

1601 BREAK-AWAY ALUMINUM ARM INSTALLATION KIT

DoorKing Part Number

1601-285

This kit is designed **ONLY** for a 1601-080 barrier gate operator. **IT CANNOT BE USED** with a 1601-081 operator with Convenience Open, 1602 or 1603 Operators. The kit provides a break-away bracket assembly for a **aluminum break-away arm with OR without LEDs 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 to function normally again.

Kit Includes: Arm Pivot Bracket Assembly, Arm Sleeve, Arm Wire Harness, Relay/Power Wire Harness, Relay Mounting Plate Assembly, Arm Pivot Bolt and Arm Securing Bolt Hardware, Power Transformer, Zip Ties, Adhesive Zip Ties.

Optional Aluminum Break-Away Arms Available (sold separately):

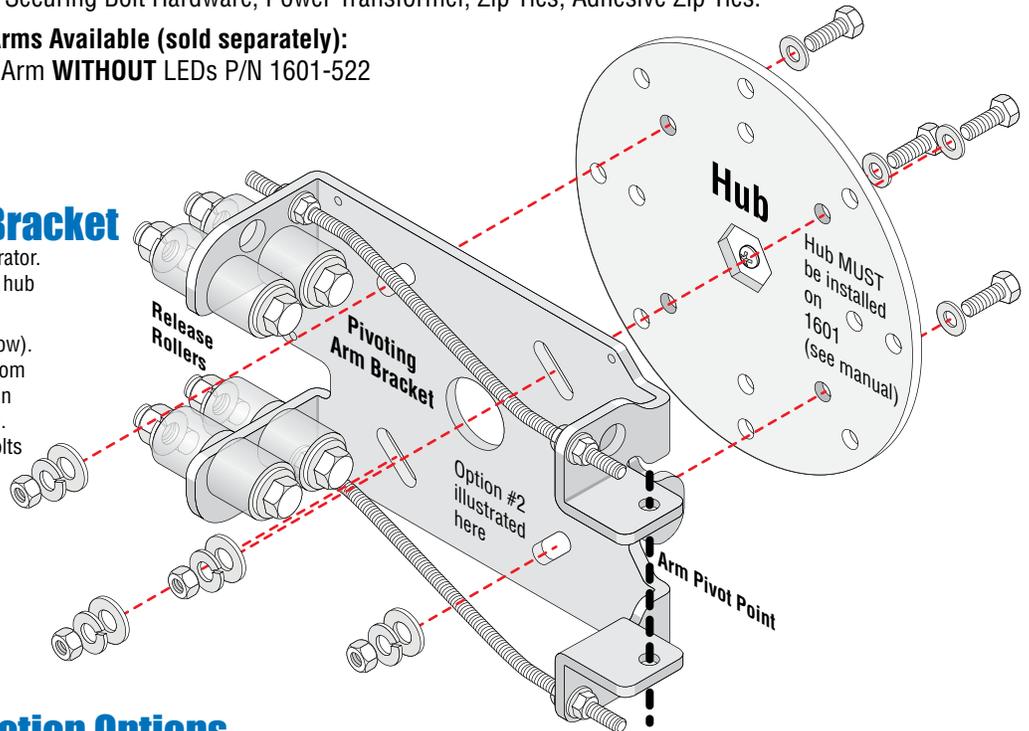
Arm **WITH** LEDs P/N 1601-520 Arm **WITHOUT** LEDs P/N 1601-522

