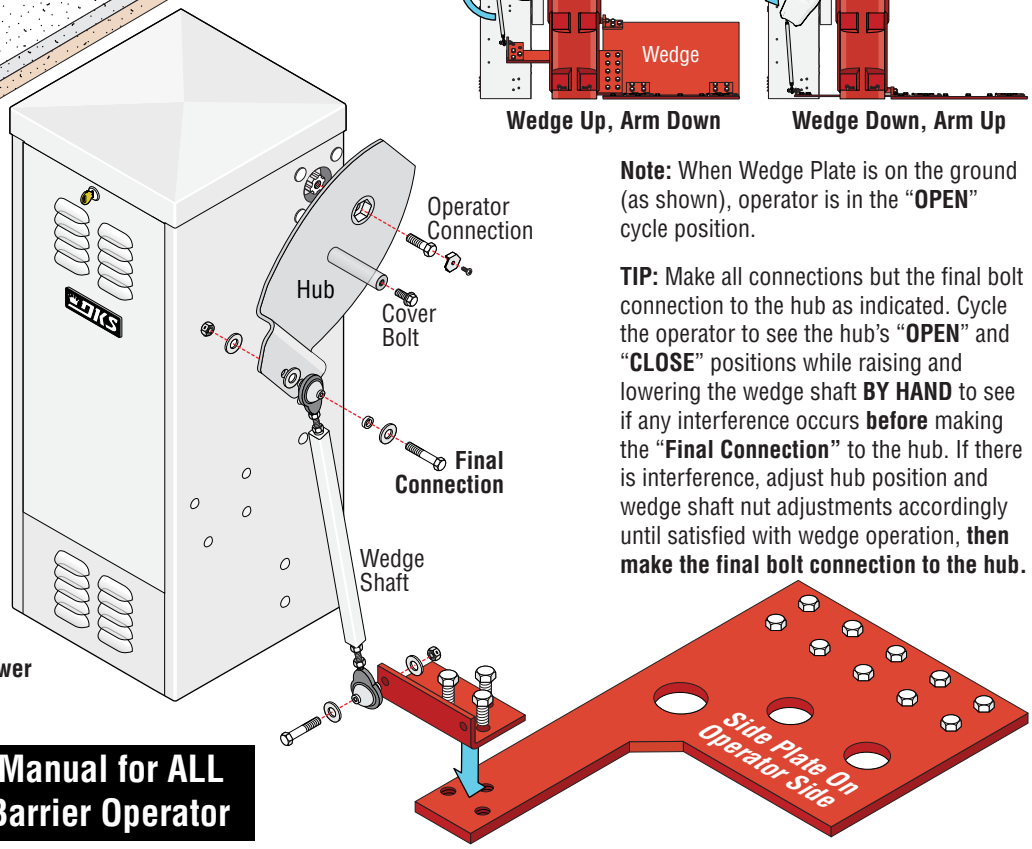
Note: When Wedge Plate is on the ground (as shown), operator is in the "**OPEN**" cycle position.

TIP: Make all connections but the final bolt connection to the hub as indicated. Cycle the operator to see the hub's "**OPEN**" and "**CLOSE**" positions while raising and lowering the wedge shaft **BY HAND** to see if any interference occurs **before** making the "**Final Connection**" to the hub. If there is interference, adjust hub position and wedge shaft nut adjustments accordingly until satisfied with wedge operation, **then make the final bolt connection to the hub.**

8 Connect Operator to Wedge Plates

DO NOT operate wedge **WITHOUT** counter-balance weights installed. Make sure hub is installed on operator in the correct **Open** and **Close** positions. Test these positions **BEFORE** making the "**Final Connection**".

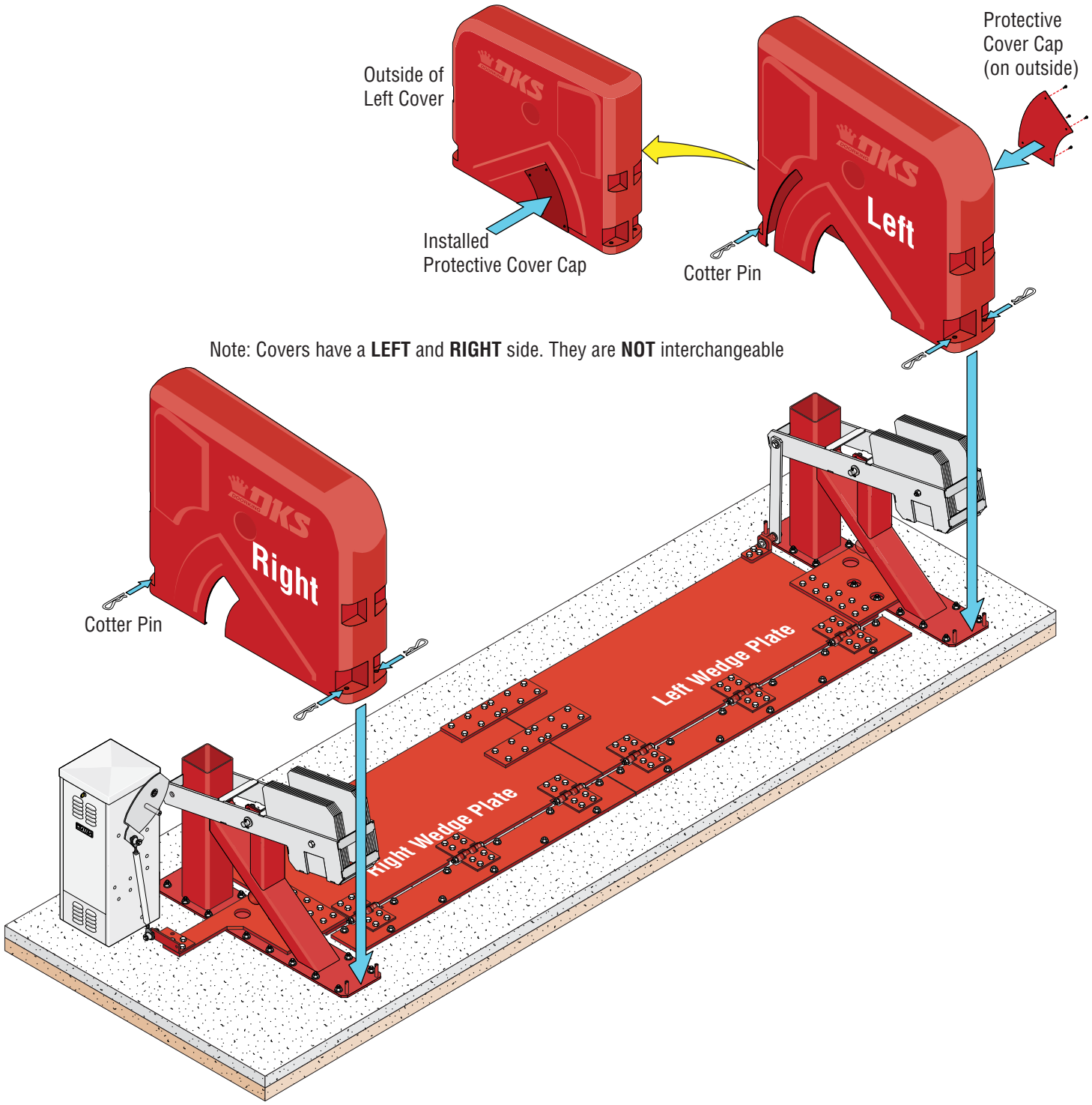
Note: Operator will **require power** when preforming this step.



Refer to the 1601-065 Manual for ALL information about the Barrier Operator

9 Install Covers

Protective Cover Cap: Only one. Install on the outside of the cover as shown, on the opposite cover from the operator side. Use 4 self-tapping screws. Helps protect against debris and trash getting inside the cover and interfering with the moving parts of the wedge.



