

Vehicles

For the Nova game engine



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VEHICLES FOR NOVA

*VEHICLES FOR THE
NOVA GAME ENGINE,
ALONG WITH COM~
PLETE RULES FOR VE~
HICLE COMBAT AND
A LIST OF USEFUL
EQUIPMENT. SORRY,
NO SPACESHIPS.
THESE WILL HAVE
THEIR OWN PRIVATE
SOURCEBOOK PRETTY
SOON!*

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Vehicle attributes

Much like characters, vehicles share some common characteristics:

Acceleration: How fast the vehicle can increase speed. On every turn, the vehicle can increase speed by this amount up to the maximum speed. However, when accelerating at more than half of this rating, you have a +1 penalty to skill checks for controlling the vehicle.

Armor: The natural protection a vehicle has.

Autonomy: Every vehicle is fueled by some sort of power source which tends to run out. The autonomy rating numbers the kilometers a vehicle can cover before running out of fuel.

Capacity: The number of persons the vehicle can carry.

Handling: Describes how easy it is to control the vehicle. It is used as a modifier to all skill checks concerning control of the vehicle.

Mounting: The amount of extra equipment the vehicle can carry. Large equipment requires some of the vehicle's Mounting points.

Resilience: This rating is used as the vehicle's Constitution (Stamina dam-

age is ignored). As Resilience points are lost, the vehicle gets the same penalties to all control rolls as a character suffering from excessive Constitution loss.

Safety: This rating describes the safety measures of a vehicle which are vital in surviving an accident.

Speed: The first number is the vehicle's cruise speed, while the second is the maximum speed (in km/h). Traveling above cruise speed inflicts a +2 penalty to all control rolls.

Accidents

Performing difficult maneuvers with a vehicle requires a successful skill check. If this roll fails, there's always the possibility of an accident occurring (a critical failure means that an accident is certain). The driver needs to make another roll of average difficulty to avoid crashing with the vehicle (ass a +3 penalty if moving above cruise speed).

If an accident occurs, it can easily injure or even kill the passengers of a vehicle, especially if moving at high speeds. Divide the speed the vehicle was moving at by 40 and

add the result of a D3 roll. Every passenger takes that many dice of damage minus the sum of his Vitality and Reaction dice (to account for instinctive movements to protect one's self). At least one die of damage is dealt. The damage t#s are all equal to the vehicle's Safety rating.

Damage is of kinetic type, but any armor worn by passengers has its kinetic rating reduced by 2 against such high-velocity impacts (to a minimum of -2). The damage dealt to the vehicle if equal in damage dice to the speed divided by 50. Damage t#s are all 4.

Ramming

Ramming something or someone with a vehicle can prove very useful, aside from the fact that it's a lot of fun. Crashing through gates or running people over are classic stunts of action movies.

The damage dealt by a moving vehicle is always kinetic and always lethal (ie it deals Constitution damage). As in an accident, any armor the target wears has its kinetic rating reduced by 2. The potency of

the attack is largely determined by the mass of the vehicle and its speed. The damage dice are determined as in an accident. The damage t#s are 5 in the case of relatively small vehicles (like bikes), 4 for moderate ones (cars) or 3 for large vehicles (trucks). If the target is capable of reacting to the ramming, a successful control skill check must be made to hit him (like an attack roll).

When ramming objects, you must be careful for you might get hurt like your target is. If the GM rules that you hit an object too large, you suffer an automatic accident. Exactly when this happens is up to your GM and depends on the mass of your vehicle and that of your target. A bike might be in serious trouble even when hitting a person. A car could get damaged if it hit a bar which would be easily broken by the mass of a truck.

Vehicle combat generally follows most of the rules for personal combat. There is still an initiative check, as there are attack and damage rolls. However, some modifications do apply:

- **Attacking from the inside of a vehicle:** If the vehicle's structure enables this, anyone can put his gun out of the window and start blazing away. Firing from a moving vehicle in this manner suffers a +1 penalty, or a +2 one if the speed is above 100 km/h.
- **Attacking with a mounted weapon:** A weapon mounted on the vehicle doesn't suffer the general +1 modifier. It only suffers a +1 penalty if the speed is above 100 km/h.
- **Attacking a moving vehicle:** All characters have a +1 penalty against moving vehicles. This rises to +2 if their speed is above 100 km/h and +3 if above 500 km/h.
- **Attacking a person inside a vehicle:** An attack against a person locate inside a vehicle suffers no penalty (except those of the moving vehicle) if you have visibility

of the target (eg through a window). In the case of small windows, the GM might apply a cover modifier. If you have no visibility, use the modifier for complete darkness/blindness (+4). Plain glass windows don't offer any protection to the target. This may change if you try to shoot through bulletproof glass or even through the main body of the vehicle to hit someone inside. In this case, your shot needs to penetrate the material to hit the target. The target gets a base unarmored rating equal to the armor rating of the glass or the vehicle instead of his natural -2. Furthermore, the rating of any armor he's wearing is added to this. For example, someone inside a vehicle with armor 2/2/1 wearing no armor himself, has armor 2/2/1 if a shot has to penetrate through the vehicle. If he also wears a 1/1/1 armor, his effective armor becomes 3/3/2. Any attack which wounds a vehicle's driver forces him to make a skill check to retain control of the vehicle.

Effects of vehicle combat

A damaged vehicle is prone to malfunctions and loss of function. Loss of Resilience inflicts the same penalty as loss of Constitution to all checks for controlling the vehicle (+1 for half Resilience, +1 for each point lost thereafter). This penalty also applies to attacks made with the vehicle's weapons.

Furthermore, for every lost Resilience point beyond half, the driver is forced to make a check for retaining control.

Onboard systems, weapons, even the vehicle's engine may malfunction. For every Resilience point lost beyond half, a random system on the vehicle is damaged. The exact system is determined randomly by a roll. Be sure to include the engine as well as all installed devices and weapons.

The effects of the damage on the vehicle's system is determined by a D6 roll.

Temporary malfunction: System loses 50% of its functionality (reduce Speed and Acceleration for the en-

Roll	Effect
1	Unaffected
2	Temporary malfunction
3	Moderate damage
4	Moderate damage
5	Severe damage
6	Destroyed

gine) and has a +1 penalty to all related rolls for D6 rounds.

Moderate damage: System loses 30% of functionality and has a +1 penalty. Any further result of 3-5 for this system destroys it.

Severe damage: Loss of 75% functionality and +2 penalty. Any further result of 3-5 destroys the system.

Destroyed: System loses all functionality. If this is the engine, the vehicle grinds to a halt. An explosive weapon explodes, dealing its damage on the vehicle.

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Vehicle armor

Some vehicles are too large or well-armored, like tanks, to be defeated by petty weapons. You can pepper a tank with whole clips of machine pistol fire or beat it with a steel pipe for hours and it won't feel anything.

Hard vehicles may have a number in a parenthesis next to their armor ratings. Weapons attacking it need to have more damage dice in order to stand a chance of affecting it. Note that the number refers to the weapon's base damage dice. The weapon might have its damage increased by burst fire or attack successes and still not be able to damage the vehicle. This number is called the **Body** rating.

Weapons that ignore some portion of the target's armor or all of it have the same effect on its Body rating. For example, a plasma gun (which ignores one point of armor) would reduce a vehicle's Body also by one (to a minimum of zero). A mass rifle would completely ignore Body. Armor-piercing ammunition also has the same effects.

Vehicle	Engine	Handling	Capacity	Mounting	Speed	Acceleration
Bike, TL 5	Internal combustion	+1	2	2	60/130	60
Bike, TL 6	Internal combustion	+1	2	2	70/180	100
Bike, TL 7+	Electromotor	+1	2	2	60/150	80
Medium car, TL 5	Internal combustion		5	4	60/140	50
Medium car, TL 6	Internal combustion		5	4	80/200	90
Medium car, TL 7+	Electromotor		5	4	70/150	70
Large car, TL 5	Internal combustion	+1	7	5	60/140	70
Large car, TL 6	Internal combustion	+1	7	5	80/200	110
Large car, TL 7+	Electromotor	+1	7	5	70/150	90
Sport car, TL 5	Internal combustion		4	4	70/170	90
Sport car, TL 6	Internal combustion		4	4	80/250	130
Sport car, TL 7+	Electromotor		4	4	70/200	110
Small car, TL 5	Internal combustion		4	3	50/120	50
Small car, TL 6	Internal combustion		4	3	70/160	70
Small car, TL 7+	Electromotor		4	3	60/140	60
Van, TL 5	Internal combustion	+1	9	6	50/120	50
Van, TL 6	Internal combustion	+1	9	6	70/160	80
Van, TL 7+	Electromotor	+1	9	6	60/140	65

