

Errata

Fighting Wings Series:

Over the Reich (1st Edition) (as of June 1st, 1994)

Over The Reich (2nd Edition) (as of January 1st, 1996)

Achtung Spitfire! (as of January 1st, 1996)

Fighting Wings Overall Game System Specific Changes

OVER THE REICH 1st EDITION:

The following are changes and corrections that apply only to OTR when playing with the 1st Edition Fighting Wings Standard Rules (initial release of game).

The Game Rules:

Rule 3.4 - How Aircraft Move: Half FPs (clarification) - When referencing any chart or play-aid, always consider only the aircraft's speed and not any carried half FPs. Example: An aircraft with a speed of 7.5 having a 0.5 FP carry has 8.0 FPs to use in the turn but its power, turn and maneuver requirements, and any required proportioning of FPs is still determined based on its speed of 7.5.

Rule 3.6 - Level Flight: Inverted Level Flight Restrictions, & Rule 6.6 - Negative-G Pushovers: Negative-G and Non-Fuel Injected Engines (note) - All of the 24 aircraft included in the Over The Reich box have fuel injected engines. These rules are for aircraft that may be added in later expansions that do not have F.I. engines.

Rule 4.5 - Stalls and Spins: Stalled Moves (addition) - Stalled flight is considered a steep dive for purposes of determining what aircraft may do after recovering from a stall.

Rule 5.1 - Angle of Bank: Banking FPs (clarification) - You may begin banking in one game turn and finish in the next game turn if desired. Simply note any banking FP requirement already met in the Turn Carry line of the aircraft log as you would when carrying a turn. (This also applies to Slip/Skid FP requirements).

Note: Banking, Turning, and Slip/Skid FP requirements carried forward must be used in the turn they are carried into or they are lost.

Banking, Turning and Vertical Climbs and Dives (clarification) You must declare an angle-of-bank each time banking (with its requisite facing change) is accomplished while in a VC or VD. The declared angle-of-bank can be any, irrespective of the direction of the change of facing. The declared angle may be changed with each facing. If an aircraft does not bank during a VC or VD, it may not declare a new angle-of-bank. The last declared angle-of-bank in effect is what is used to determine the inversion of a bank angle when a VC or VD Facing Reversal is accomplished (see Rule 6.4).

Rule 5.3 - Additional Turn Considerations: Carrying Turns Forward (addition) - If an aircraft's speed changes from one game turn to the next such that its Turning FP requirement for the rate-of-turn being carried would be met by the turning already accomplished the previous game turn, it must still expend at least one FP before facing (There are no instant facings allowed in this game).

Turning While In An Inverted Bank (clarifications) - To get the inverted turn FP requirement reduction, you must use a steep dive and be in the inverted bank angle by the time you start turning. Mixed moves are allowed. For example, you could begin turning while upright banked (using the normal turn requirement), roll to an inverted bank while turning, and upon completing the first facing change, continue the turn using the inverted bank reduction. The rule-of-thumb is to use the bank angle in effect when each portion of turn is commenced.

Note: When reducing the FP requirement on the turn mode chart for being inverted, the 3-2 mode becomes a straight 2, and the 2-1 mode becomes a straight 1.

If in level flight, the 2 extra decel penalty for turning while inverted applies if any FP expended to meet the turn requirement is expended with the wings inverted, even if the aircraft rolls to an upright bank before the turn is finished and even if it can bank upright and do a turn with the same FP (the rule-of-thumb is use the bank angle in effect before the FP is expended).

Rule 6.1 - Climbing Flight: Climbing while in an Inverted Bank (clarification) - The +1 decel per increment penalty for climbing inverted is only assessed when a VFP is actually expended with the wings inverted or in an inverted bank and only for the increments gained with that VFP. If an aircraft completes banking from an inverted bank to an upright bank with a VFP, the inverted penalty still applies (the rule-of-thumb is to use the bank angle in effect before the VFP is expended).

The restriction on entering vertical climbs from a zoom only applies if the aircraft ends a turn of zoom climbing with an inverted or inverted bank attitude.

Rule 6.2 - Diving Flight: Steep Dives (addition) - If only one VFP is expended during a steep dive, a minimum of 2 altitude increments must be lost (as per the Play Aid).

Rule 6.3 - Changing Between Flight Types: - From a Vertical Dive (errata) - The 2nd paragraph should read as follows: "With the wings inverted or in an inverted bank, the aircraft may only continue a vertical dive unless the previous turn was the second consecutive turn of vertical diving, in which case the aircraft may push-over (negative-G) into a steep dive (still inverted). If it pushes over inverted, it must expend FPs (1/2 its speed as VFPs."

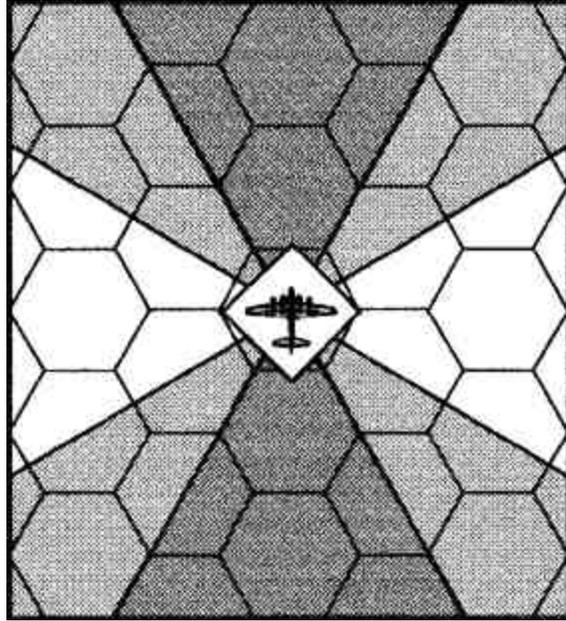
M Class Fighters: (addition) - An M class fighter with a gifted pilot may use vertical climbs and vertical dives freely.

Rule 6.4 - Reversal of Aircraft Facings: Combined Flight Example (errata): The Fw 190A-8 actually turns to face NW and then reverses to SE (Not NNW and SSE as written).

Rule 8.1 - The Initiative Phase: e) Tailing Aircraft (errata) - The "Tailer" must be in the "Tailee's" rear arc or the two borderlines of the rear arc. An aircraft in the same hex as another, or in the other's right or left rear arcs cannot do tailing. Tailing range is "8" not "6".

Rule 10.2 - Special Combat Considerations (addition): Friendly Aircraft in the Field of Fire: Friendly aircraft do not in any way, inhibit friendly gunfire.

Rule 10.5 - Bomber Defensive Fire: Defensive Gunfire Arcs (errata) - The diagram on page 23 had its light gray arcs washed out. A correct diagram is reproduced here:



Rule 11.2 - Special Damage Considerations - Engine Damage (clarification) - Shutting down or feathering an engine is declared at the beginning of a game turn. The die is rolled at that time. The attempt is considered complete at the beginning of the next turn. Fire Worsening and explosions are still possible on the turn of shutdown and the decel penalty for a windmilling is still applied during the turn of feathering.

Multi-Engine Aircraft Considerations (clarification) - The increase in minimum speeds and the reduction in max attainable level speeds for damaged, shut down or knocked out engines is cumulative with the additions and reduction ill speeds caused by being loaded/over-loaded, and for being severely damaged. An easy to refer to table is provided below.

