

AERIAL COMBAT

“Up there, in the God-Emperor skies, the world is divided in predator and prey. Make your choice.”

- Squadron Commander Derek Sabrick of the 993rd Imperial Navy Fighter Wing “Sparrowhawks”
addressing to newly promoted cadets

Aerial combat is unique in warfare: swift flyers cross the vast distances in minutes, lumbering bombers pummel targets on the ground from high above, and 2,000 metres in the air, sleek fighter craft duel at supersonic speeds.

Aerial combat is represented in **ONLY WAR** is represented in a similar fashion to regular and space combat. When fighting in the air, position and manoeuvre is the key. An attacker tries to get and stay on the tail of his target, while the target desperately tries to break away and escape –or perhaps loop around and end up on his attacker’s tail in turn. Aerial combat is a true duel, decided less by the performance of the machines involved and more by the raw skill of the pilots. Though the rules refer to combat between two aircraft, these rules can easily be used to represent a dogfight between two small spacecraft, such as Imperial Fury Interceptor or a Dark Eldar Raptor Fighter.

To perform any action aboard an Aircraft, a character need to have the Operate (Aeronautica) Skill.

COMBAT MECHANICS

Aerial combat is handled in Structured Time, just as regular ground combat is, with one Round equalling approximately five seconds. The other rules for regular combat should be followed as well. As with ground vehicle, in the case of an aircraft with multiple crewmembers the Pilot’s Initiative roll will determine the Initiative of the remaining crew. The order of Initiative should be arranged so the crewmember that rolled highest initiative take his turn immediately after the Pilot and so forth for all others.

To better represent air combat, each flyer’s turn is broken into one move action, and one shoot action. The move action is always performed first, then the shoot action. Always remember that a Pilot must take the move action first and then he may shoot one of the weapon aircraft.

The distance a flyer moves is represented by Air Units (AUs), which are roughly equivalent to 100 metres. The reason for this is one of simplicity—vehicles move fast enough that if combat distances were measured in metres, the numbers would be very large, very quickly. Due to flight principles in atmosphere, flyers are somewhat limited in how they can manoeuvre. A flyer must always move its Tactical Speed every turn (unless performing a specific manoeuvre to adjust it). In addition, a flyer’s turning is limited by how far it moves. For every four AUs a flyer moves, it may turn up to 45 degrees. There are no other limits as to how many times a flyer can turn. Note that due to the 3-dimensionality of aerial combat, each of this turning could be invariably be directed in every direction (Right or Left, Up or Down) in every combination needed. However, some Damage Condition may reduce the aircraft’s Tactical Speed, reducing its overall performances: when an Aircraft loses more than half its original speed, it automatically Stalls. In the same way, an Aircraft has to not go too far when it comes to speed. Any time an Aircraft moves at twice its Tactical Speed, it automatically suffers 1d5 Critical damage to the Wing-Area location.

This is a flyer’s basic move. A pilot with the Operate (Aeronautica) Skill does not need to test to perform this move, neither he need to test to perform routine actions, like start the vehicle, take off or landing, unless there are extenuating circumstances such as adverse weather or if the vehicle has suffered some sort of damage. Universally, any Aircraft need some space and time to take off and landing. As stated above, a pilot does not need to test to perform this task normally, still it needs time and space to perform the action. Take off and Landing length changes depending on the Aircraft, while time is equal to 10 rounds minus the Manoeuvrability bonus tens (eg: an Aircraft with a Manoeuvrability Bonus of +30 take off in 7 rounds).

The basic move can be modified by various Manoeuvres available to the pilot. By adding difficulty to any Piloting Skill Tests, the pilot can perform more complicated Manoeuvres.

Typically, only one Manoeuvre can be performed each turn. However, the pilot can choose to perform multiple Manoeuvres in a single Movement Action (unless the Manoeuvre specifically states otherwise). When a pilot combines Manoeuvres, he should determine the highest penalty to the required Piloting Test amongst all the Manoeuvres he wants to perform. Then, he should make that Operate Test one degree more difficult for each additional Manoeuvre he adds. Then he makes the Operate Test, and if the Test is successful, he gains the benefits of all the Manoeuvres he performed.

Ex: Arion, a Navy Wingman, is piloting a Thunderbolt against a Chaos Hell Blade, and need to make a sharp turn to come in on the Renegade's six. He decides to combine the Speed up and Side-Slip manoeuvres. The Side-Slip Manoeuvre is Difficult while Speed Up is Challenging, so the basic difficulty is Difficult (-10). However, he takes an additional -10 for each additional manoeuvre, so the final difficulty is Hard (-20). Arion has an Operate (Aeronautica) Skill of 47, and the Thunderbolt has a Manoeuvrability bonus of +20, so combined with the difficulty of the Manoeuvre he tests on 47. He rolls 22, succeeding with 3 degrees of success! Arion is able to move an additional 3 AUs during his movement and due to Side-Slip, he chooses to move those 3 additionally AUs sideways at the end of his movement, putting his 4 nose-mounted Autocannons directly behind the Renegade tail.

However, a too complex manoeuvre or an unskilled pilot may lead to catastrophic consequences. If a pilot fails his Operate Test to perform a specific manoeuvre or a series of multiple Manoeuvres by 2 or less degrees, that manoeuvre fails and he must make his basic manoeuvre as normal. If he fails by 3 or more degrees, the flyer goes into a steep dive, and the pilot must make a **Challenging (+0) Operate Test** to recover, plus an additional -10 for each manoeuvre added before. Otherwise, the flyer Stalls (See Crash, Stall and Gliding sidebar).

Finally, note that these manoeuvre could be influenced by some circumstances, such as adverse weather to heavy AAA fire. Table AC -1 sums up some of the different situations which imposes a penalties to the Operate (Aeronautica) Test.

TABLE AC -1: DIFFICULT FLIGHT SITUATION AND OTHER HAZARDS	
Flight Situation	Modifier
Clear Sky.	+0
Adverse wind condition, raining.	-5
Thick clouds, limited visibility of any sort.	-10
Storm, snowing, Heavy AAA fire (note that in the case of AAA fire, a test failed by more than 3 degrees of failure means that the aircraft has been hit by a flak shell: treat this as hit in a random location with the following stats: 3d10+12 I; Pen 5; Blast [10], Concussive [0]).	-15

LIST OF MANOEUVRE

Speed Up / Stall

Basic difficult: Challenging (+0)

The pilot can modify how fast or slowly his flyer moves by making an Operate Test. On a success, and for every additional degree of success, he may decrease or increase the number of AUs his flyer moves this turn by one.

