***Miscellaneous***

**EP and Implications**

EP stands for electromagnetically-propelled, and is included in ammunition abbreviations for notating its ability to be safely accelerated by either gauss or rail systems. To accommodate this type of ammunition however, most weapons are made with smooth barrels, as electrically accelerated ammunition has proven damaging to rifled barrels. In addition, all EP-type rounds include miniature fins, keeping a round stabilized when the electric acceleration of a gun is turned off to rely solely on a chemical detonation included in most rounds. It is also worth noting that electric acceleration systems can have their power inputs adjusted either manually or automatically by a user, letting one adjust for either different ranges, or different levels of armor on a target. Tanks and similar vehicles can thus prevent over-penetration by having computers adjust the provided muzzle velocity for different targets while soldiers can reliably work against both hard and soft armored personnel.

**Kessel 26 Electromechanical Wankel Engine**

The Kessel 26 electromechanical wankel engine is the standard form of both energy and drive in most Vogelian vehicles. Its design makes it easy to both upscale and downscale as well, and it can be maintained with relative ease. The base model has a maximum output of 7800 RPM (3900hp), a standard output of 10270 ft-lb (2600rpm), and a minimum optimal output of 500 RPM (250hp). It sits as an array of 8 hydrogen-fueled twin Wankel HCCI chambers fed by a turbopump fuel aerator and preheater to prevent engine freeze-up. Due to the high and consistent thermal differences in the engine casing, a recirculating heat transfer pipeline is required which carries excess heat to a large pair of thermal ceramic radiators. Much of this energy is recaptured by a dynamic rebalancing system powering the preheater and any onboard crew heating, and the rest radiated into the environment. In addition, a portion of the rebalancer is designed to dump excess heat/cold into the exhaust, massively increasing the radiation capacity. In order to maintain the max operating output range of 7800 RPM, the Kessel framework (on which the model 26 is based) implements a piezoelectric magnetic rotor dampening array; a set of piezoelectric vibration sensors wired to a corresponding set of electromagnets which reactively smooth the alignment of the engine rotor. Furthermore, the Kessel framework implements the unique "nanogear" technology for its pinion and crown, replacing the easily-damaged gear teeth with a mesh of low-cost, high-temperature ferrofiber nanoteeth allowing for smooth, continuous meshing and guiding with minimal wear and tear. Combined with the reactive stabilization system, this allows the Kessel engine block to outlast most other components - even the rotors, which are easily accessible and replaceable thanks to the sliding rack.