

# 1601 BREAK-AWAY ALUMINUM ARM INSTALLATION KIT

DoorKing Part Number

**1601-285**

This kit is designed for a 1601 barrier gate operator ONLY. Not for use on 1602 or 1603 operators. The kit provides a break-away bracket assembly for an aluminum arm ONLY. If the arm is struck and breaks away (pivots in ONE DIRECTION ONLY, see below), gate operator will automatically shut down. The arm simply snaps back into the release rollers. Power needs to be shut off then turned back on to reset the operator to function normally again.

**Kit Includes:** Arm Pivot Bracket Assembly, Arm Sleeve, Arm Wire Harness, Relay Wire Harness, Relay Mounting Plate Assembly, Arm Pivot Bolt, Arm Securing Bolt, Zip Ties, Adhesive Zip Ties, Plastic Arm Cover

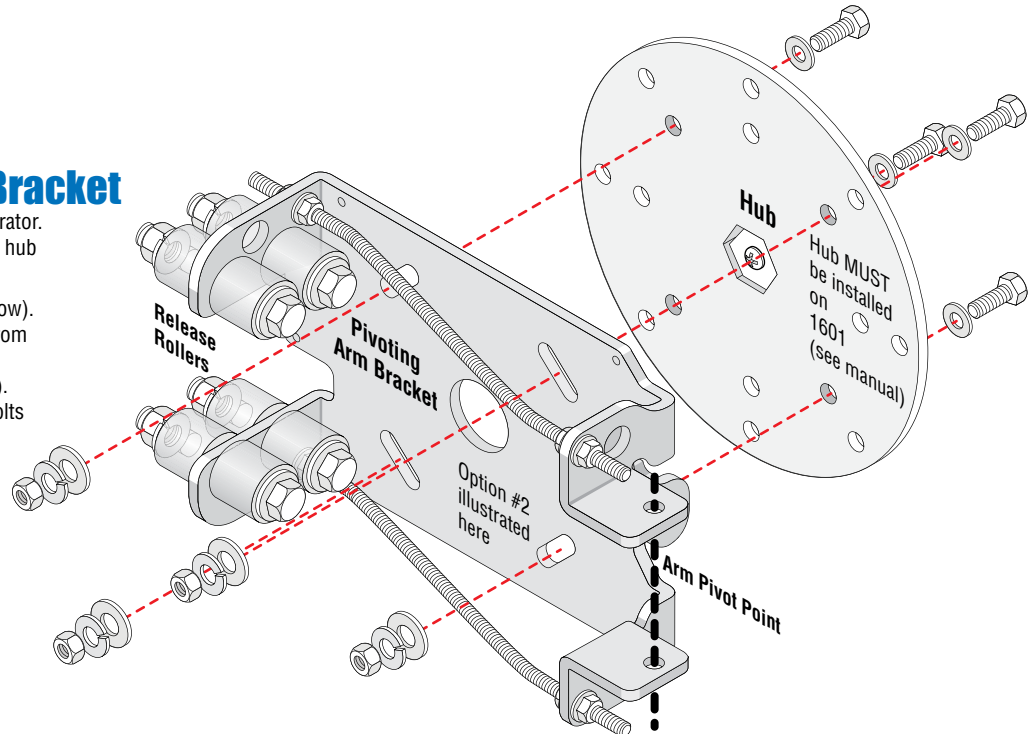
**Optional Arms Available (sold separately):** Aluminum Arm with LEDs P/N 1601-520 Aluminum Arm without LEDs P/N 1601-522