4-Engine Bomber Min/Max Attainable Speed changes
 Non-loaded Loaded Over-loaded

B-17/24 all eng. up	+0.0/-0.0	+0.5/-0.5	+1.0/-0.5
B-17/24 1 eng. out	+0.5/-1.0	+1.0/-1.5	+1.5 /-1.5
B 17/24 2 eng. out*	+0.0/-2.0	+0.5/-2.5	+1.0/-2.5
B-17/24 2 eng. SS*	+1.0/-2.0	+1.5/-2.5	+2.0/-2.5
B-17/24 3 eng. out	+1.0/-3.0	+1.5/-1.5	+2.0/-3.5
B-17/24 4 eng. out	+0.0/-4.0	+0.5/-4.5	+1.0/-4.5

If bomber severely damaged, add +0.5/-1.0 to all values.

*SS = 2 engines same side. Max reduction for engines out may not reduce value below aircraft's non-loaded minimum speed in a given altitude band. This chart also takes into account asymmetric thrust minimum speed increases.

Example: A loaded B-17F's speed range in the HI band is 3.5 to 5.5. If severely damaged and loaded it's 4.0 to 4.5. With an engine out, severely damaged, and loaded it is 4.5 to 3.5 (obviously a problem because excess speed decal must be applied). In the last case, the B-17 could salvo its bombs returning to a non-loaded, severe damage status with a speed range of 4.0 to 4.0.

Rule 13 - Aircraft Loads (addition): Jettison or Release of Loads - At the Tactical or Operational scale of play, tanks, bombs, etc. may be jettisoned or dropped from aircraft by declaring the act at the end of their movement in a same turn. At the Combat scale, the act of jettisoning, firing or dropping stores is declared in the combat phase, after all movement is complete (the aircraft is considered to still have the loads until that time). For aircraft with bomb bays, the bay doors must be open at the shift of the game turn in which any stores are released. It takes one turn to fully open the bays and another turn to close them. On any turn in which the bays are being opened, remain open, or are being closed, the aircraft in question incurs 1 decel (like flaps, see Chapter 20 note).

Rule 15-1; - Operational Scale Movement (addition): The act of taking-off and being placed in an allowable altitude band over its base constitutes a formation's or aircraft's movement for that game turn. Normal movement on the OMT may not begin until the turn after takeoff. Formation join-ups and force assemblies may be done on the turn of take-off.

Rule 16.2 - Attacking Ground & Naval Units: Ground Attack Modifiers, Target Type Effects (errata) - 3rd sentence should read: "If it is an armored vehicle, it is a hard-point target." (Bunkers are not hard-point targets).

Rule 20.2 - Combat Scale Take-Offs & Landing: Combat Scale Start, Taxi, Take-Off (additions) Ignore the power penalties for being loaded and over-loaded until actually airborne. When an aircraft becomes airborne, its altitude is set at 0.1 for no decel cost. An aircraft may declare itself airborne when start speed equals or exceeds its adjusted minimum speed but no later than when its start speed is at its adjusted minimum +1.0 (adjusted for load and flap setting).

Flap and Gear Settings (clarification) - Raising and lowering the gear and flaps are distinct and separate actions, each of which takes one game turn to accomplish. The act is declared at the beginning of an aircraft's turn and the act is considered completed by the start of the next turn. The reduced minimum flight and turn speed benefits of lowered flaps may not be utilized on any turn they are being lowered or raised. However, the decel penalties for lowered landing gear and or flaps is incurred even on the turns they are being raised or lowered. For assessing whether lowered flaps are damaged by excess speed check the A/C's start speed on any turn the flaps are being lowered down, or being raised. If the speed is > 1.5 over listed minimum, then the flaps are damaged (listed minimum ignores load or damage status).

Gear and Flaps Down Effects (change) - An airborne aircraft with its gear down or in transit incurs decel = to its start speed. An airborne aircraft with its flaps down or in transit incurs 1 decel point in addition to increasing all turn decel by 1. The original penalty of 5 decel etc., is replaced by this new rule.

Game Scenarios & Play Aids:

The P-47s in introductory scenarios "Meat on the Table" and "Rescuing a Straggler" are P-47D-5s and not P-47D-10s.

Fighting Wings Aircraft Turn Chart:

Aircraft Stalls and Spins - Add note that stalled flight equates to steep diving for the turn.

Fighting Wings Flight Rules Summary: Page 2

Over Loaded A/C Effects Summary - Add 5th bullet: "Reduce maximum level and safe dive speeds by 0.5."

Severe Damage Effects Summary - Change 4th bullet to read: "For climbing, treat clean A/C as if loaded and loaded aircraft as if overloaded. Add 1 per increment to climb decel." Also, add 5th bullet: "Increase minimum level and turn speeds by 0.5 and reduce total available power by 1 (but not below 1.0).

Note: Loaded and over loaded penalties are not cumulative, one or the other applies. Severe damage penalties are cumulative with loaded and over loaded penalties.

Changing Between Flight Types; - From a Vertical Dive - Delete the sentence: "if wings inverted, the A/C may enter a steep dive with wings upright."

Changing Between Flight Types; Bombers - The last sentence should read: "M class fighters may use inverted bank attitudes and if having a "gifted" pilot, they may use vertical climbs and vertical dives as well."

Fighting Wings A/C Critical Hit Tables

Equipment Criticals Table; - die roll 3 result - Change to read: "Hydraulics hit. Landing gear trails down; reduce maximum speeds by 2.0 and incur decel = to current speed per game turn. If fixed gear, then it is only damaged.

Fighting Wings Combat Tables: Page 2

Rocket Air Burst Attack: "Place air burst marker 11 hexes..."

Aircraft Data Cards & Counters:

Bf 109G-10/K-4 ADC: The average rate of climb numbers should be (from VL to EH): 4800, 4400, 3800, 3000, 2200, 1400, 800.

All Bf 109s: Add note: "Hard to land +1 to landing attrition rolls."

Me 163B: Average rate of climb numbers should be (from VL to UH+)- 21400, 24600, 27100, 29100, 24500, 18500, 12500, 6500. The last four are boldfaced to show pilot restricted climb rate due to oxygen system limits of aircraft. Add note: "+2 to forced landing die roll. Rough landings cause damage as for pranged aircraft."

P-38J: The minimum HT turn speed in the VL band should be 3.5 not 3.0.

P-51 & C: Add note: Combat Flaps, usable at speeds up to minimum +6.0. Cockpit visibility for Malcolm hood is Good.

P-51 D: Add note: Combat Flaps, usable at speeds up to minimum +6.0.

Spitfire Mk. XIVe: F.R. Variant LO band power available at speed 8.0 should be 4/5.

POL Counters- The defense strength and hit capacity of a POL unit is "8-8".

OVER THE REICH (2nd EDITION):

The following are changes and corrections that apply only to OTR when playing with the 2nd Edition Fighting Wings Standard Rules found in "Achtung Spitfire!".

Rule 4.2 - Decel Points, Turning Decel (OTR change): Decel for turning is incurred the instant an aircraft begins a turn rate, not when it faces at the said rate.

