

# INSTALLATION MANUAL

# 52042

## Level of Difficulty

Easy

## Parts List

1	Breakaway switch
1	Battery case, charger & push-to-test
1	Battery, 12V 5Ah gel cell
4	Self-tapping screw with hex head washer, 1/4"-14 x 1-1/4"
2	Self-tapping screw with hex head washer, 1/4"-14 x 3/4"

## Tools Required

Drill	Wire stripper
Drill bit, 9/32"	Crimper
Phillips head screwdriver	Waterproof butt connectors
Wire cutter	Ring terminal

## Functionality and Application

The breakaway kit uses a battery to engage the trailer's electric brakes if the trailer becomes disconnected from the tow vehicle while driving. The breakaway kit includes a push-to-test battery testing system to allow the charge level of the breakaway kit's battery to be verified before each use.

The breakaway battery when fully charged will provide enough power to stop the trailer and allow for time to add wheel chocks to the wheels of the trailer in the event of a breakaway situation.

**Note:** The trailer will not be held by the breakaway kit indefinitely. Do not use this kit as a trailer parking brake.

This breakaway kit is designed only for one or two axle trailers installed with electrical trailer brakes. Breakaway kits are generally required with a trailer of 3000 lbs. GTW or greater. Check your local laws for specific requirements.

The built-in battery charging system will recharge and maintain the breakaway battery's charge when the trailer's 7-way electrical connector is connected to a running vehicle. The test button provides an easy to read test of the state of charge of the breakaway battery.

## ⚠ WARNING

Never exceed the vehicle manufacturer's recommended towing capacity.

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.

## Product Photo



## ⚠ CAUTION

Do not attach the breakaway switch cable to mounting hooks, trailer safety chains or the trailer ball.

## NOTICE

Before you begin installation, read all instructions thoroughly.

Proper tools will improve the quality of installation and reduce the time required.

To help prevent damage to the product or vehicle, refer to the specified torque specifications when securing hardware during the installation process.

Be sure to test and charge your brake away battery as needed prior to installing use of the trailer after install. average life on a battery charge is 9-12 months without maintenance charging

## Product Registration and Warranty

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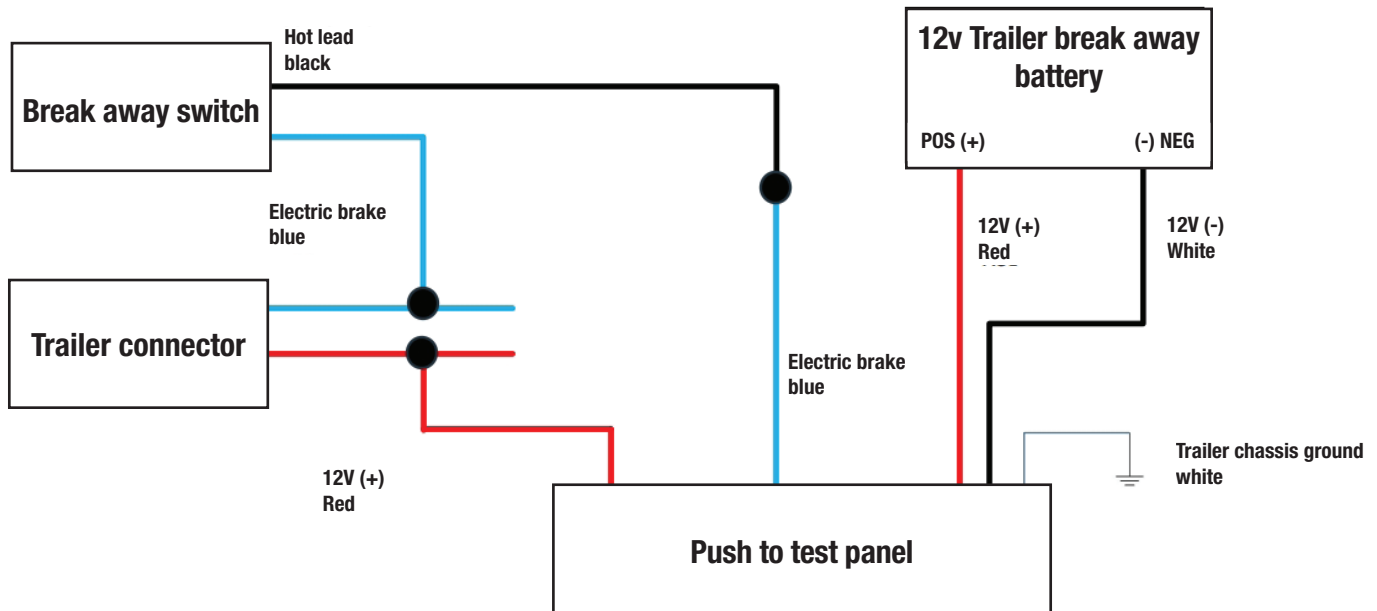
## Maintenance

Prior to each use, check the system's battery for operating voltage. Check that the breakaway switch cables are not damaged from dragging on the ground and that they can move freely.

