

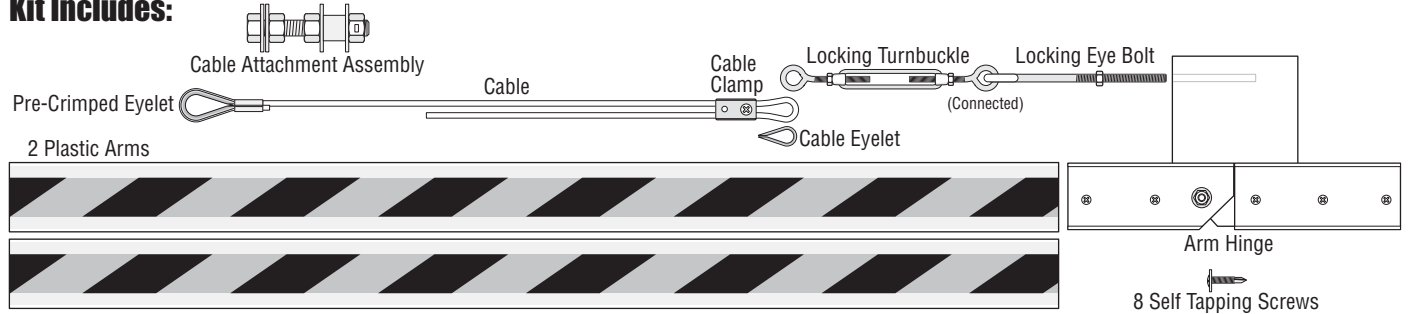
# PLASTIC FOLDING ARM KIT

DoorKing Part Number

**1601-083**

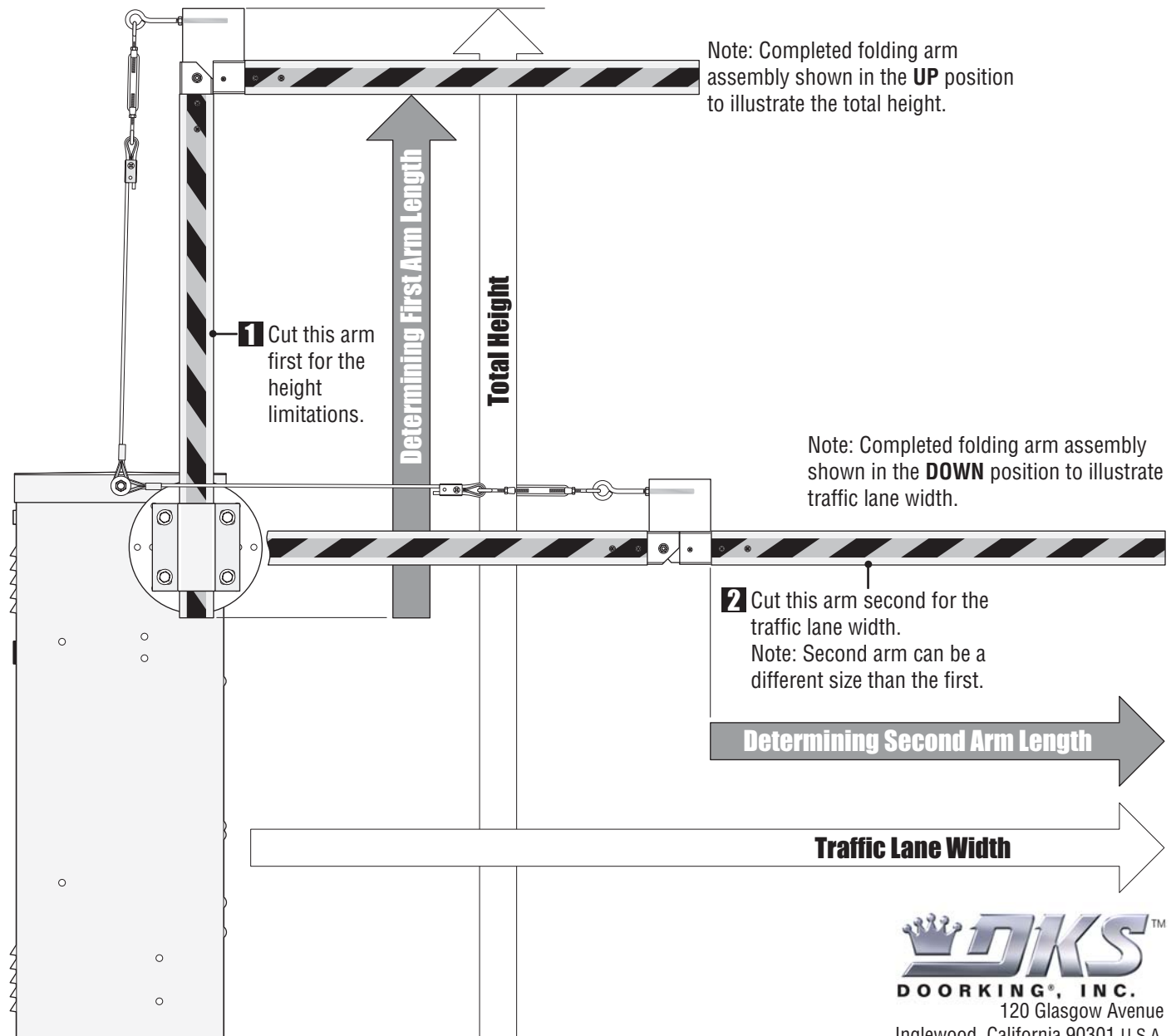
This kit is designed for the 1600 model barrier gate operators only. Recommended for low headroom applications.