Installation

Install Pivoting Arm Bracket

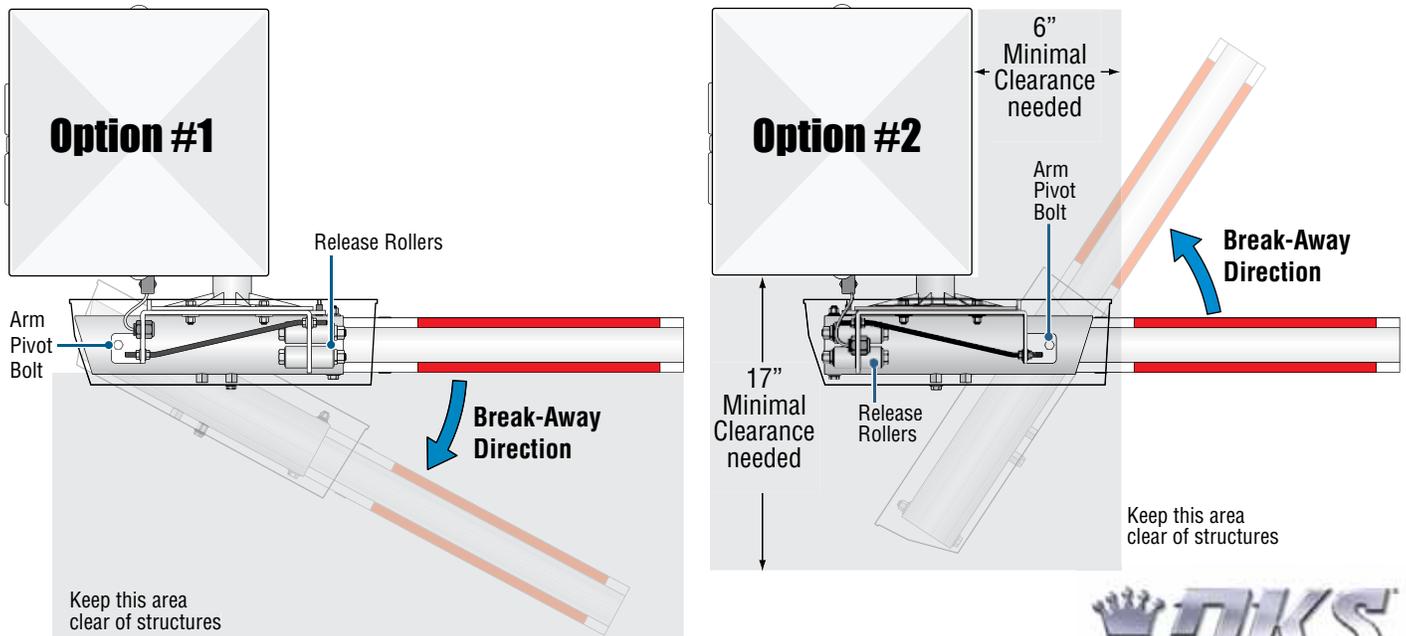
Hub **MUST** already be installed on gate operator. See Installation/Owner's manual for correct hub installation.

This illustration shows **OPTION #2** (see below). Pivoting arm bracket can be rotated 180° from the 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).

