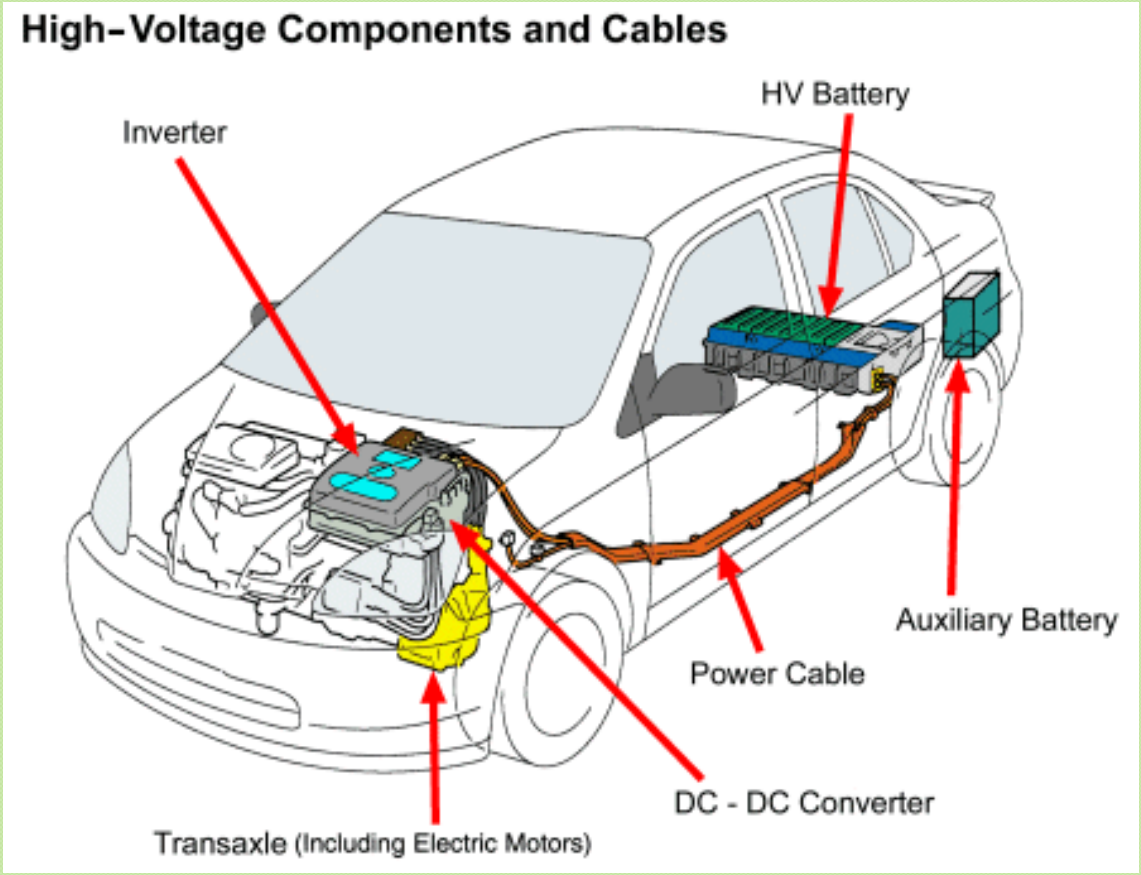
CONVERTING A TOYOTA PRIUS TO A PLUG-IN AND LIFE WITH IT SINCE

"Is it possible to build a car which offers excellent performance and fuel economy while helping to protect the environment in which it is being operated?"