Regular Maintenance of Wedge System

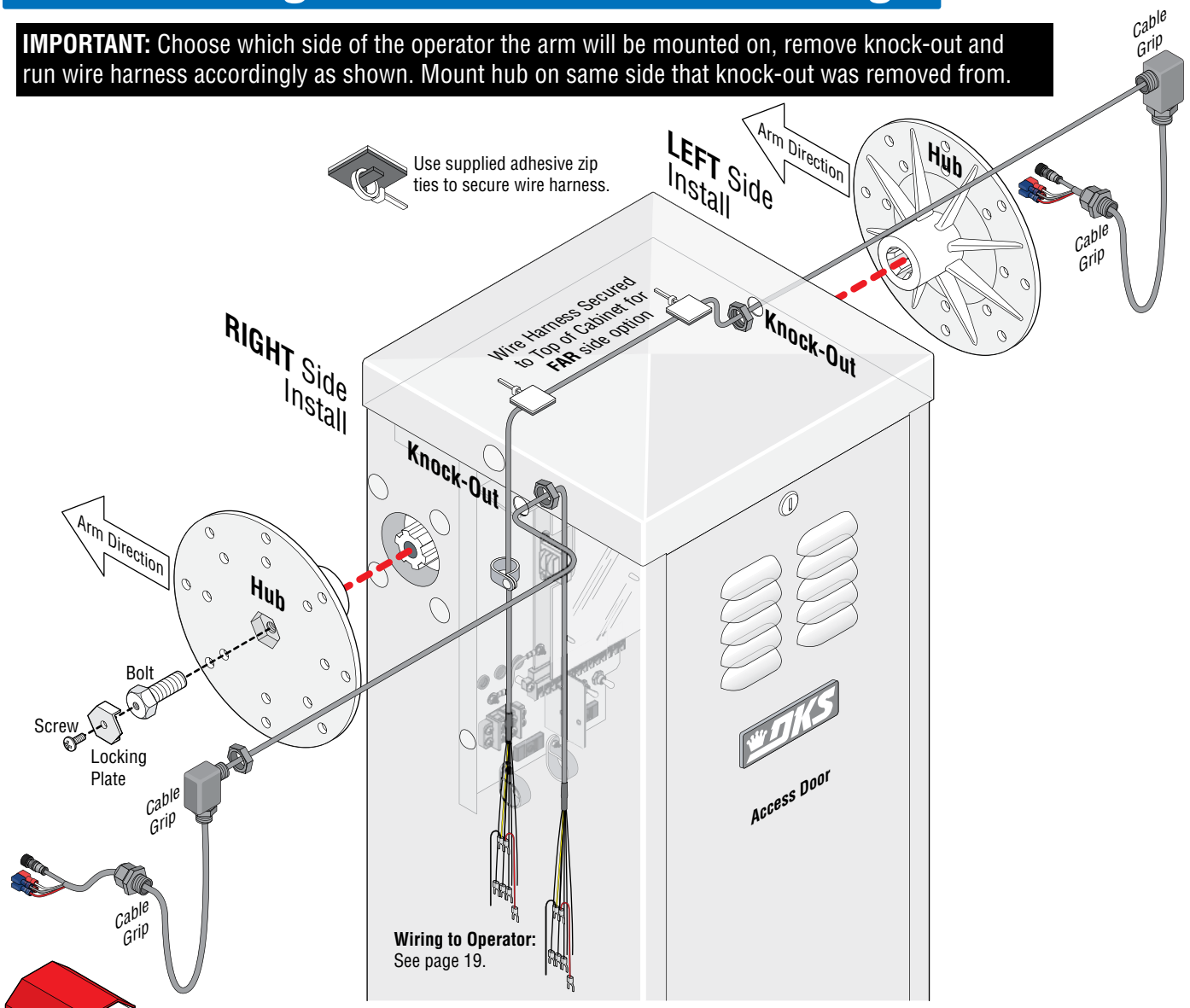
Regular inspection and removal of trash, debris, gravel, and rock is required in order to keep wedge barrier functioning properly. Neglecting to regularly clean trash and debris **UNDERNEATH WEDGE PLATE** is the number one cause of breakage and malfunctions.
Check all bolts for tightness which can loosen over time from normal operation.

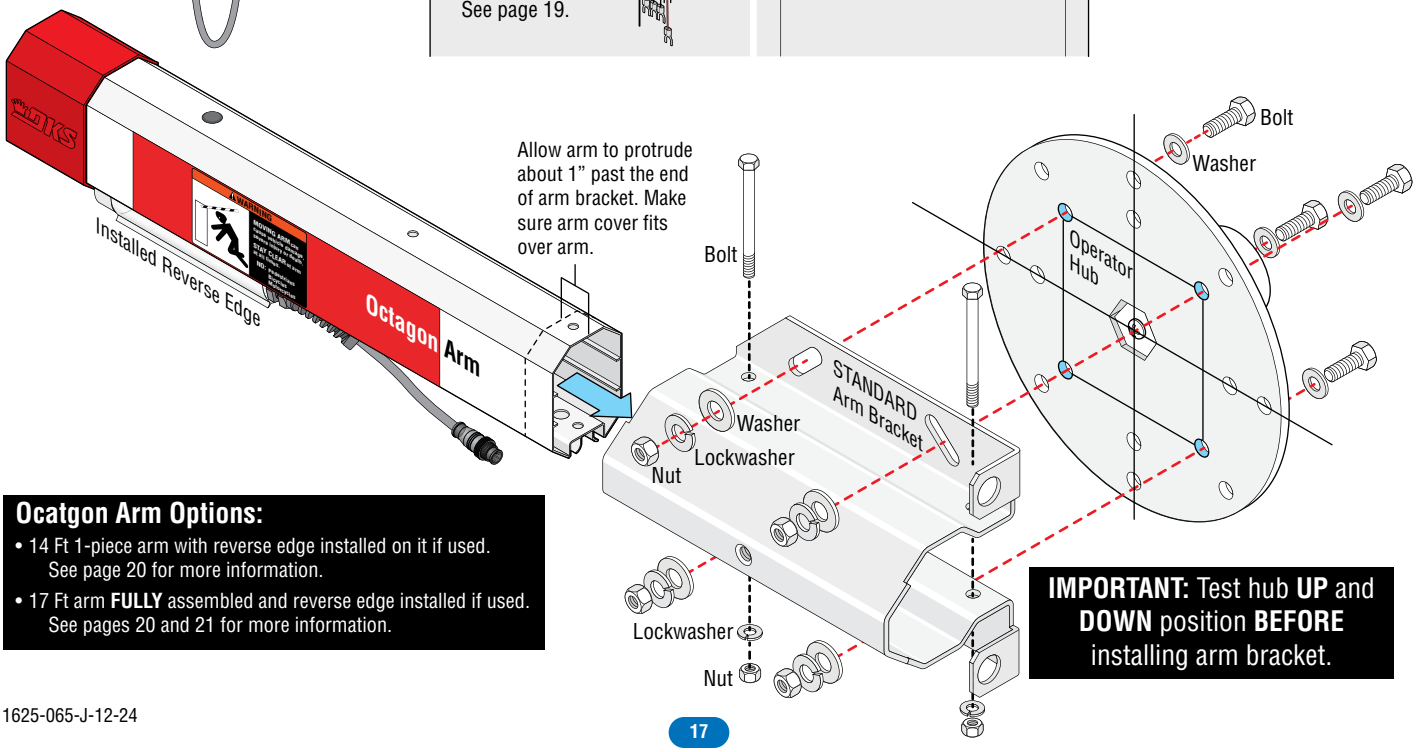
Make sure all moving parts are functioning normally. If they are **NOT**, remove wedge barrier from service immediately until it can be repaired.

Install a Octagon Arm with Reverse/LED Edge

Drawings NOT to scale.

IMPORTANT: Choose which side of the operator the arm will be mounted on, remove knock-out and run wire harness accordingly as shown. Mount hub on same side that knock-out was removed from.





