DESERT POWER DESIGNS LLC
HIGHLAND SYSTEMS

RE-EQUIPMENT VEHICLES

MADE IN UAE

RE-EQUIPMENT

Our company is engaged in the re-equipment of new and already in operation vehicles for electric motors of various capacities with any type of drive.

Replacing an internal combustion engine with an electric motor brings benefits:

Performance characteristics

The electric motor has a high thrust. This is due to the fact that the electric motor has a linear curve of torque depending on the engine speed. That is, it always pulls in the same way and there is no dynamic corridor, like an internal combustion engine. This also includes a wider range of operating speeds. The electric motor is not afraid of water hammer and high ambient temperatures up to +70 degrees C

Maintenance

A modern internal combustion engine requires timely technical attention, various oils and liquids. It requires complex and modern engine oil, antifreeze and other things. The production and processing of these liquids is also a huge problem. For an electric motor, all this is not necessary, a lubrication system is not needed, modern bearings can operate with a minimum amount of lubrication. Nothing in the engine burns and does not heat up. Also, the electric motor does not need replaceable air filters.

RE-EQUIPMENT VEHICLES

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100%ELECTRIC

Price

The electric motor will be much cheaper to maintain due to the absence of the need for constant maintenance, replacement of oils and fluids. Also, the electric motor has a much longer service life.

Noiselessness

The next important aspect is noiselessness. Electric motors do not explode fuel. As a result, they operate almost silently. Noise comes only from transmission and wheels. As a result, an exhaust system and mufflers are not needed.

Safety

Every car has a fuel tank, which is potentially dangerous. Plus, the oil that is necessary for an internal combustion engine also burns well. There are no flammable liquids in a car with an electric motor.

Environmental friendliness

Internal combustion engines greatly pollute the environment and not only with exhaust, but also with the methods of extraction and transportation of oil and finished fuel. This is not the case with electric motors. It does not emit any harmful substances during its operation, and electricity can be produced by completely environmentally friendly methods.

Many related systems

An internal combustion engine must have many related systems, such as a starter to start the engine, a generator to recharge the battery and power on-board systems, a radiator, a pump, a power system, and a lubrication system. For an electric motor, nothing like this is needed.

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Re-equipment from an internal combustion engine to an electric motor of any private and commercial vehicles

Without changing the main characteristics, it is possible to increase the power by 2-3 times

x3 POWER

RE-EQUIPMENT VEHICLES

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VCU

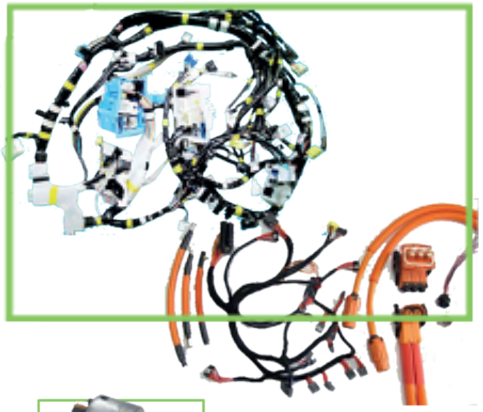
Air Pump

AC Electrical Compressor

Steering Pump

Dashboard

Wiring harness



PMSM Motor

Motor Controller

Ignition lock

Batterry Pack/BMS

Charger

Low voltage distribution Unit

PDU

Gear panel

Accelerator pedal

Power switch

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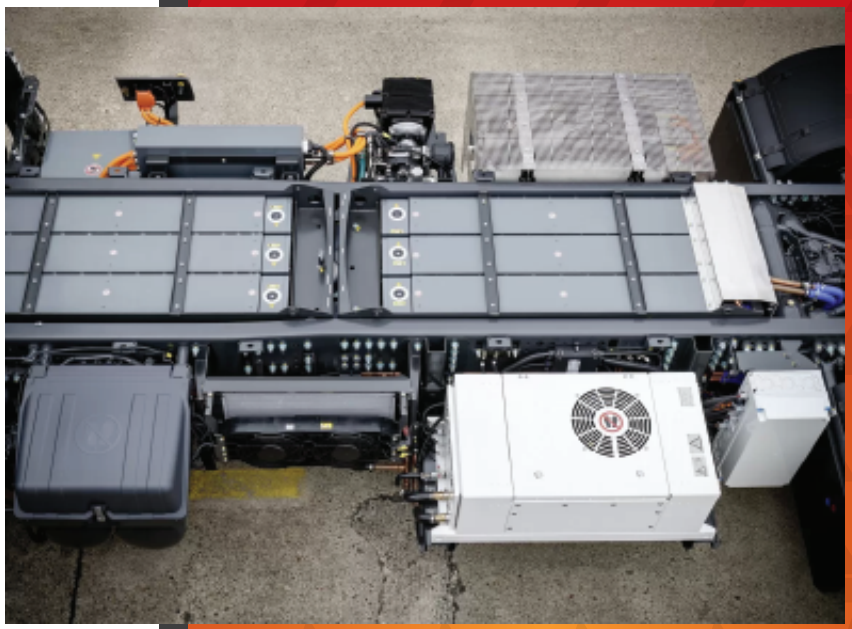
RE-EQUIPMENT VEHICLES

