Installation Manual

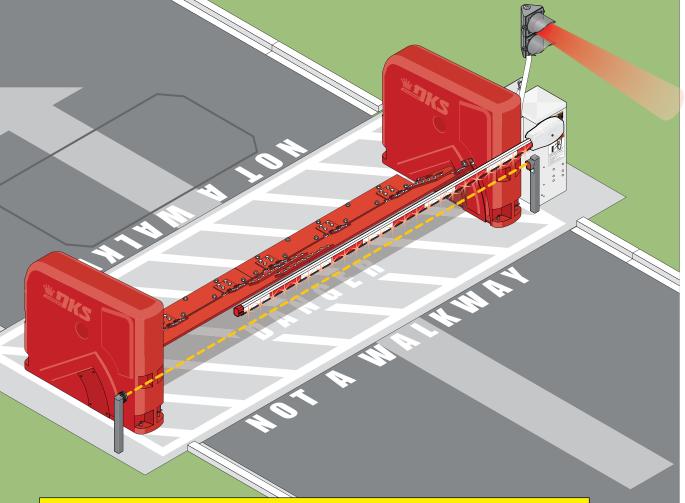
1625 Wedge Barrier

Surface Mount Vehicular Wedge Barrier Accessory

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

1695-065-D-9-94

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.

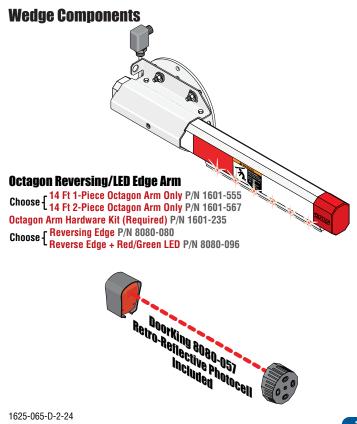
Copyright 2024 DoorKing®, Inc. All rights reserved

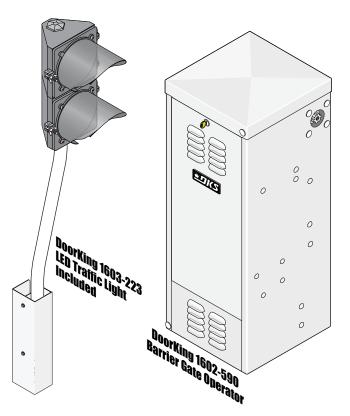
The 1625 wedge barrier is not a stand-alone product. It must be used with a 1602-590 Barrier Gate Operator (sold separately). The 1625 is not crash rated. It is intended to provide a more formidable barrier in conjunction with a standard barrier arm operator system. The 1625 is ideally used to control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



TABLE OF CONTENTS

IMPORTANT SAFETY INFORMATION		2-
Wedge Barrier One-Way Operation	4	
Wedge Barrier and 1602-590 Operator Overview	5	
Wedge Barrier Model Parts Configuration	6-7	
Concrete Pad Setup	8-10	
Existing Concrete	8	
NEW Concrete Pad	8	
Concrete Requirements and Dimensions	8	
Underground Conduit and Photocell Position	9	
Warning Signage	9	
Critical Measurments	10	
Mounting Operator and Wedge on Concrete Pad	11-15	
1 Permanently Mount Operator	11	
2 Permanently Mount Support Post Next to Operator	11	
3 Bolt Plates Together	12	
4 Wedge Lifting Arm Assembly		
5 Precisely Mark Anchors		
6 Permanently Mount Support Post and Wedge Plates		
7 Add Counter-Weights		
8 Connect Operator to Wedge Plates		
9 Install Covers		
Regular Maintenance of Wedge System	15	
Install Reverse/LED Edge on Octagon Arm	16	
Install Octagon Arm with Reverse/LED Edge	17-18	
Install Traffic Light (Required)	19-20	
Install Photocell (Required)	21	
Entry Lane Only In-Ground Loop Options	22	
Manual Release Operation	23	
ALL Components Wiring Schematic	24	





DoorKing Safety for Wdge Barrie

- DKS Wedge Barrier System is NOT crash rated. 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.
- . 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.

- When removing the operator from service, move the arms to the full open position and shut off power at the service panel.
- 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.

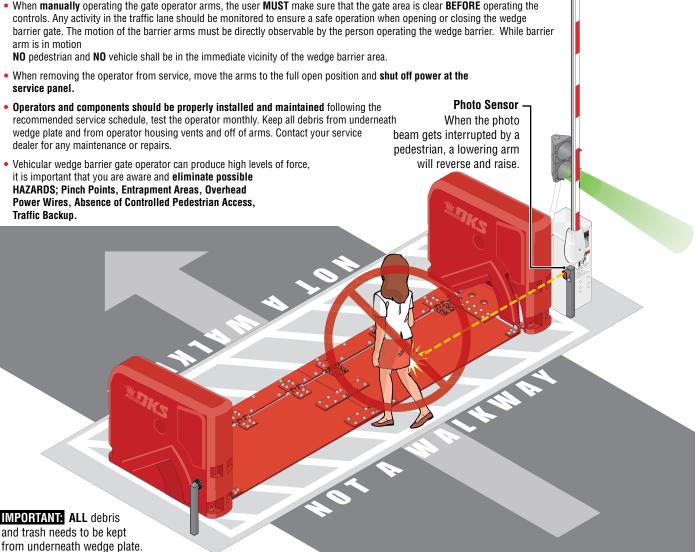
it is important that you are aware and eliminate possible HAZARDS; Pinch Points, Entrapment Areas, Overhead Power Wires, Absence of Controlled Pedestrian Access, Traffic Backup.