Vehicle	Resilience	Armor	Autonomy	Safety
Bike, TL 5	3	0/0/0	150	2
Bike, TL 6	3	0/0/0	300	2
Bike, TL 7+	3	0/0/0	400	2
Medium car, TL 5	4	0/1/0	450	3
Medium car, TL 6	4	0/1/0	600	3
Medium car, TL 7+	4	0/1/0	800	3
Large car, TL 5	5	1/1/0	500	4
Large car, TL 6	5	1/1/0	700	4
Large car, TL 7+	5	1/1/0	850	4
Sport car, TL 5	4	0/1/0	450	3
Sport car, TL 6	4	0/1/0	600	3
Sport car, TL 7+	4	0/1/0	800	3
Small car, TL 5	4	0/0/0	300	3
Small car, TL 6	4	0/0/0	500	3
Small car, TL 7+	4	0/0/0	650	3
Van, TL 5	5	1/1/0	500	4
Van, TL 6	5	1/1/0 [1]	750	4
Van, TL 7+	5	1/1/0 [1]	900	4

Vehicle	Engine	Handling	Capacity	Mounting	Speed	Acceleration
Truck, TL 5	Internal combustion	+1	30	8	40/100	40
Truck, TL 6	Internal combustion	+1	30	8	60/150	60
Truck, TL 7+	Electromotor	+2	30	8	60/130	50
Small aircraft, TL 5	Rotor		4	6	150/400	100
Small aircraft, TL 6	Rotor		4	6	250/600	130
Small aircraft, TL 7	Ramjet		4	6	400/800	150
Small aircraft, TL 8+	Gravity		4	6	600/1400	200
Passenger aircraft, TL 5	Rotor	+2	80	10	300/700	130
Passenger aircraft, TL 6	Ramjet	+2	180	10	600/1400	170
Passenger aircraft, TL 7	Ramjet	+2	250	10	800/2500	200
Passenger aircraft, TL 8+	Gravity	+1	300	10	1000/4000	300
Medium aircraft, TL 5	Rotor	+1	15	9	250/600	130
Medium aircraft, TL 6	Ramjet	+1	20	9	400/1000	170
Medium aircraft, TL 7	Ramjet	+1	20	9	500/1400	200
Medium aircraft, TL 8+	Gravity		25	9	800/2000	300
Personal heli, TL 6	Rotor		1	4	150/400	40
Personal heli, TL 7+	Rotor		1	4	200/500	50
Helicopter, TL 6	Rotor		5	6	200/650	50

Vehicle	Resilience	Armor	Autonomy	Safety
Truck, TL 5	7	1/2/0 [1]	700	5
Truck, TL 6	7	1/2/0 [1]	900	5
Truck, TL 7+	7	1/2/0 [1]	1100	5
Small aircraft, TL 5	4	0/1/0	950	3
Small aircraft, TL 6	4	0/0/0	100	3
Small aircraft, TL 7	4	0/0/0	1300	3
Small aircraft, TL 8+	4	0/0/0	1300	3
Passenger aircraft, TL 5	7	1/1/0 [1]	3000	5
Passenger aircraft, TL 6	8	1/1/0 [2]	5000	5
Passenger aircraft, TL 7	8	1/1/0 [2]	7000	5
Passenger aircraft, TL 8+	9	1/1/0 [2]	7000	5
Medium aircraft, TL 5	6	0/1/0	2000	5
Medium aircraft, TL 6	6	0/1/0 [1]	3500	5
Medium aircraft, TL 7	7	0/1/0 [1]	5000	5
Medium aircraft, TL 8+	7	0/1/0 [1]	5000	5
Personal heli, TL 6	3	0/0/0	600	3
Personal heli, TL 7+	3	0/0/0	850	3
Helicopter, TL 6	5	0/1/0	1500	4