Rule 4.6 - Turning Stalls (OTR addition): When a turn stall occurs, or is required, back the aircraft up to the point in its move where the first illegal FP was expended. If (half its FPs remain, the turn stall procedure is used for the rest of the current game turn. If less than half its FPs remain, the rest are played as HFPs straight ahead (no turns, banks, or maneuvering allowed) and the turn stall procedure is executed on the next game turn.

Rules 5.1, 5.3, and 7.1 - Bank, Turn, and Slip Carry (OTR addition): FPs expended to bank, turn or slip, may be carried forward. However, any bank, turn, or slip FPs carried to the next game turn which are not used in that same next game turn are lost.

Rule 6.4 - Reversal of Aircraft Facings, (OTR addition): This is a new paragraph.

Tailing and Facing Reversals: If an aircraft is "Tailing" another (See Chapter 8), and the "tailee" executes a facing reversal, the tailer may declare an intent to reverse also but may delay the act of reversing until the beginning of the next game turn. It must still meet the reversal prerequisites during the current game turn's flight. It is not required to execute a reversal on the following turn.

Rule 8.1 - The Initiative Phase, Case e) Tailing (OTR change): Tailing is allowed within a range of eight hexes (not six).

Rule 8.6 - Aircraft Formations (OTR addition): This is a new paragraph.

Formation Types: At the start of combat scale play, each formation must be designated as holding either fixed or flexible parameters. If it uses flexible parameters, it may not use fixed formation benefits at all. A formation may start in fixed parameters and then change to flexible at the start of any game turn but may not return to fixed parameters until that battle is over. Individual aircraft not meeting the appropriate parameters for the formation in effect are "out of formation."

Rule 10.3 - Head-On Attacks (OTR additions): In the Head-On Attack Table in the play aids, pilot quality is also a modifier to collision potential as follows: Recruit +1, Veteran -1, Hero or Ace -1. Being a Veteran is cumulative with Hero or Ace modifiers (not both). Hero and Ace are not cumulative with each other.

Additional Head-On Notes: When two aircraft with fixed guns fire at each other in a head-on attack, the worst deflection factor either one must contend with is applied to both aircraft's shot. Also, if attacking an aircraft from its 12:00 line, and it is higher than the shooter and climbed, or lower than the shooter and dived, this is not considered a head-on as, technically, the shooter is behind the target's flight path.

Chapter 13 - Aircraft Loads (OTR additions): The following are new paragraphs.

Effect of Internal Bomb Bays: Bombs and other weapons carried in a bomb bay may not be dropped unless the bay doors are open at the start of the game turn. The act of opening or closing the bay doors requires one full combat scale game turn to accomplish and is declared at the start of an aircraft's move and considered complete at the start of the next game turn. On any turn the aircraft's bays are being opened, are open, or are being closed, the aircraft incurs 1 decel point.

Jettison or Release of Loads: Fuel tanks, bombs, etc., may be jettisoned or dropped from aircraft at the tactical or operational scales of play by declaring the act at the end of their movement in a game turn. At the combat scale, the act of jettisoning firing or dropping stores is declared in the combat phase (the aircraft is considered to retain the loads until then).

Restrictions on Jettison or Release of Loads: Aircraft that wish to jettison or release stores must not end the game in an inverted attitude or pull negative Gs. Weapons are jettisoned in an unarmed condition and dud.

Chapter 18 - Anti-Aircraft Artillery (OTR changes): The following are revised paragraphs.

Big Guns: AAA guns larger than 57mm are single shot weapons which require one or two turns to reload after which they may fire again. Damage to aircraft is primarily from shell bursts and shrapnel rather than

from multiple direct hits but for game purposes this damage potential is represented by a firepower rating just as for smaller AAA guns.

Reloading Big Guns: After firing, a land-based big gun cannot attack again until the turn after it completes reloading. Reload times (in game turns) are listed in the AAA play aid. Naval turret-mounted big guns with automatic loaders are given shorter reload times. Reloading cannot occur on turns a gun is silenced due to damage.

Resolving Big Gun Attacks: Big guns attacks are resolved like regular AAA attacks except that big guns may only combine their firepower with other big guns and their attack is resolved separately from any regular AAA attacks.

Note: With the release of the Whistling Death Module, big gun (heavy) AAA will be further refined to require an on target die roll, which, if missed results in the attack scattering.

The revised big gun AAA value for the 8.8cm Flak 41 in each range grouping is:
-, -, -, -, 4, 4, 4, 4, 4, 4.

ACHTUNG SPITFIRE!

The following are 2nd edition rules changes and corrections that apply only to the ASP rule book.

Rule 6.3 - Changing Between Flight Types (ASP errata): Rule 6.3 is correct, the ASP Flight Rules Summary play aid is incorrect. Delete the words "...before first VFP used..." in both the wings inverted cases of: "- From Level Flight" and "- From a Zoom Climb."

Rule 10.3 - Head-On Attacks (ASP clarification): For the Head-On Attack Table modifiers in the play aids, being a Veteran is cumulative with Hero or Ace modifiers (not both). Hero and Ace are not cumulative with each other.

Additional Head-On Notes: When two aircraft with fixed guns fire at each other in a head-on attack, the worst deflection factor either one must contend with is applied to both aircraft's shot. Also, if attacking an aircraft from its 12:00 line, and it is higher than the shooter and climbed, or lower than the shooter and dived, this is not considered a head-on as, technically, the shooter is behind the target's flight path.

Rule 15.5 - Operational Scale movement (ASP errata): In the "Aircraft Attitudes" paragraph the second sentence should read "...with a rate of climb (3,000..." (not: (3,000). In the last Note on page 34 the first sentence should read "...has a climb rate (3,000..." (not: (3,000).

Aircraft Data Cards:

Spitfire Mk. I, Mk. II, and Hurricane Mk. IIC: Completely revised data cards appeared in issue 29 of The Art of War. Changes too numerous to specify here. All minor.

Fairy Battle Mk. III: Power in the HI band at speed range 1.0 - 4.5 should be "1/-". DG ammo should read "12 (6x3)*."

Blenheim Mk. IV: Bank and side slip FPs for speed range 8.0 - 9.5 should be 6 and 6 respectively. (Possible in dive speeds).

Bf 109E-3 Variant: Ammo for W1 and W2 weapons should be 4.0. (Slower rate of fire).

Ju 88A-5: No power should be listed in the VL band for speed range 5.0 - 7.5. Bank and side slip FPs for speed range 10+ should be 7 and 8 respectively. (Possible only at terminal velocity in the H I band.

Dornier Do 17Z-2: No power should be listed in the HI, LO, and VL bands for speeds 5.0 - 7.5.

Dornier Do 217E-3: Bank and side slip FPs for speed range 10+ should be 9 and 10 respectively.

(Possible only at terminal velocity in MH and ML bands). Max speed in the MH band should be 6.0, not 5.0.

FIGHTING WINGS- OVERALL GAME SYSTEM SPECIFIC CHANGES:

The following are 2nd edition Fighting Wings overall rules changes, corrections, and new rules that affect both the OTR and ASP rule books.

Rule 3.3 - Collisions (errata): The aircraft with the largest size modifier in a potential collision must add that modifier to the collision die roll. (Add this to the Same Hex/Same Altitude Collisions Table.)