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

Safety and Traffic Management for Wedge Barrier System

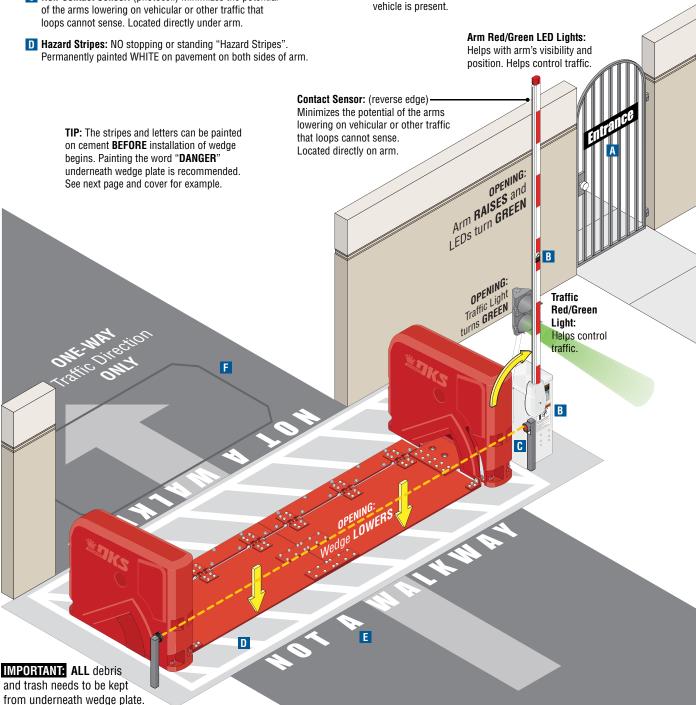
Vehicular wedge barrier gate operator can produce high levels of force. It is important that you are aware and eliminate possible HAZARDS; Pinch Points, Entrapment Areas, Overhead Power Wires, Absence of Controlled Pedestrian Access, and Traffic Management.

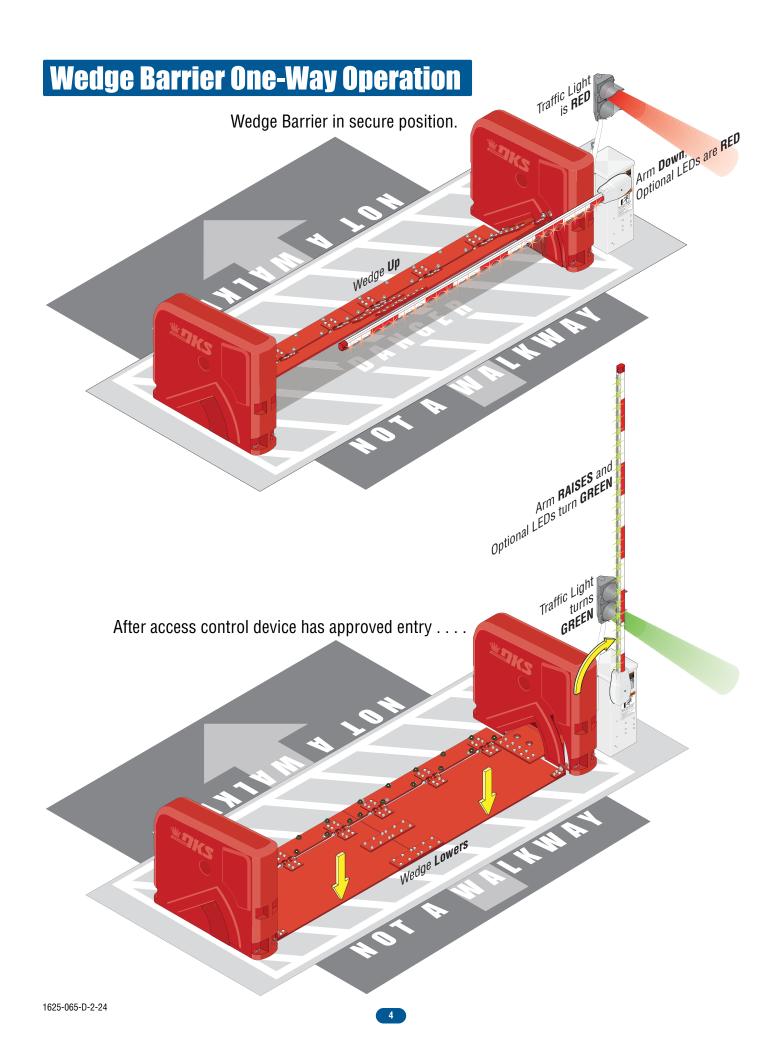
Pedestrians MUST be provided with separate access.

- 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

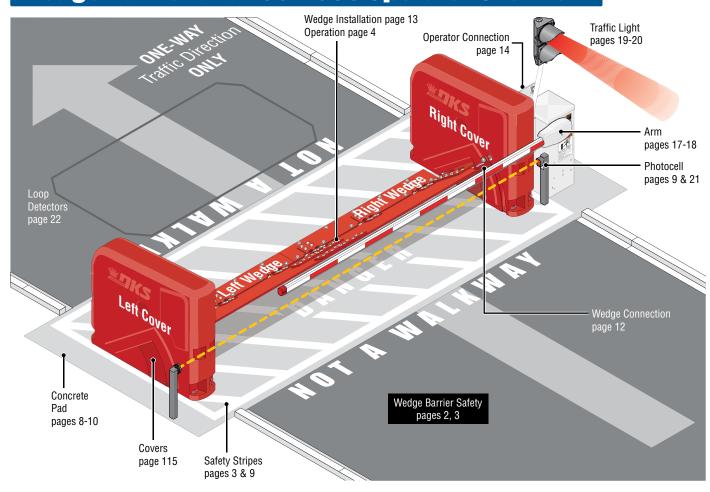
E Pedestrian Alert Warning: "NOT A WALKWAY" pavement marking facing both directions, permanently painted WHITE on pavement.

F In-Ground Loops: Minimizes the potential of the gate closing when a





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	14 Ft.	3.5 Sec

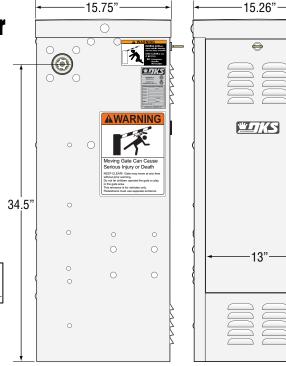
Note: 208/230/460/575 VAC input voltage can be connected to the operator by installing an "**Optional**" High Voltage Kit (P/N 2600-266).