We all know the answer is <u>YES</u>

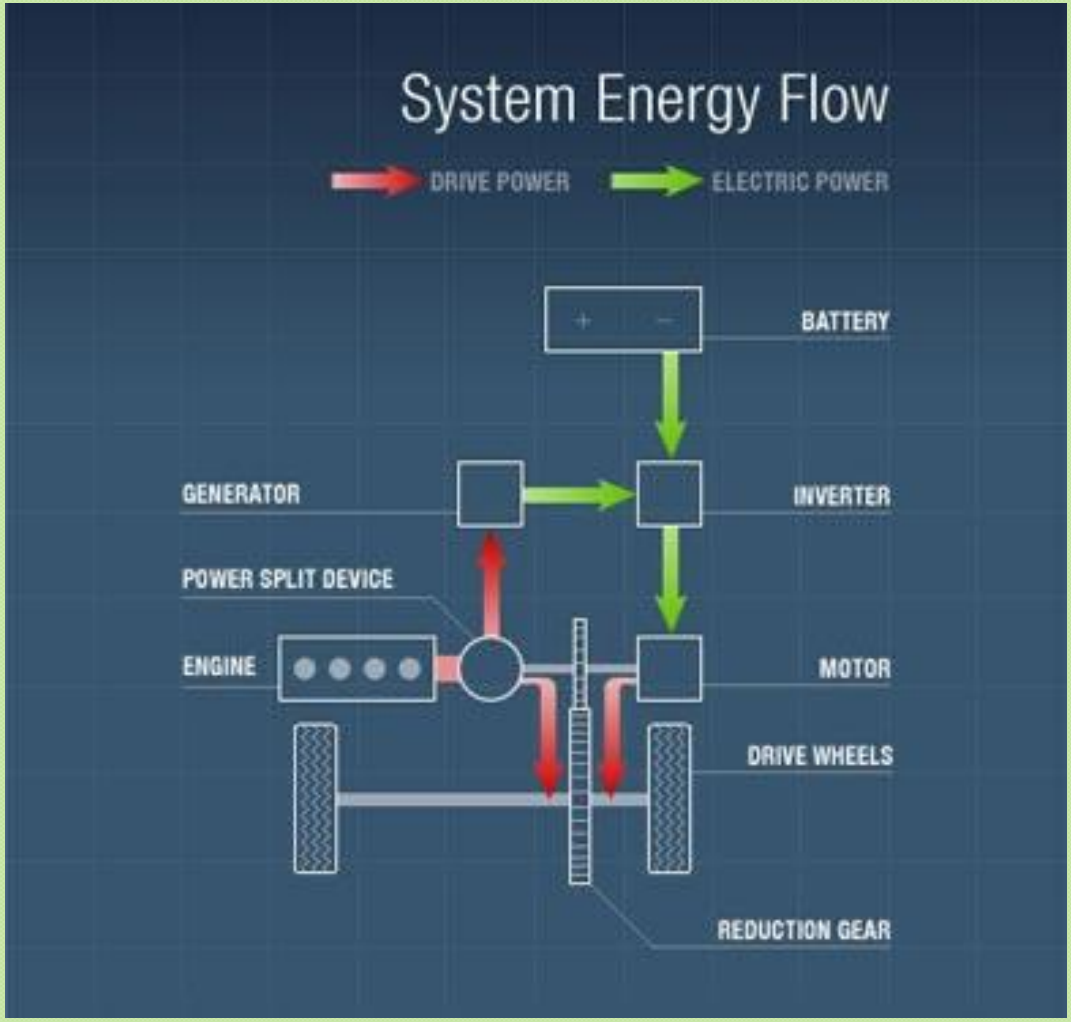


Basic outline of the electrical components found within the Toyota Prius hybrid system.

REMEMBER!!

A hybrid vehicle is not an electric vehicle!

In its original factory delivered format, the Prius, without its petrol burning internal combustion engine, combining with and supplementing the electric drive system, will not be going too far!


System Energy Flow
DRIVE POWER
ELECTRIC POWER
BATTERY
GENERATOR
INVERTER
POWER SPLIT DEVICE
ENGINE
MOTOR
DRIVE WHEELS
REDUCTION GEAR

THE ADVANTAGES .....

