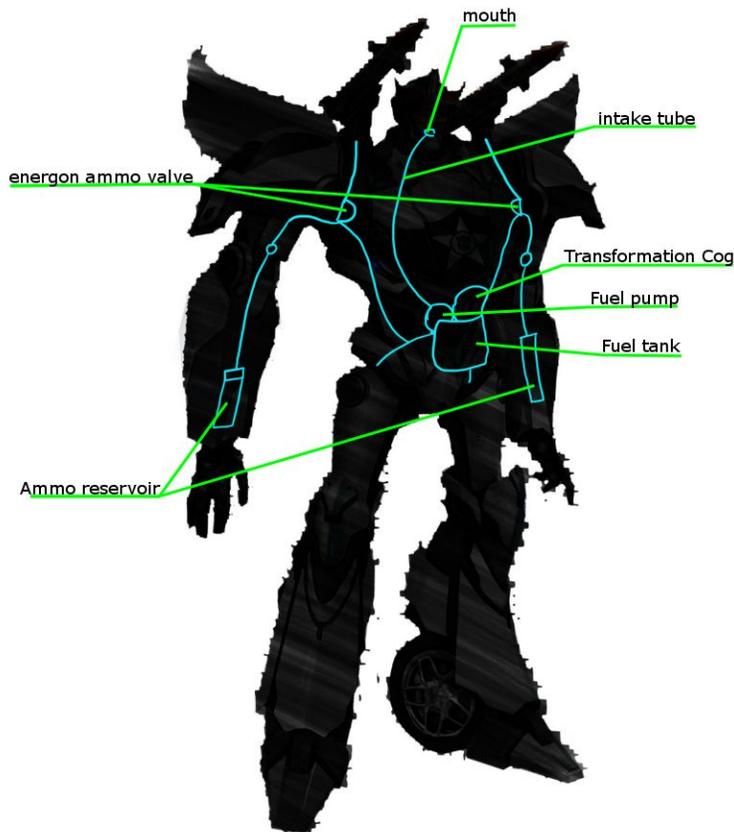


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General Systems:

Fuel System:



A Cybertronians fuel system runs on processed Energon. Most systems can run off both liquid and semi-solid energon as well.

The fuel system runs from the mouth through the intake tube - where the energon travels to the Fuel tank.

A fuel tanks size can differ depending on the alternative mode and size of the mech. Most compact cars have a fuel tank of 16 Gallons. Most pickups and SUV type mechs have a 25-30 gallon tank - rarely they are modded to have a second larger tank installed. Semi trucks and other larger Vehicles such as tanks - planes - semis all have larger tanks - 100+ Gallons. City formers and space ships can hold over 100,000 gallons of energon.

The gas tank is coated in a special enzyme, Catalysts, that will begin the breakdown the Energon so that it can go through the fuel filter that separates the Fuel tank from the fuel pump. The fuel filter separates water particles and other smaller debris from entering the fuel lines.

Once the energon is in the fuel pump it gets pushed through the lines throughout the thoracic cavity. Two major organs use Energon - the engine and the transformation cog. The engine uses spark plugs or in some engines pressure to ignite the energon and move the pistons in order to run the engine. The Engine also converts some of the energon in electricity which helps power the spark and run the rest of the mechs systems.

The transformation cog uses Energon as a lubricant. When a mech transforms the T-cog spins, energon is used to lessen the strain on the organ. The T-cog also spins if the mech uses his built in (internal) weapons.

Usually Energon lines only run throughout the thoracic cavity - the limbs alone having little to no use for energon. Only smaller vessels running under the panels to supply energon to color nanites.

If a mech has weapons installed internally and they use energon as ammo a valve should be installed between the thoracic cavity and the limb with the weapon. This valve is a safety feature installed when they have the internal weapon installed, this safety feature can be overridden. This valve will open either on command or automatically when the ammo reservoir is empty. If the mech hasn't had enough energon the valve will not fill with energon and the weapon will be out of ammo.

Struts:

The struts are the main 'backbone' that keeps a mech upright and his frame together. Struts are most commonly exposed as the upper arms, inner thigh, and most joint areas. Struts are generally strong and can withstand a lot of punishment. Some Struts are thicker than others and if a strut is broken or becomes detached there can be some pain involved. Having a limb removed at the joint is generally an easier issue than having the limb removed mid strut.