Rule 4.1 - Accel Points, Dive Accel (change): When diving, aircraft gain energy from gravity. Dive Accel is gained as follows:

Each altitude increment dived in a game turn adds 1 accel point (regardless of wing attitude or speed).

Each VFP expended diving adds the aircraft's listed dive accel number regardless of speed bands.

Rule 4.2 - Decel Points, Climb Decel (change): When climbing, aircraft lose energy to gravity. Climb decel is determined for an aircraft as follows:

Each altitude increment climbed in a game turn causes 1 decel point if wings are banked upright, or 2 decel points if wings are banked inverted (see exception below) when a VFP is expended. Add 1 decel point per increment if aircraft below its defined climb speed.

Climb Speed: An aircraft's defined climb speed is its listed min. speed +1.5, or its max allowed level speed (adjusted for loads, damage, etc.) if lower than its min. +1.5.

Additionally:

Each VFP expended adds the listed climb decel number if the aircraft's speed is in the "1.0 to 4.5" band or,

Each VFP expended adds 2 decel points if the aircraft's speed is in the "5.0 to 7.5" speed band or,

Each VFP expended adds just 1 decel if the aircraft is faster than speed 7.5.

Add 1 decel per VFP if the aircraft is severely damaged.

Inverted Exception: The +1 decel point per increment gained while in inverted bank attitudes penalty does not apply to aircraft in pure-vertical climbs (e.g., all FPs are VFPS). It does apply for regular vertical climbs however.

Note: The lower climb factors with increased speed take into account increased momentum available to the aircraft when it pitches into a climb at higher speeds.

Rule 4.2 - Decel points, Excessive Speed Decel (change): Change the bullet to read:

For every 0.5 (half FP) of speed over the aircraft's maximum allowed level speed at which it starts a game turn (after adjusting speed for idle power, it used), 3 decel points are incurred.

Rule 4.5 - Stalls and Spins (revisions): The following are new and revised paragraphs.

Stalled Moves (sentence change): "...It loses altitude in increments equal to the higher of its current speed x2, or 2 x no. of turns the aircraft has been stalled".

Stall/Spin Restrictions: Aircraft that are stalled or spinning may not participate offensively in combat in any way, nor fire defensive guns. They may still be targets. For pilot bail-out modifiers, aircraft in spins ignore speed modifiers.

Stall/Spin Effects on FP Carries, Accel & Decel: Aircraft that stall or spin forfeit any half-FPs, turning, banking, or maneuvers being carried to the next turn. Aircraft in stalls, retain accel and decal carries. Aircraft in spins lose all carried accel or decel.

Rule 4.5 - Stalls and Spins (addition): The following is a new paragraph.

Deliberate Spins: Any gifted pilot, or any regular or better quality pilot may, if desired, choose to force an aircraft into a spin, instead of avoiding one, when rolling the die for Stall/Spin determination. If they desire to spin, declare such intent, change any negative pilot die roll modifiers to positive and add +2 to the Stall/Spin die roll. Recovery from spinning, however, is through the normal rules.

Rule 4.6 -Turning Stalls (addition): The following are new paragraphs.

Deliberate Turn Stalls: A player may fly an aircraft so as to deliberately invoke a turning stall. This must be declared at the start of the aircraft's move.

Turn Stall Disorientation: Green or Recruit pilots who accidentally suffer or deliberately perform a turn stall, must, upon completing the turn stall procedure (assuming the aircraft is no longer stalled or spinning), perform one or two turns, respectively, of GLOC flight due to disorientation. If stalled or spinning after a turn stall, these GLOC moves are ignored.

Rule 5.1 - Angle of Bank, Banking, Turning, and Vertical Climbs and Dives (revision): Turning is not allowed while in a vertical climb or vertical dive attitude although banking is. Changing bank angle while in vertical attitudes will normally have little affect on the aircraft's flight path as it is merely rolling about its longitudinal axis. However, when an aircraft exits a vertical flight attitudes any angle of bank change it has made can instantly manifest itself as a facing change. To reflect this, an aircraft may, if desired, change its facing each time it banks while in vertical flight as follows:

If the banking requirement was met entirely with the expenditure of HFPS, the facing change is limited to 30 degrees in the same direction as the change in bank.

If the banking requirement was met with the expenditure of both HFPS and VFPS, the facing change may be up to 60 degrees in the same direction as the change in bank.

If the banking requirement was met entirely with the expenditure of VFPS, the facing change may be up to 90 degrees in the same direction as the change in bank.

If an aircraft is on a hexside and expends FPs to bank twice in a row in order to make a 180° heading change, it may, at the player's option, remain on that hexside instead of shifting to an adjacent hex after the first bank.

Bank angles must still be tracked and recorded normally on the aircraft logs while in vertical flight.

However, for each unused 60° of potential facing change during actual banking in vertical flight over the game turn, the aircraft's bank angle can be changed back by one step toward its starting bank.

Rule 5.5 - G-Induced Loss of Consciousness (clarification): When climbs and dives are called for, exactly 2/3s the aircraft's speed must be spent as VFPS for vertical climbs and dives, and at least 1/2 must be VFPS for steep dives and zoom climbs.

Rule 5.6 - Slatted Wing Effects (new advanced rule): Slats are wing leading-edge devices that help aircraft remain controllable while at high angles-of-attack. Aircraft are at high angles-of-attack when near their stall speed or when maneuvering hard at higher speeds. Aircraft with slats (see ADC notes) gain the following benefits:

Stall & Spin Effects: Any aircraft with slatted wings gets a -2 modifier to all stalls and spin recovery die rolls.

Minimum Speed Effects: Veteran and gifted pilots may fly slatted-winged aircraft at speeds 0.5 less than the listed minimum level speeds (in other words, the minimum allowed speed is reduced by 0.5).

However, any aircraft starting a game turn below its normal listed minimum level speeds must add 1 to any EZ turn decel incurred, and they receive a +2 shot modifier due to aircraft instability.

Minimum Turn Speed Effects: Regular or better pilots may perform "slat-assisted" HT, BT, and ET turns at speeds 0.5 less than the minimum speed normally listed for such turns by paying one extra decel per 30(of slat-assisted facing change. If shots are taken on a game turn in which slat assisted turns were used a +2 shot modifier is added to the die roll due to aircraft instability. Gifted pilots (see Rule 12) doing slat-assisted turns do not suffer the 1 extra decel penalty per facing change (but do suffer the combat modifier) and may also do TT turns at speeds 0.5 under the minimum listed for such turns.

Combined Effects of Using Flaps & Slats When Turning: ASP Rule 20.2 allows any pilot to partially drop regular flaps (with some speed limits) or to use combat flaps to lower minimum turn speeds by 0.5 at the cost of extra decel. A slatted aircraft which uses flaps for this is also considered to be in a slat-assisted turn any time it does a facing change at the reduced minimum turning speed (the slats automatically deploy at high AOA). The use of slats with flaps does not have a cumulative effect on minimum speeds. Using both features will not reduce minimum level or turn speeds by 1.0, just by 0.5). Instead, the effect of using both items is to cancel the +2 shot penalty for slat-assisted turning but the increased decel penalties for both slat use and flap use must be applied.