## Kit Includes:



## Installation

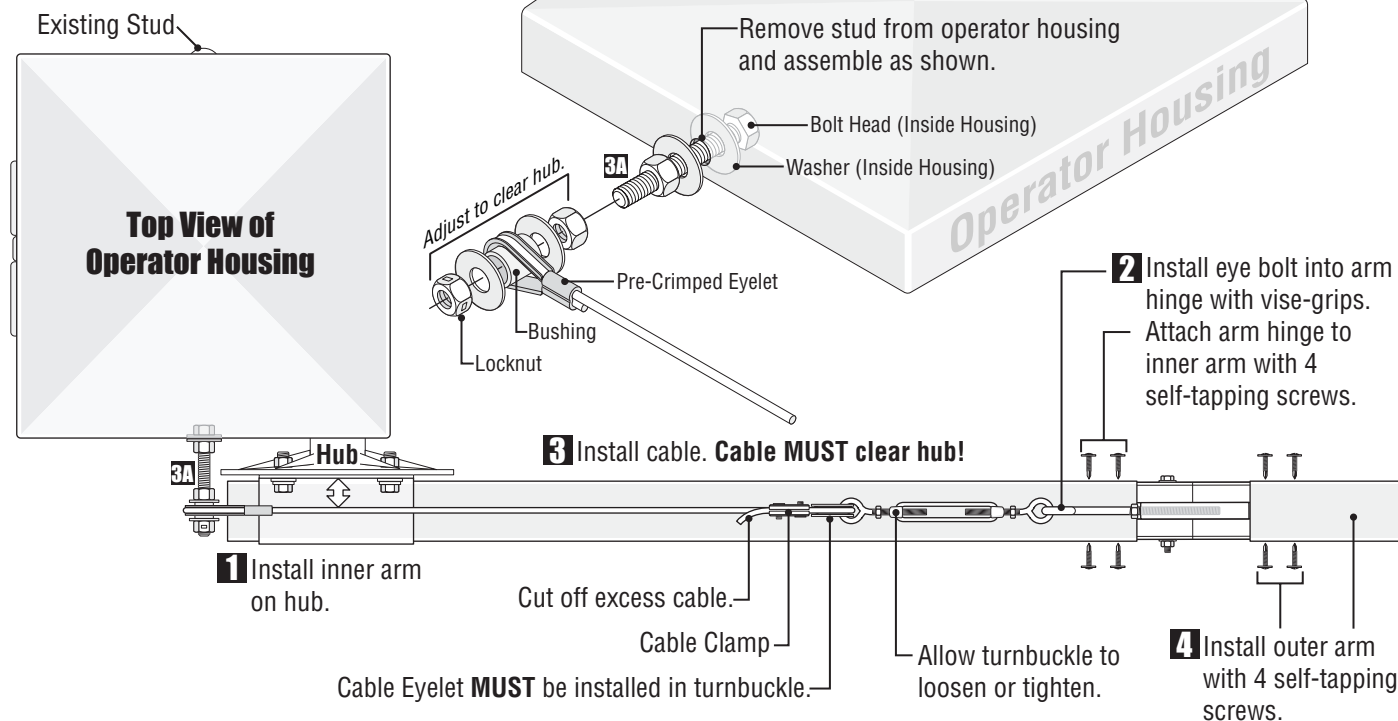
### Cut Arms to Length



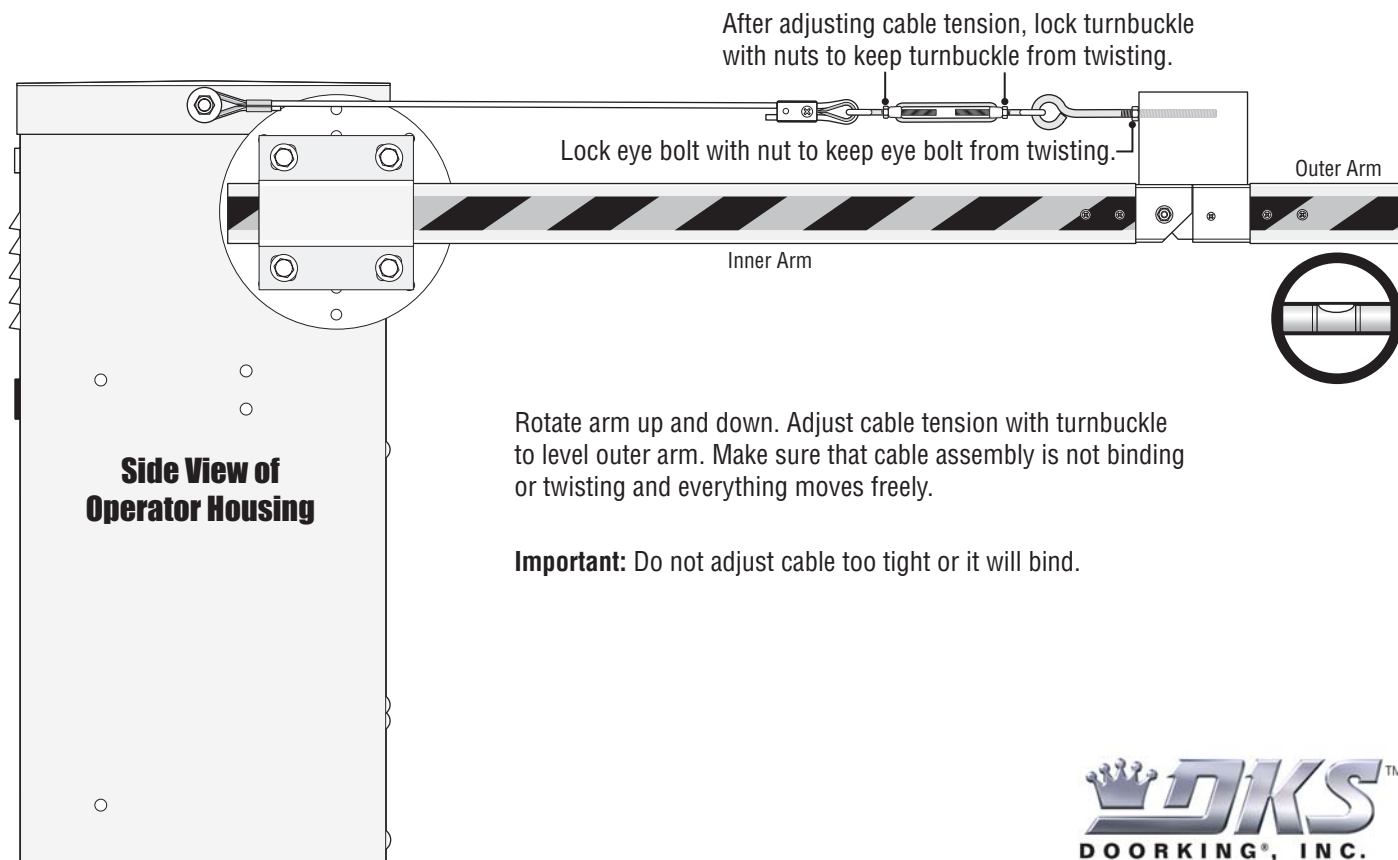
## Installing Arms

DoorKing Part Number

**1601-083**



## Adjusting and Locking Cable Assembly



Rotate arm up and down. Adjust cable tension with turnbuckle to level outer arm. Make sure that cable assembly is not binding or twisting and everything moves freely.

**Important:** Do not adjust cable too tight or it will bind.

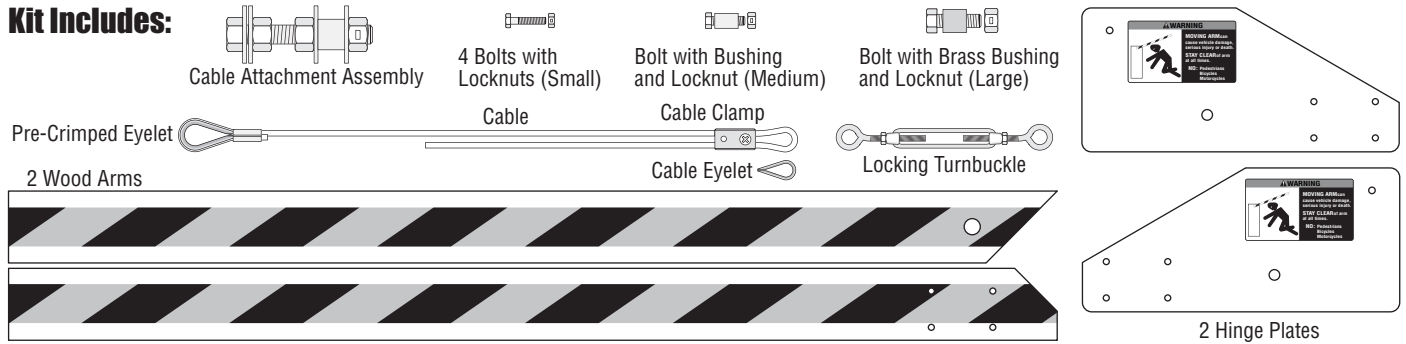
# WOOD FOLDING ARM KIT

DoorKing Part Number

**1601-084**

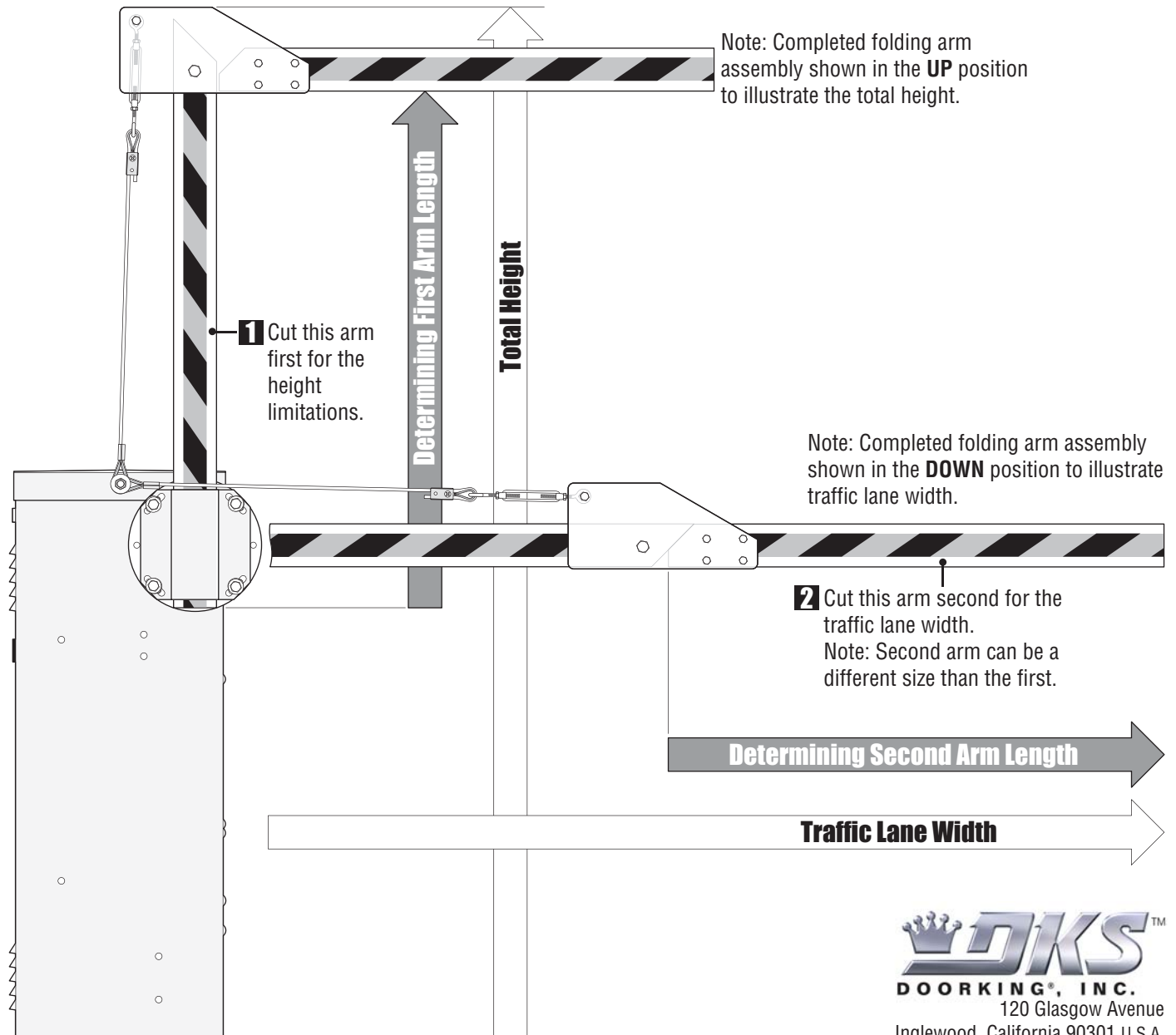
This kit is designed for the 1600 model barrier gate operators only. Recommended for low headroom applications.

