PANZER
NORTH AFRICA

OPTIONAL RULES

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GMT GAMES

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7.0 Optional Rules

Optional Rules should be thought of as nothing more than that—optional. While typically adding more depth or realism to certain aspects of the game, many of them come with a cost—greater complexity and/or record keeping—and therefore increase play time.

There is no requirement to employ any or all of the Optional Rules. They each stand on their own merits and are not necessarily interdependent.

The Optional Rules presented here follow the same number code sequence as *Panzer*. As such, there may be gaps where not applicable sections were deleted, e.g., Soviet specific information.

7.1 Morale

> **"The worst cowards, banded together, have their power." ~ Homer, The Iliad**

Morale is a descriptive term used to convey the overall status of a formation's ability to stand in a fight. Keep in mind that a formation's morale is totally different from its Grade. Grade, at the Force, Formation or Unit level, is a measure of skill and training, while Morale is a measure of relative stability in the face of the enemy.

Two key elements make up the Morale System: The Numeric Cohesion Point and the Break Point. The Numeric Cohesion Point should be thought of as the trigger point. Until it is reached, a formation functions normally in all respects, although certain special events may cause a unit to take a Morale Check. After the Numeric Cohesion Point is reached, the units within a formation become more likely to break with each passing turn.

The Break Point is a representation of probability of a unit's breaking. Breaking is not automatic. Some units have a greater chance of breaking than others. Once a unit breaks, it is severely limited in its ability to function and must recover before it can again function normally.

A third element also comes into play: Hesitation. A unit may not break, but it is not quite certain of its situation; it is Hesitating. The addition of this element or status removes breaking as an all or nothing situation. The impact of Hesitation is not as severe as breaking. In addition, units automatically recover from Hesitation.

While a formation's units are more effective when operating within Command Range of non-command units, this can have just the opposite effect once morale starts to break down. Fear, the inability to function effectively, or whatever breaking actually represents, unfortunately breeds more of the same. Breaking has a tendency to cascade through a formation once it starts; units see other broken units and more often than not decide to join the fray.

When employing the Morale Option, players must record each formation's Morale information on a Formation Summary. List the Formation's name and circle its Numeric Cohesion Point in the Command Control & Cohesion Point box for that formation.

7.1.1 Cohesion Point

The Cohesion Point is an expression of a formation's initial unit composition. It is presented as a descriptive term as one of nine possible levels from Superb (the best) to Poor (the worst). That information is then translated into the formation's Numeric Cohesion Point listed as CP #.

Only Combat units are counted when determining a formation's Numeric Cohesion Point. The loss of non-combat units does not count toward a formation's Cohesion Point.

However, all units in a formation, whether combat or non-combat, are subject to Morale Checks.

Scenarios indicate each formation's Cohesion Point and Numeric Cohesion Point.

Reference Scenario 47, Scenario 47, The Frontier Wire: Raid on Sidi Omar, Libyan-Egyptian Border, 12 June 1940. The British Infantry Company has a Cohesion Point of Excellent and a Numeric Cohesion Point of CP-6.

Use the Determining the Cohesion Point process (see 7.1.1.1) to vary a scenario's listed Cohesion Point or when creating scenarios.

7.1.1.1 Determining the Cohesion Point

Reference the Numeric Cohesion Point, Cohesion Point, and Cohesion Modifiers Tables on Game Card B. The Cohesion Point is calculated by rolling (100) and by combining the modifier listed on the Cohesion Point Table for the correct nationality/time period and then adding any adjustments for Formation Grade from the Cohesion Modifiers Table.

The result is then checked on the Numeric Cohesion Point Table to determine the actual Numeric Cohesion Point. It is read in the same manner as the Available Commands Table (see 6.2.1.1.1).

The period is early-41 for an Italian Veteran formation fielding 17 combat units. The Italian player rolls (100); the result is a 63. The Italian Nationality modifier of –20 is added to the Veteran Formation modifier of +10 resulting in a total modifier of –10. The net result is 53 (63-10).

On the Numeric Cohesion Point Table, 53 is found in the 46-55 row; the Italian Veteran formation is considered to have Good Morale.

Since the formation has 17 combat units, add the values found under the 10 and 7 columns. The final result is 9.5 (rounded down). 9 is the Numeric Cohesion Point.

Any unit of this Italian Veteran formation may break when it accumulates 9 or more combat unit casualties.

Consider all factors above the same, but with a formation of 24 combat units. Add the values found under the 10x2 and 4 columns. The final result is 13, the Numeric Cohesion Point.

When varying the listed Cohesion Pont in an existing scenario, certain limitations apply:

For German or UK formations, do not increase or decrease the listed Cohesion Point by more than two levels.

If the listed Cohesion Point is Excellent, do not increase it above Outstanding or below Adequate.

For Italian, USA, or French formations do not increase the listed Cohesion Point by more than one level; it may decrease to any level.

If the listed Cohesion Point is Excellent, do not increase it above Superior. However, it may fall all the way to Poor.

As an added twist, wait to determine the Cohesion Point until a formation suffers it first loss. That way players are unsure of a formation's Cohesion Point until a battle is engaged, a much more realistic situation.

7.1.1.2 Tracking the Cohesion Point

As a formation suffers combat unit losses, check off one number, starting at 1, for each of its eliminated combat leg or towed units (the reduction of a squad to a half-squad is not recorded) and each of its *combat* vehicles Bailed Out, Knocked Out or Brewed Up (Track or Damaged results are not recorded). Artillery and aircraft losses do not count.

Once a formation's recorded losses reach its Numeric Cohesion Point its remaining combat and non-combat units are subject to Breaking.