Rule 6.3 - Changing Between Flight Types, - From a Zoom Climb (addition): Add the following sentence to the FW rules and Play Aids of OTR and ASP: "If wings upright and steep dive selected, (to half of speed must be spent as HFPs before any VFPs may be used."

Rule 6.3 - Changing Between Flight Types, - From a Steep Dive (addition): Add the following sentence to the FW rules and play aids of OTR and ASP:

"If wings upright and aircraft steep dove last turn using 1/3 or less of its FPs as VFPs, the aircraft may zoom climb but 2/3 its speed must be expended as HFPs before any VFPs may be used.

Rule 6.4 - Reversal of Aircraft Facings, Steep Dive Facing Reversal (addition): Aircraft may not perform a steep dive reversal on their first game turn of steep diving flight, following level or climbing flight, unless, in addition to meeting the other requirements, their speed is at or above the minimum required to perform HT turns. If this is the second or subsequent turn of diving flight, they may do steep dive reversals normally regardless of minimum turn speeds.

Rule 6.4 - Reversal of Aircraft Facings, Facing Change Limits & Carries (optional addition): Aircraft reversing from steep or vertical dives are limited in the number of degrees of actual facing changes allowed when the reverse is executed depending on their bank angle at that moment as follows:

>From level or inverted attitude: 180(required, aircraft may rotate in either direction or remain on a hexside it started on hexside.

>From banked attitude: 120(to 150(allowed (4-5 facing changes). Facing change rotation of the counter is always clockwise (CW) if in right attitude and counterclockwise (CCW) if in left attitude.

Accumulated banking FPs carried to the next game turn are affected by facing reversals as follows:

1. From level toward LB becomes carry toward IRB.
2. From level toward RB becomes carry toward ILB.
3. From inverted toward ILB becomes carry toward RB.
4. From inverted toward IRB becomes carry toward LB.
5. From LB toward level becomes carry toward LB.
6. From RB toward level becomes carry toward RB.

7. From ILB toward inverted becomes carry toward ILB.
8. From IRB toward inverted becomes carry toward IRB.
9. From LB toward ILB becomes carry toward inverted.
10. From RB toward IRB becomes carry toward inverted.
11. From ILB toward LB becomes carry toward level.
12. From IRB toward RB becomes carry toward level.

Note: The facing change rotation of the counter when reversing is always clockwise (CW) if in right attitude or carrying bank toward right attitude and counterclockwise (CCM if in left attitude or carrying bank toward left attitude.

Rule 6.6 - Negative-G Pushovers (FW change): The test for negative-G situations is changed to consider only the aircraft's angle of bank at the start of its move.

Delete the ASP/OTR references to "...when the first VFP is expended." in cases 1, 2, 3, and 4 of the rules and in the Play Aids. Now, to avoid negative G, players must end the previous turn in an appropriately banked attitude. Case 8 applies only if the aircraft expends 1/3 or more of its VFPs while inverted.

Rule 7.1 - Side Slips & Skids (change): Aircraft incur decel for the slip or skid the instant they expend the first required FP for the maneuver selected. This brings decel for slips and skids in line with the rule for turning decel.

Rule 7.5 - Hammer head Stalls (addition): Aircraft may not perform hammer-head maneuvers if their rudder has been knocked out by a critical hit, or it located at an altitude increment that defines the boundary or interior of a cloud deck or layer (you can't do this acrobatic maneuver on instruments). Upon executing a Hammer-head, the aircraft may adopt any angle-of-bank by declaring it (as if banking while in vertical flight. An aircraft that successfully does a hammer-head is considered to have been in a vertical dive the turn the hammerhead was performed for purposes of determining what its flight type options are the turn after.

Rule 7.6 - Barrel Rolls and Snap Rolls, Snap Rolls (addition): M and H class bomber aircraft may not use or do snap rolls. M class fighters may only use snap rolls if a "gifted" (see Rule 12.4) pilot is at the controls.

Rule 7.7 - Negative-G Turning (new rule): F, L, and M class fighter aircraft with regular or better pilots are allowed to turn and face in the direction opposite their angle of bank by pushing over into negative-G turns. Negative-G turns of up to HT rate are allowed. Declare the intent at the start of the maneuver. The aircraft's minimum speed for a negative-G turn is that required for a one-step higher normal turn (i.e., a negative-G TT turn requires a minimum speed equal to that for a regular HT turn etc.). An aircraft in an inverted bank may negative-G turn in diving, level or climbing flight. If in an upright bank, a negative-G turn is not allowed unless the aircraft also enters a flight type, one steeper than that used the turn before (a result of the push-over). If inverted, all other inverted flight penalties still apply. Banking is not allowed while in a negative-G turn.

Note: The turning gunfire arc is not allowed if the aircraft is in or its last FP was used to face from a neg.-G turn, only the straight ahead arc. Also, negative-G turns may never be slat-assisted (Rule 6.9) and inverted pull-ups (see Rule 6.8) must use the negative-G turn speed limits and restrictions.

Rule 8.1 - The Initiative Phase, Case e) Tailing (addition): M class fighters may tail F and L class aircraft. M class bombers and H class aircraft may never tail aircraft in lower categories.

Rule 8.1 - The Initiative Phase, Case e) Tailing (addition): The following are rules additions to tailing:

An aircraft in a vertical climb or vertical dive, may declare tailing on an aircraft in the same hex, that is higher or lower respectively and also in some type of climb or dive respectively, regardless of relative facings. Note: The range limit of eight hexes still applies.

An aircraft in a vertical climb or vertical dive, may be tailed by aircraft that are lower or higher respectively and also in some type of climb or dive respectively, regardless of the tailee's arc those aircraft are in. Note: The range limit of eight hexes still applies and the tailer must still have the tailee in its front arc.

An aircraft in a climb or dive, may declare tailing on an aircraft in its front arc, within a range of eight hexes that is also climbing or diving respectively, regardless of relative facings as long as the tailee is a 300 feet above or below the tailer respectively per horizontal hex away (the same as meeting the vertical attack parameters).

Rule 8.1 - The Initiative Phase, Case h) Visual Sighting (clarification): For purposes of blind arcs, aircraft on the border of the sighter's rear arc are considered in the rear arc. (Note: The same ruling is true for critical hit die roll modifiers from the front and rear arcs).

Rule 8.1 - The Initiative Phase, Case h) Visual Sighting (addition & change): The following rules additions to blind arcs apply only to aircraft in vertical attitudes. Aircraft not in vertical attitudes use case "h)" as written:

Aircraft in vertical climbs or vertical dives are never considered blind to aircraft above or below them respectively, regardless of the arc those aircraft fall in.

Aircraft with "Rear Low" defined blind arcs that are in vertical attitudes are blind to targets in their rear arcs, based on bank attitudes and relative altitudes, as defined below:

1. Vertically climbing aircraft with "Rear Low" blind arcs, that are in one of the three upright bank attitudes, are blind only to lower aircraft in their rear arcs that are more than 300 feet below per horizontal hex of range away. Example: a target in a vertically climbing upright P-51's rear arc, which is two hexes away, is blind to the P-51 if a 700 feet below it.

2. Vertically climbing aircraft with "Rear Low" blind arcs, that are in one of the three inverted bank attitudes, are blind to lower aircraft in their rear arcs that are less than 300 feet below per horizontal hex of range away. Example: a target in a vertically climbing inverted P-51's rear, which is two hexes away, is blind to the Mustang if 500 feet or less below it.