## Kit Includes:



## Installation

### Cut Arms to Length

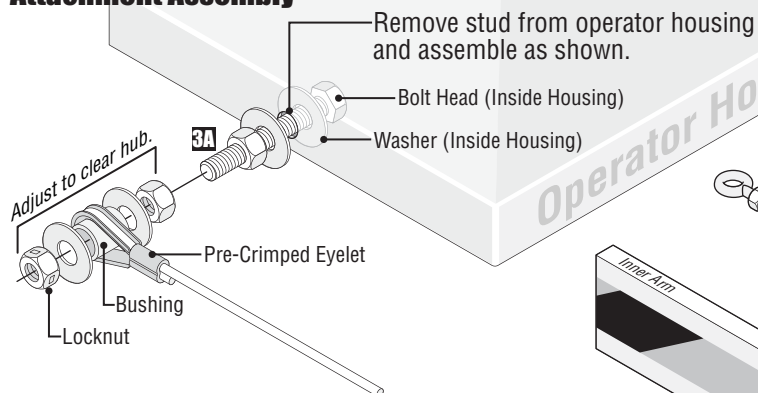


# Installing Arms

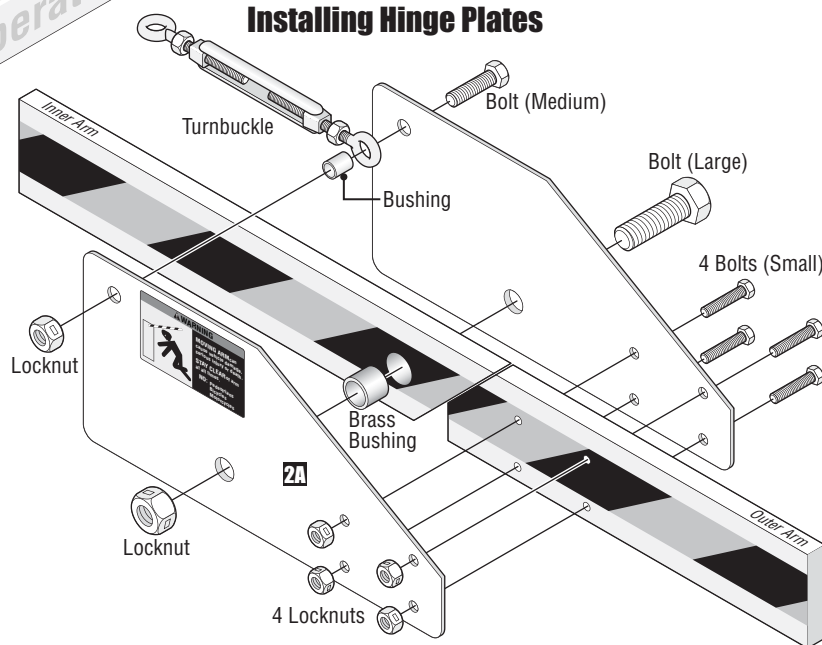
DoorKing Part Number

**1601-084**

## Installing Cable Attachment Assembly

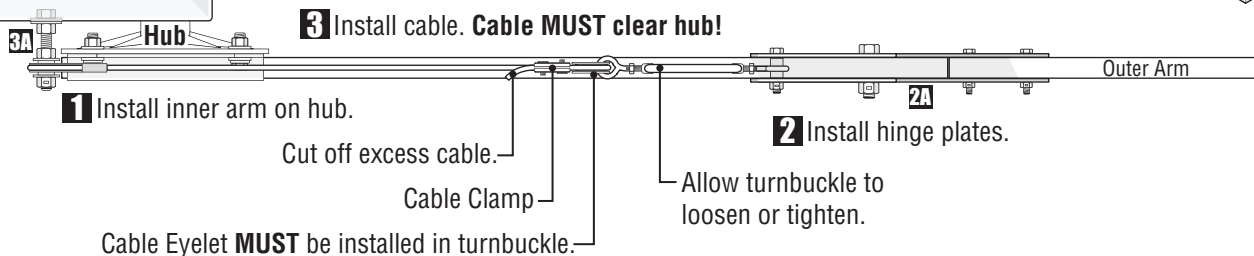


## Installing Hinge Plates



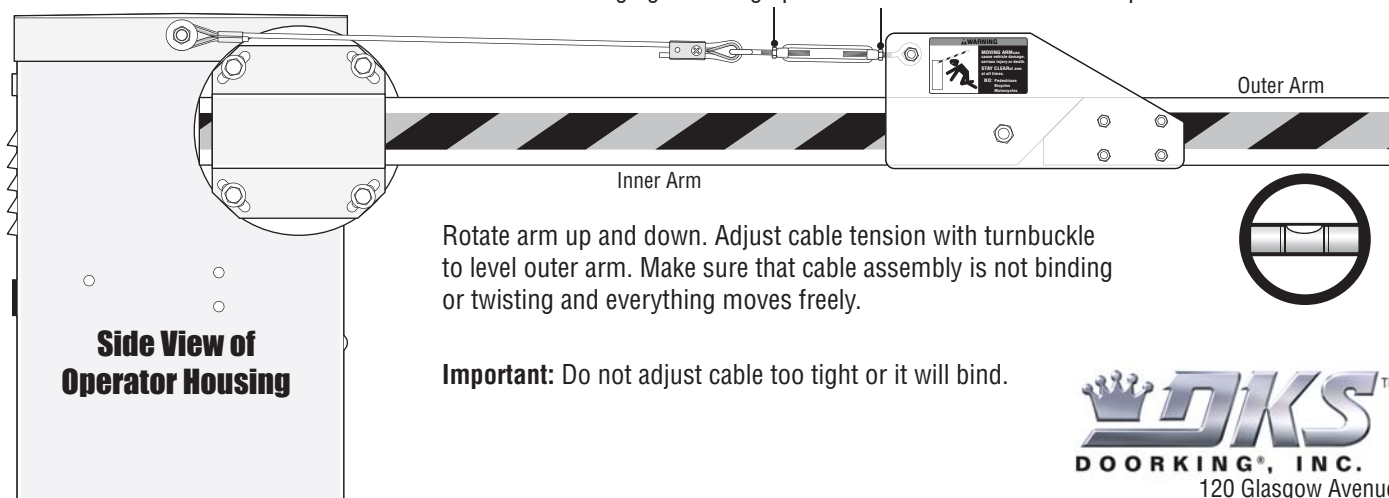
Existing Stud

## Top View of Operator Housing



## Adjusting and Locking Cable Assembly

After adjusting cable tension, lock turnbuckle with nuts in position shown to prevent turnbuckle from rubbing against hinge plates when the arm is in the UP position.



Rotate arm up and down. Adjust cable tension with turnbuckle to level outer arm. Make sure that cable assembly is not binding or twisting and everything moves freely.

**Important:** Do not adjust cable too tight or it will bind.

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# MODEL 1601 FAN KIT

DoorKing Part Number

**1601-093**

This kit is designed for the 1600 model barrier gate operators only. Recommended for hot and humid climates. An automatic thermostat will control heat and humidity inside operator housing.

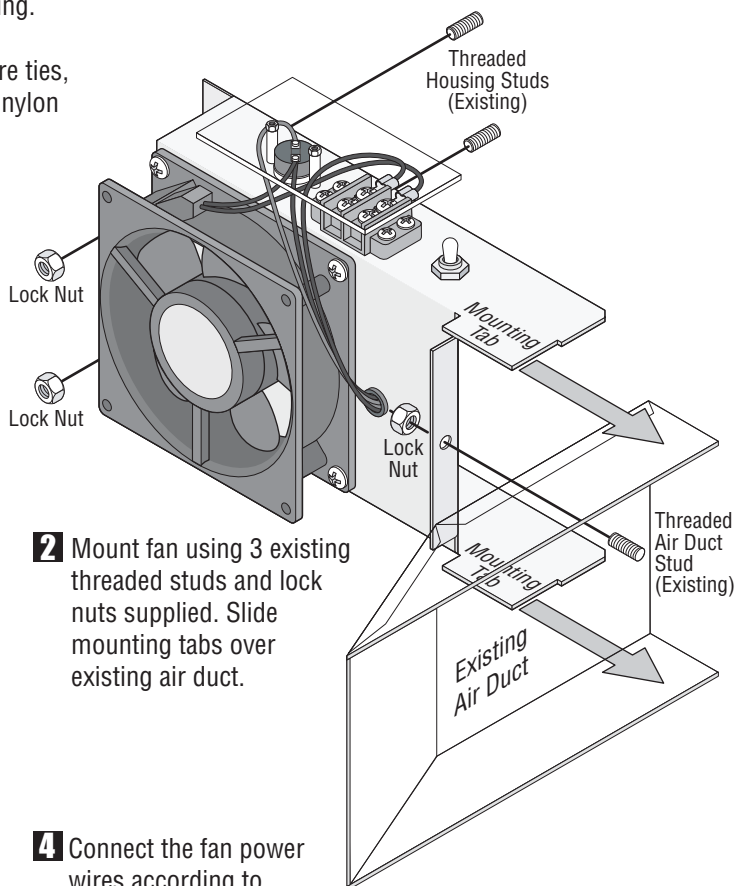
**Kit Includes:** Fan Assembly with black and white wires, 5 wire ties, 3 double stick wire tie mounts, 2 plastic wire restrainers and 3 nylon lock nuts.

## Installation

### 1 Shut off ALL power to operator

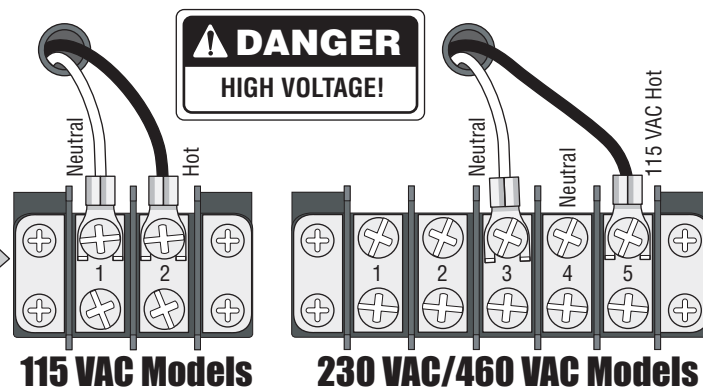
Turn off the DC convenience open power switch on certain operator models **FIRST** then shut off the AC input power to the operator from the circuit breaker.

### 3 Route fan wires as shown. Use supplied wire stays and existing wire restrainers. Keep wires clear of all moving parts.



### 2 Mount fan using 3 existing threaded studs and lock nuts supplied. Slide mounting tabs over existing air duct.

### 4 Connect the fan power wires according to operator model type.



### 5 Fan switch settings.

**OFF** - Turns the fan off.

**ON** - Turns the fan on continuously.

**AUTO - Normal setting.** Automatically turns the fan **ON** when the temperature rises above 90°F inside the housing, and turns the fan **OFF** when the temperature drops below 90°F.

⚠ Keep intake vents clear of debris.

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# 1600 115 VAC - 3.3 AMP HEATER KIT

DoorKing Part Number

**1601-092**

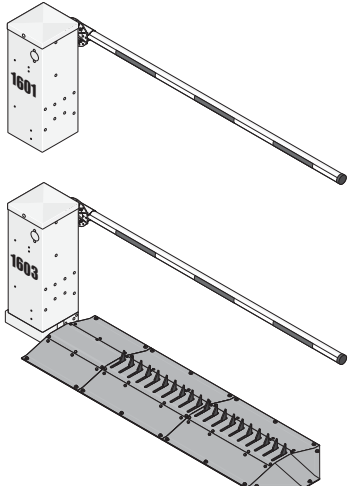
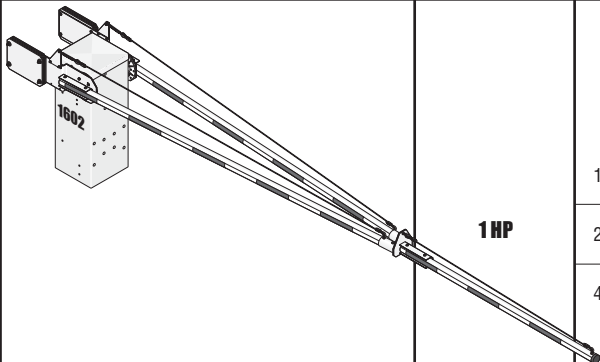
This kit is designed for the 1600 model barrier gate operators only. For cold weather climates where temperatures routinely drop below 40°F (4°C). A built-in thermostat will automatically control the temperature inside operator housing.

## High Voltage AC Input Power for the 1600 Barrier Gate Operator with a Heater

**DO NOT** use the “high voltage wire size and distance requirements” table in the Installation/Owner’s manuals to determine the high voltage AC input power wire size and distance requirements for the barrier gate operator because of a **much greater** current draw when using the heater. Use the table below to determine the wire size and distances for your chosen barrier gate operator when a heater is installed. EACH operator should have a “**Dedicated**” circuit breaker at the power source.

If the high voltage AC input power wiring is greater than the maximum distance shown, it is recommended that a service feeder be installed. When large gauge wire is used, a separate junction box must be installed for the operator connection. Wire run distances are based on NEC guidelines for copper wire allowing a maximum 3% voltage drop on the line. The calculated distance was then further reduced by 10% to allow for other losses in the system. **Never** run low voltage rated wire insulation in the same conduit as high voltage rated wire insulation.