## Installation

### Install Pivoting Arm Bracket

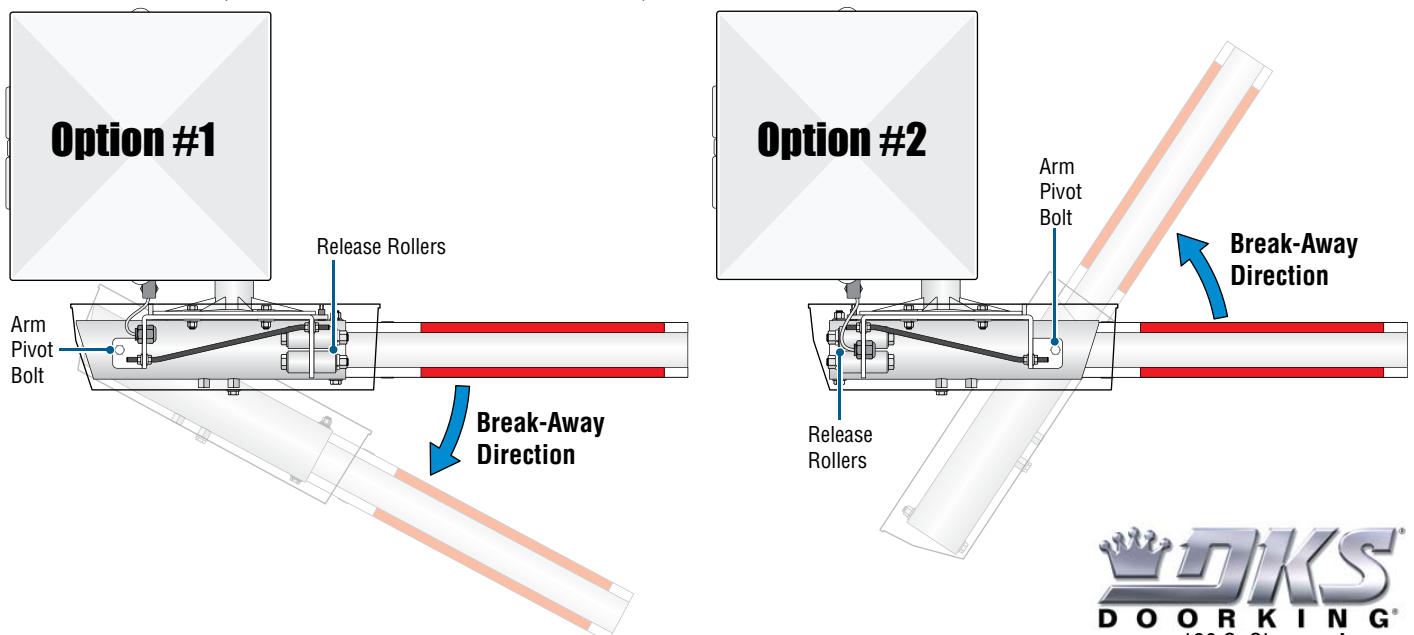
Hub MUST already be installed on gate operator. See Installation/Owner's manual for correct hub installation.

This illustration shows OPTION #2 (see below). Pivoting arm bracket can be rotated 180° from position shown to allow arm to release in opposite direction - OPTION #1 (see below). Secure pivoting arm bracket with 4 nuts, bolts and washers as shown to hub.



### Arm Break-Away Direction Options

Arm will only pivot in **ONE DIRECTION** depending on which way the pivoting arm bracket is installed. Choose the desired break-away direction and install pivoting arm bracket accordingly (note position of release rollers and arm pivot bolt).