3. Vertically diving aircraft with "Rear Low" blind arcs, that are in one of the three upright bank attitudes, are blind to higher aircraft in their rear arcs that are less than 300 feet above per horizontal hex of range away. Example: a target in a vertically diving upright P-51's rear, which is three hexes away, is not blind to the P-51 unless 800 feet or less above it.

4. Vertically diving aircraft with "Rear Low" blind arcs, that are in one of the three inverted bank attitudes, are blind only to higher aircraft in their rear arcs that are more than 300 feet above them per horizontal hex of range away. Example: a target in a vertically diving inverted P-51's rear, which is three hexes away, is not blind to the Mustang unless 1,000 feet or more above it.

The following table summarizes these four cases:

Attitude "Rear Low" Target is Blind in Rear Arc

Blind Aircraft is in: If the following is True:

1. Vertical Climb, Upright More than 300 below / hex
2. Vertical Climb, Inverted Less than 300 below / hex
3. Vertical Dive, Upright Less than 300 above / hex
4. Vertical Dive, Inverted More than 300 above / hex

Rule 9.2 - Aircraft Fields of Fire (clarification): Aircraft in vertical climbs and dives may use the "Aircraft Turning" gunfire arc if they end their move with a facing change due to banking. The turning gunfire arc used, is the one in the direction of the facing change, regardless of the aircraft's declared ending bank angle.

Rule 10.2 - Special Combat Considerations: The following are new and revised cases.

Zero Deflection (change): Attacks from the 6:00 line only get the -2 modifier to the attack die roll if the shooter is also pointed down the 6:00 line. (i.e., the shooter's 12:00 line is superimposed over the target's 6:00 line).

Beam Attacks (addition): The cockpit armor critical hit modifier is reduced by -1 (but not below "0") if the critical hit was the result of a beam attack.

Half Bursts (addition): Crack shot pilots (see Chapter 12) using a half burst only reduce their combat odds by one column, not two. For a regular burst in which some weapons empty after a half shot, crack shot pilots suffer no column shift.

Temporary Gun Jams (new rule): Some aircraft are designed to allow the pilot access to gun-charging handles and levers in order to clear certain gun jams. Guns which can be unjammed in the air are indicated on aircraft ADC's by the use of bold-faced print for the Type Weapon indication in the ADC's Firepower chart. If such a weapon jams due to a long burst, the jam may be cleared by rolling a 7 or less at the end of any turn in which the aircraft used HT turns or less, avoided negative-G flight, vertical climbs or dives, and inverted attitudes. Only one attempt may be made to un-jam guns. If the attempt fails, the jam is permanent.

Rule 10.2 - Special Combat Considerations, Sighting for Cannons with M.G.s (new rule):

Fighters with limited cannon ammo, but carrying nose-mounted M.G.s often used their machine guns to fire at and track enemy aircraft, only adding in their cannons when hits were being observed. This avoided wasting precious cannon ammo.

Sighting with M.G.s Prerequisites: Firing pilot must be a of regular or better quality, or a crack-shot.

Firing aircraft must have nose mounted M.G.s with a listed ammo capacity ? twice that of some of the cannons (nose- or wing mounted) being used in the attack, and have at least 2 shots left to the sighting M.G.s.

Sighting with M.G.s Procedure: Declare using M.G.s to sight before the attack is made. Resolve the shot normally (include all cannons being fired), using either a half, regular, or long burst as desired.

Regardless of the type of burst used, 2 points of M.G. ammo will be used up (the pilot is snapping off continuous short sighting bursts and watching for hits as he moves). The sighting with M.G.s procedure may be done for attacks out to range six, even if the M.G.s are not normally effective at that range (they add no firepower in this case). The sighting M.G.s are not subject to jamming unless a long burst is used for the attack.

Sighting with M.G.s Effects: If at least one point of damage is done to the target in the attack, then cannon ammo is expended normally per the type of burst used. If no damage is done to the target, then a half burst or regular burst expends only 0.5 points of cannon ammo, and a long burst expends only 1 point of cannon ammo. The assumption is that the pilot will know that his shot was poor and not hold the cannon trigger down as long if he sees no hits. Only cannon weapon groups whose listed ammo capacity is: 5 half that of the sighting M.G.s being used get this benefit. Large air-to-air cannons (37mm+) never benefit from this rule.

Rule 10.5 - Bomber Defensive Fire (new rule): The following is a new paragraph.

Defensive Fire Blind Spot Considerations: Some aircraft (including fighters) have defensive guns which may not fire at attackers on their 6:00 lines unless the attacker is high, or high+ relative to the gunner due to airframe interference (e.g. tall rudders). However, this blind spot really represents only a few degrees of blocked gun travel, therefore, when aircraft with such defensive guns are stacked together, in formation, in the same hex, the following two rules apply:

Only the Target is Blind - Only the actual aircraft counter being attacked by an aircraft in its blind spot is restricted from using defensive fire against the attacker. Other aircraft in the target's hex and formation are assumed to be displaced laterally some distance from the one under attack and can still use defensive

fire against the attacker as long as they still meet their defensive gun's basic altitude and arc coverage limits (ignoring the blind spot).

Only the Nearest is Blind - If an aircraft ends a move in the blind spots of one or more aircraft with defensive guns but is not attacking any of those aircraft, it is considered to be in the blind spot of only one aircraft, the one nearest to the fighter. If two or more aircraft are equally near, the blind one is determined randomly. The rest are still eligible to fire.

Rule 10.5- Bomber Defensive Fire, Defensive Fire Restrictions (addition): Unlike bomber gunners, Fighter (F and MF class aircraft) and Divebomber (any D class aircraft) gunners may fire even if their aircraft are in vertical climbs or dives, provided no other considerations restrict their firing (e.g., turn rate). They were more accustomed to flying in unusual attitudes.

Chapter 11 - Aircraft Damage & Chapter 13 - Aircraft Loads (clarification): Reductions to an aircraft's maximum level speed due to damage states, critical hits, engine power losses, knocked-out engines, or aircraft load states, always refer to the aircraft's max "attainable" level speed but not its max "listed" speed. An undamaged and unloaded aircraft's max attainable level speed is the same as its listed max level speed. Damage or load status can reduce the max attainable level speed. An aircraft that is faster than its max attainable level speed suffers excess speed decel penalties (see Rule 4.2) but its available power is never reduced by 1/3 unless it also exceeds its original max listed speed. Also, Rule 4.1's paragraph "Maximum Speeds and Excess Accel" only applies to an aircraft's current max "attainable" speed not its maximum listed speed.

Engine Power Loss Order: When an aircraft suffers reductions to engine power due to critical hits, these points are taken away before making any fractional power adjustments due to severe damage state, load status, and/or exceeding maximum listed level speed.

Rule 11.1 - Cumulative Damage Effects (change): Change the next to last bullet's 2d sentence to read: "...Add 1 decel per VFP expended climbing."

Rule 11.3- Special Damage Considerations (change): The following are revised paragraphs.