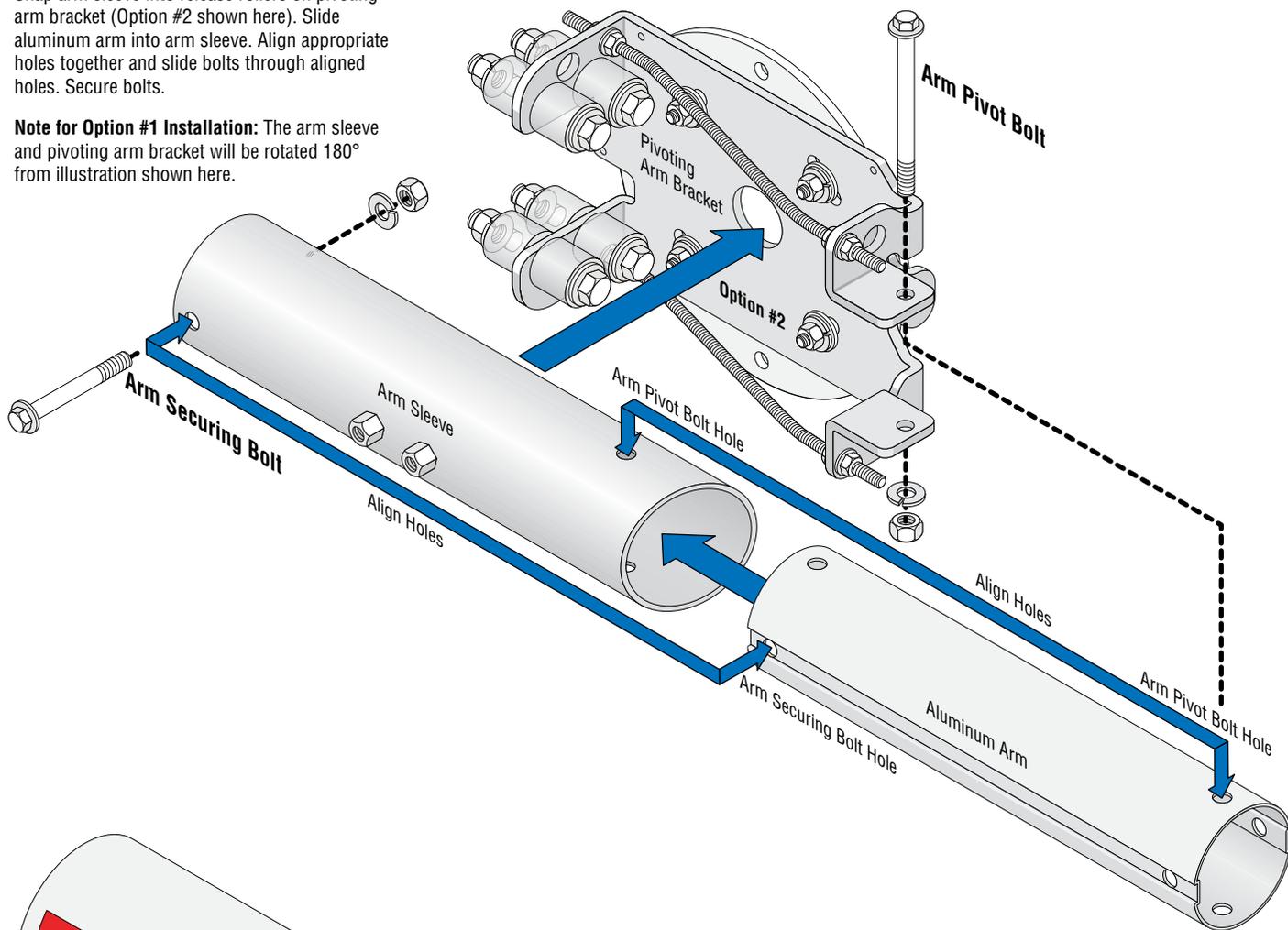


Installation Continued

Attach Arm

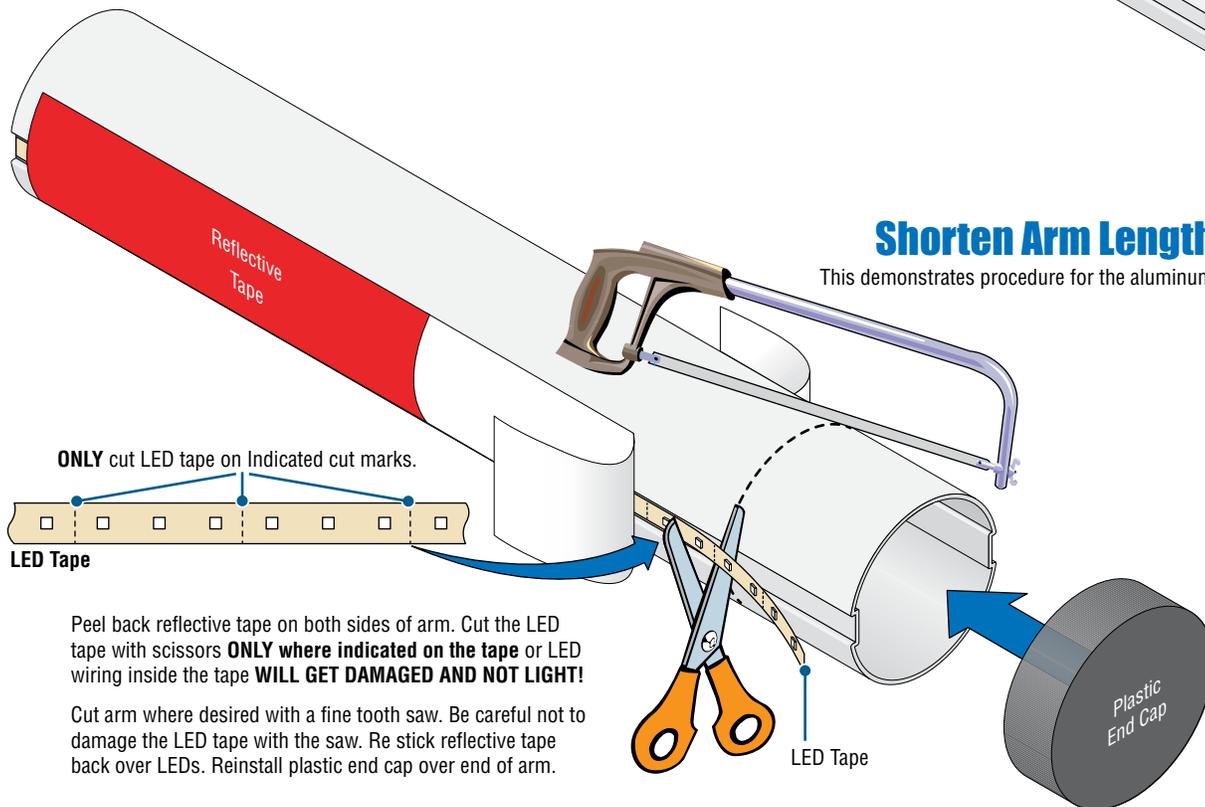
Snap arm sleeve into release rollers on pivoting arm bracket (Option #2 shown here). Slide aluminum arm into arm sleeve. Align appropriate holes together and slide bolts through aligned holes. Secure bolts.