Vehicle	Engine	Handling	Capacity	Mounting	Speed	Acceleration
Helicopter, TL 7+	Rotor		5	6	300/900	70
Fighter plane, TL 5	Rotor		2	6	300/700	150
Fighter jet, TL 6	Ramjet		2	8	800/2000	200
Fighter jet, TL 7	Ramjet		2	8	1200/3000	300
Fighter Jet, TL 8+	Gravity	-1	2	8	2000/6000	400
Bus, TL 5	Internal combustion	+1	50	7	40/100	40
Bus, TL 6	Internal combustion	+1	50	7	60/150	60
Bus, TL 7+	Electromotor	+1	50	7	60/130	50
Light tank, TL 5	Internal combustion	+2	4	8	40/80	30
Light tank, TL 6	Internal combustion	+2	4	8	50/100	40
Light tank, TL 7+	Electromotor	+2	4	8	40/80	30
Heavy tank, TL 5	Internal combustion	+2	4	10	30/50	20
Heavy tank, TL 6	Internal combustion	+2	4	10	40/80	30
Heavy tank, TL 7+	Electromotor	+2	4	10	30/50	20

Vehicle	Resilience	Armor	Autonomy	Safety
Helicopter, TL 7+	6	0/1/0	2500	4
Fighter plane, TL 5	4	1/1/0	1000	4
Fighter jet, TL 6	6	1/2/0 [1]	2500	5
Fighter jet, TL 7	7	1/2/1 [2]	3000	5
Fighter Jet, TL 8+	8	2/2/2 [2]	4000	5
Bus, TL 5	6	1/2/0 [1]	700	5
Bus, TL 6	6	1/2/0 [1]	900	5
Bus, TL 7+	6	1/2/0 [1]	1100	5
Light tank, TL 5	6	2/2/1 [2]	700	5
Light tank, TL 6	7	2/2/2 [2]	900	5
Light tank, TL 7+	8	3/3/3 [3]	1100	5
Heavy tank, TL 5	8	3/3/2 [2]	700	5
Heavy tank, TL 6	9	3/3/3 [3]	900	5
Heavy tank, TL 7+	10	4/4/3 [3]	1100	5

Afterburner (TL 6, Mounting 1)

The afterburner augments the efficiency of a jet by squirting raw fuel in the exhaust. It increases max. speed and acceleration by 50% but also accelerates fuel consumption by 200%. Naturally, it can only work with ramjets.

Charge armor (TL 7, Mounting -)

Originally a measure to prevent rioters from climbing atop law enforcement vehicles, this system consists of a capacitor sending a powerful electrical current throughout the vehicle's exterior. Anyone in contact with the vehicle's exterior when the capacitor is activated suffers 44-energy (s) damage. It holds enough power for 15 discharges; after that, it must be recharged.

ECM (TL 6, Mounting 0 or 1)

An electronic countermeasure is a device which attempts to confuse radars and ladars, thereby concealing a vehicle. Like radars, countermeasures have a rating of 1-6 (they too make rolls with t# 4). Ratings of 5+ require one Mounting point. A radar

can not detect a vehicle unless it scores more successes than the countermeasure (one contest per minute is allowed).

An ECM increase the Signature (used for guided missiles) by half its rating against radar-guided missiles. Against laser-guided missiles, it increases Signature by one quarter of its rating.

Emergency brakes (TL 6, Mounting -)

A complete replacement of a ground vehicle's brakes, this system utilises advanced sensors and intelligent electronics along with airbrakes and special tires to provide complete immobilisation of the vehicle in the shortest time possible. The presence of such a system gives a -1 bonus to Handling and can save lives in an accident: if the driver succeeds in a Reaction check at +1 (to be able to use the brakes), the Safety rating increases by one.

Extra fuel tank (TL 5, Mounting 2)

Doubles the autonomy of any vehicle but cuts 5% from its cruise and maximum speed.

Injureshield (TL 6, Mounting -)

The injureshield kit combines a variety of safety measures like iron bars in the doors, airbags etc to make a vehicle safer, thus increasing its Safety rating by one.

Life support (TL 6, Mounting 2)

A good life support system includes a large oxygen supply, radiation shielding and thermal insulation. It can sustain a man for a variable amount of time, depending on the oxygen supply.

Nitrous oxide booster (TL 6, Mounting 1)

Uses a NO2 tank to insert this fuel directly into the engine. NO2 has been described as "the fuel of the gods" and its usage multiplies the efficiency of the engine. It acts as a version of a supercharger for internal combustion engines.