Immelmann Turn

Basic difficult: Hard (-20)

If the pilot wants to quickly change direction, he can make an extreme loop-turn, completely reversing direction in a very tight loop. If he succeeds in his test, the flyer moves forward, turns in a very tight turn, and ends up back where it started, facing the opposite direction. This counts as the aircraft's move for the turn. This may not be combined with any other Manoeuvres. This manoeuvre was perfected by the Imperial Navy

fighter ace Manfred von Immelmann, after whom it has been named.

Tight Turn

Basic difficult: Difficult (-10)

If a pilot wants to turn more quickly, he can make an Operate Test and for each degrees of success he may move one less AU (to a minimum of two) before turning up to 90 degrees during this turn. The flyer must still move its Tactical Speed.

Sideslip

Basic Difficult: Difficult (-10)

Most flyers are equipped with vectored thrust engines, and can make small "sideslip" manoeuvres. After a successful test and for each additional degree of success, A pilot is able to move one Air Unit of his Tactical Speed directly to the left or right without changing the direction his flyer is facing, up to half his Tactical Speed. The pilot may Sideslip before or after his remaining move, but the flyer must move its remaining Tactical Speed as normal.

Jinx

Basic Difficult: Hard (-20)

If the pilot wants to avoid incoming fire, he can jinx, making his movements erratic and unpredictable to avoid incoming fire. On a success, and for every addition degree of success, he imposes a -10 penalty on all shooting at and from his flyer until the beginning of his next turn.

Six Position

Basic Difficult: Challenging (+0)

The pilot endeavours to keep his opponent locked in his gunsights, even if it makes himself an easier target. If the pilot succeeds his Operate Test, and if is able to end his movement so that his flyer is able to target that opponent, all shooting from his flyer against the opponent that round gains a +20 bonus. All shooting directed at the pilot's flyer from anyone gains a +10 bonus until the beginning of the pilot's next round.

Dodge

Basic Difficult: Challenging (+0)

The pilot sees a threat and dodges, hopefully throwing his flyer out of the line of fire. The pilot makes an Operate Test with a penalty equal to the vehicle's size modifier. For every success, he Avoids one shot from a single source, as with a Dodge Reaction. This Manoeuvre is unique in Aerial combat in that it's performed on an opponent's turn, in addition to the standard movement. A pilot may only Dodge once per round.

Dive

Basic Difficult: Challenging (+0)

A common Manoeuvre performed to disengage in most combat circumstances which consist in putting the aircraft nose down vertically and gain as much speed as possible. The pilot makes an Operate test and if successful he add 1d10 AUs to his Aircraft's Tactical Speed plus 1 additional AU for each degree of success. This manoeuvre can be sustained for more than one turn and for each turn it is sustained the aircraft gains additional AUs equal to the degree of success. This action could be performed only in one direction - downward.

Nose Up

Basic Difficulty: Difficult (-10)

The opposite of the Dive, this manoeuvre is equally useful to disengage from slower aircraft but it's way more dangerous. The pilot makes an Operate test and if successful he add 1d5 AUs to his Aircraft's Tactical Speed, plus 1 additional AU for each degree of success. This manoeuvre can be sustained for more than one turn, and for each turn the aircraft loose 3 AUs of Tactical Speed. This action could be performed only in one direction

–upward.

Strafing Run

Basic Difficulty: Challenging (+0)

A really effective manoeuvre used against ground target, a Strafing Run allows an Aircraft to wreck havoc upon armoured column and enemy position. The pilot makes an Operate Test and if successful he grants his next attack one of the following benefits:

- He can choose to fire one of his weapon with a +30 Bonus to his BS;
- He can choose to fire all the weapon he has control in a single salvo without penalty.

However, a strafing run must meet some requisites: an Aircraft must be at most at 1 AUs from the Ground to perform this manoeuvre, thus making a possible Crash way more dangerous. Additionally, any Ground unit capable to shoot at the aircraft reduce its penalty to hit by 20, so a weapon without Anti Air will hit with a -30 Penalty, Anti Air (Rudimentary) with +0 and Anti Air (Advanced) with +20.

Ram

Basic Difficulty: Hard (-20)

While almost suicidal, some pilots decide that some circumstances need extreme acts as the only option left. An Aerial Ram action works like the one for ground vehicle: a pilot choose a target and then attempts to ram it, moving at least its Tactical Speed in a straight line. If he succeeds, the aircraft hit the target, doing Impact damage equal to the AP on the vehicle's facing plus 4d10 (speed matters). However, target size influences the outcome of the action itself::

- If the Target was 3 or less size smaller, the rammer takes Impact Damage equal to the AP value of the target's facing it hit plus 1d10. Force Field can protect the rammer but not the rammed.
- If the Target was 1 to 2 size smaller, the rammer takes Impact damage equal to the AP value of the target's facing it hit plus 2d10. Additionally, the pilot who rammed takes 1d5 Critical Damage to a hit Location determined by reverting the result of the Ramming action. Both Aircraft has to make a Very Hard (-30) Operate test or stalls. Force Field can protect both rammer and rammed from damage, but not from the stalls.
- If the target was the same size, then the rammer takes Impact damage equal to the AP value of the target's facing it hits plus 3d10. Additionally, the pilot who rammed takes 1d10 Critical Damage to a Hit Location determined by reverting the result of the Ramming action. Both aircraft will automatically stall after the ram action. Force Field can protect the rammed from the damage, but not the rammer one.
- If the target was bigger, the rammer takes the same amount of damage as above, but also suffers 2d10 Critical Damage. The rammed vehicle has to make a Hard (-20) Operate Test without bonus from manoeuvrability or stalls. Force Field can still protect the rammed from the damage, but not the rammer one.

Counter Manoeuvre

Basic Difficulty: Very Hard (-30)

Aerial combat may seem unpredictable, but a skilled pilot is more than capable to understand his enemy next move and react accordingly to the situation. Whenever another Aircraft make a movement manoeuvre, a Pilot can make an Operate Test, with an additional -10 Penalty for each degrees of success scored by the chased aircraft. If the test is successful, the Pilot remain behind the enemy aircraft. Additionally, if he has scored more than 3 degrees of success, he may make a free attack with any one weapon the aircraft is equipped with. This free attack may come for any weapon system, but cannot be used to attack twice with the same weapon.