If a strut should happen to break or be torn off usually all a medic would need to do is weld it back together, sand down the seam, and paint over it with a Rustoleum primer. Then the Patient should return in a few days to have the coverings and protective plating removed.

The Spinal Struts are the "backbone". These struts have either air filled bags or energon filled bags to help cushion the disk like structures from each other while a mechs moves and goes about their day. These air filled/fluid filled bladders protect the disks from scraping one another.

The Disks themselves are typically half the size of the mechs fists. About $\frac{1}{3}$ of the disks total area is taken up by a wiring canal that leads up from the base of the hip struts to the base of the helm. Typically there are 13 disks that make up a mechs back struts. Mecha with extra back appendages (Wings, doorwings, certain kinds of kibble) will often have a second back strut rather than just one. The back struts will then combine into one closer to the helm and when the appendages have been cleared.

Triple changers, Cybertronians with one root mode and two other alternative modes) require much more flexible struts since they have two alternative modes to accommodate. It is more likely for a triple changer to be double jointed rather than a bi-changer (Cybertronian with only a root mode and an alternative mode) as well. There will also likely be more joints along the struts in a triple changer rather than a bi-changer.

Electrical System:

Cooling System:

Specific Organs:

Transformation-Cog (T-cog):

The T-Cog is the organ that gives a Cybertronian the ability to Transform. This organ also allows a Cybertronian to access and fire integrated weaponry (Weaponry installed into their frame and uses their own energon as ammo).

During Transformation the T-cog spins. While the T-cog spins it sends out information to the rest of the mecha's frame and it will begin to shift panels and parts until the Transformation is complete.

There are two main parts to a T-cog - the Belt and the Gear. The Belt has "teeth" that connect to the gears teeth and it spins with the belt.

There are two types of Triple-changers - The Natural Triple Changer meaning they are born with a mutated T-cog then there is the Built Triple changer - Where they added another T-cog to their system so they could change into a third (and possibly fourth) mode.

The T-cog isn't always active and functional, Well born mecha are born with their T-cogs intact. Budded Mecha are not. When budded mecha emerge the T-cog is underdeveloped and needs more time to complete the formation of the internal mechanisms of the organ. Usually by the third week after emergence (So long as they have developed normally) they can start transforming into their first alt mode - usually a ball of some kind.

Mono-Former:

Mono-formers are Cybertronians who either elected to have their Transformation cogs removed (ex: Religion, Disease, etc.). These Cybertronians cannot change form. They are stuck in Bi-pedal mode and they do not have access to integrated weaponry.

Bi-Changer:

Bi-Changers are Cybertronian-kinds most common characteristic. There have been studies stating that socially Cybertronians are more accepted as long as they can transform into **something**.

The way these T-cogs work is that the t cog moves on only two directions. One way allows for Transformation into Root mode and the opposite way makes for Transformation in the Alternative mode. In normal cases The T-cog spins horizontally.

Natural Triple Changer:

Natural Triple Changers are mecha with **one** T-cog and three directions to Transform. This third Direction has been known to differ on different mecha, sometimes the second "belt" is only slightly off from the horizontal belt sometimes it runs perpendicular most are at varying angle degrees between 15 and 80 degrees.

Depending on how the t-cog mutated there could either be two belts and one gear or there could be two belts and two gears. No one is actually sure why such mutations actually occur but it happens.

Built Triple Changer:

Built Triple changers are mecha that were sparked with only a bi-changer t-cog. There is an option that allows bi-changers to acquire a third alternative mode (and theoretically a fourth, fifth, etc.). Installing another T-cog. Theoretically a mecha can have any number of t-cogs installed so long as they had the space for them.

With having more than one t-cog installed there is a major energon drain because T-cogs use energon as lubricant. And it will need to go to BOTH t-cogs.

Fuel Tank

Creation Methods:

Budding:

Hot Spot:

Cold Constructed

Well Borne:

Cybertronian Life stages:

NewSpark:

Newling:

SparkLet:

Sparkling:

Youngling:

Mechling/Femmeling

Young Adult:

Adult:

Diseases/Conditions:

Anemia:

Fords Joint Disease:

T-Cog Degradation:

Credit:

Rules and Protocol	Weaponized Defribullator	AutobotWheelie
Elitaxne		