***Ground Vehicular Forces***

**T-39 Somiv**

The T-39 Somiv is the main battle tank of the Vogelian Supremacy, and is intended to perform breakthrough operations while being supported by other military elements to effectively utilize combined arms. It is 7 meters long, 3 meters wide, and 3 meters tall with a metric weight of 45 tons. Its primary armament is a VP-01 125mm smoothbore cannon which is automatically loaded by a magazine system in the back of the turret. The auto-loading time is three seconds, with the system’s simplicity enabling consistent reloading spans. It can carry 42 shells which are located in the back of the turret and are organized into a 14x3 format. The tank loads either EPAPFSDS (1,400mm), EPFSHEF (10kg TNT), EPHEATFS (1,800mm), or specialized compact intelligence gathering drones into the main cannon while possessing a secondary load of 3,000 rounds for the VP-17 autocannon and 600 rounds for the co-axial Mark 35 LMG. The VP-17 autocannon functions as a hard-kill APS which is mounted on the top of the tank turret and given full maneuverability to stop attacks from either above or to the four sides. The Mark 35 LMG meanwhile is co-axial and simply helps in infantry suppression while the main cannon focuses on larger targets. A soft kill system is also used, and is located next to the detection array of the hard kill APS. It uses a mini infrared spotlight and a UV flashlight to augment its signature, helping throw off infrared or UV guided munitions. The vehicle itself is often covered in radar-absorbent materials and has two sets of four smoke launchers that carry two reloads each in the tank to provide visual cover.

The tank is powered by a Kessel 26 wankel engine fueled by carbon nanotube wraps with hydrogen in them, and utilizes torsion bar suspension along with a differential transmission made with a magnet system to compensate for the engine’s own power. These work to move six ground wheels and general purpose treads toughened to handle the power strain. The crew itself has three to four members placed into a separate compartment that has remote controls near the front of the hull, with said crew members being placed into reclining seats in a two by two format and the fourth crewmember being replaceable by fuel. For protection, CBRN is included along with a standard fire suppression system, while armor is structured to focus on the front and turret. The front plate leading to the crew compartment consists of a composite design which starts with 300mm of peltor alloy and continues into a dragonscale layer, 200mm of peltor alloy, another layer of dragonscale, 100mm of peltor alloy, 25mm of magnidar, 50mm of peltor alloy, and ferrofiber reinforcement. A 45 degree slopes gives an effective thickness of 2,000mm against KE penetrators and 3,000mm against HEAT-style rounds. Side armor consists of 75mm of peltor alloy, a dragonscale layer, 25mm of peltor alloy, 10mm of magnidar, 25mm of peltor alloy, and ferrofiber reinforcement around the crew compartment. It has a 45 degree slope with an effective thickness of 450mm against KE penetrators and 900mm against HEAT rounds. The back has only 25mm of peltor alloy, a dragonscale layer, another 25mm of peltor alloy, and 10mm of magnidar. It has an effective thickness of 150mm against KE penetrators and 300mm against HEAT rounds. The turret is protected first by 300mm of peltor alloy, a dragonscale layer, 200mm of peltor alloy, another dragonscale layer, 100mm of peltor alloy, and finally 25mm of magnidar held up by ferrofiber reinforcement. The effective thickness for the turret is 1,500mm against KE penetrators and 2,000 against HEAT assuming one hits the 45 degree slope.

The T-39 Somiv can also mount extra armor which can potentially add five metric tons to the weight at maximum. One form of extra armor is explosive reactive panels that pack enough force to deflect most projectiles, though are one use after a detonation. Their power can also endanger nearby soldiers, marking their use to be relatively uncommon. In more common uses though, bulky pads of ballistic silk are hung over the turret, front plating, and sides to increase the effective protection against penetrators. Spare treads are usually included with this, and applique ceramic panels often appear in tanks. Chains are often strung up as well to act as spaced armor against explosives without getting stuck on the surroundings. In more exotic cases, a tank will have slag bags or concrete slabs tacked on to effectively act as a bunker-style fortification. Soldiers will in general use nearly anything for extra armor, as time has proven that forcing the common rocket to detonate early makes it effectively worthless. Finally, the T-39 Somiv has amphibious capabilities, with most tanks simply having a miniature snorkel and a turret cap while others are re-fitted with a rebreather system to go underwater entirely. A tank can easily handle such pressures of being underwater as well, and is easily sealed fully to keep it safe from erosion or malfunctions.