Oxygen Loss: There is no effect for five combat scale game turns. Reduce this grace period by one turn per band above ML the aircraft was in when the oxygen was lost. After that time, if the aircraft is still in the ML band or above, roll one die at the end of each combat scale turn. If a one results, one or more crewmen may collapse unconscious. Subtract 1 from this roll for each band above ML the aircraft is in. If unconsciousness is called for, roll again. On a 10, no one blacks out; on a 1-3 one crewman blacks out; on a 4-6 two do; on a 7-9 three do. For this roll, add 1 to the result for each 1,000 feet below 18,000 the aircraft is at. If all pilots black out, treat as GLOC. Below the ML band, the crew will recover from unconsciousness after a number of turns determined as for GLOC.

All H class aircraft can sustain one "Oxygen knocked out" critical with no effect due to back up systems- The second such hit invokes the above effects.

Rule 12.2 - Formation Considerations (addition): A green pilot may be used as an "acting" formation leader if insufficient regulars and veterans exist to fill the position. However, this is only an administrative position for launching missions, battle setups and scenario starts. A green pilot acting as a leader does not provide any formation benefits as a regular or veteran does.

Rule 12.4 - Pilot Characteristic Effects, Gifted Flyers (change and addition): When gifted pilots use their ability to HT, BT, and ET turn at 0.5 under the listed minimum turn speeds in non-slatted winged aircraft, they incur a 1 decel penalty for each facing change and if they take a shot, a +2 modifier is applied to the die roll. Gifted pilots in slatted winged aircraft ignore the normal decel penalty for slat-assisted turning and they may do slat-assisted TT turns (See new advanced Rule 5.6).

Chapter 13 - Aircraft Loads (change): The following paragraph is new for OTR and revised for ASP.
Drop Tank Considerations: Drop tanks that are jettisoned in combat scale play must also have a die rolled for each one. On a result > 10, the drop tank sticks (otherwise it drops freely). The aircraft may attempt to jettison a stuck drop tank again on the next turn. On the second try, a die roll of (7 means the tank is permanently stuck. Add +1 to the drop tank jettison die roll if the aircraft is above max listed level speed, and +1 if HT or higher turn rates were used in the game turn the jettison is attempted. If large formations of drop tank equipped aircraft are dropping them at once, the Aircraft Attrition Table may be used. The result on the Attrition Table being the number of aircraft that have stuck tanks (randomly determine which).

Rules 14.1 & 14.4 - First Sight Determination & Defender's Sighting Phase (additions):

Add these modifiers to the First Sight Modifiers Tables in the Play Aids:

-1 if spotter more than two hours into mission, or;

-2 if more than four hours into mission.

Add these modifiers to the Defender's Sighting Modifier's Table:

+1 if more than two hours into mission, or;

+2 if more than four hours into mission.

These modifiers take into account fatigue on long missions.

Rule 14.2 - Position Determination Phase, Attacker's Placement (FW addition): The modifier for "Early Warning Radar in Use" which appears on the TMG Starting Position Modifier's Table may be a plus or minus modifier at the TMG attacker's choice. The decision must be made before rolling for start position. This allows interceptors the option of being helped by radar to position for head on attacks.

Rule 14.3 - Attacker's Movement Phase, Aircraft Speed Definitions, Climb Speeds (change): An aircraft's defined climb speed is its listed min. speed +1.5, or its max allowed level speed (adjusted for loads, damage, etc.) if lower than its min. +1.5.

Rule 14.6 - Setting Up Combats (revision): This is a completely revised rule for both OTR and ASP with a new introductory paragraph.

When combat scale play is initiated, set up as follows:

- a). Place the defending aircraft on the game map per the instructions given in paragraph 1 below.
- b). Scatter the defending formation as allowed and explained below in the next section.
- c). Determine the attacker's set up range per the instructions in paragraph 2 below.
- d). Place the attacking aircraft on the game map per the instructions given in paragraph 3 below.
- e). Scatter the attacking formation as allowed and explained below in the next section.
- f). If the attacker's were sighted before set up, the defending aircraft may each adopt any upright angles of bank. If not, they must all begin wings level.
- g). After all defending aircraft have their angles of bank determined, the attacking aircraft may each adopt any desired upright angles of bank.

1) Defender's Set Up: Place the defending aircraft near the center of the combat map, one per hex, with wingmen and subordinate leaders in appropriate formation parameters. Escorts are placed at their declared higher altitude, in formation parameters, with their main leader being within 12 hexes of the escorted formation's leader. Escorts may be split into smaller formations and spread out so long as each subordinate escort leader is also within 12 hexes of the escorted aircraft's leader, or within normal subordinate leader flexible formation parameters (see Rule 8.6).

2) Attacker Start Range: The attacker rolls the die to determine the horizontal range at which he must set up his main leader with respect to some selected target aircraft in the defending formation. The range

varies depending on the TMG band the combat was initiated from. See the TMG play aid for more range specifics.

3) Attacker's Set Up: First, place the attacking leader at the exact distance in hexes determined above, and in the deflection arc parameters indicated on the outer edge of the TMG, from a selected target enemy aircraft (this may be any aircraft in the escort, or escorted aircraft formations). Next check the horizontal distance from the attacking leader to the next nearest non-targeted enemy aircraft. This distance may not be less than that required to exist from the leader and the original targeted aircraft. If it is, move the attacker away from the target, while maintaining required deflection arc parameters, until this distance from the next nearest enemy is also met. After the leader is placed, the rest of the attackers are placed in appropriate formation parameters with their leader. The attackers may set up with any facing that puts an enemy in one of their three front arcs and doesn't violate their formation parameters.

4) Final Adjustments: After the defenders have their angles of bank determined, the attacking aircraft may each choose to start with any upright angle of bank.

5) First Game Turn Restrictions: If the attackers were sighted before the set up, there are no play restrictions. If the attackers were not sighted, all defending aircraft must move straight and level for the first game turn (or first two game turns if no radio on aircraft) as explained in Rule 14.4 above.

Note: The defender's are no longer given a free facing change and angle of bank adjustment after seeing the attacker's final set up. This made breaking a surprise attack too easy.

Rule 14.6 - Setting Up Combats, Formation Scattering, paragraph 1 (revision): This is a revised paragraph for both OTR and ASP. The other paragraphs remain the same.

1) For each 4 or fewer enemy aircraft in a formation, roll one die and add the results. The opposing player counters by rolling one die for each 9 or fewer aircraft in his formation, and subtracts the sum of his rolls from the sum of your rolls. The remainder, if positive, is the number of adjustments you may make to the enemy's formation, excluding the enemy's main formation leader. Do this for each separate formation in the battle. If a player is the TMG defender, he may add one die to his counter roll for each two tactical turns the attacker maneuvered on the TMG after being spotted, without either side committing to combat.

Rule 14.6 - Setting Up Combats (additions):

High Altitude Effects on Formation Scattering: If any aircraft of a formation are in the HI band, add one die roll to the total number of scatter rolls. If any aircraft of the formation are in the VH band, add two die rolls to the total. If any aircraft of the formation are in the EH+ bands add three die rolls to the total and aircraft actually in the EH+ bands may have their positions adjusted up to four times instead of the normal three. Use only the worst case altitude that applies for added rolls to a formation.

Exception: Formations of aircraft with pressurized cabins are not affected by this rule in the HI band and add only one or two rolls for VH and EH+ bands respectively.