Ex: The Hell Blade Arion is chasing a good pilot indeed: the renegade decides to combine the Nose Up and Jinx manoeuvre, hoping to lure Arion in a vertical chase and use the superior speed of the foul aircraft to his advantage. The overall difficult for the test is -30 (-20 for Jinx Manoeuvre and -10 for the additional manoeuvre). The heretic has an Operate skill of 38, and the aircraft has a +15 Manoeuvrability, so it will have to test against 28. He rolls 21, obtaining 1 degree of success and points his nose up. Arion notes the manoeuvre in time and accepts the challenge: he rolls to counter manoeuvre, with a penalty

equal to -30 plus another -10, for a total of -40. Arion has an Operate (Aeronautica) Skill of 47, and the Thunderbolt has a Manoeuvrability bonus of +20, so combined with the difficulty of the Manoeuvre he tests on 27. He rolls a natural 1, scoring an outstanding 3 degrees of success! Not only Arion is capable to keep pace with the enemy aircraft but at the end of the manoeuvre he will be able to hit it with both his autocannons and lascannons. The Hell Blade has no chance to survive.

Generic Manoeuvre

Basic Difficult: GM's Discretion

In aerial combat, there are countless potential manoeuvres a skilled and creative pilot could perform. General Manoeuvre is a "catch-all" manoeuvre designed to represent anything a pilot may invent. A Manoeuvre must be approved by the GM, who also choose the basic difficult of it.

HIGH SPEED CHASES

Rules for Aerial Chases are almost similar to the ones presented in the Side bar High Speed Chases at page 273 **ONLY WAR** Rulebook. First of all, the GM set the starting distance between the two players involved in the pursuit, then both pursuing and the pursued roll opposed Operate Tests. If the pursuer wins, he decreases the distance between the vehicles by 10 metres for each success. If the Pursued wins, he increase the distance by the same amount. Faster aircraft add a bonus to this test: compare the Cruising Speeds of the vehicles and for every full 10kph the faster vehicle has over the slower vehicle, that aircraft pilot gains +10 to his Operate Test.

This continue once per Round until the distance between the two aircraft drops to zero or increases to 300 metres. Despite ground chase, the outcome of a Pursue may be more dramatic.

When the distance between the two aircraft drops to zero, the pursuing aircraft has to make a Dodge Manoeuvre, or he will eventually crash in the pursued aircraft. If this happens, apply the effects of the Ram Manoeuvre. If instead the Pilot success in the Dodge Manoeuvre, he moves a number of AUs equal to half his Tactical Speed in a random direction. With the GM's permission, and if the requisites are obtained, the pursuer can start again the chase. A pursued character may instead make a Counter Manoeuvre, with an additional penalty equal to 10 per number of degrees scored by the pursuer obtained in the Dodge Manoeuvre. If successful, then the two aircraft swap roles, with the pursued becoming pursuing and vice versa. If the pursued wins, he has managed to leave behind is pursuer as stated above.

Note that differently from a ground chase, the goal of an Aerial Chase is often just to stay in the aircraft's six long enough to take it down. A GM has to remember that an aircraft has no other way to force its opponent to pull over and stop.

For the same reason, the risk of failing a chase are different. If the chase take place at high altitude, Any failed roll is treated like usual, regardless of the score, but this can change in specific environment: if the chase take place at a very low altitude, every roll between 99-100 mean that the aircraft flips out of control, crashing into an obstacle: treat this as a +10 Result on the Hull Critical Hit Chart. A GM could decide to increase the "danger zone" depending of the circumstances: chases along the spires of a Hive may mean that crashes occur on 97-100, while chases in a thick space fight between the armoured hull of a Void-ship may modify that to 92-100. As always, the GM is the final arbitrator on this decision.

AERIAL COMBAT RULES

When it comes to combat, air-crafts follow the same standard rules found at page 274 **ONLY WAR** Rulebook. Whenever the GM has verified that the attack is possible, the characters follow the usual steps:

- Step One: Apply Modifiers to Attack
- Step Two: Attacker Determines Facing
- Step Three: Attacker Makes a Test
- Step Four: Attacker Determines Hit Location
- Step Five: Attacker Determines Damage
- Step Six: Target Applies Damage

However, there are some specific changes: Aircraft do not have the same Hit Locations of Ground Vehicles, and as such they have different types of Critical Effects when they are hit. Additionally, Aircraft follows different rules for Crashes and they can suffers specific damage condition unique to them. When determining facing, refers to **Table AC – 2 Aircraft Hit Locations** and when determining Critical Damage use the appropriate Tables found in the next pages.

Beside this, Aerial Combat presents the following restrictions:

- Each pilot or gunner may only fire one weapon system on a flyer. However, pilots may make Manoeuvres and still makes shooting attacks
- All shooting from a Flyer suffer a basic -20 BS penalty, regardless of the situation. The only Attack Actions flyers can take are Attack, Semi-Auto Burst, and Full-Auto Burst. These Actions provide their standard bonuses to shooting, which can mitigate the innate penalty. Additionally, weapon capable of full Auto Fire always deal one an additional hit, regardless of the number of success.
- Due to the distances and speeds founded in dogfight, the Bonus To Hit Modifier works in a different way than Ground-situation. To calculate the bonus to hit, subtract the Size Value of the target vehicle to the attacker then multiply per ten. An aircraft with size 7 will receive a +10 Bonus to hit another aircraft with size 8 (Target size 8 – Attacker size 7 x10 = +10 to hit), while this will decrease to -20 if the target has size 5 (Target size 5 – Attacker size 7 x10 = -20 to hit).
- Flyer and Spacecraft weapons have their range given in AUs and metres, as they can be used in aerial combat and against ground targets. Note that sometimes the two ranges do not match up. This is done for both game purposes and to represent that it is easier to line up longer shots in the open atmosphere or open void.
- All rules for firing applies normally, including bonus for firing at Short Range, penalties for Long Range, environment situation, attacks on unaware targets and so on.