### High voltage AC input wire size and distance requirements for a 1600 with a heater.

Model	Horsepower	Volts	Operator and Heater Amps	Wire Size / Distance in Feet			
				12 AWG	10 AWG	8 AWG	6 AWG
	1/2 HP	115	9.0	105	175	290	435
		230	4.6	420	675	1125	1685
		460	2.4	1615	2585	4310	6465
	1 HP	115	13.0	70	120	200	300
		230	6.5	295	475	795	1190
		460	3.3	1175	1880	3136	4705

**In bi-parting (dual) barrier gate applications, high voltage AC input power is required for EACH 1600 operator with heater.**

  
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# Installation of Heater

DoorKing Part Number

**1601-092**

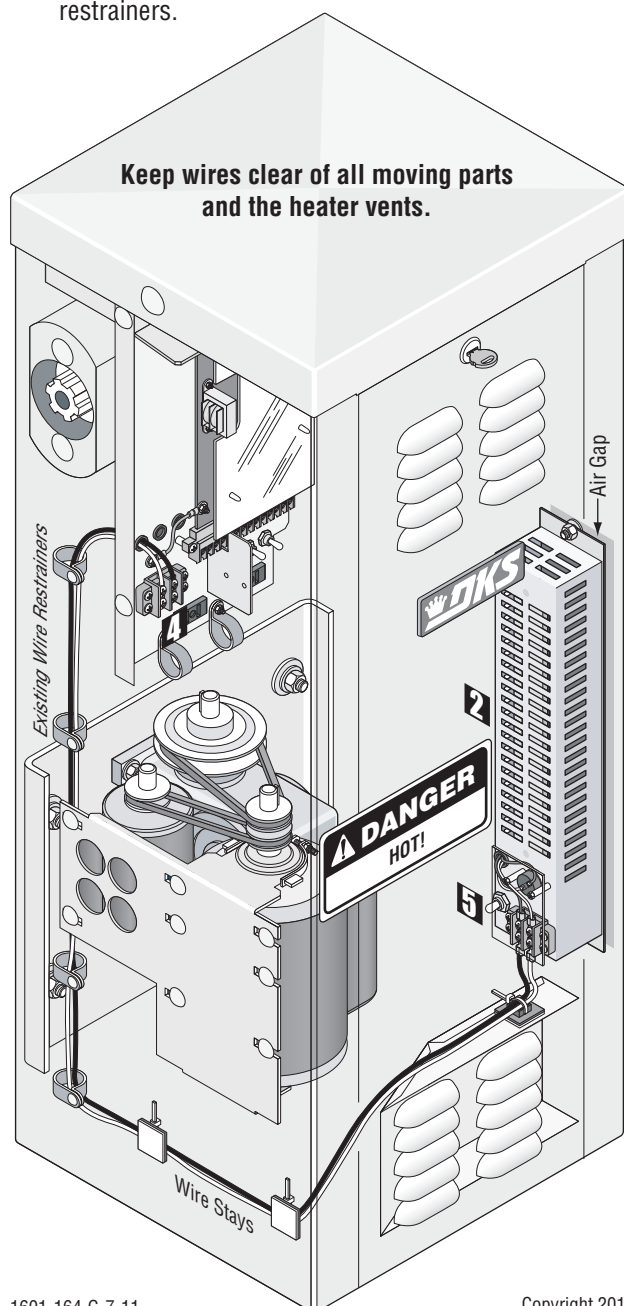
**Kit Includes:** Heater / mounting plate, 2 locknuts, 5 wire ties, 3 double stick wire tie mounts, and 2 plastic wire restrainers.

## 1 Shut off ALL power to operator.

Turn off the DC convenience open power switch on certain operator models **first** then shut off the AC input power to the operator from the circuit breaker.

## 3 Route heater wires as shown.

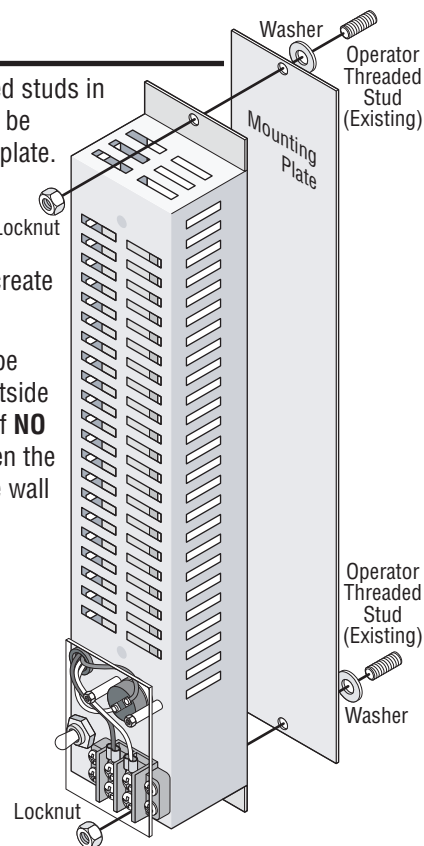
Use supplied wire stays and existing wire restrainers.



## 2 Mount Heater

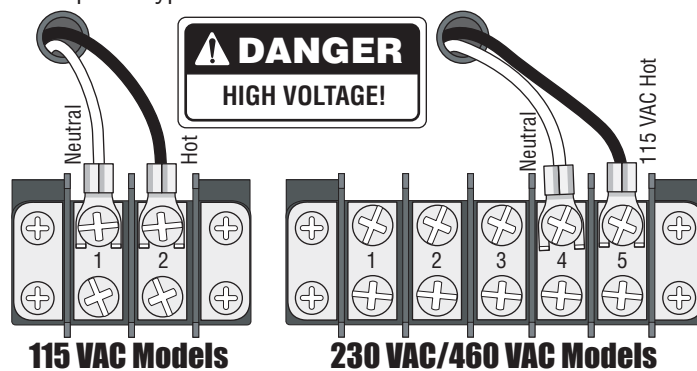
Locate existing threaded studs in operator. Heater **MUST** be mounted on mounting plate. Place the 2 supplied washers between the operator wall and the mounting plate to create an air gap.

**CAUTION:** Heat will be transferred to the outside wall of the operator if **NO** air gap exists between the heater and the inside wall of the operator.



## 4 Power Connection

Connect the heater power wires according to operator AC power type.



## 5 Heater Switch



**AUTO** - Normal setting. Automatically turns the heater **ON** when the temperature drops below 40°F inside the operator, and turns the heater **OFF** when the temperature rises above 40°F inside the operator.

**OFF** - Turns the heater off.

**ON** - Turns the heater on **continuously**. The heater will become **VERY HOT** when running continuously.

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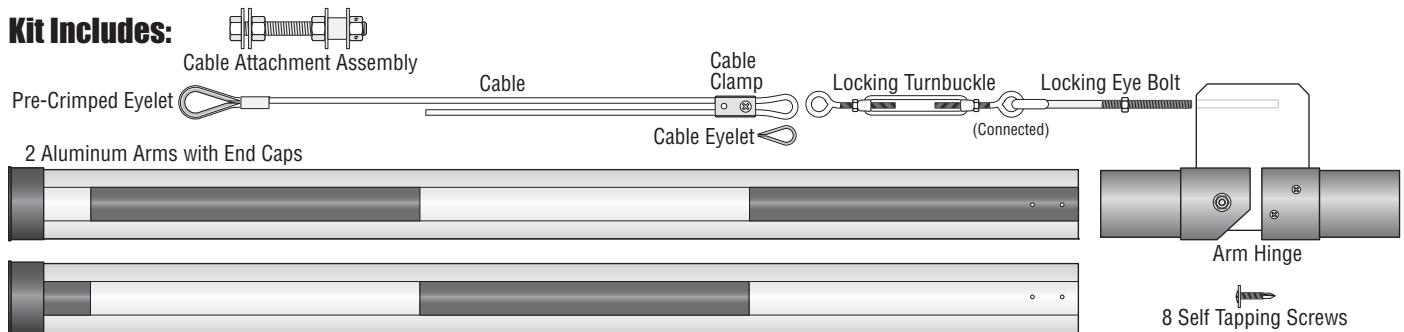
# ALUMINUM ARM FOLDING KIT

DoorKing Part Number

**1601-310**

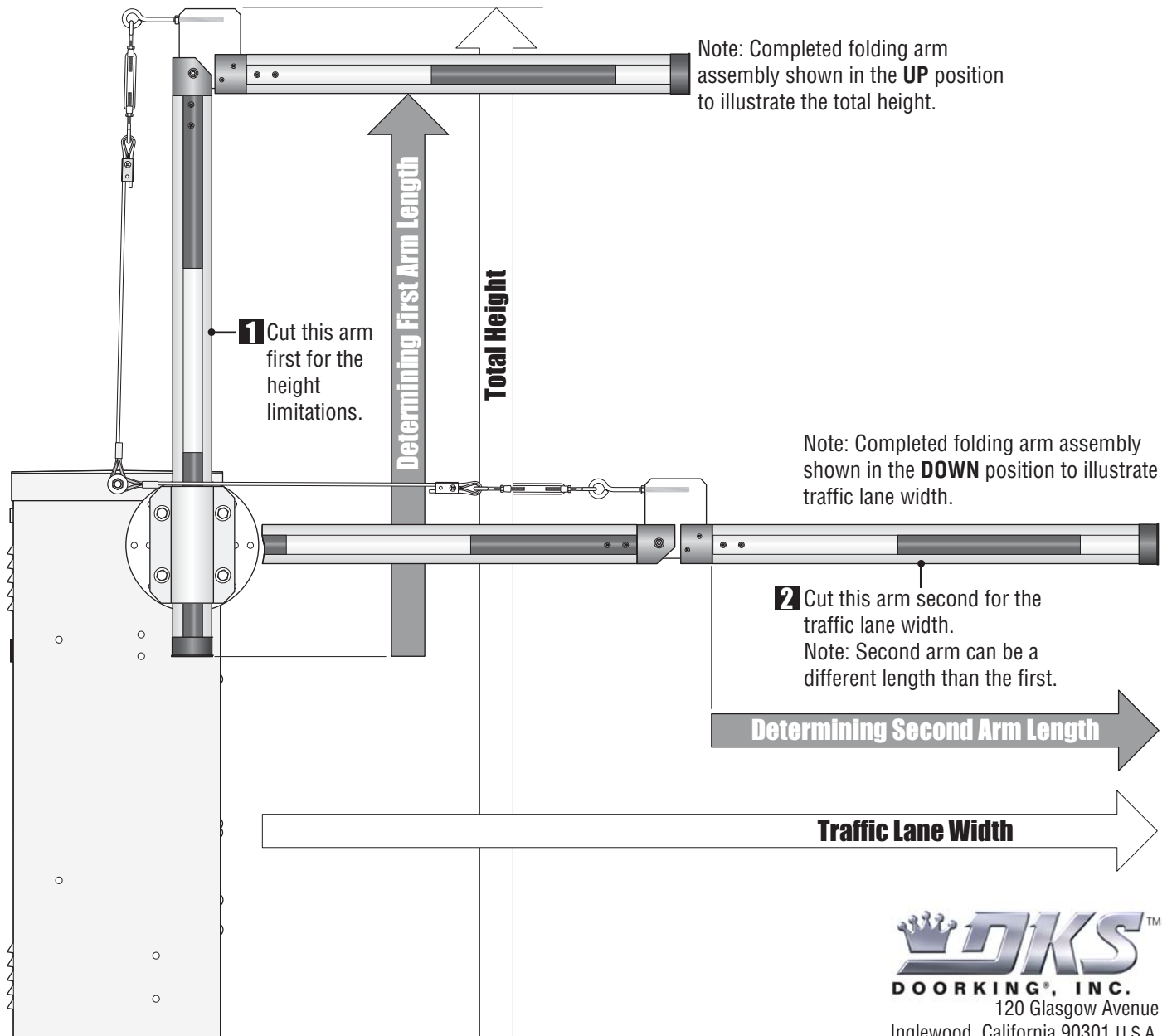
This kit is designed for the 1600 model barrier gate operators only. Recommended for low headroom applications.