Reduction in energy losses

Ability to recover and re-use energy

Motor assistance

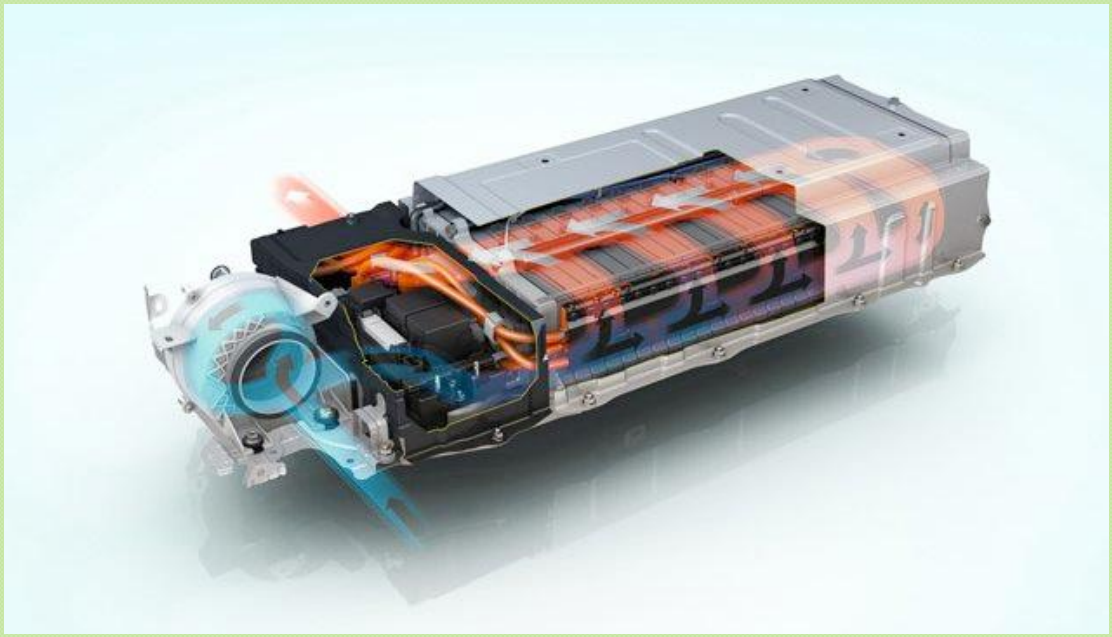
High operating efficiency

THE BIGGEST DOWNSIDE .....

Limited all-electric operation

HIGH VOLTAGE (HV) BATTERY

Gen 2 Toyota Prius fitted with a 201.6 volt battery consisting of 28 Nickel-Metal Hydride modules with a total of 168 cells.



HV BATTERY LOCATED BEHIND REAR SEAT UNDER CARGO FLOOR.

STORING POWER WHICH IS RECOVERED BY MG2 DURING THE COURSE OF REGENERATIVE BRAKING AND THE POWER GENERATED BY MG1.

THE BATTERY THEN SUPPLIES POWER TO THE ELECTRIC MOTOR WHEN THE VEHICLE STARTS OFF OR WHEN ADDITIONAL POWER IS REQUIRED.

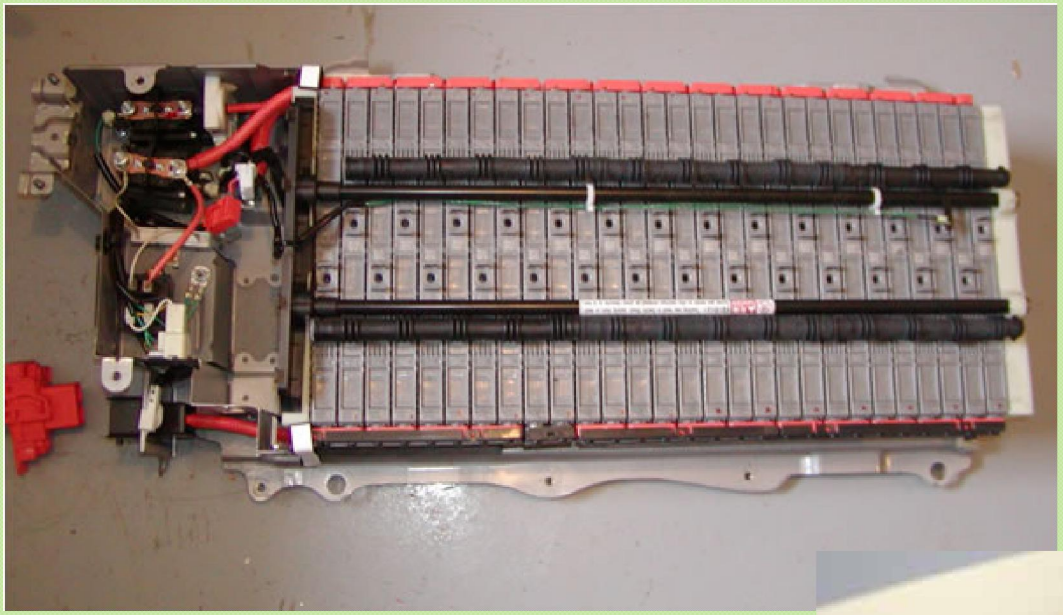
Even with this limited electric drive capability, this system has more than proved itself in the real world, but ask yourself these questions .....

Do we need to keep running the engine so much to provide drive or charge the battery?

Can we dramatically extend the range of electric only operation?

Can we re-charge externally when the vehicle is at rest?

OUT WITH THE OLD .....



Original 1.3 kWh High Voltage battery

Factory fitted original battery pack and rear seat removed ready for new battery fitment

..... IN WITH THE NEW

New larger capacity 6.1kWh High Voltage Nickel Metal Hydride (NiMH) battery and on-board charger

External 240 Volt charge point and cable

Additional dashboard control panel

Completed cargo area fitment (floor panel removed)

Life Since Conversion

FREQUENTLY ASKED QUESTIONS

How much?

How long does it take to install?

What do you change in the car?

Can I drive completely without petrol?

What about my spare wheel?

How long does it take to charge?

How much does the electricity cost to charge the car?

Do I have to plug it in every night?

Are there any benefits at all when driving after my charge is used up?

Can I really get more than the claimed 2.5liters to 100km?

MTA
PLUG-IN ELECTRIC HYBRID
S872 AHI