Air-to-Ground and Ground-to-Air Combat

Aerial combat is not limited to flyers: the Imperial Navy is often called to give Air Support to the Imperial Guard, mostly by bombing or strafing run an enemy position. In the same way, ground troops have to defend themselves against these attacks. The following restrictions are applied every time an aircraft perform an attack against a ground target and vice versa.

- Any character on the ground trying to target a Flyer without an Anti-air weapon has a basic -50 Penalty to hit. If the vehicle/installation has the Anti-air (**Rudimentary**) Trait, then the penalty is dropped to -20, while Anti-air (**Advanced**) has no penalty at all. Any weapon with a range of less than 100m cannot target a flyer, unless it's flying at a really low altitude. An aircraft instead has always a +20 to hit a ground target.
- A ground vehicle does not benefit the Bonus To Hit Modifier provided by an Aircraft Size, neither he gains the penalties usually issued for Range. An Aircraft instead can benefit the Size's Bonus To Hit Modifier, but still suffers for other penalties like Range.
- Any ground vehicle hitting a Flyer count as having hit the Lower side of the vehicle. An Aircraft counts as having hit the Upper side of the vehicle, which is equal to the side (unless it's a turret). With the GM's permission, in some circumstances a ground vehicle can target other locations, and so can a Flyer.

TABLE AC -2: AIRCRAFT HIT LOCATIONS

Roll	Location	Description
01 - 20	Motive Systems	These could be rocket-engines, grav-plates, turbo-props and so on. These systems are often quite fragile, regardless of the type of vehicle, and as such most vehicles find themselves immobilised rather than suffering outright destruction... however, in an aerial combat an immobilised aircraft is going to face a real bad destiny.
21 - 45	Hull	The attack has hit the vehicle's main hull. Powerful hits here could kill crewmembers or detonate fuel and ammunition stores.
46 - 80	Wing Area	The attack has hit the aircraft wings, aileron or whatever surface is needed to keep the aircraft stable and levelled during flight. All Aircraft has at least two wings, one on Port (Left) and one on Starboard (Right). Critical hit on this location are treated separately one wing from another: if the hit roll results is an even number, the attack is resolved on the Port Wing, while an odd one is resolved on the Starboard Wing. Critical Hit are still cumulative, but the distinction between the two wings could mean the difference when there are no weapon under one specific wing. If the roll is double, then both wings are hit.
81 - 90	Weapon	The attack has hit one of the weapons mounted on the vehicle's hull. It could be a Door-gun, or a fixed weapon protruding from the vehicle's armour. If there are multiple weapons in this location, the GM should randomise which one is hit. If a vehicle has no weapon on that particular facing, treat it as a hit to the Hull (01-50) or the Wings (51-00). These attacks often destroys the weapon system, but some attacks can translate back to the main hull or wings of the vehicle, causing secondary damage
91 - 00	Turret	The attack has hit one of the vehicle's turret. Air-Turret destruction is not as dangerous as the ground ones, but still they can be troublesome. If an Aircraft has no turrets, treat it as a hit to the Hull

SPACE COMBAT

Space combat for small craft, fighters and shuttles can easily use the same rule set as aerial combat. Although these rules do not create scenarios that adhere to the laws of physics, they do make for cinematic and exciting dogfights and duels in the void.

There are anyway some major changes. First, when turning, the 45 degree turn can be increased to a 90 degree turn by increasing the difficulty of the Operate Test made by one degree (or by make a **Challenging (+0) Operate Test** if none would be required). The Turn can be increased to 180 degrees by increasing the difficulty of the Test by two degrees (or by making a **Hard (-20) Operate Test** if none would be normally required). Note that this make the Immelman Turn Manoeuvre superfluous, which it would be in space combat.

In the eyes of Critical Damage and effects, there are still a lot of differences: if a spacecraft in space combat ever suffer a Stall, Gliding or Crash result in any critical table, the Spacecraft drifts out of control in a random direction and the Pilot must make a **Difficult (-10) Operate Test** to recover. If successful, the Pilot may either decide to stop the Spacecraft or make a single turn and then he may reduce its speed by one for each degree of success. The Spacecraft cannot speed up, and if it stops completely it remains still on its last location, waiting for somebody to recover it. A still Space-craft count as a Ground target for any other Aircraft who wish to attack it, and therefore any attempts to attack follows the same rules for Air-to-Ground Combat (the still Aircraft's weapons count as having the Anti Air (Advanced) Trait).

Anyway, specific condition may result in a aircraft still suffering from the result of a Crash or Stalls: very strong gravitic tide or Space Combat which occurs between Atmosphere and Open Space could at GM's discretion lead to the normal results as stated in the Crashes, Stalls & Gliding Side Bar.

Finally, although space combat uses AUs for weapon range and vehicle movement distances this does not mean that an AU has to equal 100 metres in this situation. For those players and GMs who want their void dogfights to place at longer ranges, simply increase the range of a single AU to 1 kilometre or 10 kilometres. This is one of the reasons for employing an abstract measurement system (of course, this may conflict with the range of some of the vehicle's weapons, but remember that weapons are able to fire further in vacuum).