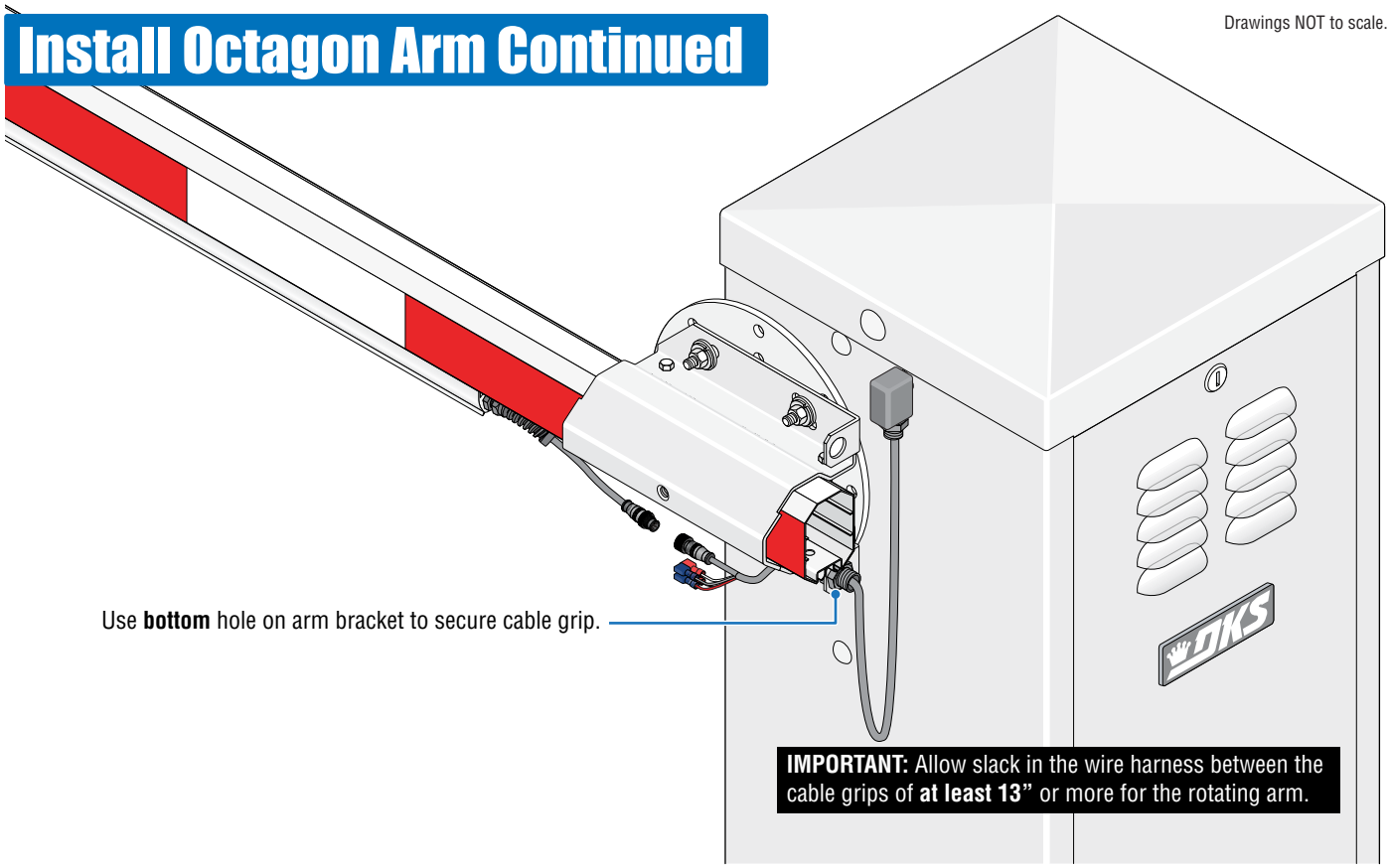
Ocatgon Arm Options:

- 14 Ft 1-piece arm with reverse edge installed on it if used. See page 20 for more information.
- 17 Ft arm **FULLY** assembled and reverse edge installed if used. See pages 20 and 21 for more information.

IMPORTANT: Test hub **UP** and **DOWN** position **BEFORE** installing arm bracket.

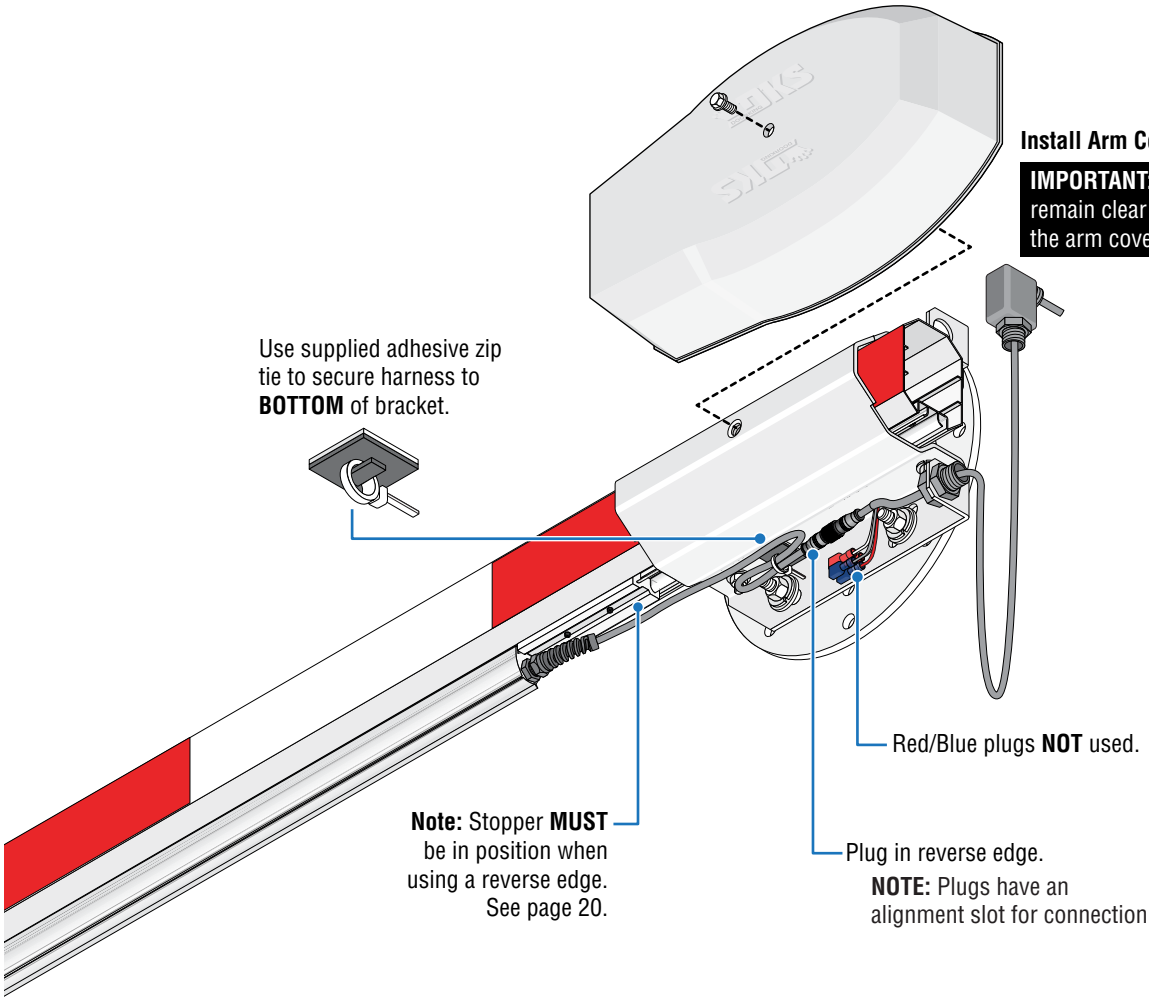
Install Octagon Arm Continued

Drawings NOT to scale.