7.1.2 Normal Morale Check

Once a formation equals or exceeds its numeric Cohesion Point, all combat or non-combat units from the formation must immediately take a Morale Check whenever a unit:

- Moves from its current hex.
- Is attacked by Direct or Indirect Fire, or any air attack.
- Is attacked by Overrun, Close Assault, or Hand-to-Hand combat.
- Has a formation vehicle Brew Up in the same hex.
- Has a formation *command* unit eliminated that is within Command Range (see 6.2.1.1.2). The command unit must be in the unit's chain of command, e.g., if a unit is part of company A it is not affected if a command unit from company B is eliminated. However, it is affected if its battalion or higher command unit is eliminated. This requirement also applies to command units if a higher-level command unit is eliminated.
- Is a leg or towed unit that has a formation leg or towed unit eliminated by Overrun or Hand-to-Hand combat in the same hex.

All Morale Checks are taken at the completion of the triggering event, e.g., a move is completed or the Hand-to-Hand combat has determined a victor.

7.1.3 Forced Morale Check

If a unit's formation has not yet reached its Cohesion Point, combat and non-combat units are required to immediately take a Morale Check whenever a unit:

- Receives a flame attack from Direct Fire or as part of a Close Assault or Hand-to-Hand combat.
- Is attacked by Overrun combat, except if occupying an Improved Position or Building hex.
- Has a formation *command* unit eliminated that is within Command Range (see 7.1.2).

- Is a leg or towed unit that has a formation leg or towed unit eliminated by Overrun or Hand-to-Hand combat in the same hex.

Once a formation reaches its Numeric Cohesion Point, all of its units follow the Morale Check conditions (see 7.1.2).

7.1.4 Morale Check Procedure

The Break Point Table on Game Card B is used whenever a unit takes a Morale Check. The row on the table that corresponds to the unit's nationality is used to determine if the unit Breaks, Hesitates or is unaffected by the Morale Check.

If a unit Breaks it is marked with a BREAK/ON counter; if it Hesitates, it is marked with a HESITATION/ON counter. If a Broken unit receives a Hesitation result, it retains its current Break status (On or Off) instead.

Roll (100) and apply all applicable modifiers:

Elite Unit Grade

If the unit's Unit Grade is Elite, the modifier is +20.

Veteran Unit Grade

If the unit's Unit Grade is Veteran, the modifier is +10

Regulars Unit Grade

If the unit's Unit Grade is Regulars, the modifier is –10.

Green Unit Grade

If the unit's Unit Grade is Poor, the modifier is –20.

In Medium Cover

If the unit is in Medium Cover, the modifier is +10.

In Heavy Cover

If the unit is in Heavy Cover, the modifier is +20.

Unbroken Command Unit in Cmd Rng

If an unbroken (it may be Hesitating, Suppressed or Damaged) command unit from the unit's formation (see 7.1.2) is within Command Range, the modifier is +20.

The maximum is +20 no matter how many command units are within Command Range.

Suppressed or Damaged

If the unit is Suppressed or Damaged, the modifier is –20 each.

Forced Morale Check

If the unit is taking a Forced Morale Check, the modifier is +20.

Broken unit from Formation in Cmd Rng

If any Broken unit from the same formation is in Command Range of the unit, the modifier is –10.

Spotted Unit within 2 Hexes

If there is a spotted opposing unit within 1 or 2 hexes, the modifier is –20.

Spotted Unit within 5 hexes

If there is a spotted opposing unit within 3, 4 or 5 hexes, the modifier is –10.

> Suppressed and Full Cover units are less able to spot units. Ignorance is bliss.

Command other than N/C

If the unit has a command other than N/C marked for the current turn, the modifier is –20.

7.1.5 Morale Check Results

If a unit Breaks or is Hesitating, it is subject to the following limitations until it recovers.

7.1.5.1 Hesitating

 Any unit with a HESITATION/ON or HESITATION/OFF counter has the following limitations:

- If employing Direct or Indirect Fire, applies the following modifiers:
  - –3 to all AP combat
  - –10 to all GP combat
- May not initiate Overrun, Close Assault or Hand-to-Hand combat.
- If in Hand-to-Hand combat—the modifier is –10.
- Moves at normal speed; automatically changed to HESITATION/ON if currently HESITATION/OFF.
- For Called or continuous Indirect Fire response—the modifier is –1.

7.1.5.2 Broken

 Any unit with a BREAK/ON or BREAK/OFF counter has the following limitations:

- Does not count as an active unit for command purposes; have their command span reduced to 0.
- Applies a –2 spotting modifier by moving 2 down on the table.
- If employing Direct or Indirect Fire, applies the following modifiers:

Does not count as an active unit for command purposes.

  - –5 to all AP combat
  - –20 to all GP combat
- May not initiate Overrun, Close Assault or Hand-to-Hand combat.
- If in Hand-to-Hand combat—the modifier is –20.
- Moves at ½ speed (round down); this is cumulative with other movement modifiers. Automatically changed to BREAK/ON if currently BREAK/OFF.
- For Called or Continuous Indirect Fire Response—the modifier is –2.

7.1.6 Recovery

During the Adjustment/Remove Morale Counters Step of the Adjustment Phase units may attempt to Recover.

7.1.6.1 Hesitation Recovery

All units with HESITATION/OFF counters automatically recover; remove the counters.

7.1.6.2 Break Recovery

All units with Break/Off counters may attempt to recover. This is just like suppression recovery, but in this case, all units have a base recovery range of 51-00 regardless of Unit Grade. If a unit recovers, remove the counter.