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.



ONLY cut LED tape on indicated cut marks.

LED Tape

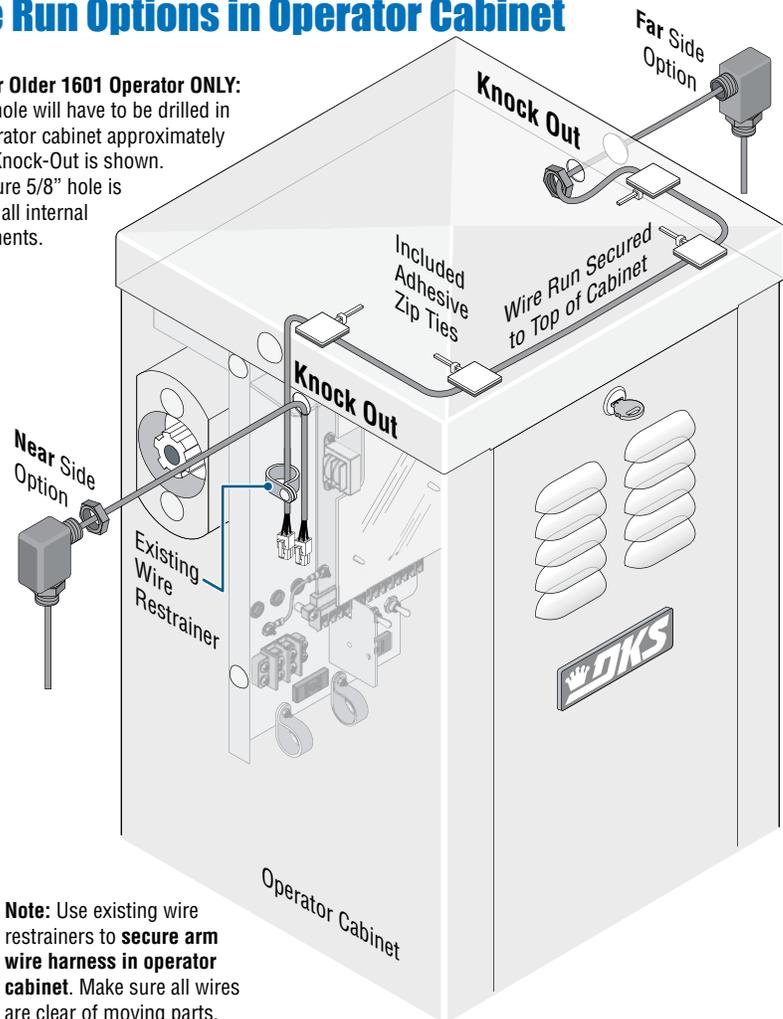
Peel back reflective tape on both sides of arm. Cut the LED tape with scissors **ONLY where indicated on the tape** or LED wiring inside the tape **WILL GET DAMAGED AND NOT LIGHT!**