## Kit Includes:



## Installation

### Cut Arms to Length

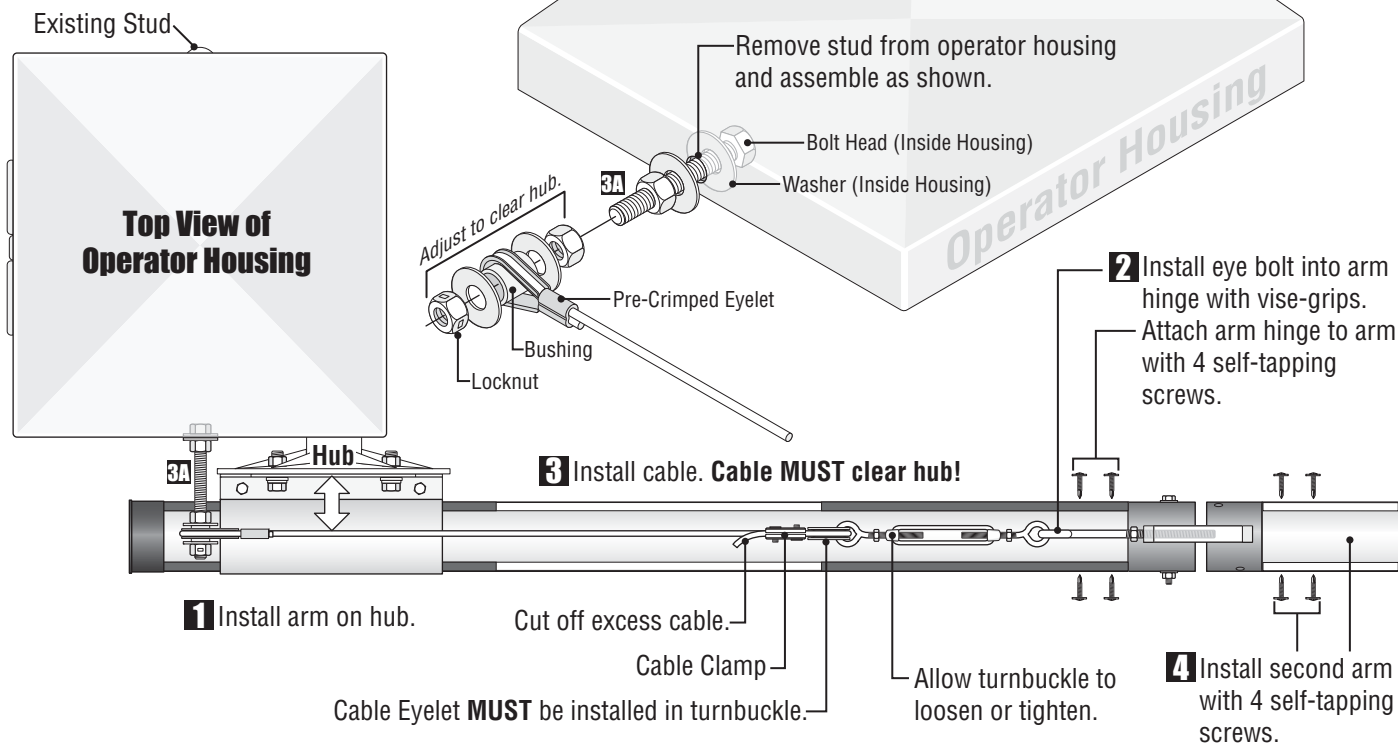




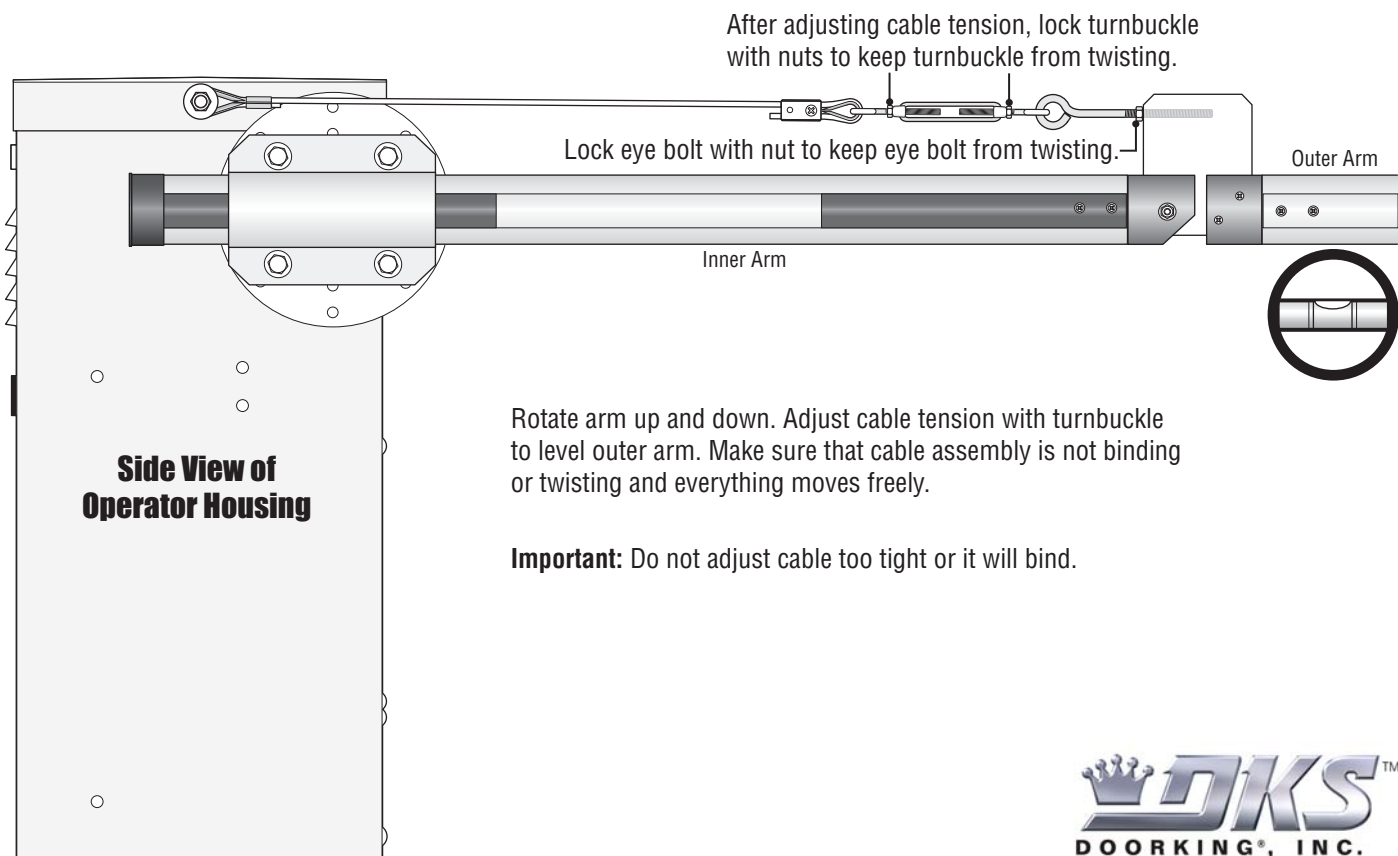
## Installing Arms

DoorKing Part Number

**1601-310**



## Adjusting and Locking Cable Assembly



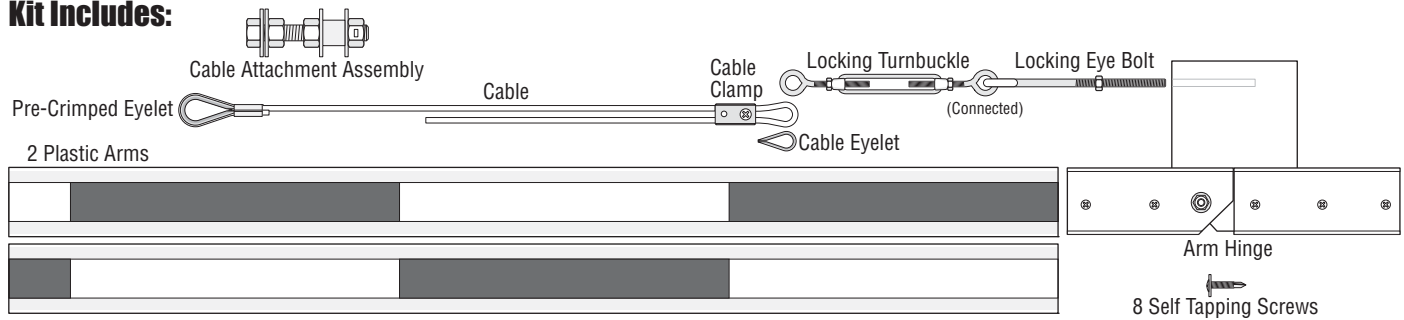
# PLASTIC FOLDING ARM KIT

DoorKing Part Number

**1601-083**

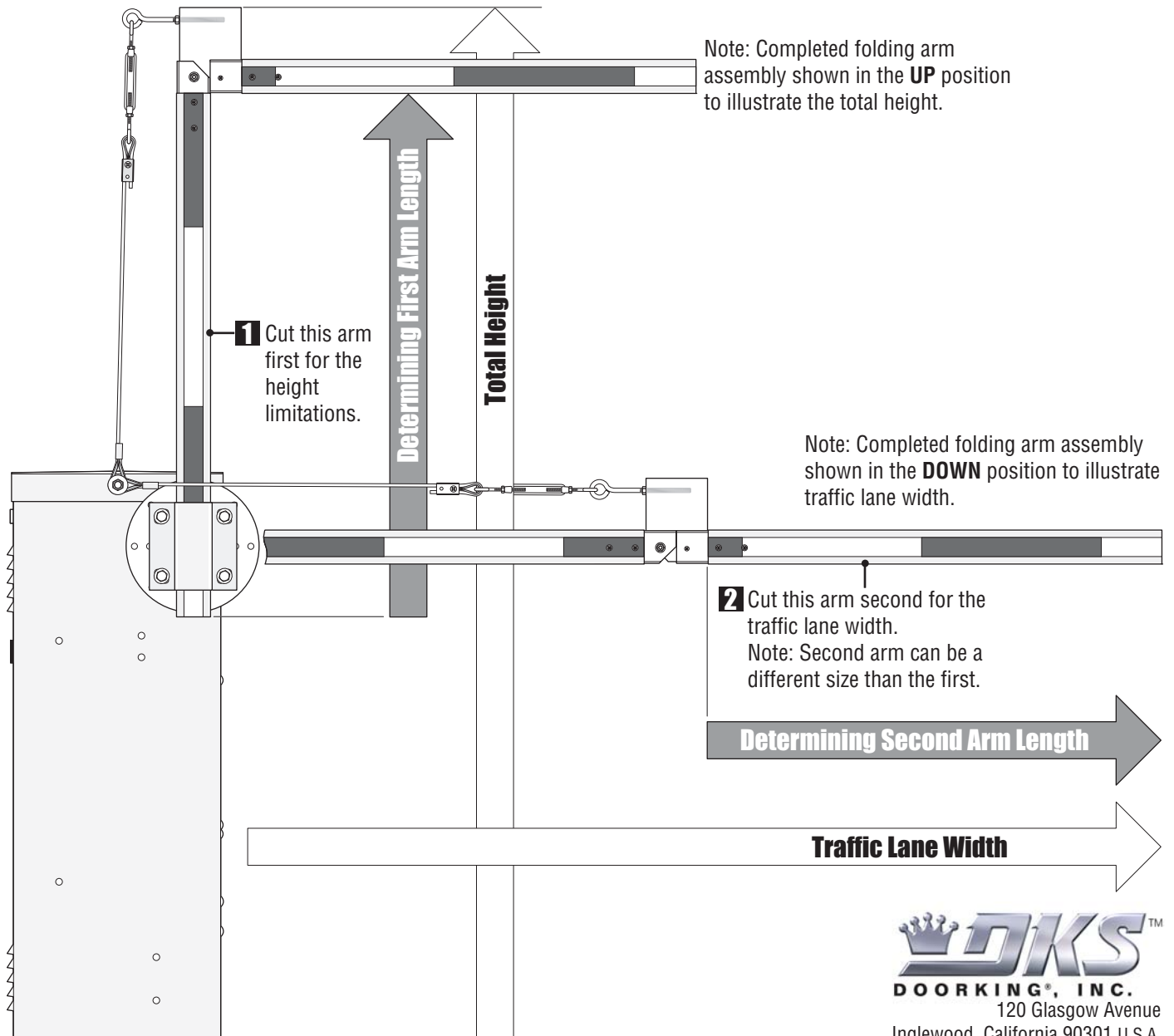
This kit is designed for the 1600 model barrier gate operators only. Recommended for low headroom applications.