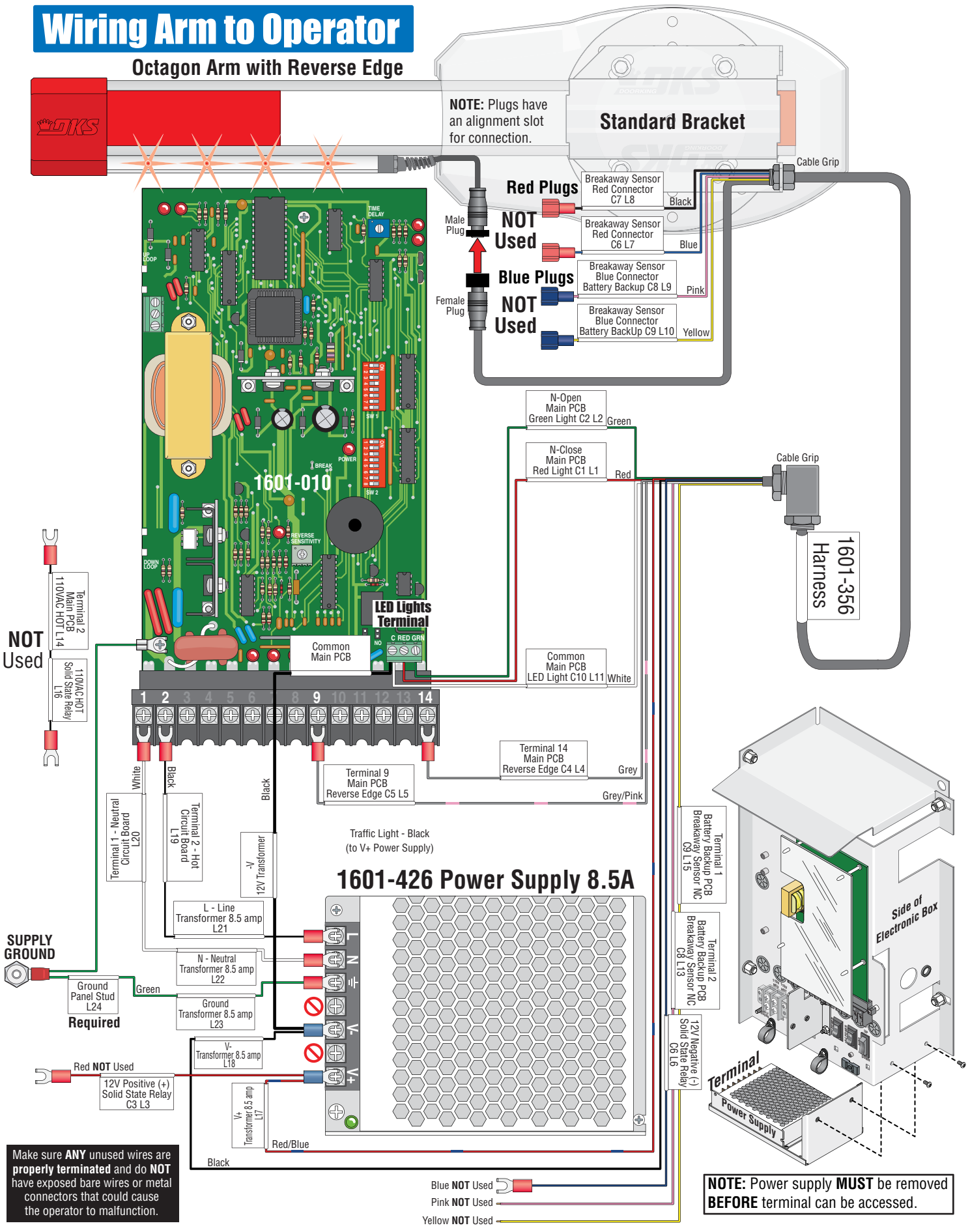
Install Arm Cover

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



Wiring Arm to Operator

Octagon Arm with Reverse Edge



NOTE: Power supply **MUST** be removed **BEFORE** terminal can be accessed.

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.

1625-065-J-12-24

Install Reverse/LED Edge on a Octagon Arm

DoorKing Part Numbers:

8080-080
14 Ft Arm Reverse Edge **WITHOUT** LEDs

8080-096
14 Ft Arm Reverse Edge + Red/Green LEDs

8080-315
17-ft Arm Reverse Edge + Red/Green LEDs

These kits are designed to install on a 14 ft **OR** 17 ft **OCTAGON Arm ONLY**.

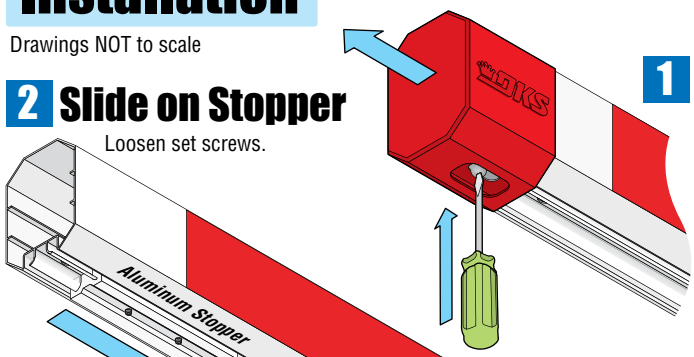
IMPORTANT: **DO NOT** operate arm with a malfunctioning reverse edge.

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 Stopper

Loosen set screws.

Push stopper against reverse edge and tighten it so edge does **NOT** slide in slot.

3 Slide on Edge

Tip: Liquid soap will help reverse edge slide on easier.

4 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.

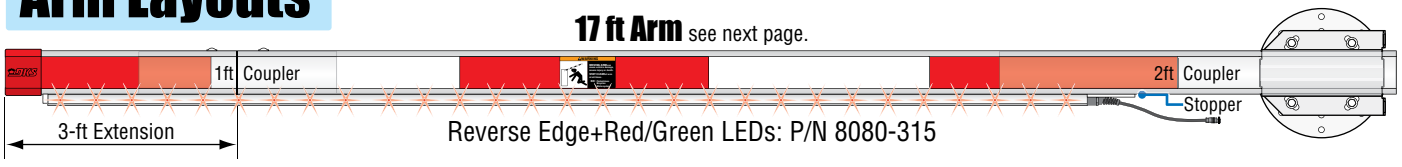
Tighten set screws.

Stopper MUST be used or edge will slide in slot.

Plug connects to the 1601-356 wire harness. see page 20.

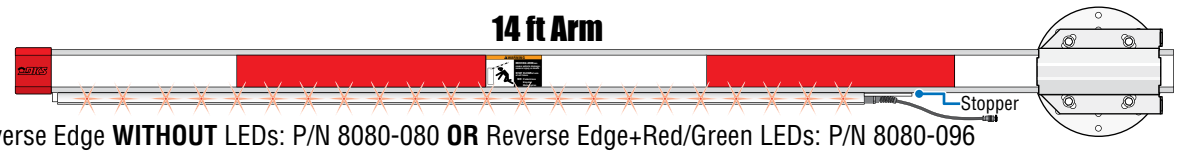
Arm Layouts

17 ft Arm see next page.



Reverse Edge+Red/Green LEDs: P/N 8080-315

14 ft Arm



Reverse Edge **WITHOUT** LEDs: P/N 8080-080 **OR** Reverse Edge+Red/Green LEDs: P/N 8080-096

17 Ft Octagon Arm Assembly

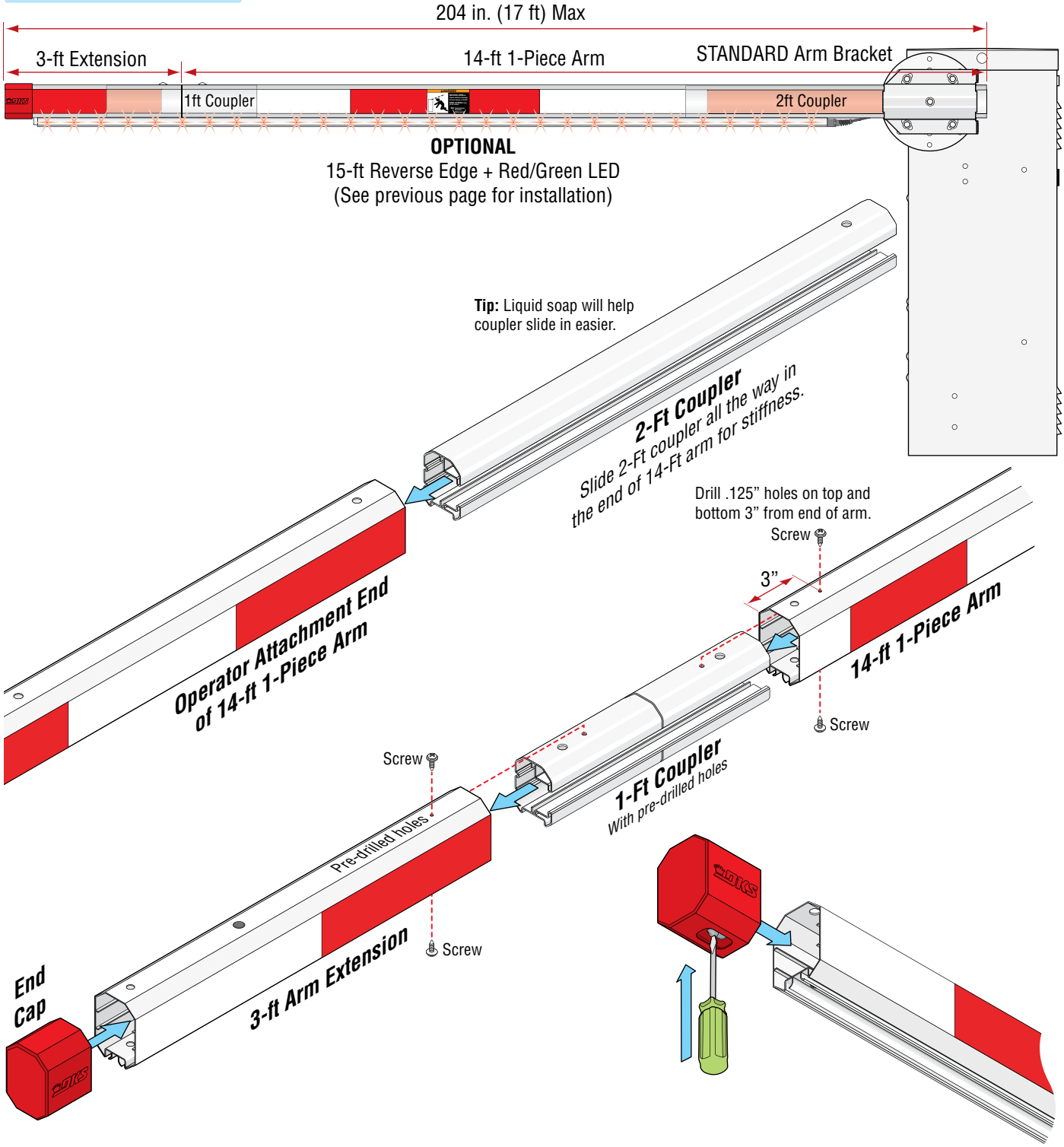
This kit will extend a 14 ft octagonal arm an **extra three feet**. The reverse edge is sold separately but **highly recommended** for safety when lowering this very long arm.