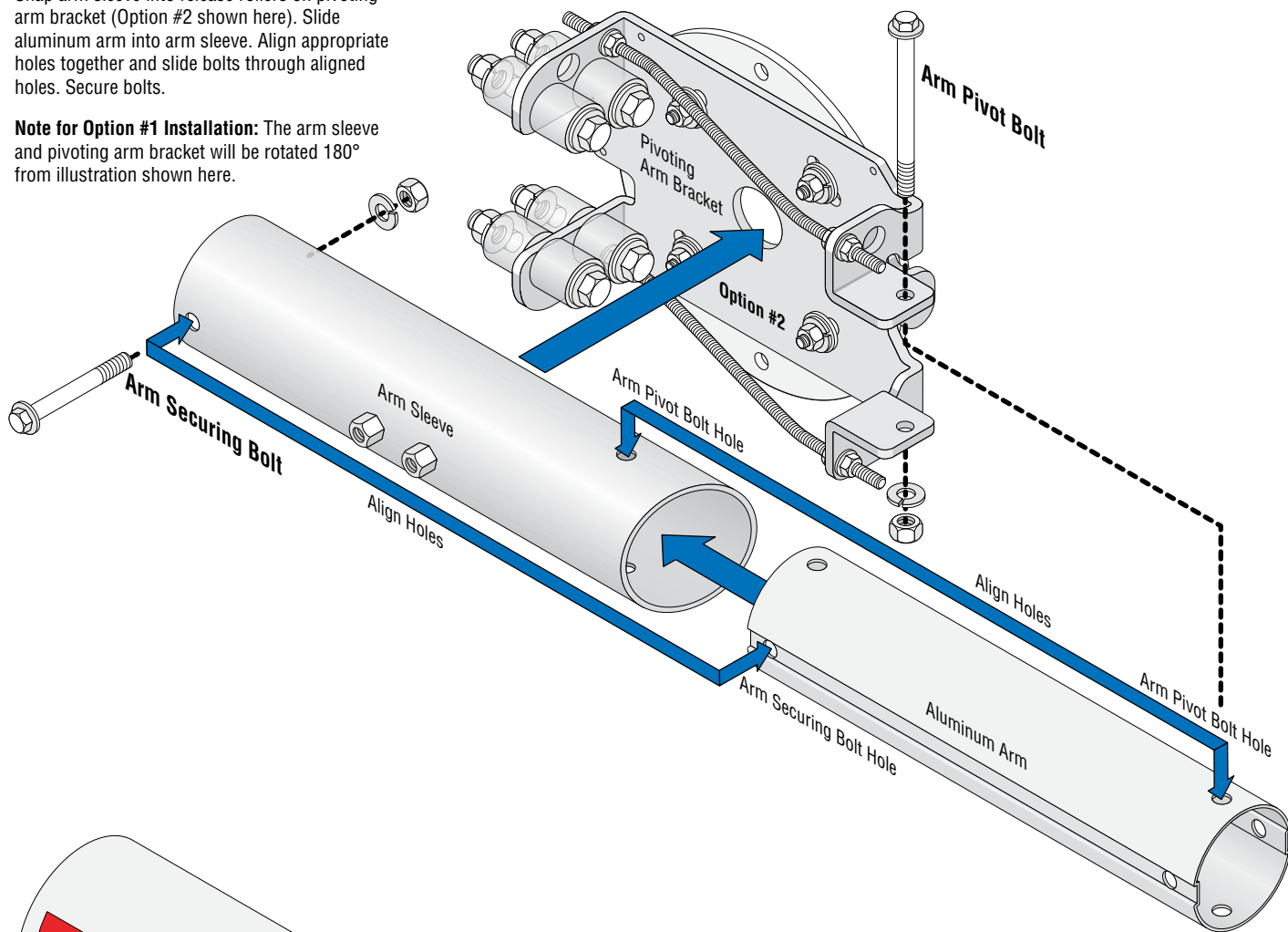


# Installation Continued

## Attach Arm

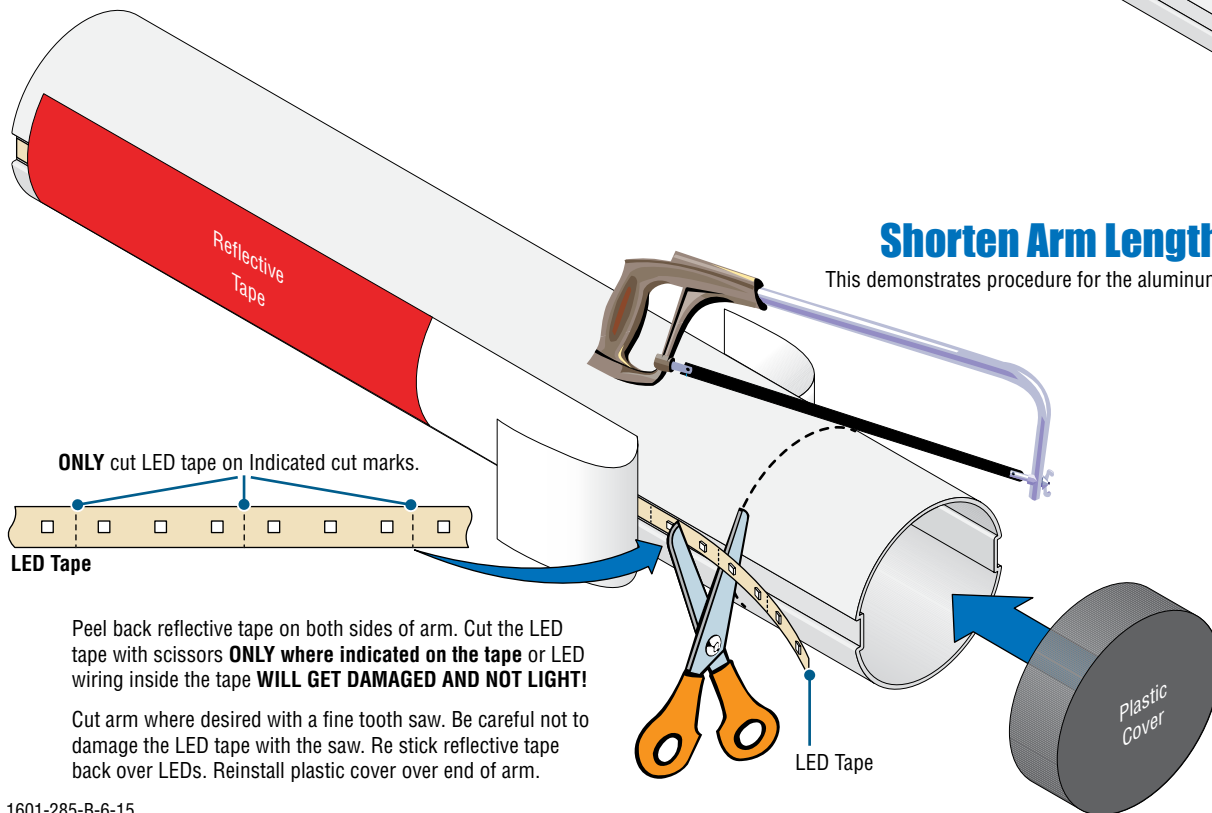
Snap arm sleeve into release rollers on pivoting arm bracket (Option #2 shown here). Slide aluminum arm into arm sleeve. Align appropriate holes together and slide bolts through aligned holes. Secure bolts.

**Note for Option #1 Installation:** The arm sleeve and pivoting arm bracket will be rotated 180° from illustration shown here.



## Shorten Arm Length if Desired

This demonstrates procedure for the aluminum arm with LED lights.