Roll (100) and apply all applicable modifiers (see 7.1.4).

The Situation

A German Rifle squad, Veteran Unit Grade, located in a Scrub hex was just Overrun by a British Crusader II. It was Suppressed. The British tank is now adjacent to and is now off to the rear/side of the German Rifle squad. The German formation is not yet at its Cohesion Point. An unbroken command unit from its formation is within Command Range directly to its rear.

Due to the fact that the German Rifle squad was Overrun, it must make an immediate Forced Morale Check even though its formation is not yet at its Cohesion Point.

The net modifier is +30:

- *Veteran Unit Grade (+10)*
- *Suppressed (–20)*
- *unbroken command unit within Cmd Rng (+20)*
- *Forced Morale Check (+20).*

The Spotted Unit within 2 Hexes modifier is not applied since the German Rifle squad is Suppressed, and Suppressed units may only spot directly to their front. The Crusader II is not within its line-of-sight.

The German player rolls (100). The result is 36; the net result is a 66 (36+30). Since 66 falls within the Hesitation Range (51-70) on the German row on the Break Point Table, the German Rifle squad is marked with a Hesitation/On counter.

7.2 Hidden Units

In board wargames, it is often very difficult to maintain the element of surprise and concealment when all on-map units are displayed in full view. It is also a very difficult and time-consuming process to plot hidden movement either before the start of a scenario, or, for that matter, during a scenario.

This option helps to bridge the gap between fully open deployment and plotting hidden units.

7.2.1 Hidden Unit Counters

As dictated by a scenario's Special Conditions one or both forces' ground units may start a scenario Hidden; replaced by a Hidden Unit counter. These counters are provided in two sets, red and gray. Assign one color to one side and the other color to the other side.

A Hidden Unit counter may be used to represent nothing, a fake position to fool the opposing side, or one or more units from the same formation. A Hidden Unit counter may not represent units from different formations.

7.2.2 Placing Hidden Unit Counters

For Hidden Unit counters that actually represent one or more units, place the counter in any legal hex. A counter may be used to represent a mix of vehicle, towed and leg units or just one particular type. The number of Hidden Unit counters on the mapboard may not exceed the designated limit in a scenario.

Place the hidden units on the Turn Track, Transport & Summary and Hidden Unit Card in the box that corresponds to the number on the HHidden Unit counter. Place the card in a secure location away from the prying eyes of the opposing players. The hex of the Hidden Unit counter represents the actual location of at least one of the hidden units.

For fake Hidden Unit counters, just place it on the map board in any legal hex. Obviously, no units are placed on the hidden unit card.

7.2.2.1 Spotting Hidden Units

Players spot Hidden Unit counters just like any other ground units. The actual position of the units around a counter is not known until the units are placed on the mapboard, so the counter itself is used for spotting determination. If a counter is spotted, all of the units represented by that counter are placed on the mapboard whether or not all of the units could actually be spotted.

The unit type represented by a Hidden Unit counter that affords the greatest spotting range is used when determining spotting.

If a HIDDEN UNIT counter represents 1 vehicle and 10 leg units, the vehicle is still used when determining spotting

At least one hidden unit of the type spotted must be placed in the hex occupied by the Hidden Unit counter. The remainder of the units may be placed in that hex or any legal hex (by not crossing impassable terrain) within Command Range of the counter; units may face in any direction.

Players may treat fake counters as any unit type, vehicle, towed or leg. However, when an opposing unit reaches the range at which even a leg unit would be spotted, the owning player must reveal the Hidden Unit counter as a fake.

7.2.2.2 Moving Hidden Unit Counters

Players may move Hidden Unit counters just like regular ground units. If the counter represents one or multiple types, it may not move faster than the Movement Factor of the slowest hidden unit.

Hidden units may mount or dismount following the normal rules for those actions. Moving Hidden Unit counters are subject to greater spotting ranges just like visible units. Hidden units may enter Full Cover.

Fake counters may move as if they were any unit type. However, if a fake counter moves at a rate that would suggest it is a vehicle, it cannot then be treated as a towed or leg unit for spotting purposes.

7.2.2.3 Revealing Hidden Unit Counters

With the exception of Indirect Fire, any hidden unit that engages in any other form of combat is automatically revealed and all units represented by the Hidden Unit counter are placed on the mapboard (see 7.2.2.1). Units that either observe for or engage in Indirect Fire are not revealed by that fire.

Any Hidden Unit counter that is the target of Indirect Fire or an Aircraft bomb or rocket attack is automatically revealed and all units represented by the Hidden Unit counter are placed on the mapboard (see 7.2.2.1).

7.2.3 Adding Hidden Unit Counters

While not quite as mysterious as units that start a scenario hidden, players may, during the course of a scenario, hide units that are not currently spotted by removing them from the mapboard and replacing them with one or more Hidden Unit counters. These units must still be from the same formation. Fake counters may also be added. The number of existing and new Hidden Unit counters may not exceed the designated limit.

7.3 Platoon & Section Command Control

Only combat units and activated unarmed units that are all from the same Platoon, Section or Troop (UK) Formation and are within Command Range of one another may utilize the same unique Command counter. Units from other platoons, sections or troops, including non-command HQ units, even if they are part of the same formation may not share the same command.

Command units from the same formation, at any level, may share commands with subordinate platoons or sections, e.g., regimental Command units may share a command with a platoon or section unit in their regiment.

The command unit must be in the unit's chain of command, e.g., if a unit is part of company A it may not share with a command unit that is from company B.

Utilization of this option requires the players to document the Formation organization for each platoon and section. The unit numbers for each platoon or section should be noted on the Formation Summary.