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 end cap over end of arm.

Wiring

Wire Run Options in Operator Cabinet

Note for Older 1601 Operator ONLY:
A 5/8" hole will have to be drilled in the operator cabinet approximately where Knock-Out is shown. Make sure 5/8" hole is clear of all internal components.



Arm Wire Harness

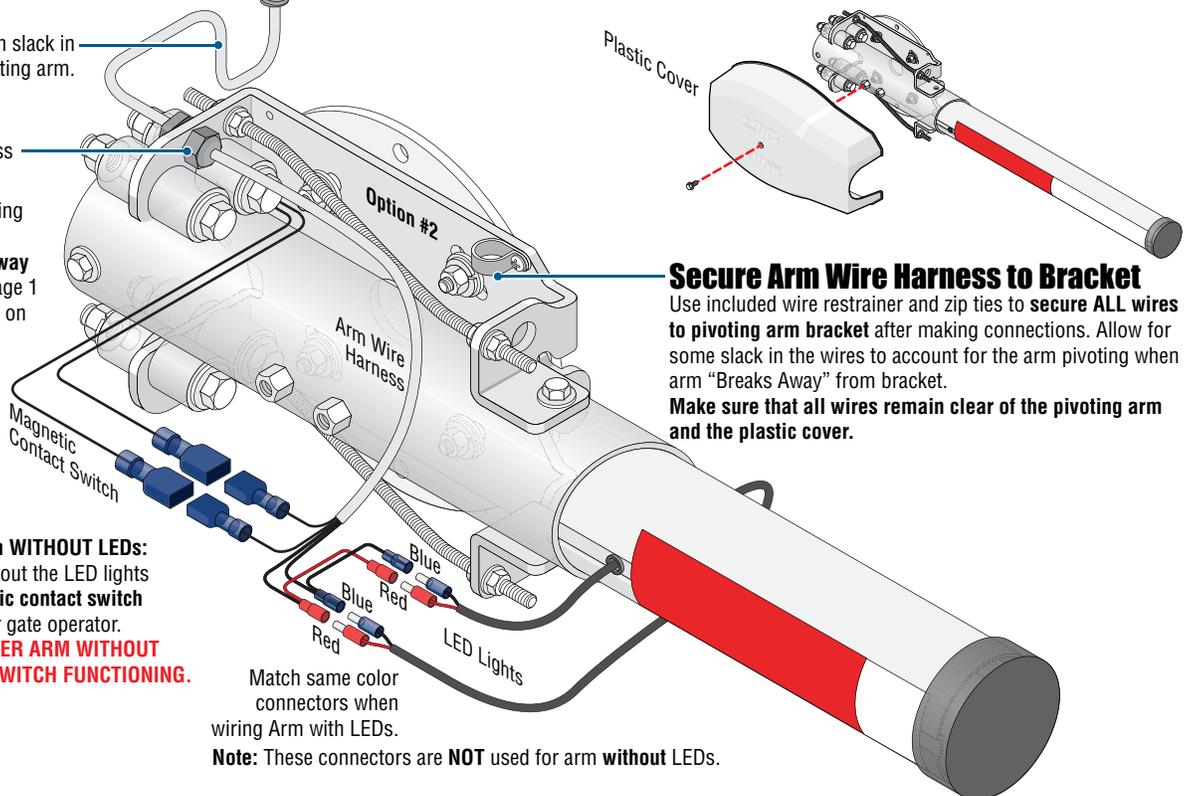
Mount Arm Wire Guard in Knock-Out hole on operator cabinet.