Mission Fatigue Effects on Formation Scattering: If any bomber or fighter formation has been in the air for more than two hours (12 Operation scale turns), add one die roll to the total number scattering die rolls; if more than four hours, add two die rolls and individual aircraft may have their positions adjusted up to four times instead of the normal three, regardless of altitude.

Exception: Aircraft with pressurized cabins do not suffer above fatigue effects until four and eight hours in air.

Rule 14.11 - Remaining Engaged With Enemy Bomber Formations (new advanced rule): Per Rule 15.7, aircraft formations are limited to initiating only one combat per Op-scale turn against opposing aircraft, however, once a formation initiates combat, they may remain engaged with the target formation from Op-turn to Op-turn, eliminating the need to re-roll for interception on successive turns if the following applies:

The target formation consists of unescorted L, M, or H class bombers or of bombers whose escort was lost (due to combat losses or break-off), and the attackers are all F, L, or M class fighters.

Rule 14.12 - Temporary Combat break-Off to the TMG (new advanced rule): When combat scale play ends after an initial attack, and the above Rule 14.11 conditions are met, instead of breaking off to the OMT, the attacking fighters may, instead, break-off back to the TMG remaining "engaged" with the target formation. Fighters breaking off to the TMG are placed in the B-Band or C-Band ring, depending on range at break-off, on the deflection arc box that most closely approximates their relative position with respect to the defending aircraft formation's highest ranking surviving leader. If the range at break-off was 30 or less (taking into account relative altitude), the interceptors go into the B-Band. If >30 hexes, they go into the C-Band.

Each interceptor's altitude becomes what it was at time of break-off. Interceptors in the same TMG band square and within 600 feet of each other in altitude may automatically join into a new formation during the break-off.

Interceptor Re-attack from TMG Option: After breaking off to the TMG, interceptors may maneuver on the TMG and re-attack per the normal TMG rules. They may do this repeatedly so long as they are not intercepted themselves, or the defenders acquire new escorts.

Note: These rules simulate unmolested attackers pulling off outside of defensive gunfire range, regrouping and swinging around for another attack on the same target

Relative Time Scale Considerations: Each move on the TMG still advances the time by one minute.

When ten tactical scale moves go by the whole game advances to the next Op-turn. Engaged formations maneuvering on the TMG are subject to being intercepted themselves per the Intercept Time Line rules given below (see Rule 15.7.1). If a new Op-turn occurs, engaged formations move with the target formation.

Rules 15.1,15.7,14.9 & 14.10 - Weather (addition):

When a combat is set up from operational tactical scale play, it is possible that weather can be rolled up that totally immerses all combatants in solid cloud decks. Since, in reality, a flight leader would not normally take or operate a formation of aircraft into thick clouds during a combat mission (they would go over, under, or around any clouds), the following procedure should be followed if this occurs:

Before setting up wingmen and doing scattering shift all leader A/C up or down uniformly in altitude in the direction that will allow all the A/C in the combat set up to be clear of the clouds with the least change in altitude. Stop when the last aircraft is 100' past the clouds. If this cannot be done while keeping some of the defenders in the original band, or exceeding their ceilings, re-roll the weather and try again from the original start positions. Repeat this procedure until the combat can occur. Finish setting up then. Note: WingA/C may not set up in, nor be scattered into the clouds.

Note: Clouds were abstracted at the Operational and Tactical scales of play because the designer assumed there would be enough gaps for formations to fly around them. An op-scale intercept, and tac-scale play to a combat set up assumes clouds were not a factor, so to have them suddenly envelope everyone is not right, this rule fixes this.

Rule 15.75 - Operation Scale Movement, Endurance Speed (FW Revision): Replace the original paragraph with the following:

Endurance Speed: Any aircraft, except bombers proceeding to a target, may choose to move or loiter at "endurance" speed to save fuel. They may:

Stay in place, move a half square each turn, or move two squares every three turns while remaining level or diving as allowed above for their aircraft class. An aircraft moving horizontally at endurance speeds simulates a half square move by moving onto the border line between two squares or off the border line into the next square as required. While on a half square it is always considered to be in the square it just came from.

Slow Formations: Formations with a combat cruise speed of <4.0 must always move as if they were at endurance speed (but normal fuel burn), even when proceeding to the target. These formations may climb

only by staying in place and climbing 1 band per turn. Fuel consumption when climbing is at normal rate. If a slow formation loiters to save fuel, it only moves a half square each turn.

Rule 15.7.1 - Intercept Time Lines (new optional rule): With this optional rule, combat scale play does not begin until all formations in an enroute square have had a chance to declare and attempt intercepts using the normal order of initiative rules. After the intercept procedure is done, a timeline for any other successful intercepts against this first pair of combatants is established as follows:

Time-of-intercept=One: The first successful intercept which occurs, be it a random, free-hunter, or deliberate intercept, is deemed to occur at time=1 minute into the Op-turn (this becoming the time of the first turn set up on the TMG for the involved formations' engagement).

Time-of-intercept=One+N: Any other formations in that enroute square having successful intercepts involving the original "time = one" formation, must each secretly roll a die. Each takes half its roll rounded up, +1 for each formation that successfully attempted intercepts before it during the initial intercept procedure. The result (N) becomes that formation's time-of-intercept (TOI) in minutes on the established time-line. Note this on paper to show at the proper time.

Note- If subsequent formations make intercepts not involving the first pair of combatants, then their battle also begins at time = one, and not later, as this is a separate event.

Time-Line Usage: Once all intercepting formations have their TOI determined, formations involved in the "Time=One" intercept may begin TMG play. Each game turn on the TMG advances the time-line by one minute, and if combat scale play commences, each 15 combat scale game turns advance the time-line by one minute. Other formations intercepting any of the participants in this action do so when their time-line TOI tactical game turn begins.

Effects of New Formations Entering an Engagement: If a new formation enters combat while the original pair are still maneuvering on the TMG, and the intercept is against the TMG defender, simply add the new force (randomly positioned per the normal rules) to the attacker's side as per the multiple attackers on the TMG rules (Rule 14.7).

If the new formation enters combat while the original pair are still on the TMG, and the intercept is against the TMG attacker then the original defenders are ignored (get away for now, but may be targeted by another formation later), and the original attackers are bounced by the new arrivals. A combat scale set up occurs using 6:00 line and range band A parameters. The bounced formation is allowed one roll to spot the new arrivals.

If the new formation enters a combat scale engagement already in progress then the new arrivals are set up per Rule 14.7 (6:00 line and B band parameters from anyone active foe on the map).

Rule 20.3.1 - Shooting at Parachutists (addition): When a pilot or crewman successfully bails out and his parachute deploys he descends at the rate of one increment per game turn. Parachuting crewmen may be attacked by ruthless gamers if desired. A parachute has a defense factor of 15 (it's mostly hollow) and can take only 5 hits before being destroyed. No deflection modifiers apply and for each hit achieved in an attack, roll the die, on a "1" the parachutist is wounded (two wounds = a kill). Other than Japanese attackers must make a range one determination die roll as for head on attacks to shoot at helpless parachutists.

Fighting Wings A/C Critical Hit Tables, Engine Criticals Table (Revision): Change the die roll for the occurrence of "Coolant Loss" from to "2" to "2,3." Change the die roll for "Minor Engine Fire" from "3, 4" to "4.