7.4 Without Radio Sets

In the early stages of the war, and even throughout the war, many vehicles were not equipped with radio sets or were only equipped with rudimentary Morse code sets. This greatly limited their tactical flexibility, forcing the vehicles to fight and move in close proximity to one another. Those vehicles without radio sets have an R notation listed in the Unit Identifier section of their Data Cards.

> *Reference Data Card I-3A, the Italian M11/39 has the without radio set notation.*

Many of these vehicles were later fitted with radio sets or command vehicles of their type were equipped with radio sets. The Notes section of their Data Cards lists these exceptions.

7.4.1 Spotting Limitation

Vehicles from one platoon, section or troop (UK) may not hand off spotted targets (see 4.1.1) to or receive spotted targets from units from a different platoon, section or troop (UK).

7.4.2 Command Limitation

Vehicles from the same platoon, section or troop (UK) must share the same Command counter no matter the number of available commands. Their Command Range is treated as 0 regardless if their Formation Grade is Seasoned, Veteran or Elite.

If a tank suffers a track hit the remaining platoon members may leave it behind (see 6.5.2.2.1). Damaged vehicles may not be separated from the platoon. If a platoon member suffers a track hit, in later turns, it may be assigned a command up to limits of what is available to the company.

Recon vehicles maintain all of their special abilities with the exception of the Observer Limitation (see below).

7.4.3 Observer Limitation

Vehicles may not call Indirect Fire or observe targets for aircraft.

7.4.4 Morale Limitation

To receive the modifier associated with the presence of an unbroken command unit, that command unit, regardless if it is equipped with a radio set, must occupy the same hex as the vehicle taking a morale check.

> Some of the early war tactical advantages demonstrated by the German forces can be attributed to the wise installation of radio sets in their vehicles.

7.6 Tank Fright

Prior to executing Close Assault attacks, leg units must first pass a Forced Morale Check (see 7.1.3). This option applies to Italian forces in 1940. At their discretion, players may also apply this option at any time during the campaign to leg units with Green Unit Grade.

This Morale Check does not use the Spotted Unit Morale Check modifiers. All of the other listed Break Point modifiers are applicable.

Units executing an Advancing Attack (see 6.6.1.1) conduct this Morale Check prior to executing the move. The Tank Fright Morale Check does not in and of itself trigger Overwatch Fire, the unit must still actually move.

If the Morale Check result is *Break*, mark the unit with a Suppressed/On counter instead. If the result is *Hesitate*, mark the unit with a Suppressed/Off counter instead. If the unit passes the Morale Check, it conducts the Close Assault normally.

7.7 Limited Spotting

The absolute nature of spotting a target unit is a chance situation, especially as spotting ranges increase. With this option players must attempt to spot units when the spotting range is greater than 1; units at a range of 1 are still automatically spotted.

7.7.1 Spotting Ranges

The ability to spot is based on the spotting unit's Unit Grade and its range to the target unit. Reference the Spotting (OR) Table on Game Card B.

For each Unit Grade, two values are listed: if the spotting range is equal to or less than ½ of the maximum spotting range (round down) use the first value; for ranges greater than ½ up to the maximum range use the second value.

If more than one friendly unit is attempting to spot the same opposing unit, utilize the friendly unit that has the greatest probability of actually spotting the target unit since only one attempt is made to spot a unit; each spotting unit does not roll individually. However, for each unit attempting to spot the same target unit, apply a +10 modifier to the attempt. A spotted target is handed off to other friendly units as long as the target unit is within their maximum spotting range.

Roll (100) if the result is less than or equal to the listed value, it is spotted. Failure does not cancel Overwatch Fire.

Two German PzKpfw IIIJs, Veteran Unit Grade, are both attempting to spot a British Crusader I located in a Grove hex at a range of 4 hexes. Since the spotting range of 4 hexes is greater than ½ of 7, the German player must roll (100) with a result of 70 or less (60+10) to spot the Crusader I.

7.7.2 Maximum Spots
A subset of this option limits the total number of spotted units a single unit is able to maintain. This limitation is also based on its Unit Grade.

Reference the Spotting (OR) Table on Game Card B. The value listed in the Max column is the maximum number of spots a unit of any particular Unit Grade may individually maintain including hand-offs. Any spots in excess of the Max value are ignored or must be removed.
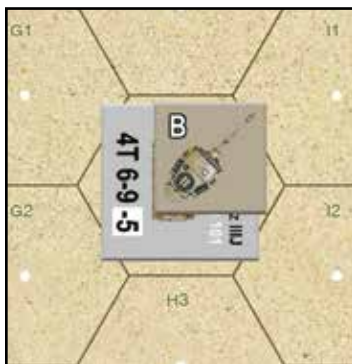
7.8 Turrets

This option adds moveable Turret counters for vehicles. Turret counters display an image of either a German, Italian, or a British turret, but any may be utilized as there is no functional difference between the three types. The front side of the counter designates Open turrets while the reverse B side designates Buttoned-up turrets.

The use of Turret counters enables turreted vehicles to face their turrets to different hexsides from their hulls. This presents a more realistic game model as turreted vehicles may only direct fire at targets that fall within their turret's Field-of-Fire (60°). It also enables them to minimize the impact of the Overwatch Adjust modifier by positioning their turrets to cover specific areas.

Whether a turret is open or buttoned-up also impacts the potential damage sustained from GP Fire by A-Type vehicles.