DoorKing Part Numbers:

1602-303
Octagon Arm 3-ft Extension Kit

8080-315
15-ft Reverse Edge + Red/Green LED
(Sold Separately
See previous page)

Installation



Install End Cap

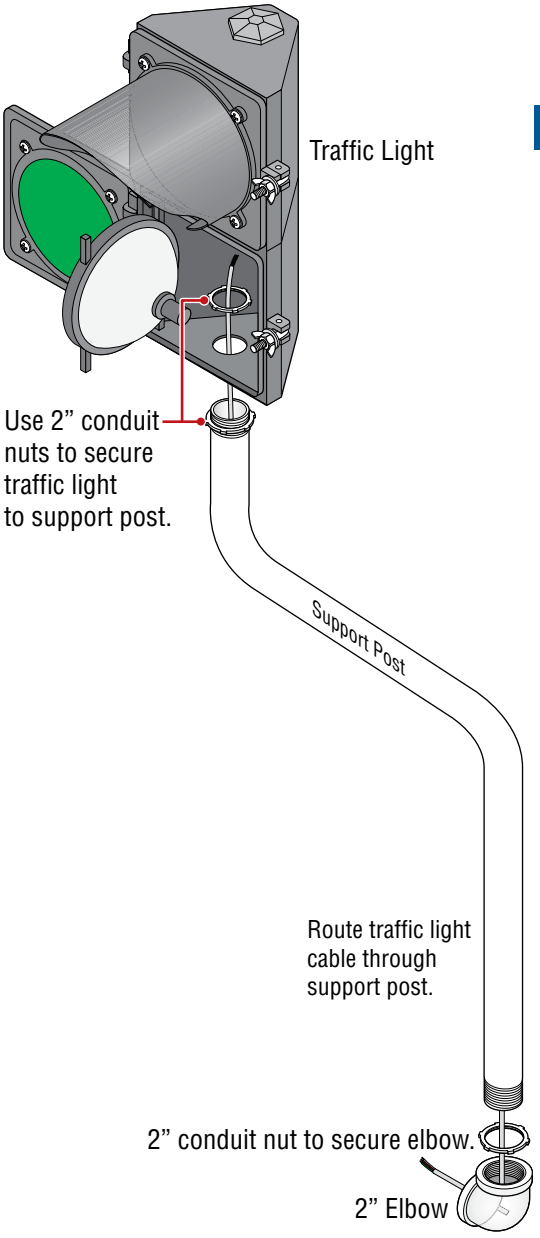
Push a screwdriver through the hole in cap to release spring **while** pushing cap on. Keep pushing cap on until a "**CLICK**" is heard, locking it in place.

Drawing NOT to scale

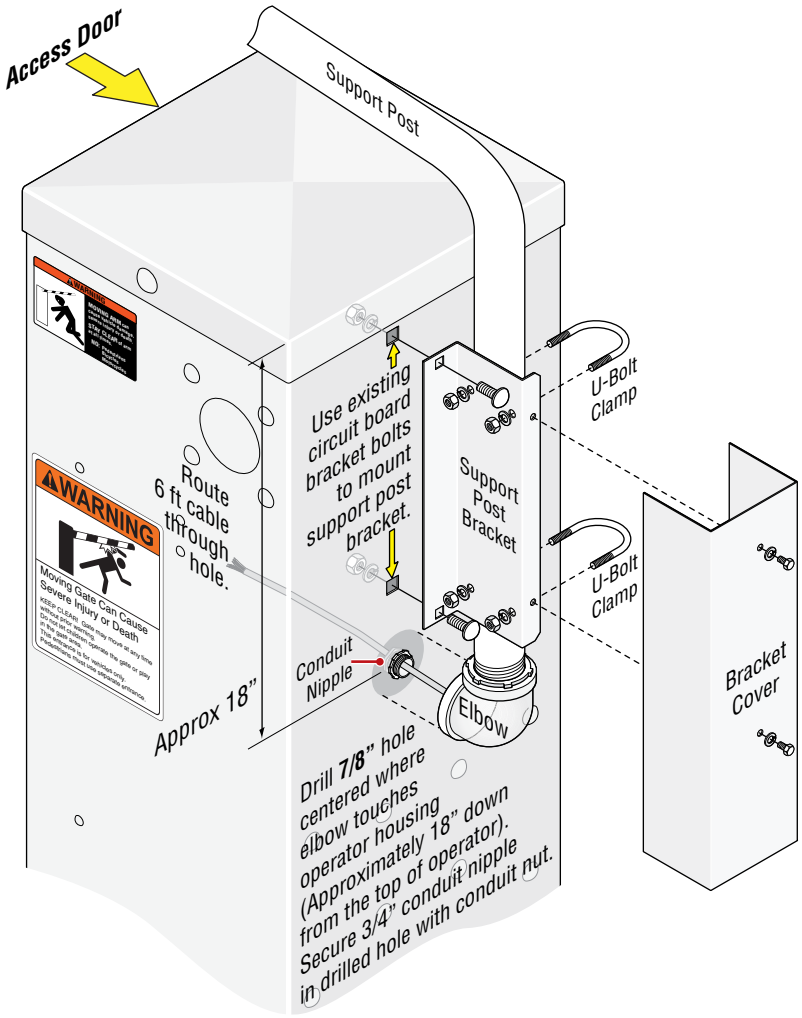
1625-065-J-12-24

Install Traffic Light (REQUIRED)