Plating (TL 5, Mounting variable)

Plating consists of steel and hard polymer plates placed on the surface of a vehicle to protect it from attacks. Each point of plating requires

one Mounting point to install and increases all of the vehicle's armor ratings by one (to a maximum of 4). The plates are pretty heavy, taking their toll on the vehicle's speed and maneuverability. Each plating point decreases maximum speed and acceleration by 5% and each two points give a +1 modifier to Handling.

Pylon (TL 5, Mounting 1)

A pylon is a mount for missiles and bombs. It is commonly found in aircrafts but can also be used in other vehicles, like tanks. Each pylon can mount three missiles or two bombs (it still requires one Mounting point). Missiles are fired from a rocket launcher with the press of a button (pylons are always rigged to the vehicle's controls).

Radar/ladar (TL 6/7, Mounting 0 or 1)

A radar has a rating of 1-6 (ratings of 5+ require a Mounting point). It can detect airborne targets or ground targets, although in the later case it suffers +1 to all rolls and range is divided by four. To detect a target

within range, a radar must make a roll using a number of dice equal to its rating (all t#s are 4).

The maximum range of a radar is its rating in hundreds of kilometers. However, all rolls for this range are penalised by +6. Targets within tens of kilometers equal to the rating are easier to detect (+3 penalty). Targets within kilometers x rating inflict no penalty.

Radars of TL 7+ are high-resolution imaging devices. Their precision enables them to determine the target's shape and size in a great detail (although color may not be perceived).

Radars can be used to provide targeting for weapons rigged with them. Such an option enables a gunner to use the radar's dice to attack instead of making a Gunnery roll.

Ladars are radars based on laser technology. Their main disadvantage is that they can't be used in fog, smoke or heavy rain. On the other hand, they're harder to confuse with countermeasure devices (halve the rating of any countermeasures) and they're much more accurate, gaining

a -1 bonus on every roll.

Runflat tires (TL 6, Mounting-)

The interior of these special tires is made of small compartments, each independent from the others. When the tire is ruptured by bullets, caltrops, broken glass etc, only some of the compartments lose their air, so that the vehicle can keep going without much problem.

Supercharger (TL 7, Mounting 1)

This device uses powerful capacitors to hold energy that is released in bursts to boost the performance of a vehicle's electromotor engine. The result is an impressive increase in both speed and acceleration (increased by 30%). This boosted performance is only short-living. The supercharger is drained of energy after 3 minutes of continuous use. It can be recharged later by a powerful electrical source, regaining one minute of use per half an hour of recharging.

Suspensions plus (TL 6, Mounting -)

Any wheeled vehicle may have this

system. It improves the handling of the vehicle under tough conditions, decreasing penalties for off-road driving by one.

Thermal cloaking (TL 7, Mounting -)

Reduces the thermal signature of a vehicle by using heat-insulating coating and channeling all generated heat to a special sink tank. Thermal imagers (like IR goggles) can spot the vehicle only if they roll 6 on a D6. It increases a vehicle's Signature by 2 against thermal-guided missiles.

Weapon mounts

Military vehicles, as well as civilian ones, can accept weapons and indeed some heavy weapons are intended to be vehicle-mounted. Unless the weapon system specifies otherwise, it needs a number of Mounting points equal to its Recoil, or its damage dice minus one, whichever is greater.

The following systems may be used for mounting weapons:

- **Fixed mount:** The weapon faces one direction and can't be moved.

- **Swivel mount:** Swivel mounts can rotate the weapon 360 degrees and raise it up to 60 degrees.
- **Turret:** A turret is a superstructure containing the weapon. They perform as a swivel mount but they conceal and protect the gunner with the vehicle's armor. Turrets decrease the mounting cost of weapons by one point, but need at least 3 Mounting points.
- **Pop turret:** Like a turret, but it can retract into the vehicle, concealing itself and the weapon till it's needed. It doesn't decrease the weapon's mounting cost like a turret.

A weapon may simply be mounted, so that it requires a gunner to manually handle it (using the appropriate skill). Or it can be electronically rigged to the vehicle, so that it can be fired with the press of a single button from the inside of the vehicle.

Just because a weapon is mounted on a vehicle doesn't mean that it has no recoil, especially if it's a

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large weapon on a small vehicle. When calculating the effects of Recoil, use the vehicle's Resilience minus 2 as its Conditioning dice. Turrets decrease Recoil by one, but simple mounts don't.