7.8.1 Adjust Turrets

Like vehicle counters, turrets must face a specific hexside. They are adjusted during movement and/or the Adjust Turret Step of the Adjustment Phase. The maximum number of hexsides a turret may turn is equal to its TT Factor found in the Weapon Data row of its Data Card. TT Factors range from 1 to 3. Turretless vehicles have a factor of 0.

Reference Data Card G-4A, the German PzKpfw IIIJ's TT Factor is 2. Its turret may turn 1 or 2 hexsides.

As a vehicle moves, it may adjust its turret up to its listed TT Factor for each new hex entered or maintain its turret's facing in relation to its hull. The non-phasing player may fire eligible units in Overwatch at any time while the phasing player adjusts a turret, by simply interrupting the phasing player, prior to or after a turret adjustment. Tracked vehicles retain their listed TT Factor. Turret Damaged vehicles' TT Factor is reduced to 1 if not already a 1.

7.8.2 Turreted Vehicle Hit Locations
When a vehicle is hit by AP Direct Fire, its turret may have the same or a different Hit Angle than its hull. When determining the Hit Location, if the Hit Location is a Hull Hit, continue on to the next step.

However, if the result is a Turret Hit, an additional check is made. If the Turret's Hit Angle is the same as the Hull's Hit Angle continue on to the next step. However, if it is not, determine its Hit Angle and apply the same result (the dice are not rolled again) against the Turret's Hit Angle.
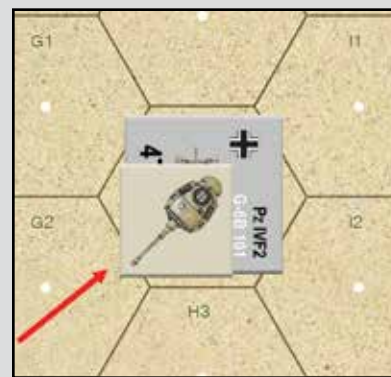
A German PzKpfw IVF2, Data Card SG-6B, Level Shot Hit Angle is Rear/Side. The British player rolls (100) the result is 39. The Hit Location is TR. However, the German tank's turret is actually positioned on its Hull's Rear/Side directly facing the British unit making the Turret's Hit Angle Front. The Hit Location is now TF. The Armor Value is 12 as opposed to 9, a 133% advantage.

7.8.3 Open & Buttoned Up Turrets
A-Type vehicle turrets are positioned as Open or Buttoned Up. This Turret status is selected during the Adjust Turret Step of the Adjustment Phase and applies to the entire next turn. Turret status may not change during a turn.

Non-turreted A-Type vehicles may Button Up; they just, of course, do not adjust their turrets. There are turreted P-Type vehicles; however, they never Button Up.

Turret status affects a vehicle's ability to spot targets and the impact of Direct or Indirect GP Fire and Aircraft Combat. Vehicles with Open Turrets spot normally, but are more susceptible to GP Fire and Aircraft Combat. Vehicles with Buttoned Up turrets have spotting limitations, but resolve GP Fire normally.

Vehicles with Buttoned Up turrets must apply a –1 Spotting modifier by moving 1 row down on the table.

Vehicles with Open Turrets may suffer increased damage from GP Fire. AP Direct Fire is not affected.

- With non-small arms fire with an Effective Result, the vehicle is Damaged if the shooter's maximum GP Effectiveness Factor is less than the vehicle's GP Defense.
- With small arms fire with an Effective Result at Point Blank Range, the vehicle is Damaged.

7.8.4 Overwatch Fire

If the firing vehicle is executing Overwatch Fire at a target located outside of the turret's Field-of-Fire—the modifier is –3. Based on its TT Factor, the turret must be able to adjust its facing a number of hexsides to place the target within its Field-of-Fire. This becomes the turret's new facing.

Again, the Target Moving modifier is also applicable in addition to this modifier if triggered by movement.

7.9 Smoke Dischargers

Vehicles equipped with Smoke Dischargers (see 5.16.2) may create a smoke cloud that covers just that vehicle and any units it is transporting. It may attempt to create a smoke cloud only once per turn during its Command Phase before placing its command.

Since this process actually takes place before the current turn's Initiative Phase, the previous turn's First Player places all DS smoke first followed by the Second Player.

To determine if a vehicle creates a smoke cloud, roll (10) and compare the result to the listed Ammo Limit value (see 5.16.2.3). If the result is less than or equal to the Ammo Limit value, place a Smoke/DS counter on the vehicle; if it is greater than the Ammo Limit value, the attempt failed.

The smoke cloud is treated as Open/SHEAF Smoke that applies only to fire to or from the vehicle and its passengers not to any other units in the hex. It does not apply to Indirect Fire or Aircraft Combat.

The Smoke/DS counter is removed during the current turn's Adjust/Remove Counters Step (see 6.8.4) or if the vehicle moves to a new hex or moves within its hex. Place the counter under the vehicle unit; vehicles may not create discharger smoke in consecutive turns. It is removed during the next turn's Adjust/Remove Counters Step.

7.10 CE Ammo Types

With the advent of HEAT-Type anti-tank shells, including those fired from guns as well as later-war hand-held anti-tank weapons.

7.10.2 CE Ammo & S-Type Vehicles

CE rounds vs. S-Type vehicles do not apply the –2 damage modifier.

7.11 BU Modifier

Based on their turret layout or ammo storage, some vehicles are more susceptible to explosive damage when receiving a Knocked Out result from combat. Those vehicles have a BU notation listed in the Unit Identifier section their Data Cards.

The BU modifier does not increase the overall chance of damage; it just increases the chance of a Knock Out becoming a Brew Up. A modified Damage Result is never greater than 10. It is not applicable with Basic Game Damage. The modifiers are +2 for AP Fire and –2 for GP Fire.