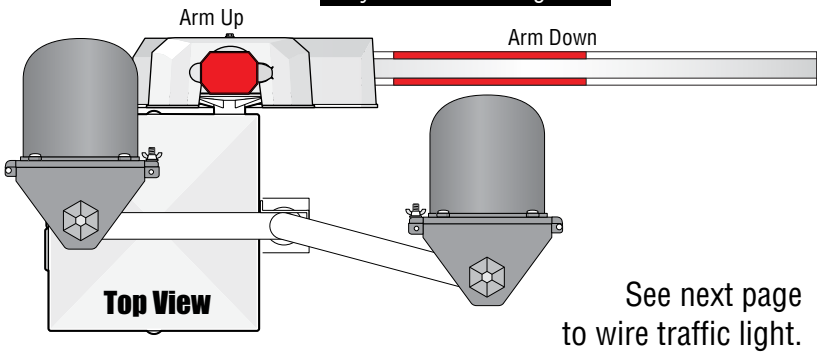
1 Assemble Support Post



2 Mount Support Post on OPPOSITE Side of Access Door



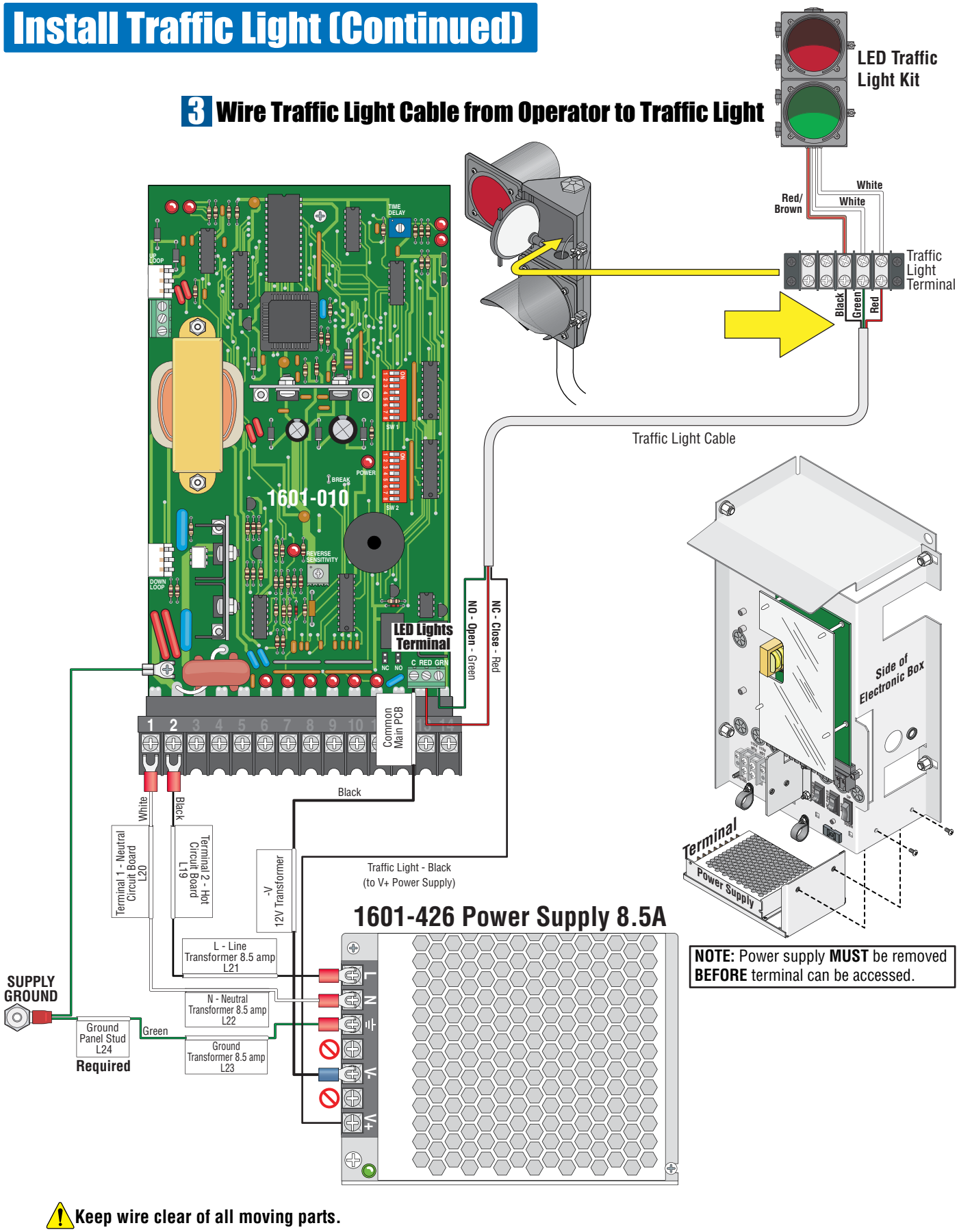
Make sure traffic light stays clear of raising arm.



See next page to wire traffic light.

Install Traffic Light (Continued)

3 Wire Traffic Light Cable from Operator to Traffic Light

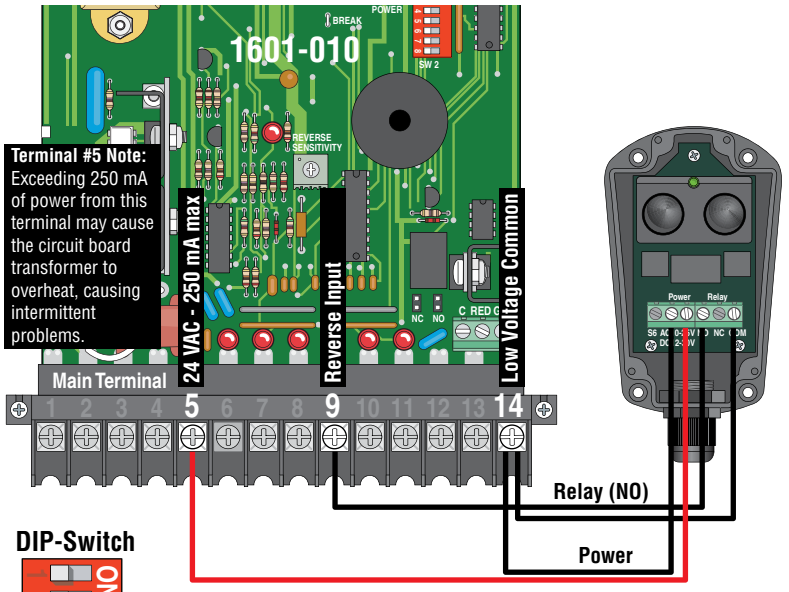


NOTE: Power supply **MUST** be removed **BEFORE** terminal can be accessed.

⚠ **Keep wire clear of all moving parts.**

Install Photocell (REQUIRED)

Mount photocell **directly** below the octagon arm on separate posts as shown (see page 9), mounting brackets not supplied.



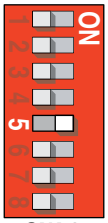
Type of wiring to be used on ALL external devices:
A) Type **CL2**, **CL2P**, **CL2R**, or **CL2X**.
B) Other cable with **equivalent** or **better** electrical, mechanical, and flammability ratings.

DoorKing Retro-Reflective Photocell (P/N 8080-057)

If using other photocells refer to the manufacturer's manual for wiring installation.

Fine Tune Photocell
After photocell has been mounted, spring mounted beam sensors can be precisely adjusted "Fine tuned" using the 3 screws to help keep the **GREEN** LED **ON** if necessary.

DIP-Switch

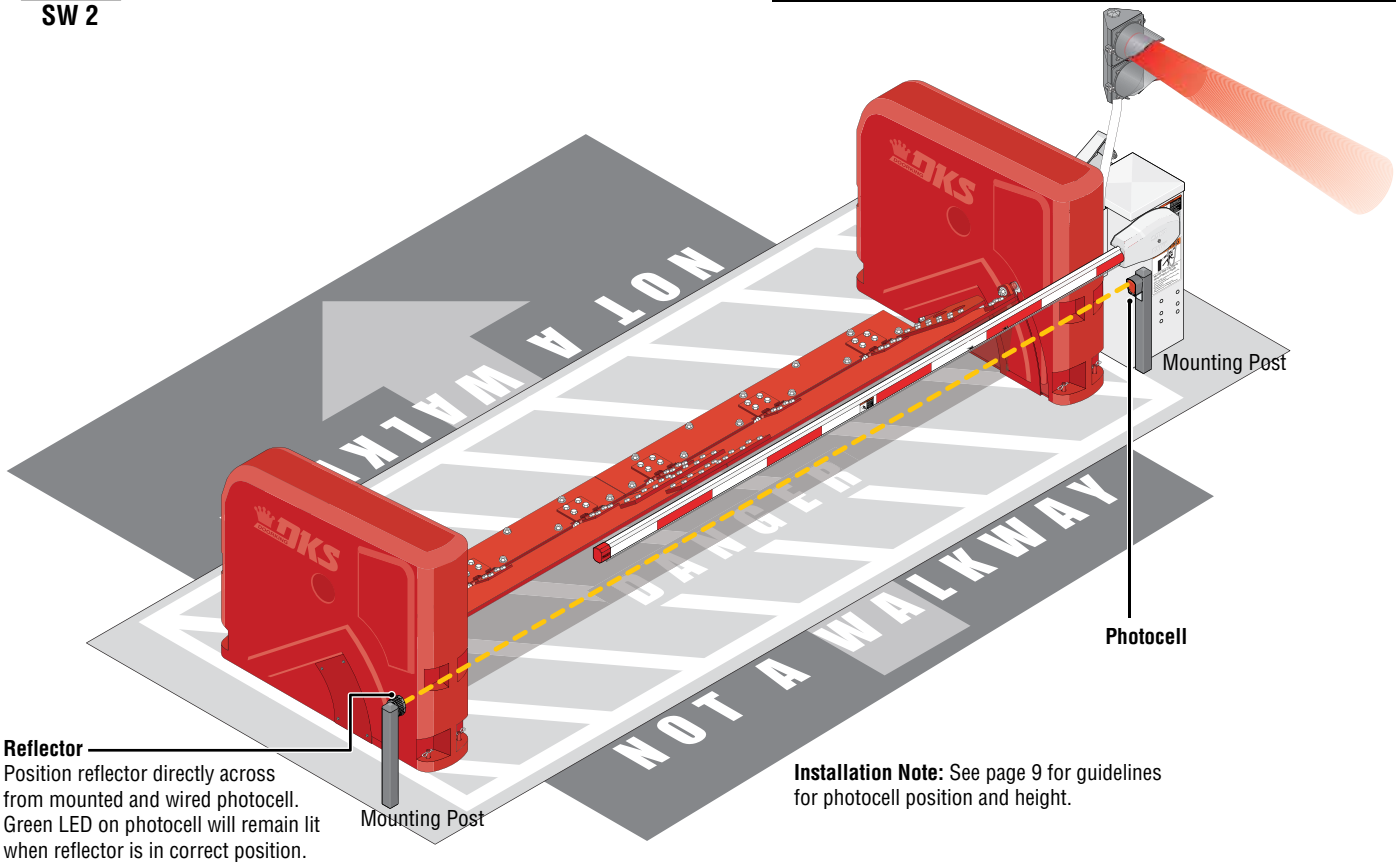


SW 2

SW 2, Switch 5 is **ON**. The lowering arm will **instantly reverse** when photocell gets blocked.