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

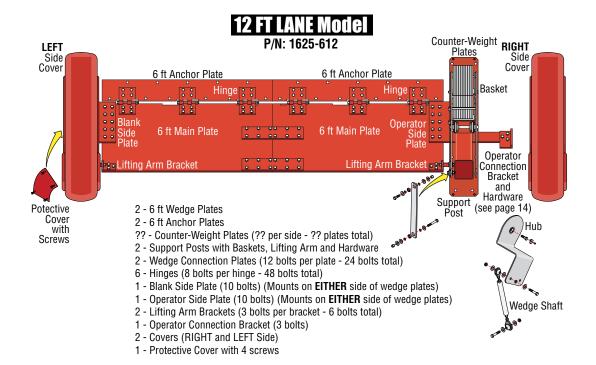


39.6"

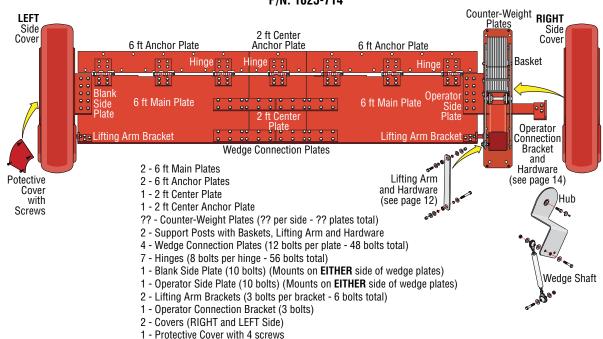
Wedge Barrier Model Parts Configuration

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



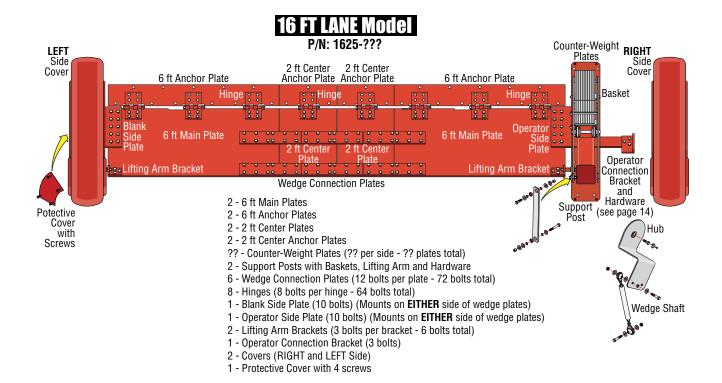
14 FT LANE Model P/N: 1625-714

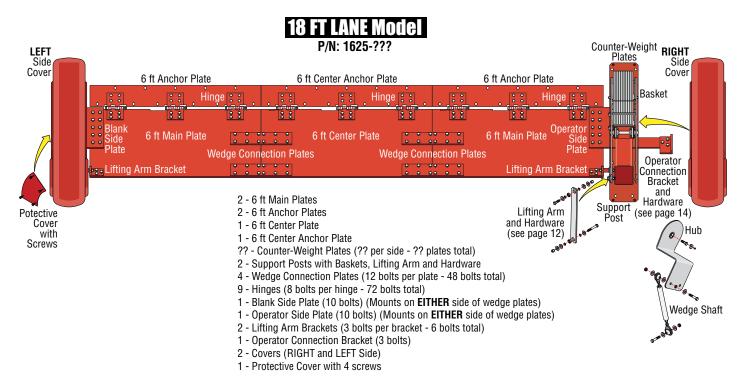


Wedge Barrier Model Parts Configuration Continued

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





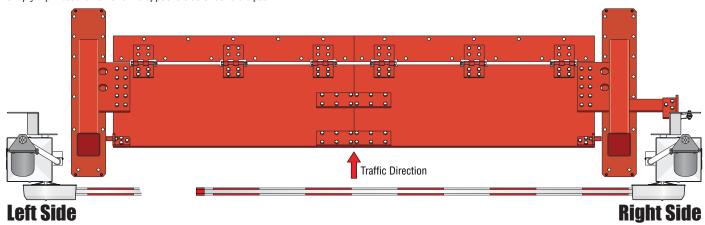
Concrete Pad Setup

EXISTING Concrete

WARNING for P recast 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.

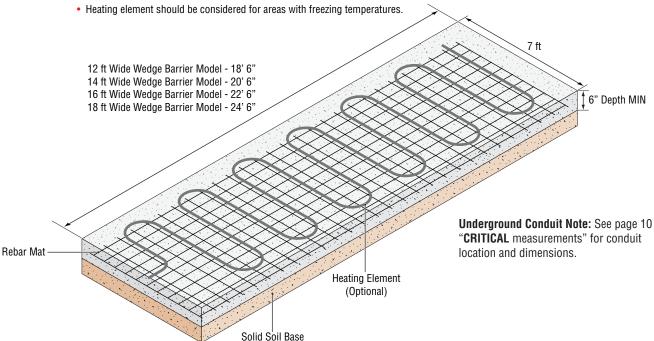
NEW Concrete Pad

Select which side of wedge barrier 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.



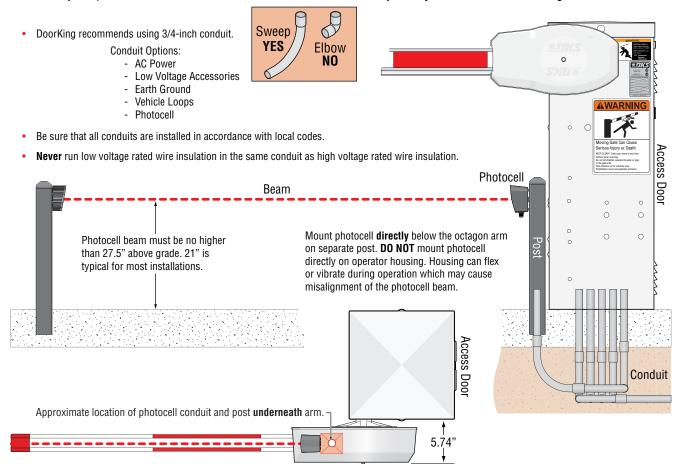
Concrete Requirements and Dimensions

- · 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 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.



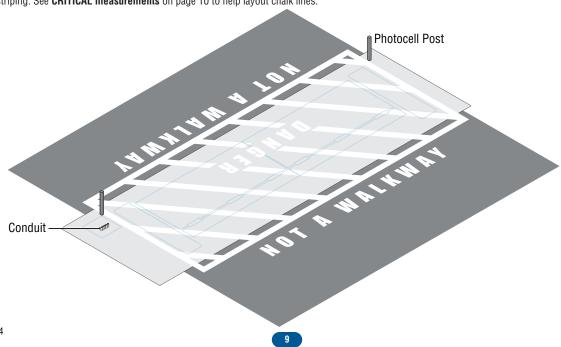
Underground Conduit and Photocell Position

- 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.