> *Reference Data Card B-5A, the British Crusader I has the BU notation listed. An Italian M13/40 (Data Card I-1A) penetrates it with its AP ammo and rolls a 8 result for damage. That would normally result in a Knock Out. However, with the +2 BU modifier applied, the 8 result is now a 10, resulting in a Brew Up.*
>
> *If the same M13/40 instead achieves an Effective Result with GP Fire and rolls a 4 damage result, the –2 BU modifier is applied; the 4 result is now a 2, resulting in a Brew Up.*

7.12 Variable AP Penetration

AP penetrations values (KE and CE-Type shells) are presented in absolute terms based on a long study of ballistic data. The actual penetration values did vary due to the variances in the quality of the shells or caused by slight deviations in the angle of impact or the quality of the vehicle armor at any given impact point.

With this option, whenever an AP Hit is made, before the Hit Location-Damage roll, the firing player rolls (10x2) and references the AP Penetration (OR) Table on Game Card A. Reference the row on the table that corresponds to the listed AP Penetration Factor.

The two dice are read separately. Add the two listed results together to find the total adjustment. It may not be plus or minus greater than the listed Max Value.

Note that dice roll results of 1, 2, 3, and 4 subtract from the AP Penetration Factor, while results of 7, 8, 9, and 10 add to it. Results of 5 and 6 have no effect.

> *With an AP Penetration Factor of 27, the roll (10) results are 10 and 4. The Total Adjustment is +2. The 10 result adds 3 to the Penetration Factor while the 4 result subtracts 1.*
>
> *With an AP Penetration Factor of 18, the roll (10) results are 1 and 2. The Total Adjustment is –3. The 1 subtracts 2 from the Penetration Factor while the 2 result also subtracts 2. However, the Max adjustment is ±3.*

7.13 Lower Hull Hits

This option models the possibility of hitting a vehicle's less armored lower hull front with AP Direct Fire. It is only possible when a moving vehicle is changing elevation or its Height is 2 or more above an opposing unit.

7.13.1 Changing Elevation

When a vehicle moves out of a Gully or crosses a Wall hex, any *overwatching* unit at a Height equal to the Vehicle's new Height hitting the HF utilizes an Armor Factor equal to ½ (round down, not less than 1) of the listed Rising HF Armor Factor. Note that Rising Shot is utilized even though it is actually a Level Shot.

7.13.2 Height Difference

When the target vehicle is not in a Hull Down or an automatic Partial Hull Down position and the firing unit's range is equal to or less than twice the Height difference hitting the HF utilizes an Armor Factor equal to ½ (round down, not less than 1) of the listed Rising HF Armor Factor.

If the target vehicle's Height is 3 and the firing unit's Height is 0, the firing may hit the target vehicle's lower hull if the range is 4, 5 or 6. The target vehicle is Partially Hull Down if the range is 3 or less (see 6.1.4.1.3).

7.14 Fire Priority

In the heat of battle, vehicles typically engage opposing vehicle targets posing the greatest threat and those tend to be the closest targets. A vehicle with a FIRE or SHORT HALT command must fire at the closest opposing vehicle *combat* unit (see 4.1.1) unless it is already engaged by another vehicle from the same formation. Friendly leg and towed units firing at a vehicle do not offset this requirement.

7.15 CE Ammo GP Direct Fire

CE-Type ammo has considerable explosive force and can be used for GP Direct Fire. However, the construction of the shells makes them somewhat less effective in open areas.

When hand-held ant-tank rocket weapons are fired at dismounted leg or towed units in terrain other than inside of buildings or Improved Positions, apply a –10 modifier.

7.16 Towed Unit Platform Gun Mounts

Some anti-tank and anti-aircraft guns were mounted on platform or turntable mounts that enabled them to quickly engage targets located in any direction. The Towed Data Cards indicate which units have Platform Gun Mounts.

Reference Towed Data Card Key, the German 8.8cm FlaK 36 ATG/AAG has a Platform Gun Mount.

Reference Data Card B-17A, the British OQF 2 pounder ATG has a Platform Gun Mount.

Like Turretless 360° vehicles, for the purposes of Overwatch and Anti-Aircraft Fire, their Field-of-Fire is always assumed to be facing the target. These units always use the Overwatch Front Modifier for all Overwatch Shots.

If they fire at a target located in their Side or rear Fields-of-Fire, pivot the towed unit to face the correct Field-of-Fire.

7.17 Attached Weapon Loss

When a full squad is reduced as a result of GP Fire or Hand-to-Hand combat, roll (10) for each attached weapon the squad was carrying. On a result of 1-5, the attached weapon is destroyed.

If the squad was carrying more than one attached weapon, apply a –2 modifier to the first roll (10). Randomly select which is the first attached weapon.

7.18 Pinning Fire

Ground units employing small arms Direct GP Fire against leg or towed units may use *Pinning Fire* against the target. Pinning Fire simulates a unit spraying fire in the proximity on a target unit to pin or force them to keep their heads down as opposed to trying to eliminate them.

Pinning Fire may be used with FIRE, SHORT HALT or OW commands. It must be declared at the point the fire is announced.

The GP Fire is resolved normally; the +20 Pinning Fire modifier is applied.

An Effective Result is treated as a Suppressed result instead. It is not possible to achieve an Effective Result with Pinning Fire.

7.19 Engineer vs. Terrain Combat

Engineer squads, half-squads and sections are the only ground units that may directly attack certain types of terrain. All Terrain types possessing a GP Defense Factor, with the exception of Building hexes, may be attacked as if they are normal ground units.