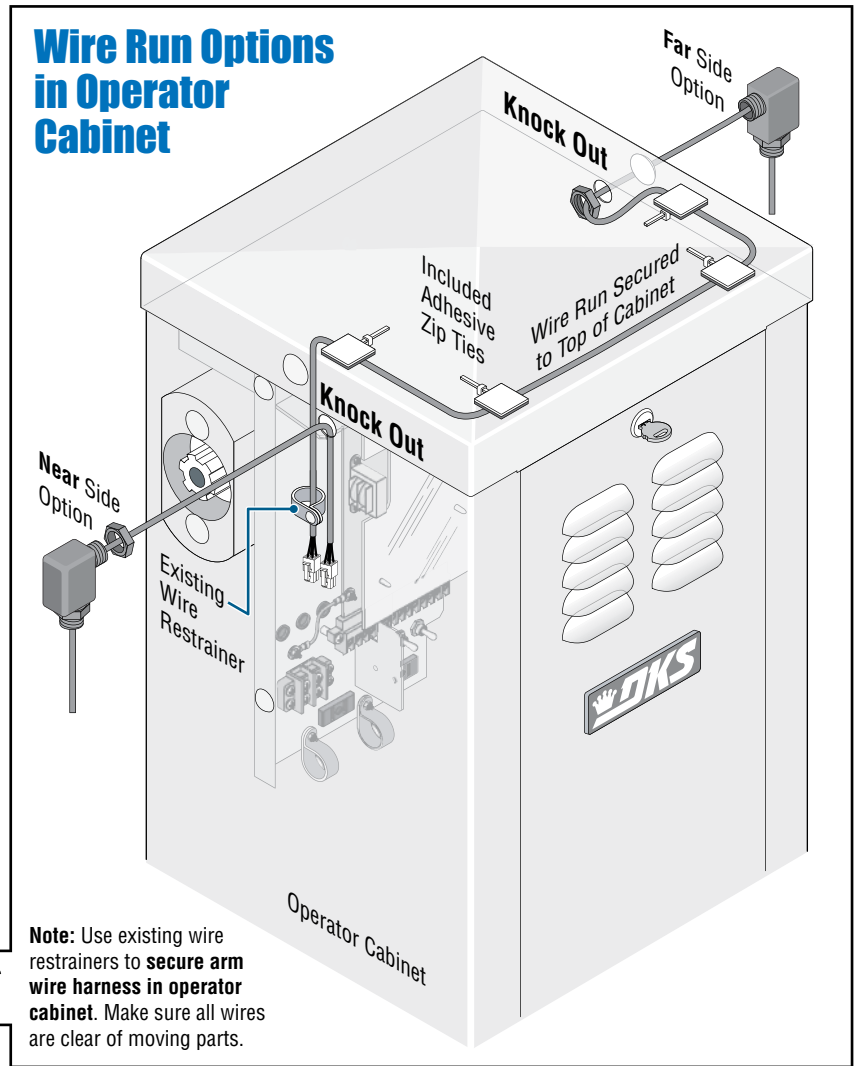


Peel back reflective tape on both sides of arm. Cut the LED tape with scissors **ONLY where indicated on the tape** or LED wiring inside the tape **WILL GET DAMAGED AND NOT LIGHT!**

Cut arm where desired with a fine tooth saw. Be careful not to damage the LED tape with the saw. Re stick reflective tape back over LEDs. Reinstall plastic cover over end of arm.

# Wiring

## Wire Run Options in Operator Cabinet



**Note:** Use existing wire restrainers to **secure arm wire harness in operator cabinet**. Make sure all wires are clear of moving parts.