TABLE AC -3: MOTIVE SYSTEMS CRITICAL HIT CHART

Critical Damage	Critical Effects
1	A savage blow to the vehicle's drive mechanism or engine intakes force the operator to wrestle with the controls in order to keep it pointed in the right direction. The vehicle's operator must take an immediate Challenging (+0) Operate test . If the test is failed, use the Scatter Diagram to determine the vehicle's new facing. The Operator takes one level of Fatigue from the effort.
2	The vehicle is knocked violently by the airstrike, but otherwise no major damage is caused. The vehicle may not take manoeuvre next turn.
3	One of the vehicle's engine or perhaps a vital fuel link has taken a major hit and now is leaking fuel. The Vehicle gains the Motive Systems Impaired Damage Condition (see page 284 ONLY WAR Rulebook). In addition, the trail left behind by fuel makes easier to target the aircraft, granting any BS test to hit an additional +10 Bonus
4	The vehicle's fuel or pilot power systems have taken a glancing hit. The vehicle is in no danger of exploding, but coaxing speed out of the engine is far more difficult now. If the vehicle's operator ever want to move faster than its Tactical Speed they must first pass a Hard (-20) Operate Test . If the test is failed, then the engine stop working for 1d5 rounds and the aircraft counts as Gliding during this time. If the test is failed by three or more degrees the vehicle automatically Stalls.
5	The driver finds that the vehicle's control systems are completely unresponsive ...but the vehicle is still moving! Use the scatter diagram to determine the vehicle's new facing. Then the Operator may try a Very Hard (-30) Operate Test to stabilize the aircraft in a flying position. If the test is successful, the vehicle now is Gliding, and it keeps Gliding until the Pilot succeed in a Challenging (+0) Operate Test with no bonus granted by the aircraft manoeuvrability . If the test is failed, the aircraft moves 2d10 AUs upwards, and then Stalls.
6	The hit tears off a rocket engine plate, sprung off a rotor or tears into the grav-generator housing, doing severe damage. The vehicle gains the Motive Systems Crippled Damage Condition (see page 285 ONLY WAR Rulebook)
7	The small internal explosion causes a loose bolt to ricochet around the driver's controls at breakneck speed, or perhaps a control panel explodes in the driver's face. The aircraft's operator immediately suffers 1d10 Impact damage to the head, suffers one level of Fatigue, and must take a Hard (-20) Operate Test in order to pilot the aircraft next turn. The Aircraft gains the Impaired Flight Control Damage Condition. Additionally, if the damage dealt was 8, 9 or 10, then the cockpit breaks, which can become a problem in some environment.
8	The aircraft motive systems are ripped apart in an explosion that immediately stops the vehicle engine. The Pilot make a Arduous (-40) Operate Test : if the test is successful, the Aircraft count as Gliding, while if failed, the aircraft crash.
9	The aircraft power systems or fuel tank are penetrated. The aircraft immediately catches alight, and is now On Fire! The aircraft crashes.
10+	As above, but additionally chunks of the aircraft are scattered all around the aircraft itself. Every aircraft or character in an area equal of 1d5 AUs from the vehicle suffers 1d10+5 I damage with the Tearing qualities. Additionally, every vehicles in that area suffers a -20 Penalty to all Operate Test the next round, due to the fragments which can damage avionics. This effects can be Dodge by vehicles, but not from Characters.

TABLE AC -4: HULL CRITICAL HIT CHART

Critical Damage	Critical Effects
1	The aircraft jolts to one side with the force of a strong hit, forcing everyone aboard to grab onto something to stay in their seats. Any crew who are not strapped in or otherwise secured must make an Ordinary (+10) Toughness Test or be Stunned for one Round.
2	An internal gas line bursts, unleashing an opaque but non-lethal cloud with the crew compartment. One member of the crew (or passenger) must dedicate their entire next Round to closing the leak (no Test is required, they just spend a Full Action to do this). All Actions taken within the vehicle by any crew suffer a -20 Penalty until the leak has been sealed. Obviously, single-seat aircraft pilots will find the problem more annoying than normal.
3	A jarring blow tosses the aircraft, throwing things about the interior. Any crew or passengers who are not strapped in or otherwise secured must make an Ordinary (+10) Toughness Test or be stunned for 1d5 Rounds. All shooting from the vehicle during the next Round suffers a -10 to hit as aims are knocked askew and shots go wide. If the vehicle is single-seat, treat this as the result 4 on this table.
4	Some electrical cabling or power coupling is blasted loose by the impact, raining a sudden shower of sparks down on a member of the crew. The GM randomly selects one member of the vehicle's crew. This crewman immediately suffers 1d10+6 Impact Damage to the body and suffers one level of Fatigue.
5	Several hull plates buckle and fall away, weakening the vehicle. The Facing where the attack hit reduces its AP by 1d10 (eg. If the attack hit the vehicle's Rear Facing the vehicle's Armour would be reduced by 1d10 and all subsequent attacks that hit the Rear Facing would only need to penetrate this reduced Armour value).
6	A small explosion rips through the crew compartment, damaging internal systems and wounding the crew. If the vehicle's crew are housed separately from the passengers, the GM determine randomly whether this affects the crew or the passengers. In either case those that suffer from this result take 1d10+6 Explosive damage to the body, suffer one level of Fatigue and must make a Challenging (+0) Agility Test or catch fire. If this occurs, refer to the On Fire! Sidebar on page 284 ONLY WAR Rulebook. Anyone who catches fire can attempt to put themselves out. Finally, the Aircraft gains the Impaired Flight Control Damage Condition, due to the deformation of the hull.
7	The hit tears through the vehicle's armour, leaving only useless shards of metal. The facing where the attack hit reduces its Facing's AP by half (eg. If the attack hit the vehicle's Rear Facing the vehicle's rear Armour would be reduced by half and all subsequent attacks that hit the Rear Facing would only need to penetrate this reduced Armour value). If the attack was a ranged weapon, the shot rips through the interior of the vehicle as well. Each crewmember has a 20% chance of being hit by the same shot and taking one quarter (rounding up) of the rolled damage. In addition, the vehicle gains the Open Topped Vehicle Trait, which could be a problem if the vehicle is in a poisonous atmosphere or in vacuum. Finally, the vehicle also get the Impaired Flight Control Damage Condition, due to the contorted piece of metals which let flying more difficult than before.
8	As above, but the aircraft also catches fire! Refer On Fire! Sidebar on page 284 ONLY WAR Rulebook.
9	A short, sharp explosion flares outward from the vehicle. Armour panels fall off, weapons are blasted free, and the vehicle's drive mechanisms are ruined causing it to stop dead. The vehicle is now a shattered Hulk and gains the Vehicle Destroyed Damage Condition. If the vehicle had any remaining weapons, each one has a 50% chance of gaining the Weapon Destroyed Damage Condition. Anyone inside the vehicle takes 1d10+5 Explosive Damage, and must take a Difficult (-10) Toughness Test or become Stunned for 1d10 Rounds. The aircraft crashes too.
10+	The vehicle's ammo supply, reactor or fuel supply take a direct hit and the vehicle erupts from within. Shard of molten metal are sent flying in every direction. The vehicle is destroyed and cannot be repaired. Anyone inside takes 2d10+18 Explosive damage. Anyone within 1 AU suffers a 1d10+6 Explosive Damage from the blast. If the vehicle has the Open-topped trait, passengers or crew may make an Evasion test using the Dodge Skill to bail out at the last second. Anyone who succeeds at the Evasion Test suffers the 1d10+6 Damage from the vehicle's explosion.