**M-03 Begu**

The M-03 Begu is an infantry fighting vehicle designed to operate in nearly any condition while deploying and supporting troops. It measures 6.5 meters long, 2.5 meters wide, and 1.8 meters tall (approx. 2.1 meters with guns), and has a weight of 15 metric tons, not including soldiers and their gear. It can carry 10 infantry and their gear along with the gunner, driver, and commander while having extra space for added gear. The primary weapon of the vehicle is a VP-02 gun which is supported by a mounted VP-03 heavy missile launcher meant for destroying armored vehicles. It is additionally protected by a VP-17 hardkill APS at the back, with the available softkill systems to assist this being smokescreen launchers that obscure thermal, a small UV spotlight, and an infrared spotlight. The IFV is also nearly always covered in basic radar absorbent materials, reducing its signature in the field. 800 rounds are available for the rotary autocannon, with 900 rounds loaded for the APS autocannon while the missile system has 4 shots available to it. The smokescreen system usually has six uses available to it as well, and depending on the situation, ammunition can be put in place of infantry. This IFV can also be converted into a mortar launch system thanks to a modular chassis intended to support different loadouts as the situation demands. It can be configured to take more missiles as well, swap out guns freely, pack itself full of soldiers, or be a simple cargo transport.

The Begu is fully covered in a 25mm layer of peltor alloy which is equivalent to 50mm of steel, though this can increase from angling when measuring effective thickness. This enables it to entirely ignore small-arms fire, with the front plates also having a layer of dragonscale on top to help deal with the initial shots from portable anti-tank weapons. The extra armor which a T-39 Somiv can mount is also available to the Begu, granting additional countermeasures for rockets to crew in the field. The Begu is also entirely amphibious, and can be easily weighed down to move across the bottom of a lake without taking water damage. The M-03 Begu is also powered by a downscaled Kessel 26 electromechanical wankel engine which takes out half the chambers to achieve half the horsepower. This IFV is also built with enough modularity to be shifted for more dangerous environments as needed, and can have its generalized treads fully replaced by rugged wheels for an APC role in the field.

**B-25 Morvok**

The B-25 Morvok is a tank designed to handle the effects of a tactical nuclear-scale detonation nearby while returning fire with its own tactical nukes. Its designation is that of a nuclear warfare tank as a result, and it uses a specialized 155mm cannon built to have rails and chemical propellant for the firing of ammo. This tank is quite large, with it measuring to be 9 meters long, 4 meters wide, and 4 meters tall while weighing 85 metric tons. The ammo for this tank includes a tactical nuke equivalent to 25 tons of TNT, chemical burst rounds that corrode plastic to compromise basic CBRN gear, and flechette airburst canisters meant to clear swathes of infantry and slow air targets. It also has an MCLC backpack to blow paths through minefields as needed. It naturally mounts enhanced CBRN protection and hardened resistance against EMP effects, letting it work in such nuclear conditions. A fully automated loader is used, with 10 reserve nuclear shells being carried along with 15 alternative shells in a belt feed system. A co-axial Mark 49 chain gun conversion is also included, with 1,000 rounds being made available. It additionally carries the VP-17 APS with 1,500 rounds on hand to account for the heavy fire it is ensured to draw. A full infrared, UV, and thermally bright smokescreen softkill system is included as well, with an independent smoke generator sometimes being mounted just to keep visual and thermal detection incapable of maintaining a lock. No radar absorbent is on it due to the large profile though, making it trackable with simple radar detection when not in a cluttered environment. It also registers as a radiological signal to capable systems, marking it as a nuclear threat.