The engineer unit must have a MOVE command. With an Effective Result roll (100) again. These attacks utilize the Close Assault combat procedures. With two Effective Results the Terrain type is destroyed; otherwise, there is no effect.

7.20 Long Guns

If utilizing the Optional Turrets Rule (see 7.8), some turreted vehicles have long guns that can inhibit their movement in Alley and Grove hexes. Units so equipped have Long Gun listed in the Notes section of their Data Card.

If a Long Gun turreted vehicle unit moves into or within an alley hex or a Grove hex, its turret must be positioned directly to the vehicle's front or rear. While stationary, it may turn its turret to any hexside.

If a Long Gun turreted vehicle unit is following the route described by a Path or Road (see 4.5.1.1.5), its turret may be positioned in any direction.

7.21 Variable Track Damage

In reality, small caliber guns would have a difficult time achieving a track hit against many of the more heavily armored vehicles. With this option, an additional calculation is required to determine if a track hit is actually made. This same method of calculation is used whether firing AP or GP weapons.

Double the firing unit's maximum GP Effective Factor for its GP weapon. If the result is equal to or greater than the target's GP Defense Factor, the Track Hit was made; if it is less, the Track Hit is treated as a miss instead. If treated as a miss, no Bail Out attempt is required.

For firing units with small arms or for those that lack a GP weapon, they are assumed to have a doubled factor of 1. Hand-held anti-tank weapons are excluded from this calculation.

A British OQF 6 pounder ATG (Data Card B-17B) made a Track Hit on a German PzKpfw VIH Tiger I (Data Card G-9A). The OQF 6 pounder's maximum GP Effectiveness Factor is 2. That value is doubled to 4 and compared to the PzKpfw VIH Tiger I's GP Defense of 5A. Since 4 is less than 5, the Track Hit is treated as a miss.

Note that even though the OQF 6 pounder's GP-type is not available until early-43, it is still utilized as reference.

7.22 Infantry Smoke

Squads and half-squads receive a Smoke Ammunition limit based on their nationality, Unit Grade and engineer status. Unsuppressed, non-hesitating, and non-broken units may create smoke in their current hex if it does not contain any other dismounted leg or towed units.

7.22.1 Direct Fire Smoke

Only units with FIRE or SHORT HALT commands may place smoke within the Ammo Limits (see 5.16.2) constraints as Small Arms Fire. The unit may still utilize any attached weapons.

Place a SMOKE/ON counter in the hex. The smoke affects just the target unit.

7.22.2 Smoke Ammo Limits

Smoke Ammo limits by Nationality:

- German: S5
- USA: S5
- UK: S4
- France '41+: S3
- Italy: S3

Special Ammo Limit modifiers:

- Elite Unit Grade: +2
- Veteran Unit Grade: +1
- Green Unit Grade: –1
- Engineer: +3

7.23 Vehicle Collateral Damage

This option requires some form of record keeping or unit notation.

Any AP hit on an A-Type or P-Type vehicle that penetrates but results in No Damage may cause Collateral Damage. Each collateral hit is only applied once. Cross-reference with the vehicle hit location and roll (10):

7.23.1 TF – Turret Front

On a result of 1: Optics damaged.

Apply a –1 AP Direct Fire modifier for the remainder of the scenario.

Apply a –5 GP Direct Fire modifier for the remainder of the scenario.

On a result of 2: Coax MG damaged if equipped, otherwise, mark a SUPPRESSED/ON counter.

The vehicle no longer applies the +10 Coax MG modifier to GP Direct Fire or Overrun combats.

On a result of 3-10: No effect.

7.23.2 TS/TR – Turret Side or Turret Rear

On a result of 1: Turret Ring.

The turret is fixed in its current position. It may not rotate for the remainder of the scenario.

For Turretless 360° (see 4.4.3.1.2) and Turretless (see 4.4.3.1.1) vehicles, mark a SUPPRESSED/ON counter.

On a result of 2: Radio damaged.

The vehicle loses any Command and/or Recon abilities. For ultimate realism, the vehicle must also follow Optional Rule 7.4, Without Radio Sets.

On a result of 3-10: No effect.

7.23.3 HF – Hull Front

On a result of 1: Running Gear Damage.

The vehicle loses 2 Movement Factors (minimum 1) for the remainder of the scenario.

On a result of 2-10: No effect.

7.23.4 HS/HR – Hull Side or Hull Rear

On a result of 1: Fuel Damage—at the beginning of each Movement Phase roll (10).

On a result of 1: the vehicle is out of fuel for the remainder of the scenario. Mark a TK Hit (including Bail Out attempt).

On a result of 2: the vehicle catches fire and suffers a BU Hit (including Bail Out attempt and Suppression effects).

On a result of 3-10: No effect.

7.24 Camouflage

As dictated by a scenario's Special Conditions one or both forces' ground units may limit the ability of opposing forces to spot them by the use of camouflage. Only those units that start a scenario setup on the mapboard may camouflage. Use the Formation Summary to list camouflaged units.

Camouflage does not function in the same manner as Hidden units (see 7.2). Camouflaged units remain on the mapboard at all times. The controlling player must announce a camouflaged unit at the point the opposing player announces a spot. Camouflaged units are automatically spotted at a range of 1 hex.

After meeting normal spotting range requirements, the spotting player rolls (10); the result must be less than or equal to the spotting range found on the Spotting Ranges Table on Game Card B for the unit being spotted. Spotting units hand off spotted camouflaged units to other friendly units at the same range or less.

If a unit attempts to spot a vehicle located in a Medium Grove hex, the spotting player must roll a 7 or less to spot the vehicle.