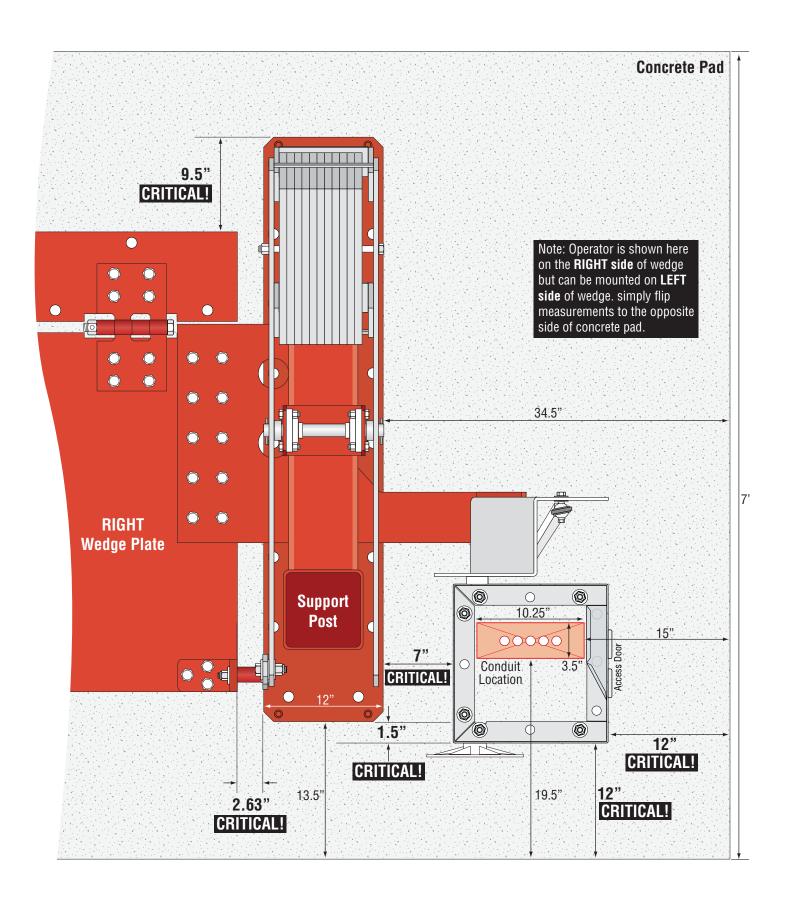


Warning Signage

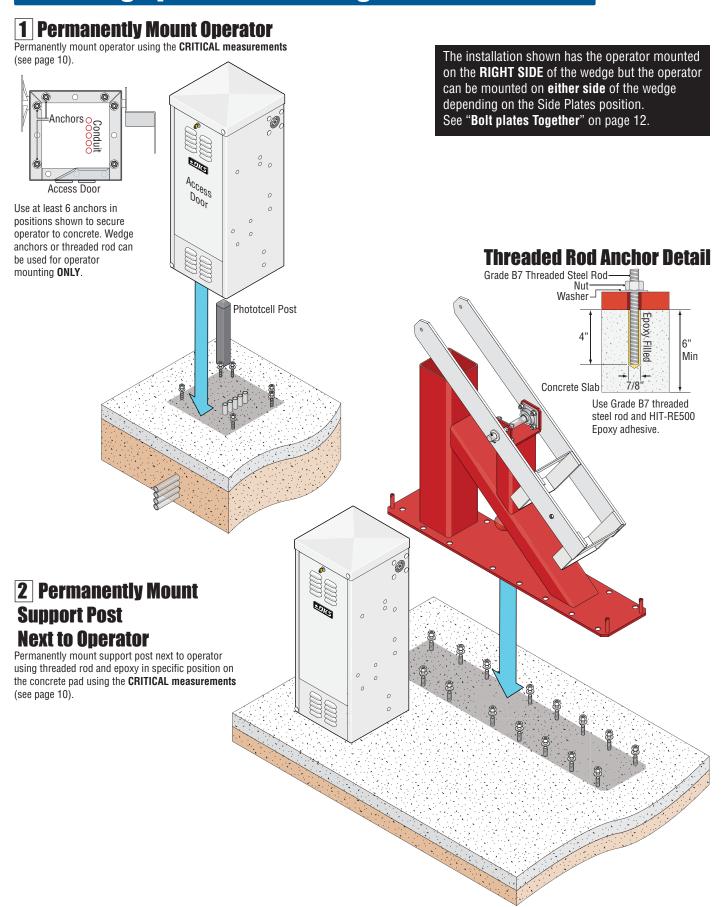
AFTER concrete pad has been poured but BEFORE wedge and operator have been installed, warning stripes and verbage can be painted on the surface to discourage pedestrians from walking in the general area. It's much easier to paint now rather than after the installation. "DANGER" can be painted underneath 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 10 to help layout chalk lines.