The tank uses the same Kessel 26 electromechanical wankel engine as the T-39 Somiv for its power, though it carries increased stores of hydrogen-filled carbon nanotube wraps to fuel its power draw. The transmission and suspension also match the T-39 Somiv, though it splits off in design at the ground wheels and treads as nine ground wheels are included to account for its weight and need for reliable movement. The treads are relatively reinforced for the tank as well, being able to support the high weight. The crew compartment is also once more separate and meant for only three crew members, with it being designed for long term operations. A unique elliptical design is then used for the overall armor and hull shape to keep itself stable when sustaining a nuclear shockwave, with said armor having far more layers to enhance protection and a final lead layer. The front plate and turret are protected by 350mm of peltor alloy that continues into a dual layer of specialized dragonscale, 200mm of peltor alloy, another dual layer of dragonscale, 50mm of magnidar, 100mm of peltor alloy, and ferrofiber structuring for the separate crew compartment. This grants an effectiveness of 1,500mm in RHA against kinetic penetrators without accounting for slope and 3,000mm in RHA against HEAT-style rounds without accounting for the armor’s sloping again. The side armor is somewhat less armored at a starting layer of 125mm of peltor alloy that continues into a layer of dragonscale, 75mm of peltor alloy, another layer of dragonscale, 25mm of magnidar, and 50mm of peltor alloy. Without the slope being included, this grants an effectiveness of 600mm against kinetic penetrators and an effectiveness of 1,100mm against missiles. The back carries the least armor, with the first layer being 50mm of peltor alloy with dragonscale layer underneath, 25mm of peltor alloy, an added layer of dragonscale, 25mm of magnidar, and 25mm of peltor alloy. This gives an effectiveness of 300mm against kinetic penetrators and an effectiveness of 600mm against HEAT-like rounds when not accounting for slope.

**A-32 Mochim**

The A-32 Mochim is a dedicated mobile ICBM launcher which is capable of firing nuclear warheads for strategic operations. The platform for this launcher takes the form of an enlarged truck measuring 22 meters long, 2 meters wide, and 6 meters tall with 25mm of peltor alloy for armor against small arms fire and a half-sized standard electromechanical wankel engine for the movement of its own often immense weight. No weapons or forms of alternative protection are mounted on it otherwise, due to its position as a back-line strategic asset. The A-32 Mochim can only launch a single ICBM at a time before having to reload, and the warheads for these missiles take four forms. The first is a nuclear payload which delivers two megatons of force, though it is hindered by easily being identified as a nuclear-level missile that can be shot down without much difficulty due to its own size. The second type of load is a thermobaric warhead which delivers an equivalent payload to 50 tons of TNT, with the relatively light load making the missile travel faster while having additional room for maneuvering to dodge incoming point defense. The third type of load is an enormous chemical dispersion system that uses sets of retrograde thrusters to grant additional air time while firing off a chosen gas over an area equivalent to a basic city. The fourth type of load is a carrier hull that releases swarms of missiles over a target area, resulting in an exchange of destructive power for a loss in the effectiveness of enemy point defense. Due to the expensive nature of all such warheads however, the firing of even one is rare, with thermobaric warheads serving as the relatively cheaper alternative to keep it relevant. This has thusly kept the Vogelian military focused on the traditional methods of conquest, for planetary-scale saturation is unaffordable.