Wiring Note: See page 27 for complete wiring.

IMPORTANT: DO NOT mount photocell to the operator housing. Housing can flex or vibrate during operation which may cause misalignment of the photocell beam.



Reflector
Position reflector directly across from mounted and wired photocell. Green LED on photocell will remain lit when reflector is in correct position. Permanently mount reflector making sure LED remains lit. "Fine Tune" photocell alignment if necessary, see above.

Installation Note: See page 9 for guidelines for photocell position and height.

1625-065-J-12-24

Entry Lane Only In-Ground Loop Options

Before attempting to connect any wiring to the operator, be sure that the circuit breaker in the electrical panel is in the OFF position. Permanent wiring must be installed to the operator as required by local electrical codes. It is recommended that a licensed electrical contractor perform this work.

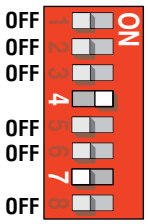
Loop detector wiring shown is for DoorKing model 9409 Dual Channel plug-In loop detector only.
If using other loop detectors refer to their Loop Information Manual for installation instructions, loops/preformed loops and wiring diagrams.
All inputs to the main terminal are NORMALLY OPEN.

Type of wiring to be used on ALL external devices:
A) Type **CL2**, **CL2P**, **CL2R**, or **CL2X**.
B) Other cable with **equivalent** or **better** electrical, mechanical, and flammability ratings.

DoorKing offers a free "**Loop and Loop-Detectors Information Manual**" PDF located at DoorKing's web site for more information. **www.doorking.com**

Typical DIP-Switch Settings

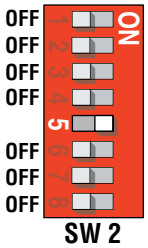
A



SW 1

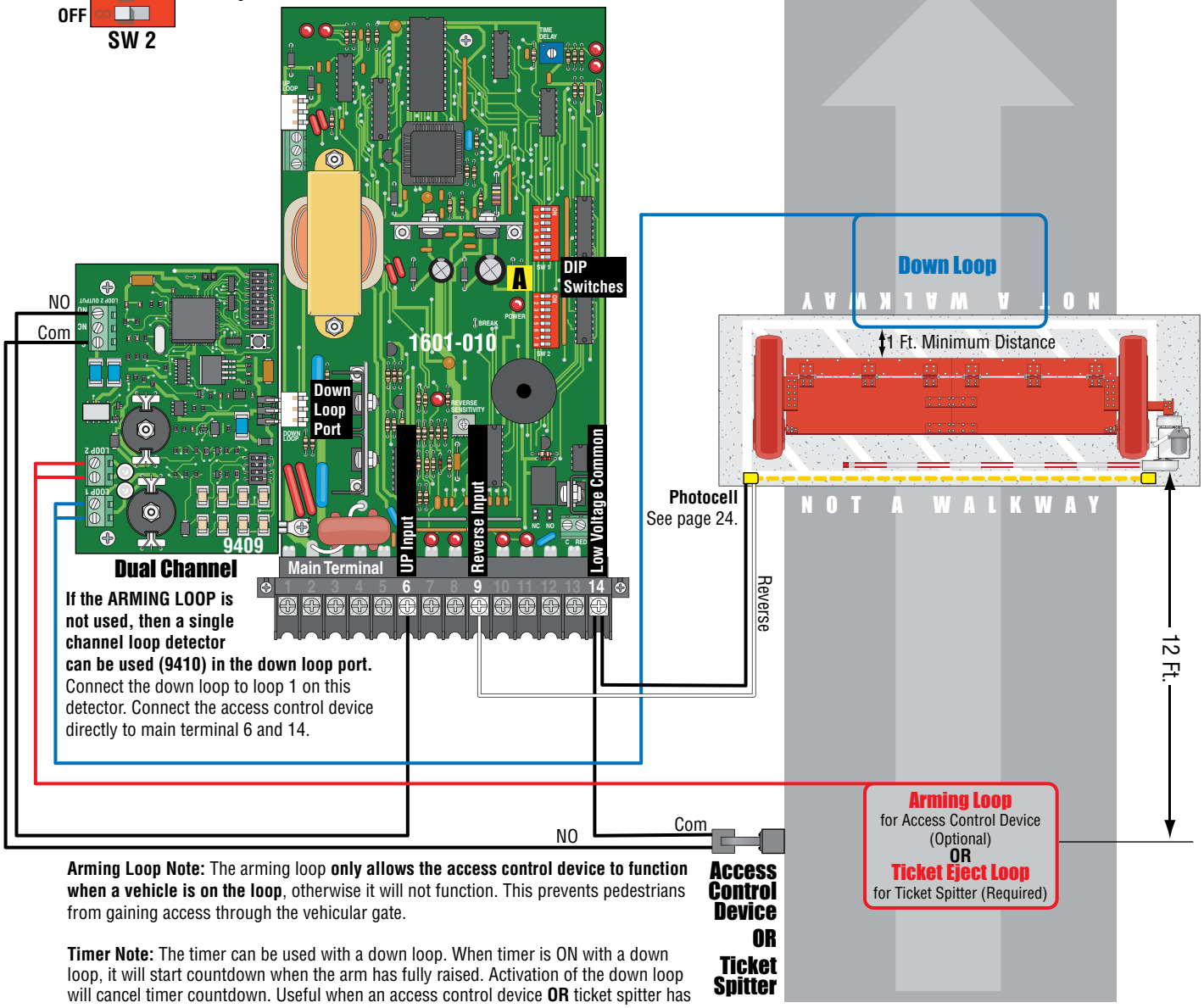
Switch 4 is **ON**.

Switch 7 is **OFF** (Timer). The arm will rotate down after the vehicle clears the **down loop**. See timer note below.



SW 2

Switch 5 is **ON**. The lowering arm will **instantly reverse** when photo sensor gets blocked.