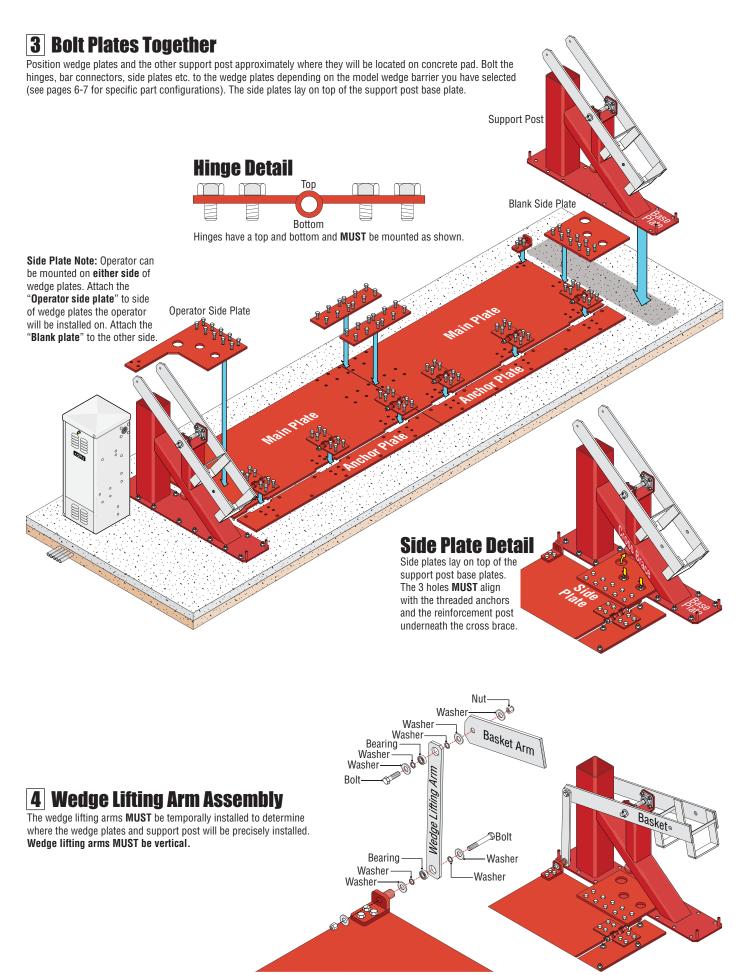


Critical Measurements

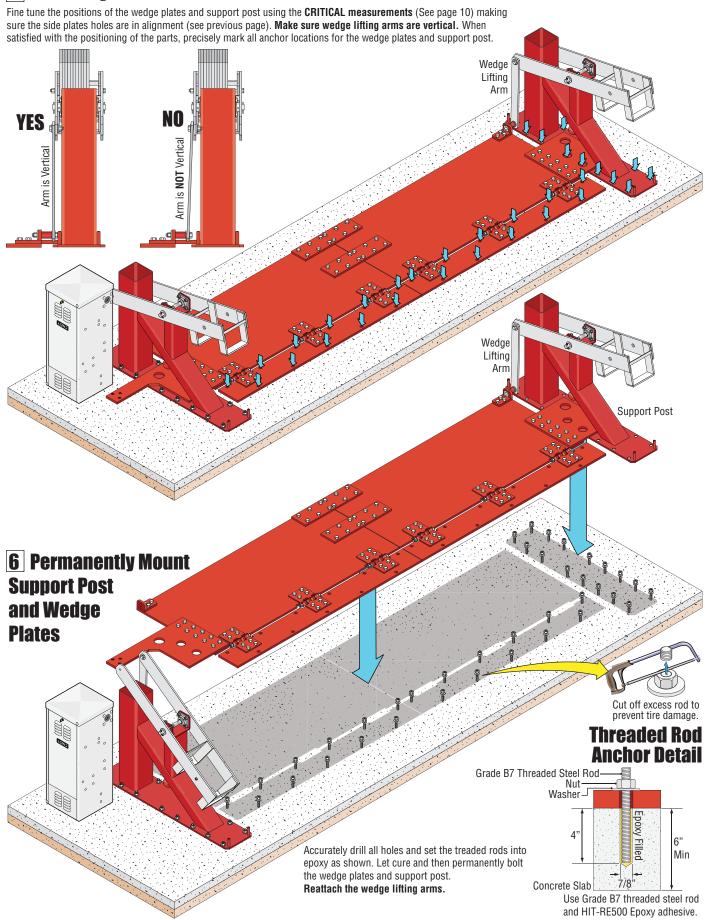


Mounting Operator and Wedge on Concrete Pad



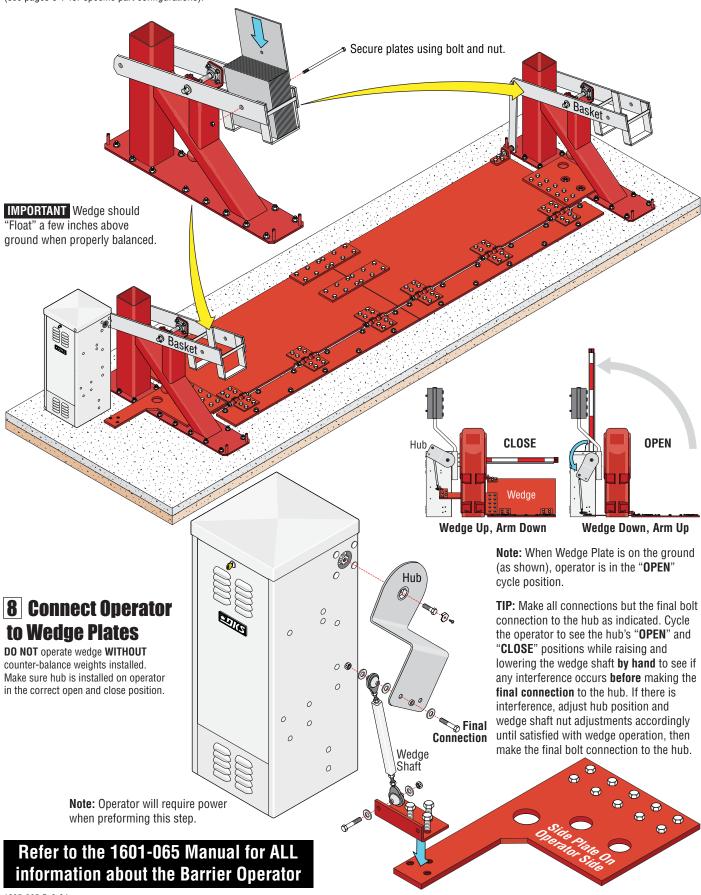


5 Precisely Mark Anchors



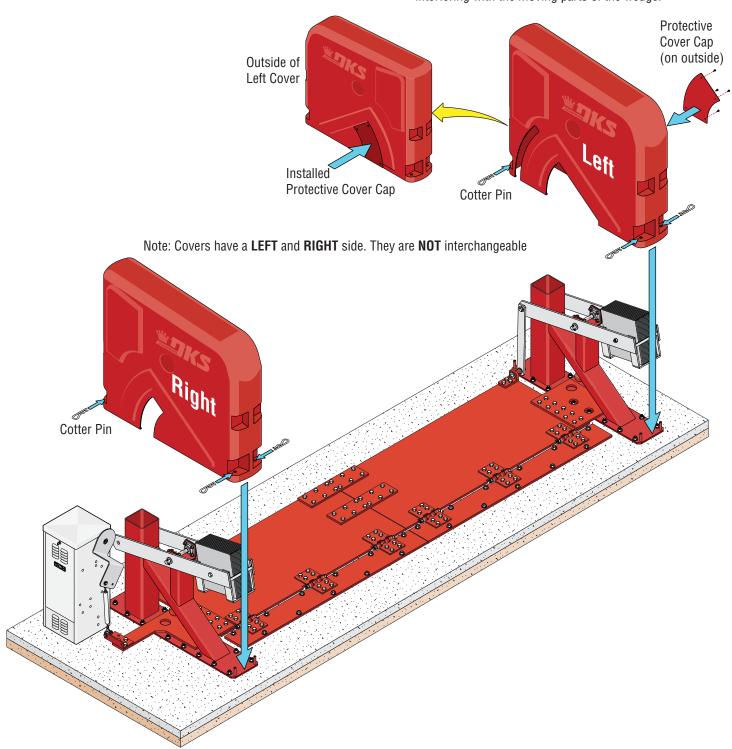
7 Add Counter-Weights

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).



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 potect 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.

