

# INSTALLATION INSTRUCTIONS

**WARNING: NEVER EXCEED YOUR VEHICLE MANUFACTURER'S RECOMMENDED TOWING CAPACITY**

## PUSH-TO-TEST BREAKAWAY KIT - SIDE LOAD



## PARTS LIST

| Qty | Description                |
|-----|----------------------------|
| 1   | Breakaway switch           |
| 1   | Battery case, push-to-test |
| 1   | Battery, 12V 5Ah gel cell  |
| 4   | Self-tapping screws        |

## BATTERY CHARGING

If the system measures voltage less than 14V, the charging circuit will provide maximum charging current to a 12V 5Ah gel cell battery until the battery is fully charged to 14V. During the operation, the system provides a 'trickle charge' to maintain battery voltage.

When battery voltage is under 6V, relay K1 will not activate when switch S1 is activated and the whole tester circuit will have no power and will not activate either the green or red LED. This will indicate a dead battery.

This breakaway kit is designed to activate the trailer's electric brakes if the trailer should disconnect while towing, bringing the trailer to a safe stop. Breakaway kits are required when towing trailers of 3,000 lbs. GTW or greater. **NOTE:** Your trailer must be equipped with electrical brakes in order to use this kit.

## MOUNTING

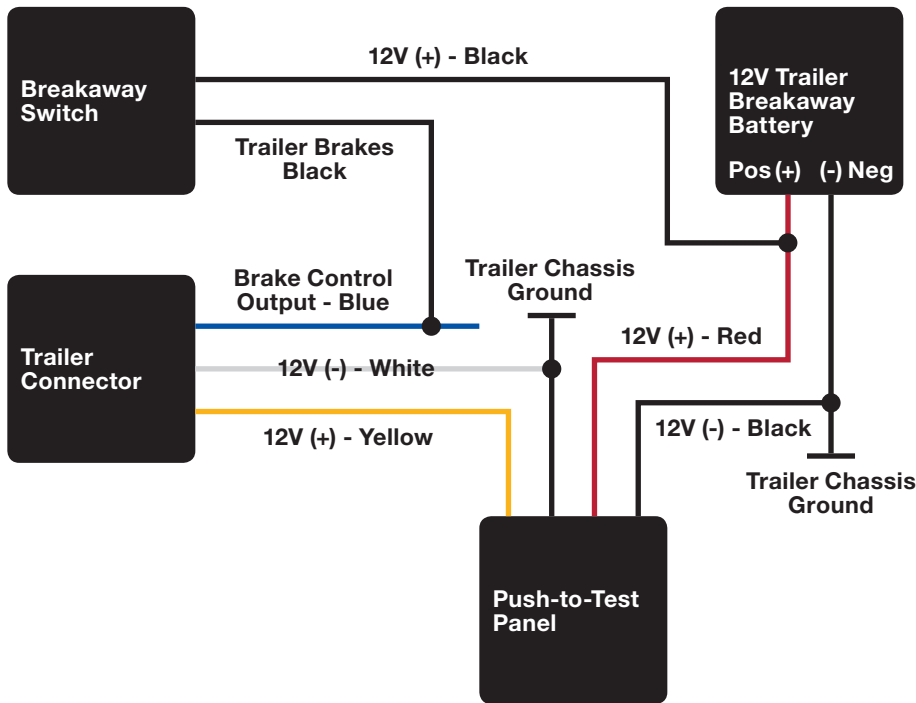
Read instructions thoroughly before beginning.

Position the breakaway switch on the tongue of the trailer such that it allows the cable to reach the tow vehicle's trailer hitch safety chain eyelets. This is critical for proper engagement of switch.

Drill a 9/32" hole in the trailer frame to mount the breakaway switch once you have identified a suitable mounting location. Use provided hardware to mount the breakaway switch to the trailer **NOTE:** Use caution when drilling a hole, making sure there are no wires or other objects behind the drilling surface. **NOTE:** Do not to over-tighten the bolt because the breakaway switch needs to pivot.

Find a suitable location on the trailer frame to mount the battery case. Mount in a location that it does not interfere with the switch's lanyard.

# WIRING DIAGRAM



## WIRING INSTRUCTIONS

### Step 1

Connect one of the black wires to the breakaway battery's positive (+) terminal.

### Step 2

Splice the other black wire to the blue wire leading to the trailer brakes. **NOTE:** The blue wire should show 12V positive when the vehicle brakes are applied.

### Step 3

Splice yellow wire on breakaway box to trailer 12V auxiliary power lead.

### Step 4

Splice white wire of the breakaway box to the white ground wire coming from the trailer side connector.

### Step 5

Test unit by pulling firmly on cable of breakaway switch. Battery will activate brakes. **NOTE:** Do not use this kit as a parking brake. Battery should be charged and tested prior to each trailer outing. **CAUTION:** Do not attach the breakaway switch cable to mounting hooks, trailer safety chains or the trailer ball.

Check that the breakaway switch cables are not damaged from dragging on the ground and that they move freely.

Prior to each use, check the system's battery for operating voltage. **WARNING:** In order to avoid severe damage to the tow vehicle's electric brake controller, disconnect the trailer connector from the tow vehicle prior to testing the breakaway system.

Check the breakaway system from time to time to ensure proper and secure connections. Open and / or short circuits result in a no-brake situation.

## USE

The push to test breakaway system operates as both a battery test and battery charging system and is built to bring trailers safely to a stop by activating the electric brakes, should a trailer be disconnected while driving.

**Battery test:** An operational load of a nominal 0.5A is applied each time the test button is pushed. If the battery voltage is above 12V, a green LED is illuminated. If the battery voltage drops under 12V, a red LED is illuminated. If the battery is under 6V neither LED indicator will be illuminated.