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

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.



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 EITHER ARM WITHOUT MAGNETIC CONTACT SWITCH FUNCTIONING.**

Match same color connectors when wiring Arm with LEDs.

Note: These connectors are **NOT** used for arm without LEDs.

Installing and Wiring Relay

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.

MAKE SURE ALL POWER IS TURNED OFF TO OPERATOR!

Use existing carriage bolt on operator to install relay mounting plate.
 Plug relay/power wire harness into arm wire harness.

Relay/Power Wire Harness Connections:

RED wire connects to **RELAY #3**.

BLACK wire connects to **RELAY #4**.

Connect power transformer to **TRANSFORMER PLUG** as shown.

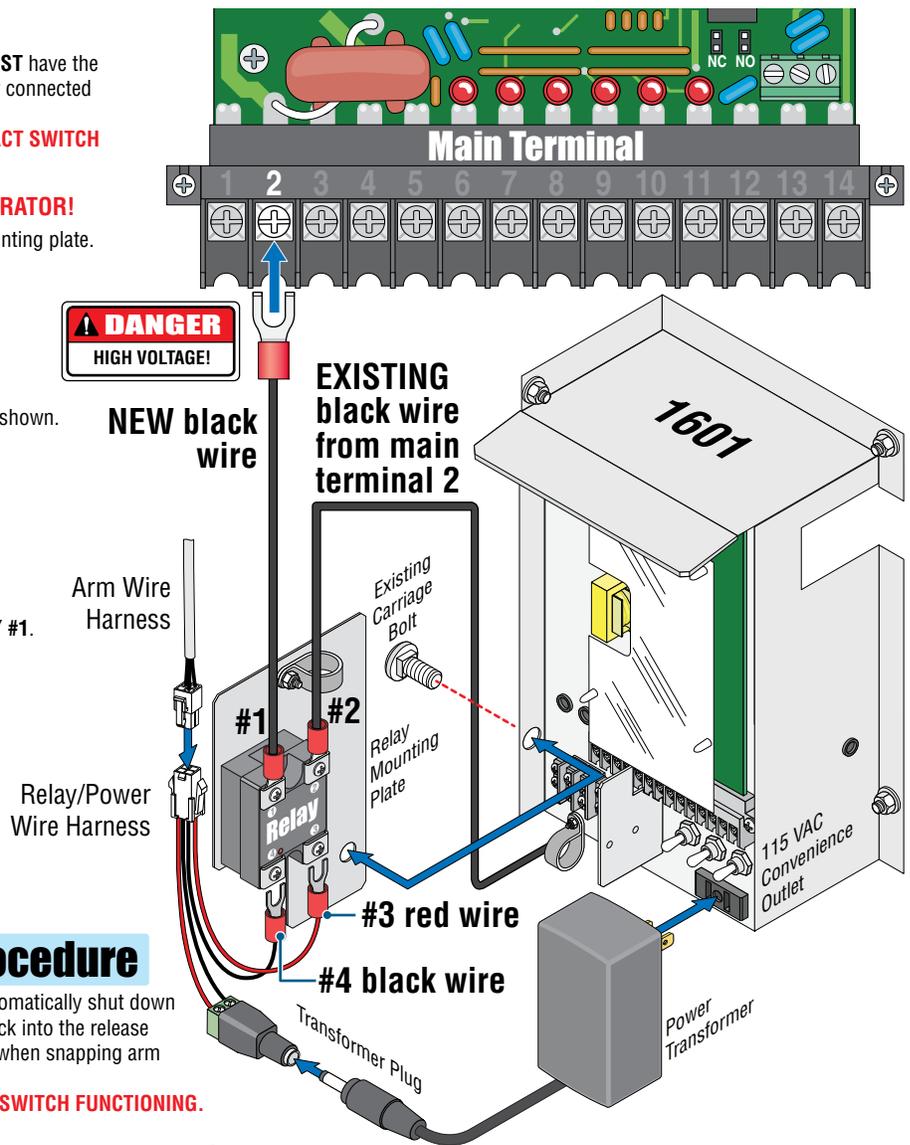
REMOVE existing black wire that is connected to **MAIN terminal 2** and re-connect wire to **RELAY #2**.