**S-112 Chivri**

The S-112 Chivri is a flexibly designed SPAA vehicle capable of bringing down aircraft, acting as point defense, or being used as an ambush vehicle. It measures 7.5 meters long, 3 meters wide, and 3.5 meters tall, and can have its profile downsized by stowing external detection systems. Its armament is a dual set of VP-15 chain gun conversions linked to a dual set of VP-3 missile launchers built as a four tube system, all of which is then connected to a central computer system for independent targeting and corrective firing measures. 2,500 rounds of EPHEVT are loaded for each of the chain guns giving a total of 5,000 shots, and the missile launchers can be externally loaded by a member of the crew if extra ammunition is available, though are otherwise limited to the starting four shots. No hardkill systems are mounted due to a lack of space, though the radar is capable of acting as a scrambler system, with its own frequencies being adjustable to disrupt enemy detection or communication for general softkill uses. The radar itself is a potent detection system, and can pick up objects in high atmosphere and sometimes at low orbit given clear conditions, while long-range thermal detection and high-powered visual scopes augment its detection and work around enemy countermeasures intended for the norm of radar system. The radar also includes two pieces, granting a passive and active system, with rapid tracking and quantum detection letting it override simplistic methods of scrambling. The system slaved to these detection methods and the main armament is capable of using such data for independent or syneced targeting, with it also being able to shoot down hypersonic missiles with enough reaction time. The unit can also coordinate info from other stations, granting faster reactions in the event of an enemy massing fire to overwhelm local protection systems.

The S-112 Chivri is protected by 30mm of peltor alloy and sometimes has a dragonscale layer placed over sections to improve defenses. This lets it ignore small arms fire for the most part, though high caliber fire can damage most of its detection systems, rendering it reliant on targeting data from other units. As with most combat vehicles, the crew compartment is also kept separate, with three crew members being present inside alongside a 10mm layer of peltor alloy to improve survivability. A Kessel 26 electromechanical wankel engine cut down to half its size is used to power the vehicle, with standard treads, suspension, and transmission adapted from the T-39 Somiv being used to handle the engine’s own power. The chassis and hull itself is also designed to be modular, allowing the Chivri to be equipped as needed for different environments with relative ease. Most importantly, the overall shape of the S-112 Chivri lets it be easily covered in camo netting or high-grade radar absorbent materials, letting it work in the field with tougher units while keeping itself undetected until opening fire for the removal of CAS or incoming enemy missiles.

**A-12 Mochim**

The A-12 Mochim is an MRLS mount meant to coordinate with other active tracking unit systems in order to direct its missile loads for enacting either area bombardment, precise strikes against superstructures, or active point defense against aircraft and incoming projectiles. This uses the same platform as the A-32 Mochim, though its length is downsized to 15 meters while retaining the 6 meter height and 2 meter width. No defenses are used outside of a 25mm peltor alloy cover to render small arms ineffective, and the main weapon system is a VP-30 MRLS with a 30-tube load. An onboard computer enables the synchronization of firing with any other type of bombardment unit while also ensuring missiles fired as a form of point defense coordinate for shooting down targets more effectively. Independent targeting and tracking is easily within its range, and the hypersonic nature of its missiles allow it to intercept fast-moving aircraft as well. At extreme elevations, the A-12 Mochim can fire its missiles into low orbit to act as a basic form of anti-orbital, allowing an element of surprise against enemy vessels.

**S-113 Chivri**

The S-113 Chivri is an SPG that mounts the VP-33 as its primary weapon to operate as a mobile artillery piece. It measures 7.5 meters long, 3 meters wide, and 5 meters tall, with the gun’s position shifting its relative heights. Said gun is automatically loaded with a fire rate of 10 rounds per minute and 42 shells in a seven by six format being available to it. No softkill systems are mounted on it, though a hardkill system of VP-15 autocannon with 1,000 rounds is included to counteract rapid action missiles fired against the vehicle. Detection systems are not integrated on the S-113 Chivri however, making it reliant on coordinating with other units for targeting data for which it can adjust accordingly to provide extreme levels of accuracy. The rounds it can fire include standard artillery shells, CDS type shells, thermobaric payloads, and specialized airburst flechette packs. When deployed, it usually syncs its firing to create effective barrages with similar units, with it being ready to leave a position in order to avoid counter-fire. For armor, 30mm of peltor alloy is used, and a three-man crew compartment remains separate with 10mm of additional peltor alloy for increased survivability. A Kessel 26 electromechanical wankel engine cut down to half size is used for power, with the standard suspension, transmission, and treads being used for movement. The chassis is also notably the same as the S-112 Chivri, letting production rapidly swap the purpose of a Chivri vehicle.