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

Test the breakaway by pulling firmly on the cable of the breakaway switch. The battery will activate the brakes.

# WIRING DIAGRAM



## Step 1 - Mounting

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

Identify a suitable mounting location and drill a 9/32" hole in the trailer frame to mount the breakaway switch. Use the provided hardware to mount the switch to the trailer **Note:** Use caution when drilling the hole, making sure there are no wires or other objects behind the drilling surface. Do not to over-tighten the bolt so the breakaway switch can 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.

## Step 2 - Wiring Breakaway Switch

Ensure the breakaway switch pin is fully installed.

Splice the blue wire from the breakaway switch to the blue trailer brake wire from the breakaway battery box.

Splice the black wire from the breakaway switch into the Trailer 7-way connector brake circuit. The color of the brake circuit may vary trailer to trailer.

## Step 3 - Wiring Breakaway Battery Box

Splice the red battery positive wire from the breakaway battery box to the Trailer 7-way connector 12V+ auxiliary power circuit. The color of the 12V+ auxiliary power circuit may vary from trailer to trailer.

Attach the white wire from the breakaway battery box to the trailer chassis using a ring terminal. Be sure the attachment point is tight, clean and free of paint and rust.

## Step 4 - Post-Installation Test

After the full installation of the breakaway kit following steps 1 through 3, it is important to test the system.

### ⚠ WARNING

Do not perform this test with the trailer's 7-way connector connected to a tow vehicle.

Safely lift the trailer off the ground using a jack and jack stands so that the wheels are can free spin without touching the ground.

Spin a trailer wheel and pull the pin on the breakaway switch. The wheel should immediately stop spinning simulating trailer brake application during a trailer breakaway situation.

Verify the brakes are applied by attempting to rotate the wheels. Leave the breakaway pin pulled with the trailer brakes applied for 15 minutes.

After 15 minutes, again attempt to rotate the wheels. The trailer brakes should still be applied and the wheels should not be able to spin.

Reinsert the breakaway switch pin. Safely lower the trailer back to the ground.

After performing the post-installation test, the breakaway battery will need to be recharged before first use. See the Battery Charging and Maintaining section.

## Preparation for Use when Towing

Check the breakaway system wiring and switch before each use to ensure secure connections and proper operation. Open and / or short circuits may result in a no-brake situation.

### **⚠ WARNING**

Always check the breakaway battery charge level using the Test button on the breakaway battery box prior to connection for towing.

### **⚠ WARNING**

The Test button should only be used when the trailer's 7-way connector is disconnected from the tow vehicle. Failure to do so may damage the system and prevent proper operation.

Test the breakaway system by pulling firmly on the cable of the breakaway switch. The battery will activate the brakes when the breakaway switch pin is pulled out.

### **⚠ WARNING**

Do not use this kit as a parking brake.

When preparing to tow a trailer with the breakaway kit installed, plug the 7-way trailer electrical connector into the tow vehicle as normal. The yellow Charging LED may be illuminated on the breakaway battery box. Attach the breakaway switch cable to a suitable location on the frame of the tow vehicle. Do not attach the breakaway switch cable to mounting hooks, trailer safety chains, or the trailer ball. Ensure the breakaway switch cable is mounted in a location which will not become dislodged from the tow vehicle and that the cable will not accidentally pull the breakaway switch pin during normal vehicle motion.

### **⚠ CAUTION**

Do not attach the breakaway switch cable to mounting hooks, trailer safety chains or the trailer ball.

### **⚠ 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.

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## Breakaway Battery Charging and Maintaining

When the red recharge LED is illuminated, the breakaway battery requires charging.

To do so, connect the 7-way trailer electrical connector to a tow vehicle. Turn the tow vehicle on and leave running for 10 to 15 minutes to allow for the breakaway battery to recharge.

After the charging cycle, turn the tow vehicle off and disconnect the 7-way connector from the tow vehicle. Wait two minutes until pressing the test button. The green "Fully Charged" LED should now be illuminated when pressing the Test button for five seconds.

The breakaway kit charging system will maintain the breakaway battery level when towing the trailer regularly. It is recommended to remove the battery and use a battery maintainer if the trailer is going to be stored for a long period of time.

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