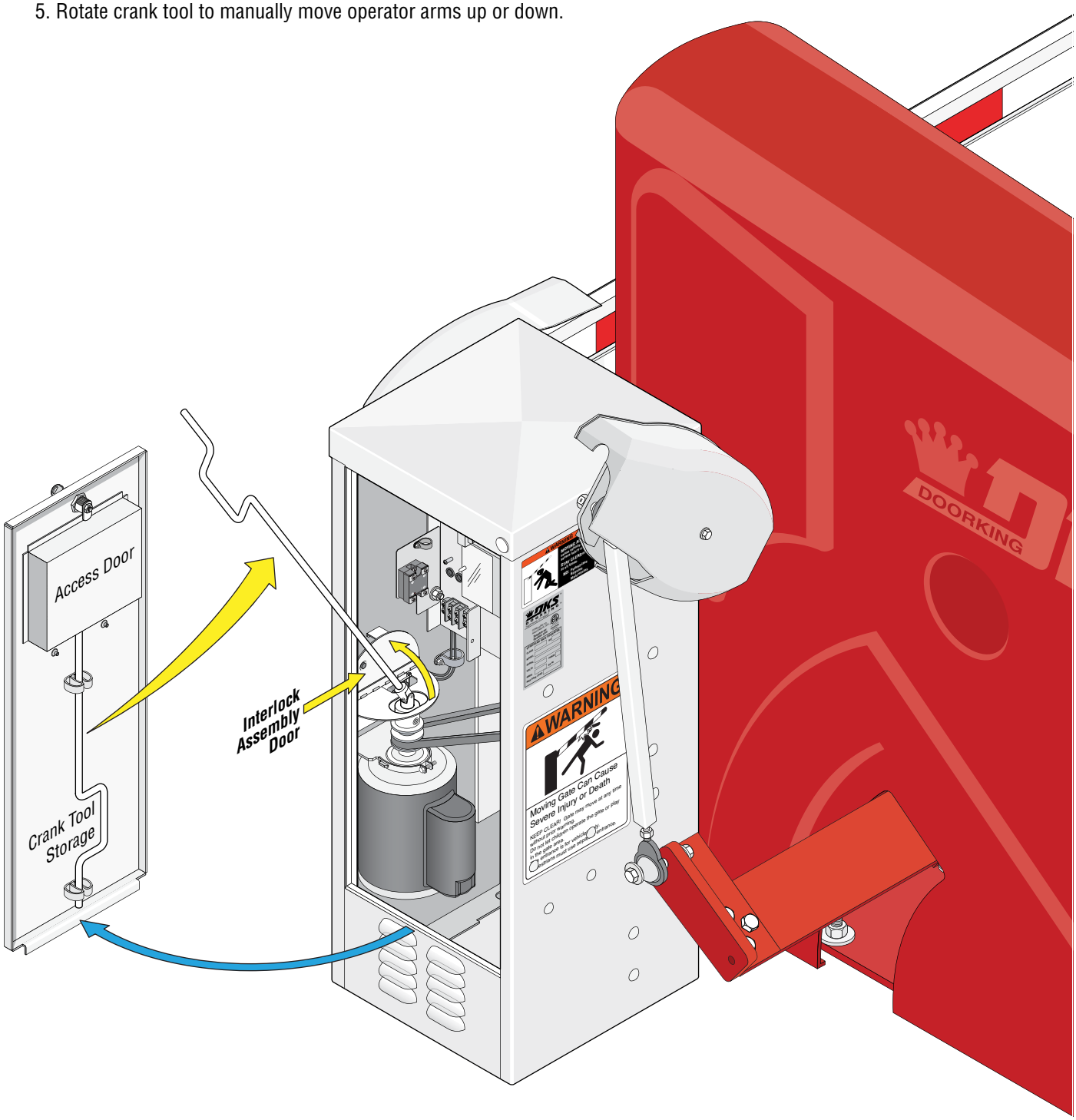
If the ARMING LOOP is not used, then a single channel loop detector can be used (9410) in the down loop port. Connect the down loop to loop 1 on this detector. Connect the access control device directly to main terminal 6 and 14.

Arming Loop Note: The arming loop **only allows the access control device to function when a vehicle is on the loop**, otherwise it will not function. This prevents pedestrians from gaining access through the vehicular gate.

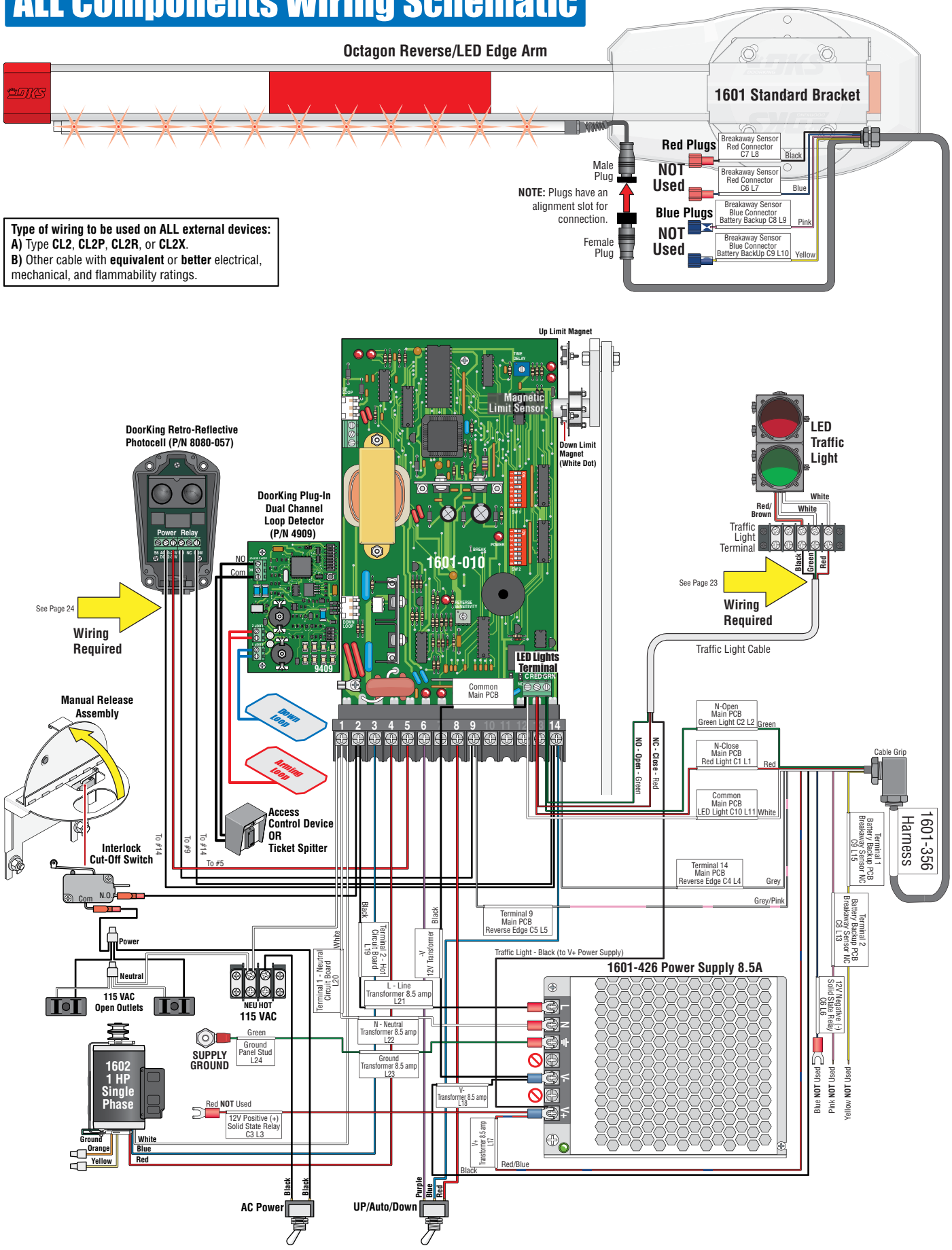
Timer Note: The timer can be used with a down loop. When timer is ON with a down loop, it will start countdown when the arm has fully raised. Activation of the down loop will cancel timer countdown. Useful when an access control device **OR** ticket spitter has been activated but vehicle does not move forward to activate the down loop. **The arm will remain UP.** Timer will time out and lower the arm **without** the down loop being activated.

Manual Release Operation

1. Unlock and remove access door.
2. Remove crank tool from inside access door.
3. Flip interlock assembly door up, power will be disabled from operator.
4. Insert crank tool into motor pulley as shown.
5. Rotate crank tool to manually move operator arms up or down.



ALL Components Wiring Schematic



Installation Manual

1625 Wedge Barrier

Surface Mount Vehicular Wedge Barrier Accessory

Use this manual for circuit board 1601-010 Revision AK or higher.

1625-065-J-12-24

IMPORTANT: Installation of Traffic Light, Photocell and Octagon Arm with LED Edge is REQUIRED.

WARNING pre-stressed concrete may be used in multi-level parking garages. Cutting a tensioned cable, or tendon, can endanger the contractor and compromise the structural integrity of the floor. Contact the building structural engineer for specific instructions and information BEFORE drilling or saw cutting into the floor.

INSTALLATION AND USE OF THE WEDGE BARRIER IN AREAS SUBJECT TO FREEZING WEATHER WITH POTENTIAL FOR SNOW AND ICE ACCUMULATION IS NOT RECOMMENDED.

THIS PRODUCT IS TO BE INSTALLED AND SERVICED BY A TRAINED GATE/DOOR SYSTEMS TECHNICIAN ONLY.
Visit **www.doorking.com/dealer-locator** to find a professional installing and servicing dealer in your area.

www.doorking.com

The 1625 wedge barrier is not a stand-alone product. It must be used with a 1602-590 Barrier Gate Operator (sold separately). The 1625 is crash rated (ASTM F2656 PU-30-(P1, P2). It is intended to provide a more formidable barrier in conjunction with a standard barrier arm operator system. The 1625 is ideally used to control passenger vehicles and lightduty trucks.