TABLE AC -5: WING AREA CRITICAL HIT CHART

Critical Damage	Critical Effects
1	The hit has caused a minor jolt during flight, slightly changing its actual route.. The Aircraft scatters 1 AU in a random direction. Additionally, any crew who are not strapped in or otherwise secured must make an Ordinary (+10) Toughness Test or be Stunned for one Round.
2	The attack has caused a sudden destabilization, and for a brief instant the pilot have to struggle to maintain control on the Aircraft itself. The Aircraft count as having -10 Manoeuvrability the next turn, then it keeps flying as usual. The Operator must also make a Challenging (+0) Toughness Test or suffers one level of fatigue.
3	The flight controls seems to have taken considerable damage from the blow, but with the right mix of skill and luck a good pilot could keep on flying as nothing happened. The Pilot must immediately make a Challenging (+0) Operate Test , with no bonus provided by the Aircraft manoeuvrability. If the Test is failed, the damage is pretty severe, and the Aircraft gains the Impaired Flight Control Damage Condition, while if successful, the flight control are still operational, and no Damage Condition is sustained. Anyway, the Pilot can't be completely sure about that, and prefers not to risk in dangerous flight for a while. Every failed manoeuvre also cause the aircraft to gain the Impaired Flight Control Damage Condition, in addition to any other effect. This effects last for 1d10 rounds, minus the degrees of success scored in the Test (to a minimum of 1).
4	A penetrating hit disrupt the links between the firing control and one of the weapon installed under the wing. One random weapon on that location automatically gains the Weapon Disabled Damage Condition (see page 286 ONLY WAR Rulebook) until it has been repaired. If there are no wing-mounted weapon on the aircraft, treat this as a result 5 on this table.
5	The violent blow has stripped the Aircraft panels, heavily damaging the wing surface controls. The Aircraft gains the Impaired Flight Control Damage Condition. In addition, the armoured panels do not provide the same cover as before, reducing the AP value on that facing by 1d10 (eg: If the attack hit the vehicle's Rear Facing the vehicle's Armour would be reduced by 1d10 and all subsequent attacks that hit the Rear Facing would only need to penetrate this reduced Armour value).
6	One of the wing-mounted weapon is torn apart by the violent blast, leaving only a a shattered piece of metal barely resembling the original weapon. One Random weapon on this location gains the Weapon Destroyed Damage Condition. If that weapon was a missile or a bomb, then there is a 50% chance that it explodes. If it does so, roll Damage against the vehicle, halving all Damage rolled. Additionally, the Aircraft gain a -10 to all manoeuvre test.
7	The wing is barely attached to the aircraft hull, still the pilot is capable of keep it flying... or so it seems. The Aircraft gains the Crippled Flight Control Damage Condition. In addition, for the next 1d5 round each time the pilot wish to make a manoeuvre he must make a Challenging (+0) Toughness Test : if the test is failed, he suffers one level of fatigue, and if the test is failed by two or more degrees the aircraft automatically stalls.
8	The sudden blow has ignite the ammo-storage or the Fuel tanks stored in the wing, enveloping it in fire. The Aircraft is set alight (See page 284 ONLY WAR Rulebook). Additionally, the long trail of smoke make the aircraft an easy target, and each attacks against it gains a +20 bonus to hit. Any weapon mounted behind the wings location suffers instead a -30 to hit, and every crewman in the same position suffers the effects of Suffocation (see page 267 ONLY WAR Rulebook for detail)
9	An outstanding blow tear the wing away, making the Aircraft rolling on his axis like a spin. The Aircraft gains the Missing Flight Flight Control Damage Condition. Everyone on board must make a Very Hard (-30) Agility Test or taking 1d10+6 I damage on a random location which ignores armour. Hard to says it could be worse...
10+	As above, except that the hit has caused a severe explosion on the Ammo rack stored in the wing-mounted weapon, swallowing the aircraft in a fire ball. The Aircraft is set alight. Additionally, the torn wing shatters in pieces, covering the area with molten metal and armoured fragments: any character or Aircraft in a 3d10 metres radius from the point where the wing is torn suffers 1d10+8 R Damage in a random location, with the Crippling and Flame trait.

TABLE AC -6: WEAPON CRITICAL HIT CHART

Critical Damage	Critical Effects
1	A strong concussive hit leaves the gun intact, but temporarily damages the sight's alignment. Next Turn each shot with that weapon will suffer a -10 penalty. If the gun was directly manned (as a door-gunner), then the gunner is also stunned for 1 round.
2	A glancing blow knocks the gun about, dislodging an ammo linkage, buckling a breach door or shorting out a power system. That would be a minor issue on a ground vehicle, but indeed is a serious problem while flying. The weapon immediately jams. It can be cleared via the normal method, but only if someone can physically do that action. If the Weapon has only a Full-auto fire mode, then there's a 30% chance that the weapon can still fire: if this happens, reduces its RoF by half rounding up (eg: a weapon with a RoF of -/-/10 will become -/-/5). Note that the weapon still counts as firing in Full-auto mode.
3	The hit frazzles the gun's targeting system, block a vision silt or causes internal armour to flake away and strike the gunner in the eyes. All shots made with the weapon suffer a -10 penalty for 1d5 Rounds.
4	With the sound of grinding metal, the gun locks in place. The gun gains Weapon Locked Damage Condition (see page 286 ONLY WAR Rulebook). The Weapon is now only capable of firing in direct straight-line in whatever direction it happened to fire at last (or directly forward if it had not fired yet). If the weapon was a Fixed Weapon, treat this as the result 5 on this table.
5	The gun's ammo-hopper or power control system is destroyed, leaving the weapon incapable of firing. The weapon itself is otherwise undamaged as it is the power of ammunition linkage that is damaged, but to represent this result still gains the Weapon Disabled Damage Condition (see page 286 ONLY WAR Rulebook) until it has been repaired.
6	The weapon's targeting systems are annihilated by the blast. The weapon gains the Targeting Systems Destroyed Damage Condition (see page 285 ONLY WAR Rulebook).
7	The gun's ammo-hopper or power control systems are severely damaged, or perhaps the weapon's barrel is cracked from a heavy impact. The weapon can still fire, but with a risk of causing an ammunition explosion. The weapon can continue to be used as normal, but every time the weapon is used there is a 30% chance of the currently loaded ammunition cooking off. If it does so, roll Damage against the vehicle and any gunners manning the weapon as if the destroyed weapon has hit them, halving all Damage rolled. If this happens, the weapons gains the Weapon Destroyed Damage Condition (see page 286 ONLY WAR Rulebook), and all the remaining ammunition in that clip is destroyed.
8	The weapon explodes and is torn from its housing. Damage from the explosion rips further the vehicle's hull or wing area, possibly injuring the weapon's gunner. Any gunner operating this weapon has a 20% chance of being hit by the same shot and taking one quarter (rounding up) of the rolled damage
9	As above, except the explosion rips through the aircraft's hull. Every member of the crew suffer 1d10+6 Explosive Damage to the body, suffer one level of fatigue and must make a Challenging (+0) Agility Test or catch fire. If this occurs, refer to the On Fire! Sidebar on page 284 ONLY WAR Rulebook. Anyone who catches fire can attempt to put themselves out as described in the rules for Fire on page 266 ONLY WAR Rulebook.
10+	The force of the attack destroys the weapon and continue through into the vehicle's hull, detonating the ammunition store or power supply for the weapon. The vehicle explodes immediately. It cannot be repaired and no equipment from within the vehicle can salvaged. Anyone inside takes 2d10+18 Explosive Damage. Anyone within 1 AU of the vehicle suffers 1d10+6 Explosive damage from the blast. If the vehicle has the Open-Topped trait, passengers or crew may make an evasion test using the Dodge Skill to bail out at the last second. Anyone who succeeds at the the Evasion Test suffers 1d10+6 Damage from the vehicle's explosion.

