Trouble shooting Chart Lifepo4 Battery-P and (HP Series and Hybrid)

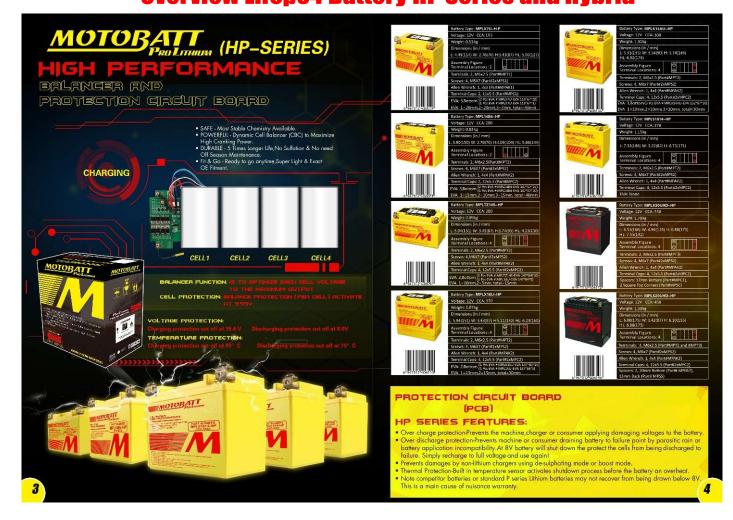
MOTOBATT GO BEYOND LIMITS OF BOTH LEAD ACID Ruber id

Always charge your Motobatt Lifepo4 battery properly before use

- Motobatt Lithium HP series and Hybrid batteries are programmed to 0v when in protection mode.
- Motobatt uses both a balance board and a PCB Safety board in its HP series and Hybrid batteries to control the dynamic balancing and the safety
 parameters of the battery. Importantly it "protects the battery cells" by entering shutdown mode see conditions below in Fig 2
- Most aftermarket chargers will NOT ACTIVATE under 2v, so you must use a Motobatt Lithium charger model (which activates from 0v) or a direct source of power such as a car battery or constant voltage car charger to apply charge to reset the board. Once re-activated you can measure and see that you have voltage at the terminal, if the voltage is lower than specified use any 12v charger to recharge so long as it does not have a desulphation mode.
- If the battery is at the required voltage it may be that the amperage draw of your vehicle in certain conditions at startup is too high for the battery pack
 performance or safety board settings and there is a mismatch. In this case you need to return the battery and select one of the same size with a higher
 Amp Hour capacity. It is not only the Cranking amps that matter, you must be able to draw down on the battery the amount of discharge amps required
 to start the machine under different conditions. Extreme conditions like snow cold temperatures, hot temperatures and repeatedly holding down the
 start button can all be causes of shutdown activation or over discharging the pack in the case of P series. Riders in Fred Flintstone mode hill climbing
 on the starter button will wreck a good battery! Do not repeatedly hold the start button allow the battery to "rest for 30 seconds" between difficult starts.
- Motobatt P series has no shutdown protection since the physical size of that battery will not allow for the fitment of a PCB. If this battery is drawn under *8V it will likely irreversibly damage the cell pack.* You must always ensure a fully charged battery before attempting starting or you risk ruining the battery. *This is not a warranty event, its maintenance!* We often find our P series batteries will start machines that our HP series will not. This is due to the programmed voltage settings on the PCB. They may be just outside the range needed for a successful start. To ensure the battery is not ruined and you have enough reserve, we have to have the setting in the safe voltage shutdown range. In this case you will need to opt for a battery of higher overall capacity if you want extra reliability. There can be large differences in amp draw in between brands with the same engine size and CCA requirements, and over time batteries degrade, so if you are close to the limit always go the next size up in capacity if there is one available.
 You will find that the MPLX7U-HP, MPLX4.5-HP and MPLX6.0-HP are all the same physical size but higher capacity respectively.
- Generally there is no diagnostic equipment available to check why a lithium starting battery of this type has failed. So you will need to use a Multimeter or voltmeter to check terminal voltage.

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Overview Lifepo4 Battery-P

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