# multi-battery ISOLATORS

# **OPEN FOR APPLICATION GUIDE**



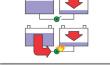
- Eliminates multi-battery drain when two or more battery banks are in a charging system.
- Performs as well or better than existing factory installed components.
- Designed to exceed OEM specifications.
- Solid-State Electronics...Isolates each battery circuit and allows each battery to discharge and charge according to its own needs.
- The ORIGINAL, not an imitation! The Battery Isolator was invented by Sure Power in 1959.
- More efficient and reliable than mechanical or solenoid systems.
- The most comprehensive line of Battery Isolators on the market. Isolators are available for most application needs.

# WHY YOU NEED TO ISOLATE YOUR BATTERIES

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Many vehicles and other types of equipment have multiple batteries: one to start the
engine and others to power accessories. To understand the problem of multi-battery
drain and how a Sure Power Battery Isolator prevents it, think of electricity as water.
Electrical current is equal to the flow of water, and voltage is equal to the pressure.
The alternator pumps current (water) into the batteries (storage tanks). The current
then flows through the wires (piegs) to the accessories. It's important to think of batteries as storage tanks. If a fully charged battery is connected directly parallel with
a discharged or empty battery, the voltage pressure in the full battery will force its
current into the empty battery until the current stored in both batteries reaches a
common level. The discharged battery will dravey so bower from a charged battery.
So, no matter how many batteries you have on your vehicle, the accessories connected
to one will draw power from the other batteries in the circuit. This is the problem of
multi-battery drain. And if it's collowed to continue unchecked. It can leave you stark multi-battery drain. And if it's allowed to continue unchecked, it can leave you stuck with dead batteries and an engine that won't start...all when you least expect it.

Accessories connected to battery #2 rob power from battery #1, your starting battery, leaving you with two dead batteries when you least expect it.

One of the "so-called" solutions for multi-battery drain is nothing more than a solenoid, a switch that disconnects batteries one from another. With a solenoid, there's no multibattery drain while the batteries are disconnected. But, the second the solenoid reconautery urban white in Buntens are accommence. Do in Section the Station of the International recur-nects the batteries, the drained battery robs power from the starting battery. That isn't all that happens. This sudden, violent transfer of energy from one battery to another has been known to damage batteries or shorten their life, and overhear wires and con-nections. And wors! of all, cause fires. THE SOLENOID IS NO SOLUTION FOR MULTI-BATTERY DRAIN!



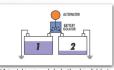
Solenoids don't prevent multi-battery drain, only delay it. In fact the current surge that occurs when the batteries are reconnected has been known to cause major electrical system damage.

# THE SOLENOID IS NOT A SUBSTITUTE FOR A SURE POWER BATTERY ISOLATOR

## THE SOLUTION

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The eliminate the multi-battery drain problem, a Sure Power Isolator acts as a check valve between the batteries, preventing current from flowing from one battery to another. Cathod battery is isolated and acts as an independent power source. So an omatter how drained your accessory batteries become, they will never drain power from the battery you're depending on to start your engine. When the current is used from battery #2, the check valve (diode) stops current flow from battery #1. When the alternator is charging, current can only flow in one direction, from the alternator is the batteries. Each battery then determines the amount of current which flows into it by its own state of charge based on the voltage regulator setting. With this system, the alternator is protected and the batteries are protected and your family on passengers are protected. The balanced circuit electronic Isolator is absolutely the only way that proper isolation and control can be accomplished solving every multi-battery ranklem. can be accomplished, solving every multi-battery problem.



A Battery Isolator acts as a check valve (through two diode legs), one on each line. Both batteries receive current from the alternate and the voltage will equalize throughout the system while the

### **ENGINEERING EXCELLENCE**

An Isolator is a simple and safe device. But, if it isn't properly engineered, it can fail and cause the entire electrical system to also fail. Sure Power Isolators are engineered with a SAFETY MARGIN competitor models cannot match. From the quality heat sink to the finest electrical components and materials, Sure Power enables you to install the best!

# THE ORIGINAL!

Sure Power Industries invented and has been producing Isolators since 1959. We build the finest Isolator products on the market for 6 through 48 volt systems, with one or two charging systems, 2 or 3 battery banks, and current capacities of 25 through 350 amps. Our Isolators are standard equipment on many boats, ships, RV's, trucks, police, fire, emergency vehicles, industrial equipment and military vehicles.



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