TABLE AC -6: TURRET CRITICAL HIT CHART

Critical Damage	Critical Effects
1	A strong concussive hit leaves the turret intact, but knocks those within the turret around. Anyone within the vehicle's turret is Stunned for 1 Round.
2	A heavy blow knocks the turret aside, but it is not immediately apparent how much damage the gun has taken. The crew cannot risk firing the weapon until they have made sure that the shells won't explode in the barrel or the weapon's power systems won't overload. Treat the weapon as if it had Jammed . If the Weapon has only a Full-auto fire mode, then there's a 30% chance that the weapon can still fire: if this happens, reduces its RoF by half rounding up (eg: a weapon with a RoF of -/-/10 will become -/-/5). Note that the weapon still counts as firing in Full-auto mode.
3	The hit frazzles the targeting system, blocks a vision slit or cause internal armour to flake away and strike the gunner in the eyes. All shots made with the weapon suffer a -10 penalty for 1d5 Rounds.
4	With the sound of grinding metal, the turret locks in place. The gun gains Weapon/Turret Locked Damage condition (page 286 ONLY WAR Rulebook). The weapon is now only capable of firing in a direct straight line in whatever direction it happened to fire at last (or whenever was pointed before). There's a 10% chance that the weapon is locked in a way that can disturb the Aircraft flight model, reducing its Tactical Speed by 1 AU.
5	The turret's loses power, and everything stops working. The turret and the weapons contained within are undamaged, but nothing as any power and thus no weapons can be fire: it cannot rotate until the power systems are repaired. If the turret had any equipment linked to it these cease to operate. For the purpose of repairing damage, treat this as a weapon Destroyed Damage Condition , but the weapon within the turret do not need to be replaced before the repair test is made (unless of course the weapon had already been destroyed by previous critical effects).
6	The turret's targeting systems are annihilated by the blast. Every weapon within the turret gain the Targeting Systems Destroyed Damage Condition .
7	The hit tears trough the turret's armour, leaving only useless shards of metal. Treat the vehicle has having lost 2d10 AP for the purposes of repairing the armour. If the attack was a ranged weapon, the shot rips trough the interior of the turret as well. Each Crewmember within the turret has a 75% chance of being hit by the same shot and taking one half (rounding up) of the rolled Damage. The vehicle gains the Open Topped Vehicle Trait , which could be a serious problem in a poisonous atmosphere or in vacuum. Finally, the vehicle gains the Damaged Avionics Damage Condition .
8	Several areas of the turret are blasted away and the entire turret catches fire. Any weapon mounted in or on the turret gains the Weapon Destroyed Damage Condition . Any equipment on or in the turret is destroyed, and the turret itself gains the Weapon/Turret Locked Damage Condition . Additionally the turret is set alight (page 284 ONLY WAR Rulebook)
9	As above, except the fire pours into the main hull of the vehicle, setting everything alight. Every member of the crew plus any passengers if they are not separated from the crew compartments must take a Challenging (+0) Agility Test or Catch fire . Refer to the On Fire! Sidebar page 284 ONLY WAR Rulebook. Anyone who catches fire can attempt to put themselves out as described in the rules for fire (page 266 ONLY WAR Rulebook)
10+	A colossal explosion tears the turret away from the vehicle, the twisted wreckage flying away as the vehicle itself is ripped apart by the secondary explosions. The vehicle is destroyed. It cannot be repaired and no equipment from within can be salvaged. Anyone inside takes 2d10+18 Explosive Damage, while any crew who were stationed within the turret are automatically killed – There's no way they'd have time to bail out!

CRASHES, STALL & GLIDING

Any pilot knows too well the risks associated with pushing any vehicle to its limit, and this is eventually more true when manning an Aircraft: evading AAA fire, dodging other aircraft or risk to plough in the ground while making really low strafe run against armoured targets may lead to disastrous crashes, who will often kill the pilot and anyone on Board on the spot.

This rules provide a deeper view about aircraft perils and danger.

CRASHES

Whenever a Critical Hit results in the vehicle crashing, applies the usual rule for Crashes, as found on page 280 **ONLY WAR** Rulebook. The Pilot has to make a single **Very Hard (-30) Operate Test** and if successful, the vehicle crash-lands, ploughing a gaping furrow into the ground. The vehicle is destroyed and anyone inside takes 2d10 Impact Damage ignoring Armour, and is Stunned for a number of damage equal to the damage sustained. If the Pilot fails the Test, the vehicle ploughs into the ground and explodes, as per the +10 result on the Hull Critical Hit chart. Individuals may bail out at the last second according to the rules, although they will count as falling from whatever altitude the aircraft was at the Turn before it crashed.