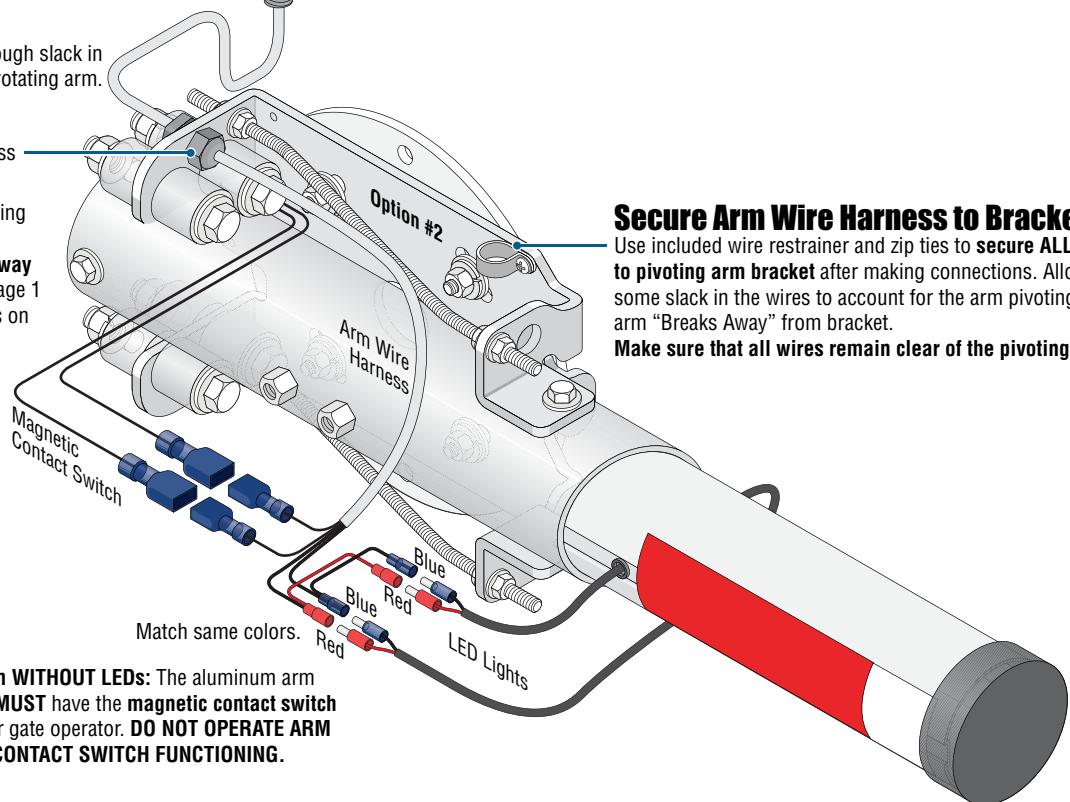
Mount Arm Wire Harness Connector in Knock-Out hole on operator cabinet.

## Arm Wire Harness

Allow enough slack in the wire for rotating arm.

Mount Arm Wire Harness Connector

**Note:** Connector mounting position is different for **Option #1**, see **Break-Away Direction Options** on page 1 and **Wiring Schematics** on page 4.



### Secure Arm Wire Harness to Bracket

Use included wire restrainer and zip ties to **secure ALL wires to pivoting arm bracket** after making connections. Allow for some slack in the wires to account for the arm pivoting when arm "Breaks Away" from bracket. **Make sure that all wires remain clear of the pivoting arm.**

**Note for Aluminum arm WITHOUT LEDs:** The aluminum arm without the LED lights **MUST** have the **magnetic contact switch** connected to the barrier gate operator. **DO NOT OPERATE ARM WITHOUT MAGNETIC CONTACT SWITCH FUNCTIONING.**

# Installing and Wiring Relay

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

Use existing carriage bolt on operator to install relay mounting plate.

Plug relay wire harness into arm wire harness.

**Relay Wire Harness Connections:**

#1 relay white wire connects to operator's main terminal 1.