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

Install Reverse/LED Edge on Octagon Arm

Install on a 14 ft aluminum octagon arm.

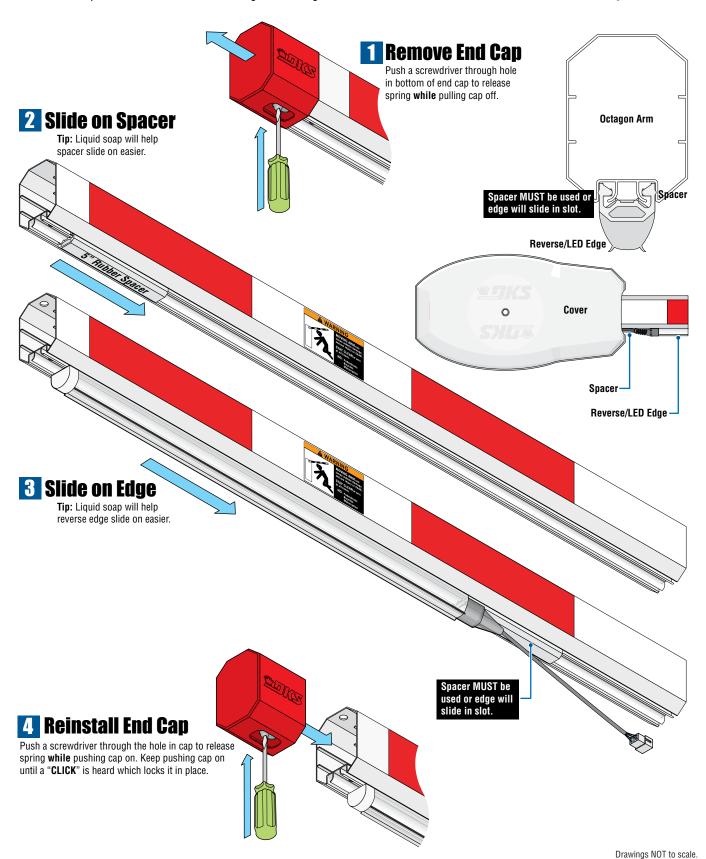
Note: DO NOT operate arm with a malfunctioning reverse edge.