## Kit Includes:



## Installation

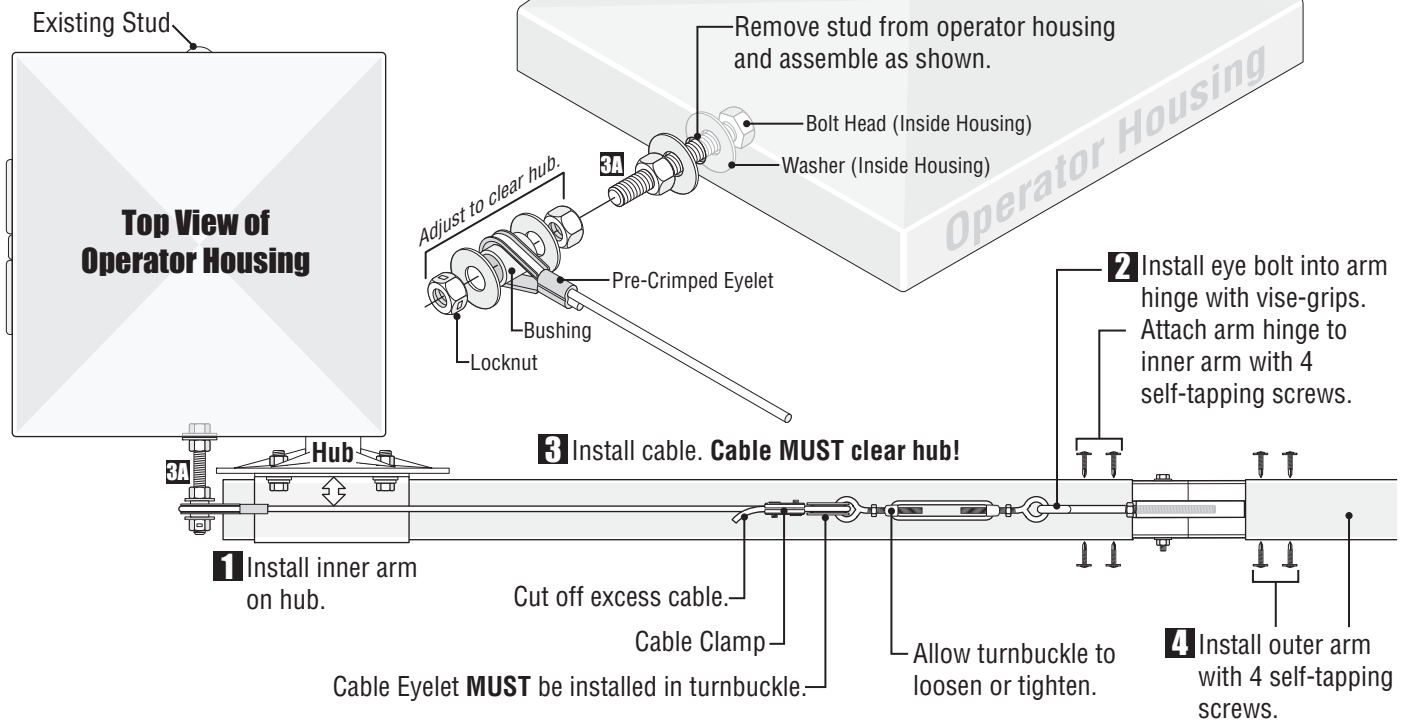
### Cut Arms to Length



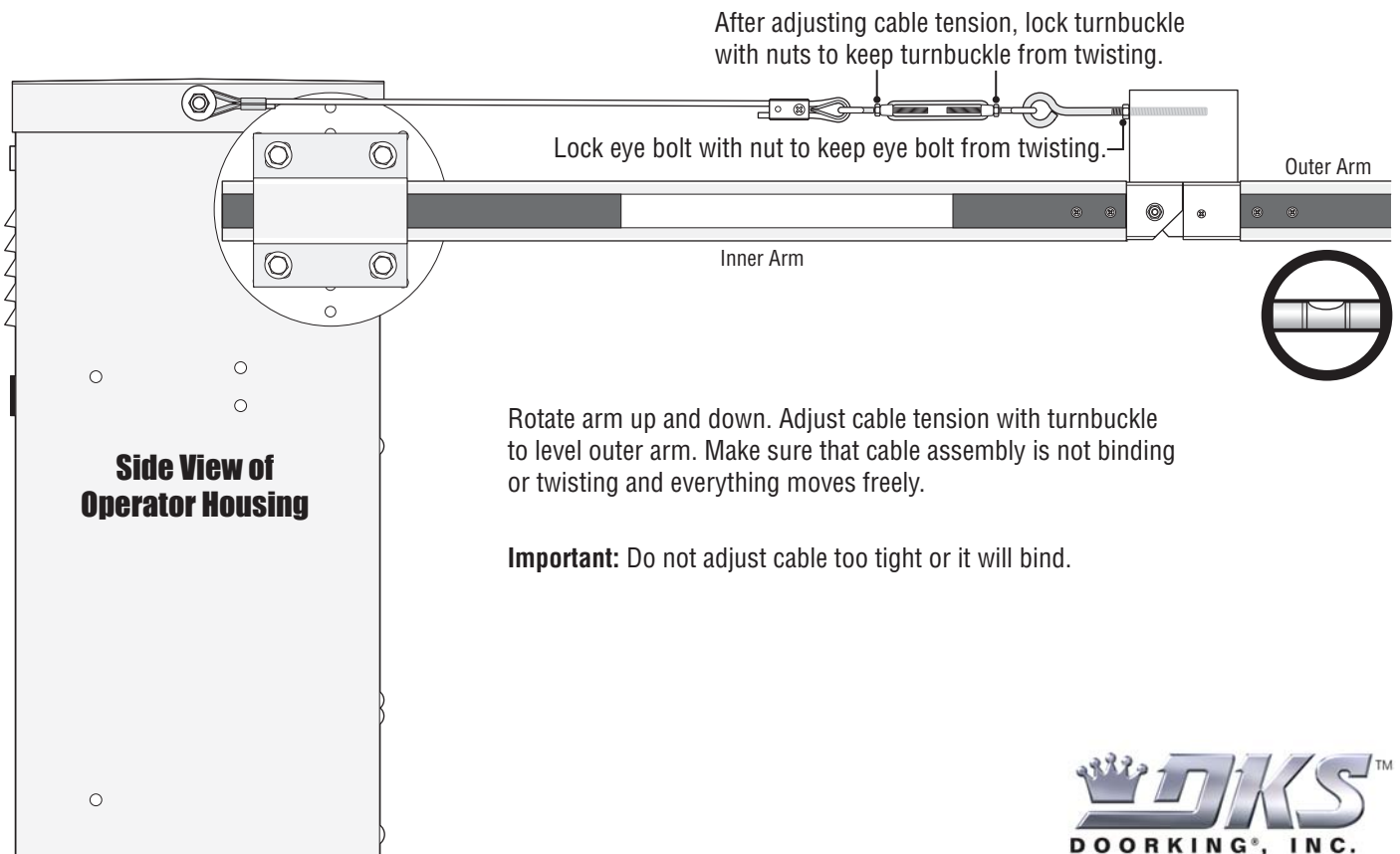
## Installing Arms

DoorKing Part Number

**1601-083**



## Adjusting and Locking Cable Assembly



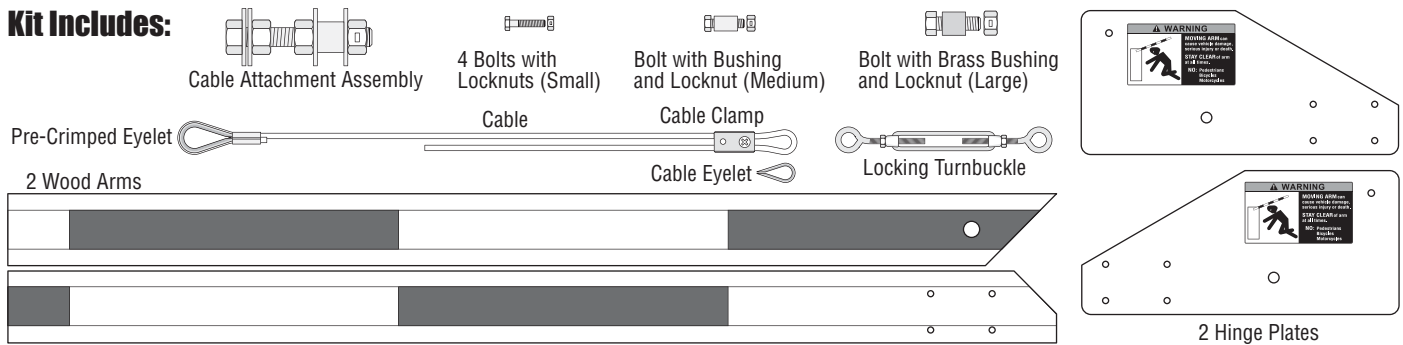
# WOOD FOLDING ARM KIT

DoorKing Part Number

**1601-084**

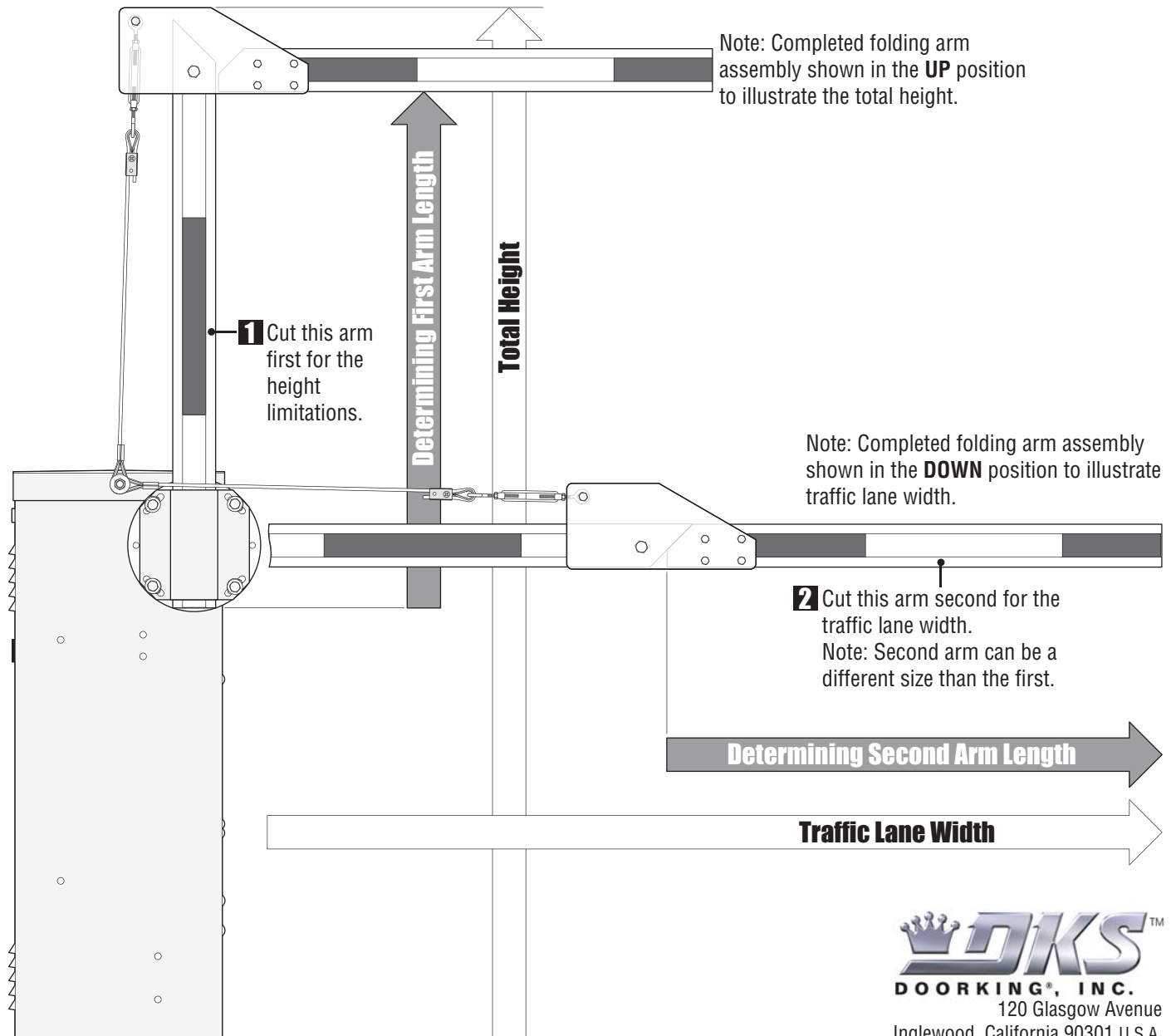
This kit is designed for the 1600 model barrier gate operators only. Recommended for low headroom applications.

## Kit Includes:



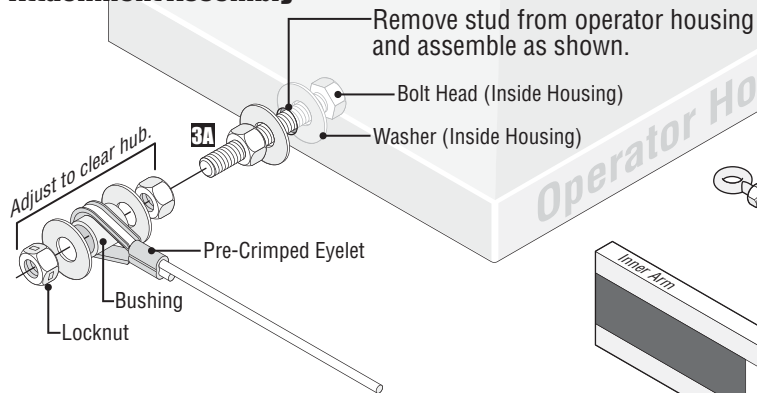