Re-equipment of heavy trucks from an internal combustion engine to an electric motor

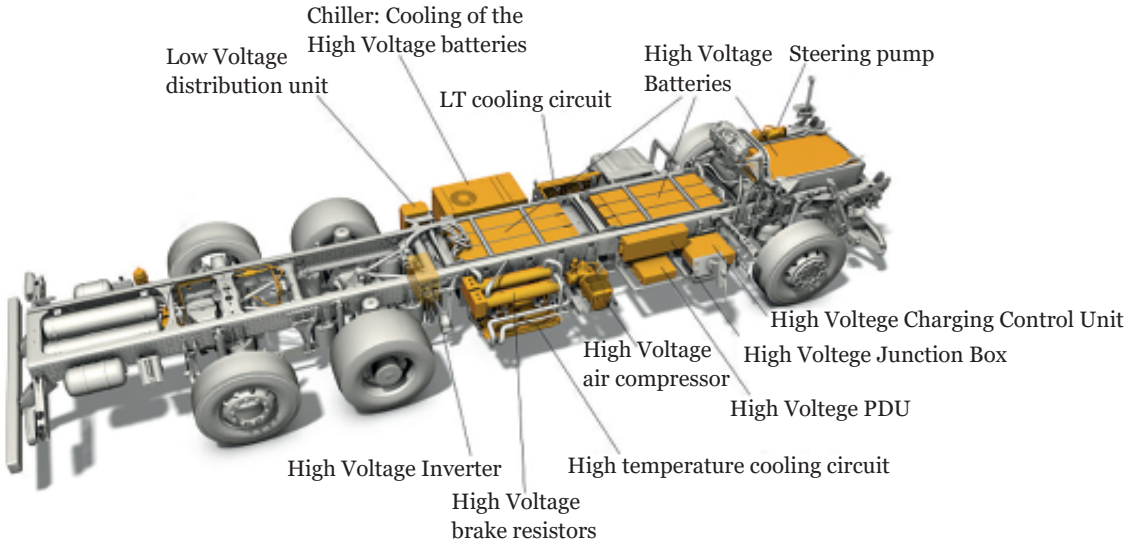
Advantages of electric trucks

Electric trucks will be extremely beneficial for transport companies, as their use will help to significantly reduce the operational costs of this type of equipment. Conventional diesel engines require more labor -intensive maintenance work, which can not be said about electric motors on new trucks. In addition, there is significant fuel savings, which over the years will only increase.



RE-EQUIPMENT VEHICLES

Re-equipment of medium and light trucks from an internal combustion engine to an electric motor



RE-EQUIPMENT VEHICLES

100%ELECTRIC

Re-equipment of city and regular buses from an internal combustion engine to an electric motor

The main advantages of an electric bus over an internal combustion engine bus are higher performance and environmental friendliness. The electric bus is the safest and most environmentally friendly mode of transport.

Compared to a bus equipped with an internal combustion engine running on gasoline, diesel fuel or gas, an electric bus has a number of undoubted advantages. It is almost silent, easy to operate, reliable and durable. The operation of an electric bus is much cheaper than the operation of a conventional bus with an internal combustion engine.

RE-EQUIPMENT VEHICLES

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Re-equipment of municipal urban vehicles from an internal combustion engine to an electric motor

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Re-equipment of the buggy and off-road vehicles from the internal combustion engine to the electric motor

RE-EQUIPMENT VEHICLES

RE-EQUIPMENT VEHICLES

100%ELECTRIC

Re-equipment of the MRAP and war vehicles from the internal combustion engine to the electric motor

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Re-equipment of the classic vehicles from the internal combustion engine to the electric motor

RE-EQUIPMENT VEHICLES

Advantages of replacing the internal combustion engine with an electric motor

- The electric motor has an efficiency of up to 92-97% compared to 22-35% for an internal combustion engine
- The electric motor develops the maximum torque from the beginning of the movement, at the moment of start-up. This is why electric cars have fantastic traction.
- Lower cost of operation and maintenance
- No harmful emissions. High environmental friendliness due to the absence of the use of petroleum fuel
- Low fire and explosion hazard in case of accident
- Easy design and control, high reliability and durability
- Possibility of recharging from a household electrical network
- Less noise and vibration due to fewer moving parts and mechanical gears
- High smoothness of the course with a wide interval of change of frequency of rotation of a shaft of the engine.
- Possibility of recharging battery during regenerative braking.
- The possibility of braking by the electric motor itself (electromagnetic brake mode) without the use of mechanical brakes - no friction and, accordingly, wear of the brakes.

If we compare all the factors, then we can calculate that a vehicle using an electric motor is 3-4 times more efficient than a similar vehicle with an internal combustion engine!