DoorKing Part Numbers

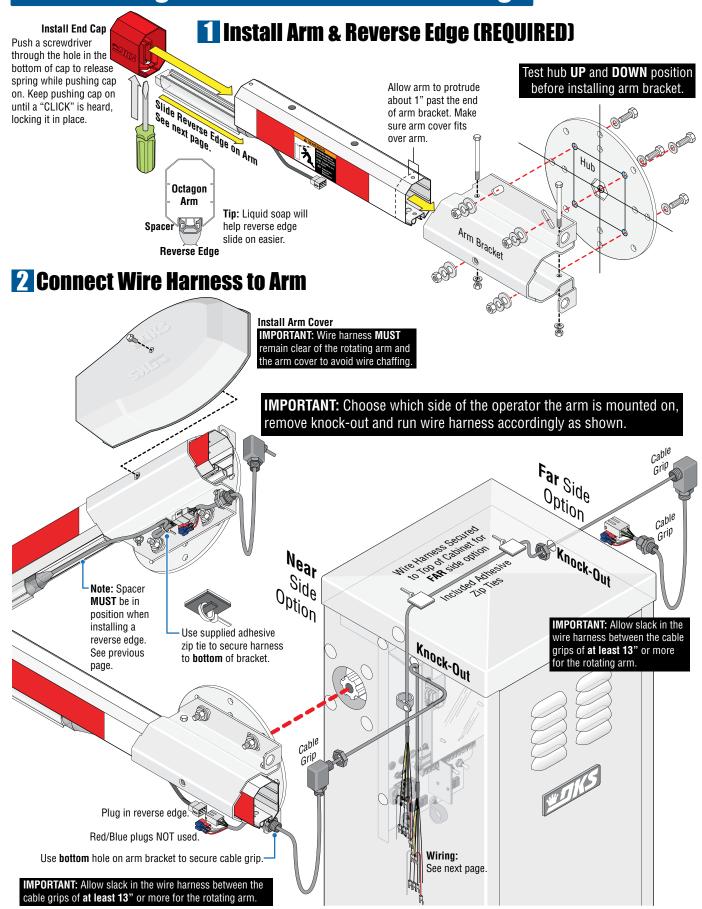
8080-080

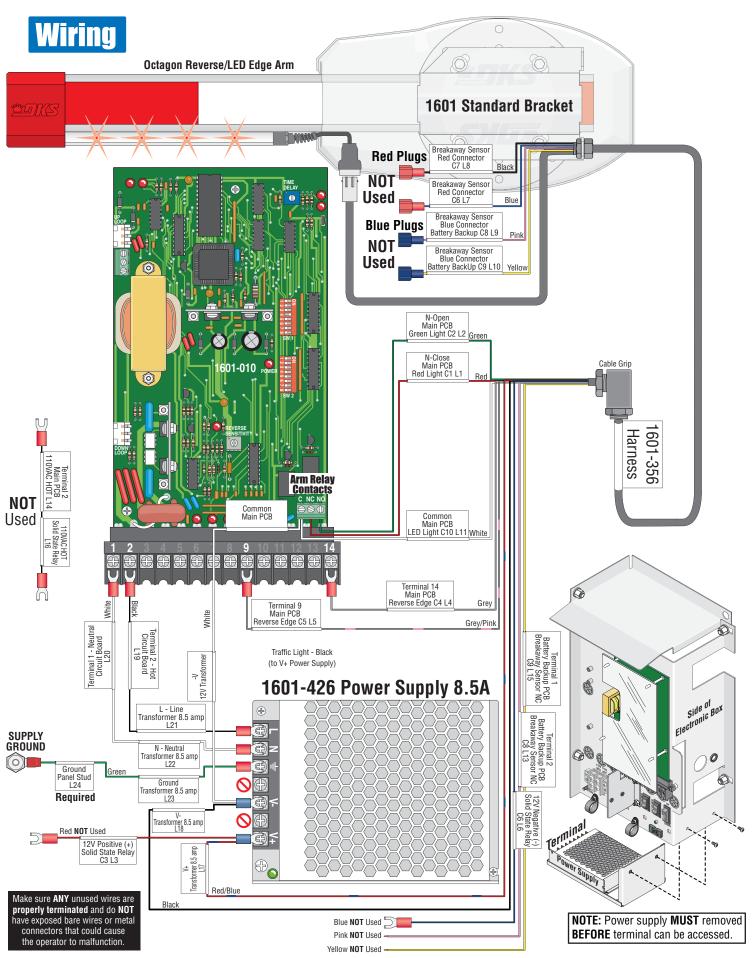
Reverse Edge **8080-096**

Reverse Edge + Red/Green LED



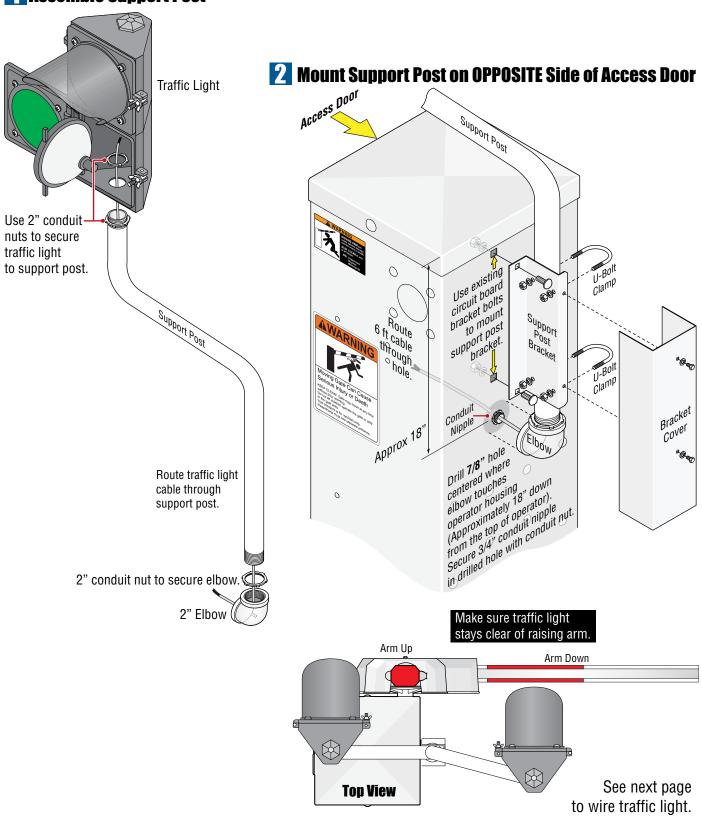
Install Octagon Arm with Reverse/LED Edge

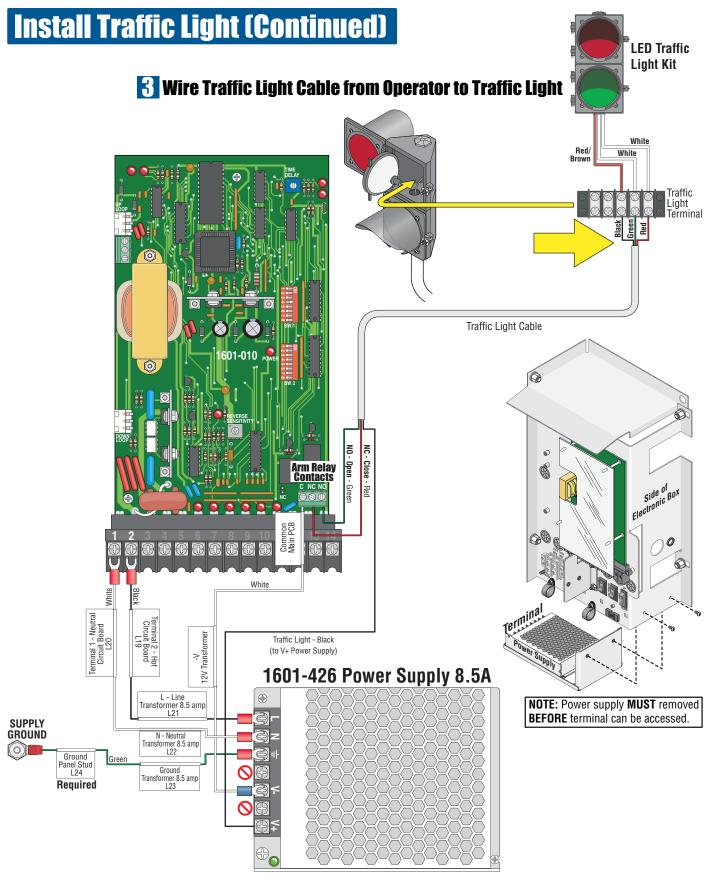




Install Traffic Light (REQUIRED)