## Installation

### Cut Arms to Length



## Installing Arms

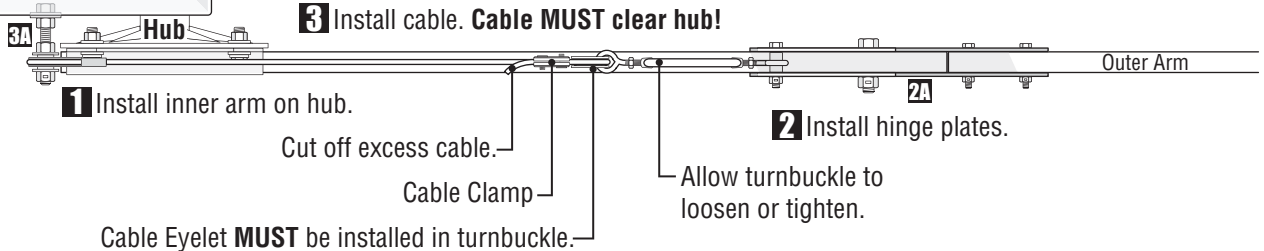
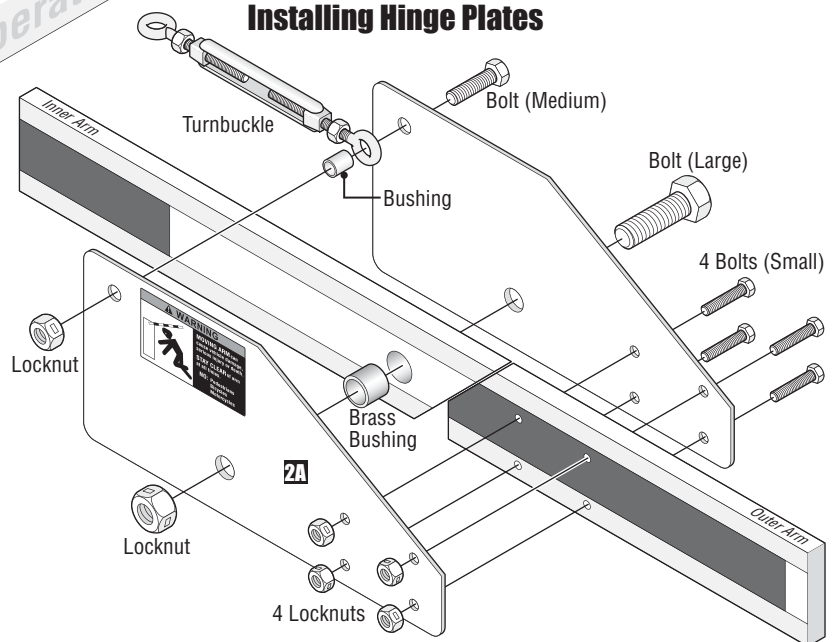
### Installing Cable Attachment Assembly



Existing Stud

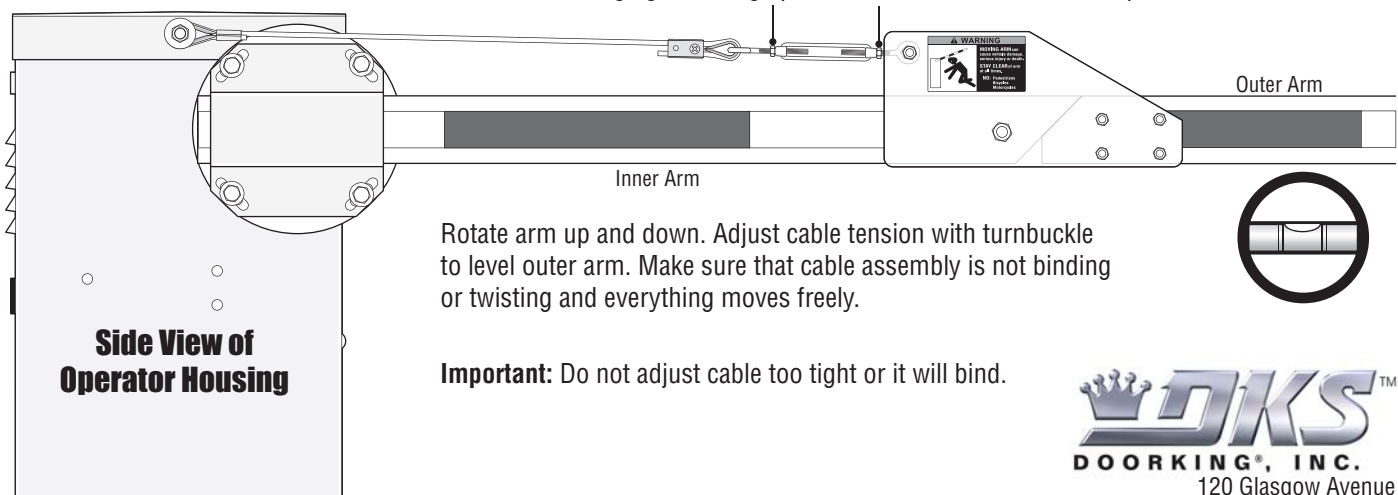
### Top View of Operator Housing

### Installing Hinge Plates



## Adjusting and Locking Cable Assembly

After adjusting cable tension, lock turnbuckle with nuts in position shown to prevent turnbuckle from rubbing against hinge plates when the arm is in the UP position.