Older Model 1601 Operator Note: Older model 1601 barrier operators have **TWO** existing black wires connected to **MAIN terminal 2**. Re-connect **BOTH** wires to **RELAY #2**.

Connect **NEW** black wire from **MAIN terminal 2** to **RELAY #1**.

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

 Make sure all wires are clear of moving parts.



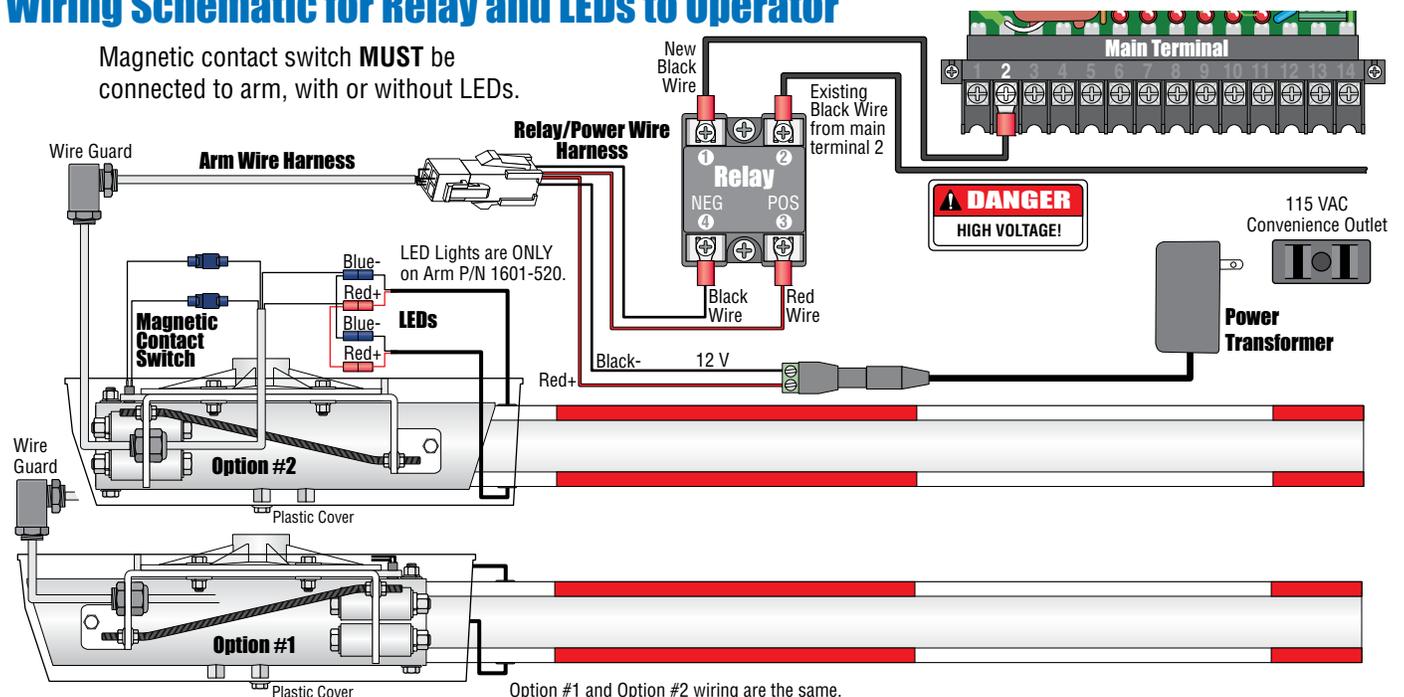
Break-Away Arm Reset Procedure

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. Normal operation can then continue.

DO NOT OPERATE ARM WITHOUT MAGNETIC CONTACT SWITCH FUNCTIONING.

Wiring Schematic for Relay and LEDs to Operator

Magnetic contact switch **MUST** be connected to arm, with or without LEDs.



Option #1 and Option #2 wiring are the same.