Indeed, in most situations air combat takes place at really high altitude. If the crash results while the aircraft was at a considerable height, then the Operator may try to retake control of the Aircraft multiple times before crashing. For each 1,000 metres falling down, the Operator may take another Operate Test, adding an additional -10 Penalty to the test. This test can be performed until the Aircraft touch ground or till the total Accumulated Penalty is equal to -60. If the Test is failed, then the Aircraft crashes in a fireball.

*Ex: Arion's Thunderbolt has been badly damaged by an enemy Hell Talon. The Aircraft has received a total of 8 critical damage to the Motive Systems location, and is now plunging toward the ground. Arion was at 2,800 metres when the critical effect was applied, and as such, during his next turn the aircraft commences a nosedive. The Pilot may make **Very Hard (-30) Operate Test** to regain control of the Aircraft. Arion has an Operate (Aeronautica) Skill of 47, and the Thunderbolt has a Manoeuvrability bonus of +20, and he has to test with a -30 Penalty, for a total of 37. He makes his first attempt and rolls a 61, failing the test. The Thunderbolt falls for 1,000 metres, reaching 1,800 metres in altitude, but Arion has faith in his skill, and attempts the test again to regain control of the aircraft, with the penalty increasing to -40 due to the continued dive, testing against 27. Arion rolls again, resulting in a 29. So close, but still not enough! The Thunderbolt continues falling for another 1,000 metres, reaching 800 metres to the ground. Arion is desperate but still he refuses to leave the aircraft, and he decides to test again. This is the last chance he has and, having incurred an additional -10 penalty he must test against 17 if he wishes to save himself and his craft from certain death. Sadly, he rolls an 88. Arion has just enough time to consider his last actions before dying in a devastating explosion. He implores the God-Emperor for mercy as he descends, burning his last Fate Point – time seeming to slow just long enough for him to hit the Eject button.*

STALL

Whilst not nearly so dangerous as the Crash effect, a Stall causes the Aircraft to become completely uncontrollable, while still retaining most of its flight capabilities and integrity. While this is a substantial complication for even the most skilled pilot, it can be recovered from. A stalled Aircraft cannot perform any manoeuvre actions, and enters an uncontrollable descent. Each round after this effect is applied, on the pilot's turn, a Stalled Aircraft plummets 3d10 AUs (remember that 1 AU is equal to 100 metres). The Pilot may attempt to retake control of the Aircraft with a **Hard (-20) Operate test**. If the test is successful, roll two scatter dice to determine the craft's new vertical and horizontal facings respectively. At this point, the pilot has managed to regain control of the aircraft and can resume normal flight, provided he has not crashed during the stall-induced dive and has enough space to recover the aircraft with any manoeuvre deemed necessary. If the pilot fails the test, the aircraft continues to fall for another 3d10 AUs plus 1 for each Degrees of failure, after which the Pilot can attempt to take control of the aircraft once more. If the Aircraft reach ground while is stalling, the aircraft suffers the consequences of a Crash.

GLIDING

If an aircraft has suffered a critical hit to its engine but still its flight surface are intact, is possible that it will gradually loose speed and altitude: aircraft are much more controllable in this situation and a good pilot may perform a softer landing. When a critical hit results in Gliding, an Aircraft reduce its Tactical Speed by half, cannot perform manoeuvres and can make only one Turn each round, and in doing so there's a 10% chance to Stall. A gliding Aircraft will loose each round 2d10 AUs altitude. At any time, the pilot may take an **Ordinary (+10) Operate Test**: if he successes, he can choose to increase or reduces the number of AUs by a number equal to half its Ag Bonus plus the degree of success gained in the test, to a minimum of 1, providing a safer approach to ground. Eventually, the Aircraft will touch ground: treat this as a crash-landing, but the Pilot can make a **Difficult (-10) Operate Test**, reducing the damage inflicted to the crew by 2 for each degrees of success to a minimum of 0. The Aircraft also does not count as Destroyed, but instead gains the Heavily Damaged Damage Condition, as seen on page 283 **ONLY WAR** Rulebook. If the test is failed, then it gains the Critically Damaged Condition.

NOTE: depending on the ground hit, a DM may choose that the aircraft has crash-landed as usual, no matter the Pilot skill. The Aircraft could for example glided into a forest, or in a magma lake, or otherwise he has plowed in a building. If this is the case, the Aircraft crashes, without exploding.

NEW DAMAGE CONDITION

These Damage Conditions are specifically to Aircraft and Spacecraft vehicle.

Impaired Flight Control

Skill Requirements: Essential Repair Skill

Repair Difficulty: Challenging (+0), Ordinary (+10) if the character has Tech Use, Trade (Armourer) or Trade (Technomat)

Repair Time: 4 hours (the time can be extended or decreased due to specific Vehicle Traits)

An Aircraft that suffers a Impaired Avionics result on the critical chart reduces its bonus manoeuvrability by half (rounding up) and also reduces its tactical speed by 1d5 AUs. If the repair test fails by three or more Degrees then something has gone wrong during the repairs and the aircraft reduces its manoeuvrability by another -10.

Crippled Flight Control

Skill Requirements: Trade (Technomat)

Repair Difficulty: Arduous (-40), Very Hard (-20) if the character has Tech-Use or Trade (Armourer)

Repair Time: 12 hours (the time can be extended or decreased due to specific Vehicle Traits)

An Aircraft that suffers a Crippled Avionics result on the critical chart loses its bonus manoeuvrability and also reduces its tactical speed by 1d10 AUs. If the repair test fails by three or more Degrees the something has gone wrong during the repairs and the aircraft counts as having Manoeuvrability -50.

Missing Flight Control Surface

Skill Requirements: Tech Use and Trade (Technomat)

Repair Difficulty: Arduous (-40), Hard (-20) if the character has Forbidden Lore (Adeptus Mechanicus).

Repair Time: 3 days (this time can be extended or decreased due to specific Vehicle Traits)

An Aircraft that suffers a Missing Flight Control Surface result automatically count as having -30 Manoeuvrability and reduces its tactical speed by 2d10 AUs. In addition, the Aircraft automatically Stalls. Obviously, a similar Damage Condition while in flight have serious consequences, and any Aircraft will probably crash. However, if the aircraft gets this Damage Condition while landed, is still possible to repair it.