1 Assemble Support Post

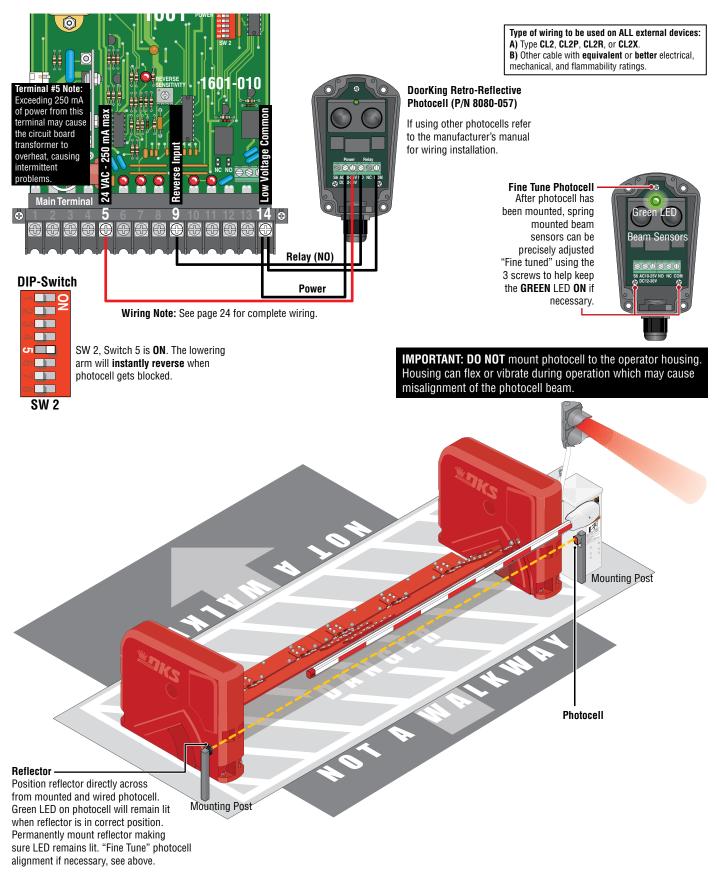




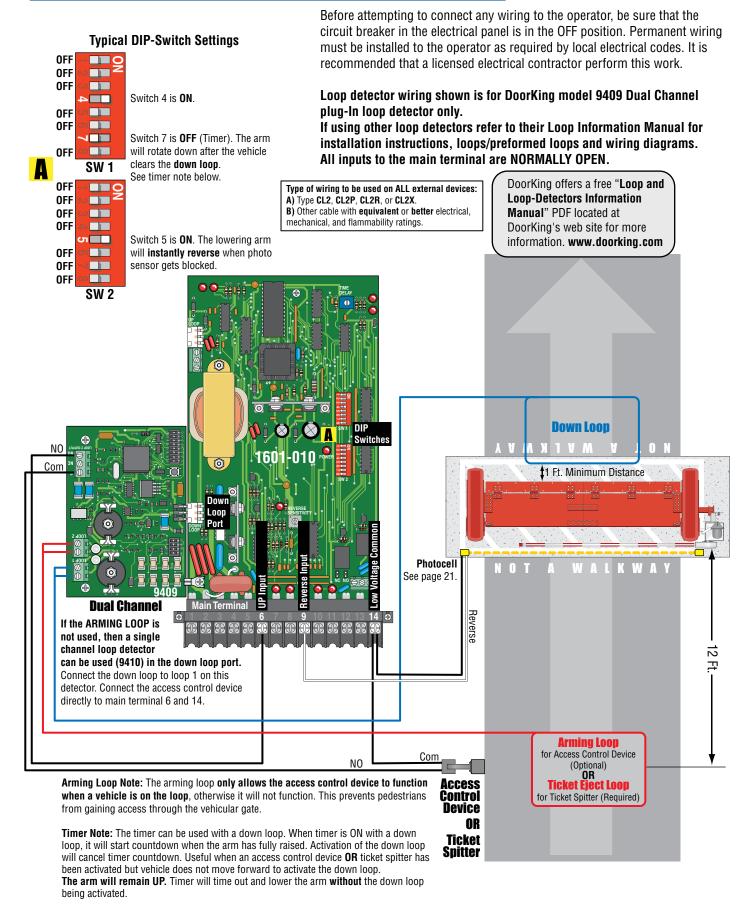
! Keep wire clear of all moving parts.

Install Photocell (REQUIRED)

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

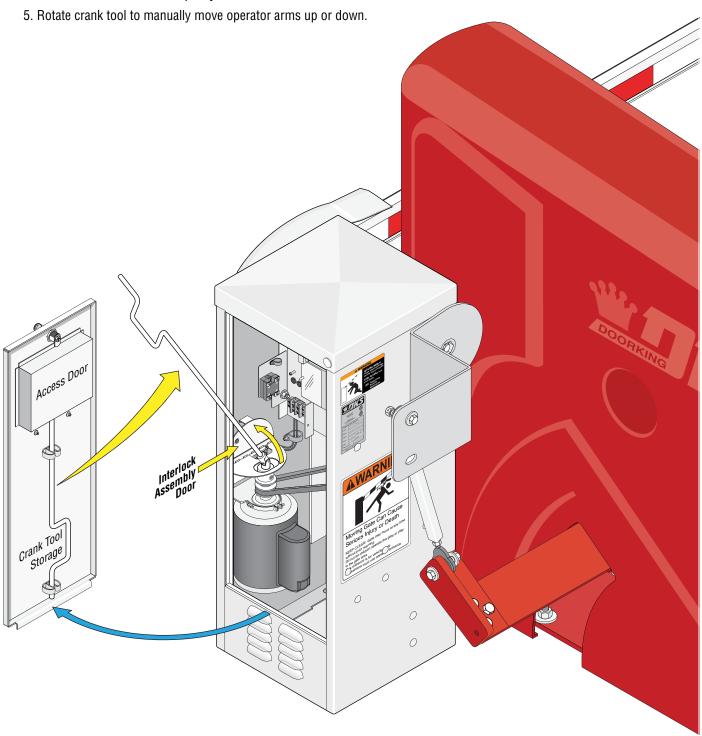


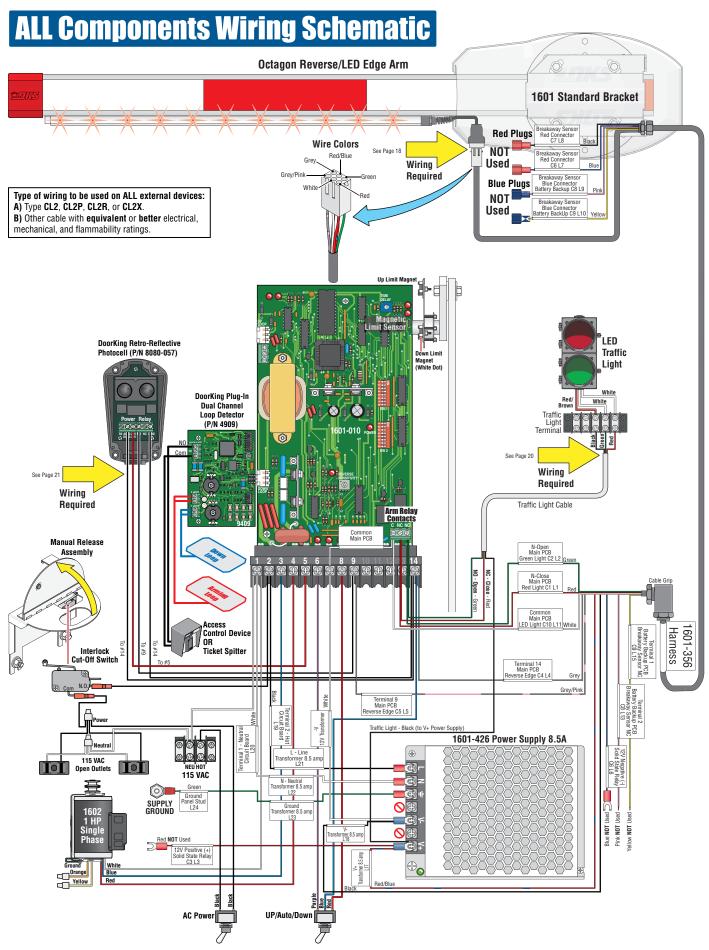
Entry Lane Only In-Ground Loop Options



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.





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-D-2-24

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 not crash rated. 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.

DoorKing, Inc. 120 S. Glasgow Avenue Inglewood, California 90301

> Phone: 310-645-0023 Fax: 310-641-1586