**Important:** Do not adjust cable too tight or it will bind.

# 1601 Manual Release Kit

DoorKing Part Number

**1601-270**

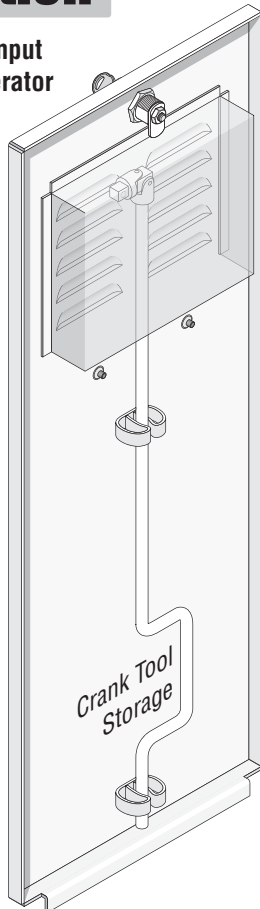
This kit is designed for the 1601 barrier gate operator **WITHOUT** the **convenience open** option. It provides an interlock power cut-off switch when manually using crank tool to move the arm up or down. **DO NOT** install on **convenience open** models.

**Kit Includes:** Pre-wired Interlock assembly,  
Double motor pulley, Crank tool,  
2 spring clips with lock nuts.

## Installation

Shut off the AC input power to the operator from the circuit breaker.

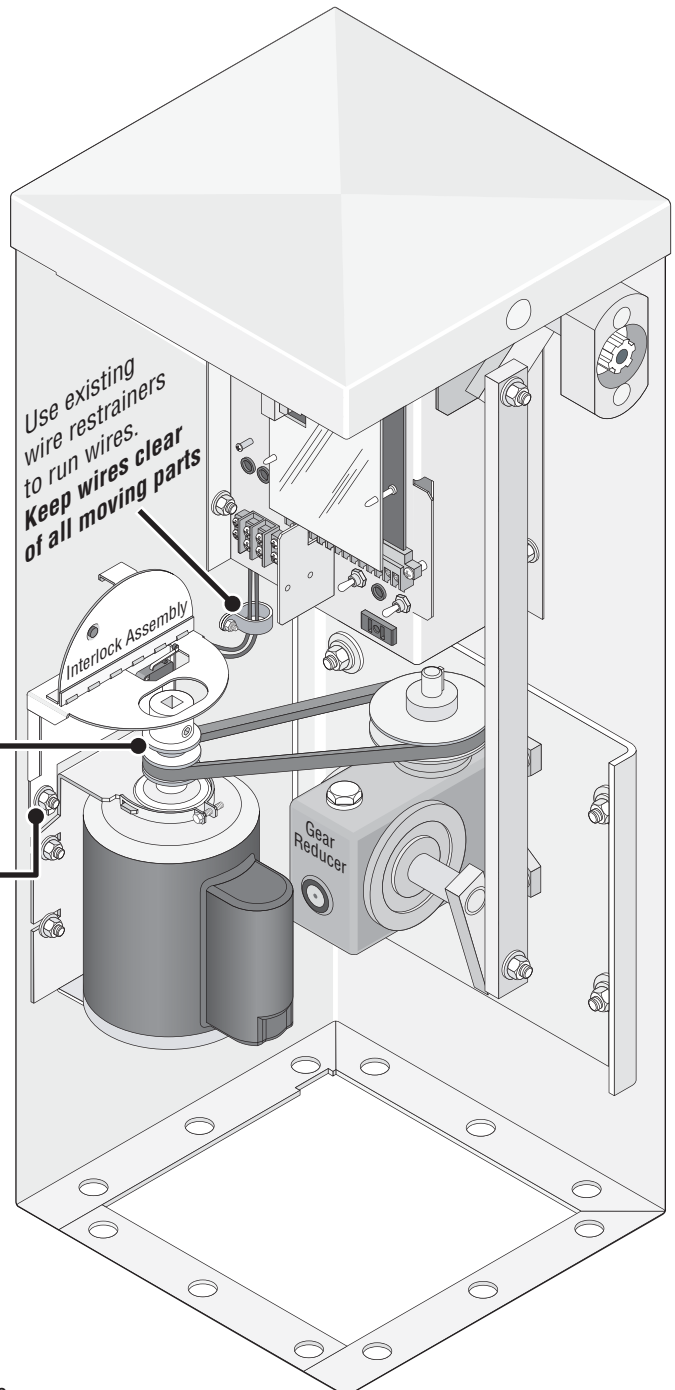
Mount spring clips with lock nuts on existing threaded studs inside access door.



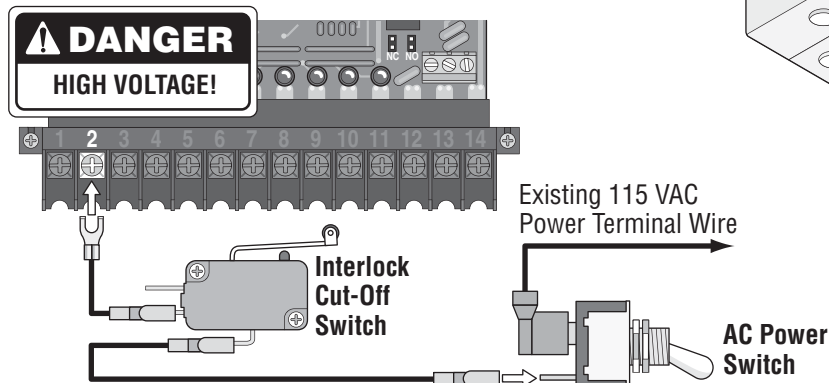
Replace existing single motor pulley with double motor pulley. Align motor pulley with gear reducer pulley.

Mount interlock assembly using existing hardware.

Use existing wire restrainers to run wires. Keep wires clear of all moving parts



## Wiring Interlock



Replace the existing AC power switch wire connected to terminal #2 with interlock cut-off switch wires.

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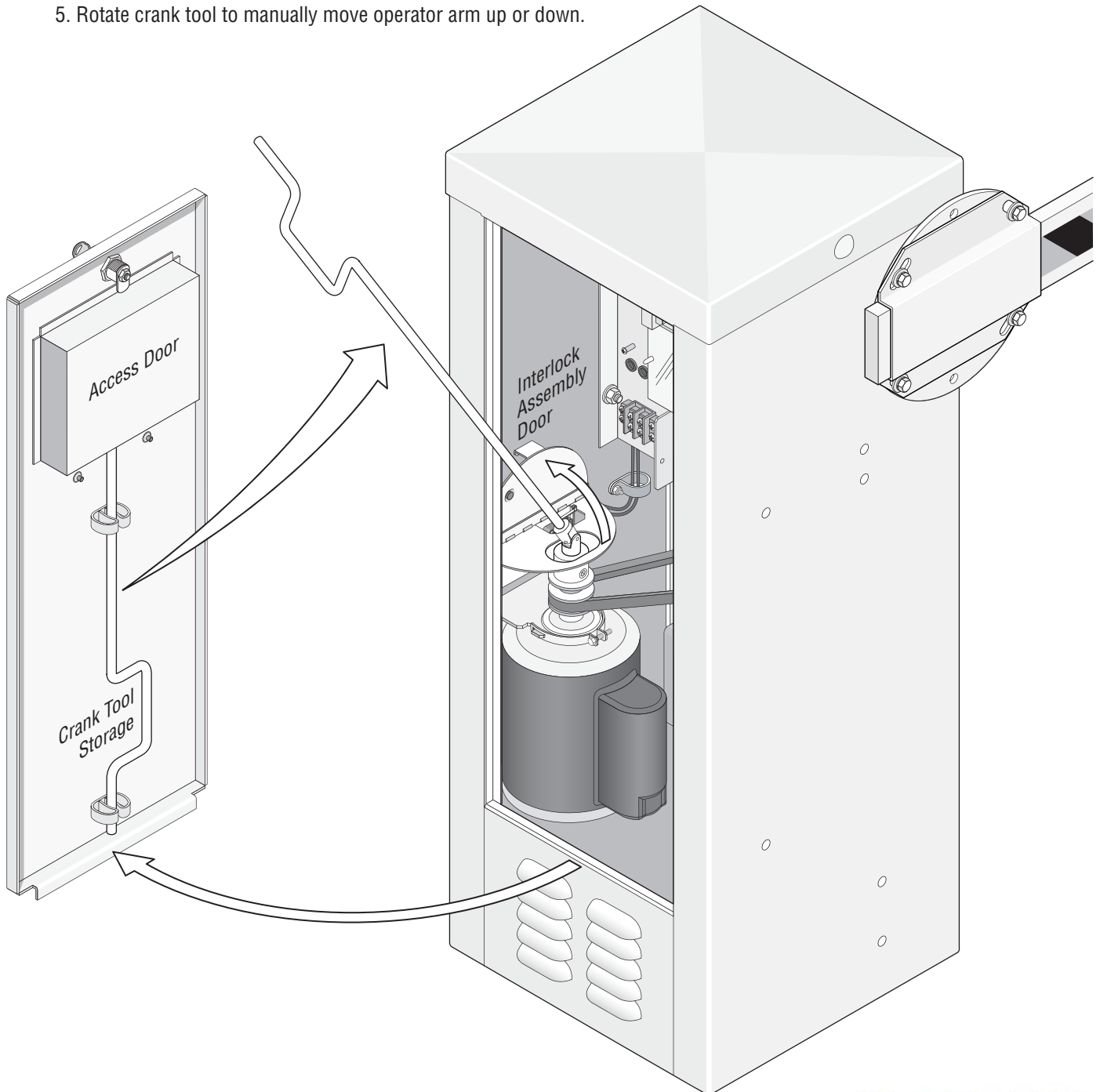


# Manual Operation

DoorKing Part Number

**1601-270**

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 arm up or down.



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