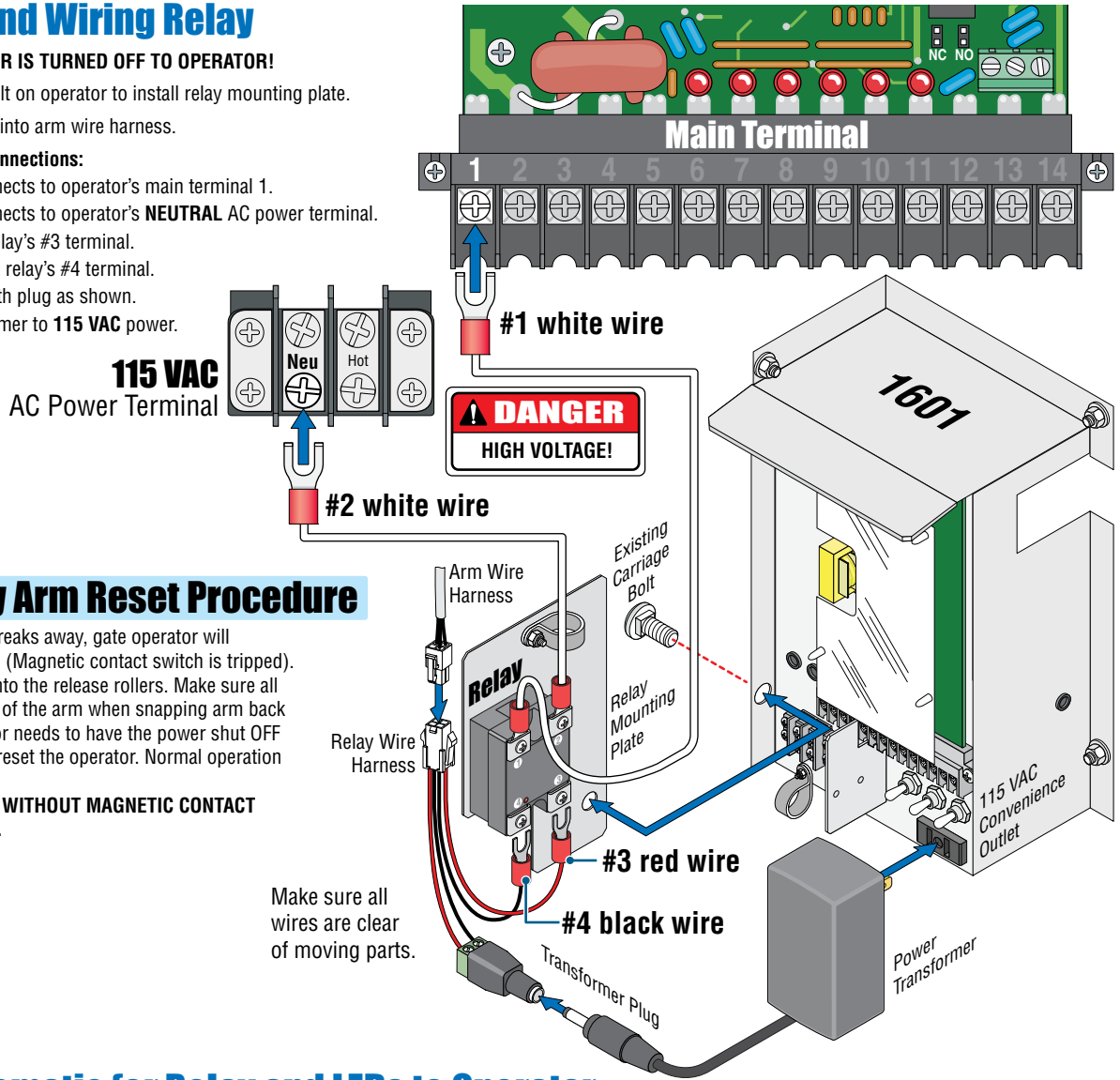
#2 relay white wire connects to operator's **NEUTRAL** AC power terminal.

**RED** wire connects to relay's #3 terminal.

**BLACK** wire connects to relay's #4 terminal.

Connect transformer with plug as shown.

Connect power transformer to **115 VAC** power.



## Break-Away Arm Reset Procedure

If arm gets struck and breaks away, gate operator will automatically shut down (Magnetic contact switch is tripped). Simply snap arm back into the release rollers. Make sure all wires are out of the way of the arm when snapping arm back in position. Gate operator needs to have the power shut OFF then turned back ON to reset the operator. Normal operation can then continue.

**DO NOT OPERATE ARM WITHOUT MAGNETIC CONTACT SWITCH FUNCTIONING.**

Make sure all wires are clear of moving parts.

## Wiring Schematic for Relay and LEDs to Operator

**Note:** Aluminum arm without LEDs P/N 1601-522 **MUST** have the magnetic contact switch, relay and power transformer connected to barrier gate operator. **DO NOT OPERATE ARM WITHOUT MAGNETIC CONTACT SWITCH FUNCTIONING.**