Camouflaged units permanently lose their camouflage status once they execute a MOVE or SHORT HALT command. They also permanently lose their camouflage status once they execute a FIRE or OW command if an opposing unit meets the normal spotting range requirements. No spotting roll is necessary.

7.25 Weapon Malfunction

AP Direct Fire combat resulting in 00 or GP Direct Fire combat resulting in an unmodified 01 is treated as a weapon malfunction. It may not fire again until repaired. The combat that resulted in the malfunction is resolved normally.

To repair, roll (10) at the end of the Command Phase:

- If the final result is a 2 or less, the weapon is repaired and functions normally on all subsequent turns.
- If the result is a 10, the weapon is permanently out of action and may not attempt repair during future turns.
- If the unit has an N/C Command, apply a –2 modifier.

Utilize a DMGD counter with the MALFUNCTION or OUT OF ACTION side facing front to indicate the vehicle's status.

7.26 Indirect Fire Scatter

When the modified response roll equals the value listed for the observer on the Called Indirect Fire Response Table on Game Card A, the Impact Point for that firing unit missed the designated target hex and has scattered 1 or 2 hexes.

Roll (10). On a result of 1-6, it scatters 1 hex; on a result of 7-10, it scatters 2 hexes. It may be easier when determining fire response to just roll (10x2) on the chance fire scatter occurs. Roll (d6) and reference the Directional Hex on the mapboard or geomorphic map panel and move the Impact Point the required number of hexes in the indicated direction.

If the new Impact Point is still within the observer's line-of-sight, the Indirect Fire may be continued or adjusted normally next turn.

An expansion of this optional rule adds aircraft bomb scatter. If bombs are dropped from an aircraft flying at Medium or High Altitude that was attacked by Anti-Aircraft fire within 5 hexes of the drop hex, may result in bomb scatter.

- If a No Effect result from the Anti-Aircraft Fire, roll (10). If the result is a 1 or a 2, the bombs scatter.
- If a Suppressed or Damage result from the Anti-Aircraft Fire, roll (10). If the result is 6 or less, the bombs scatter.
- Based on the Aircraft's Unit Grade, apply the following modifiers:
  - Elite: +2
  - Veteran: +1
  - Regulars: –1
  - Green: –2

Roll (d6) and reference the Directional Hex on the mapboard or geomorphic map and move the Impact Point in the indicated direction 1 hex if at Medium Altitude or 2 hexes if at High Altitude.

7.27 Illumination Indirect Fire Missions

Illumination Fire Missions are used to increase spotting ranges during night/limited visibility conditions. Illumination rounds may be fired only in non-linear Closed SHEAFs. Illumination rounds function in a similar manner as Smoke rounds with an On/Off state.

They illuminate the area described by the SHEAF Pattern. Any unit within the area applies a +2 spotting modifier as long as the area remains illuminated. The illumination modifier never increases the Spotting Level above 0.

Illumination has either Illumination/On or Illumination/Off counters to indicate its status.

Illumination is recorded by placing an Illumination/On counter; or by rotating an existing Illumination/Off counter to Illumination/On. Illumination/Off counters are removed during the Adjust/Remove Counters Step, see 6.8.4.

7.28 Counter Battery Fire

Counter Battery Fire is the action of locating opposing off-map artillery batteries and then executing disruptive fire missions to suppress or eliminate those batteries.

Counter Battery Fire is conducted only by off-map batteries dedicated to counter battery fire missions. They are not the same organic or attached batteries assigned to the support of the friendly forces. They must be included as specific Counter Battery Fire assets in the list of friendly forces in a scenario.

7.28.1 Utilizing Counter Battery Fire

A Counter Battery unit is considered to be available at all times, may be used any number of times, and each may attempt to find one opposing off-map artillery battery per turn. Whenever opposing off-map artillery responds to Called Indirect Fire, continues a fire mission or arrives as planned fire, "counter battery fire" may be announced.

All Counter Battery Fire takes places after the targeted artillery battery resolves the fire mission for the current turn.

7.28.2 Resolving Counter Battery

For each Counter Battery Fire announced, the controlling player rolls (100) to first determine if its counter battery firing unit located the targeted artillery battery.

Reference the Artillery Data Card for the Counter Battery Fire information. If the location result falls within the range of 01-20, the artillery battery is located. Otherwise, the location attempt failed.

The following location modifiers apply:

- If the targeted artillery battery's current fire mission equals or exceeds the listed number of consecutive turns, e.g., German counter battery attempting to locate a battery firing for 3 or more consecutive turns, apply a –10 modifier.
- If the targeted artillery battery is self-propelled (SP), apply a +10 modifier.
- If an Italian counter battery unit attempts to locate in 1940 or early-1941, apply a +10 or +5 modifier, respectively.

If the artillery battery is located, roll (100).

- On a result of 01-50, the targeted artillery battery is suppressed.
  - ◊ Suppressed artillery batteries may still function and conduct normal operations, but apply the Shooter Suppressed –20 GP Fire modifier (see 6.5.4.3). Place a SUPPRESSED/ON counter on the battery's Data Card for reference.
  - ◊ All artillery batteries have a fixed recovery range of 01-50 when attempting to recover from Suppression. No Suppression modifiers apply.
- On a result of 51-80, the targeted artillery battery is Damaged.
  - ◊ Damaged artillery batteries may still function and conduct normal operations, but apply the Shooter Damage –10 GP Fire modifier (see 6.5.4.3). Place a DMGD counter on the battery's Data Card for reference.

◊ All damaged batteries apply a –2 modifier when determining fire response.

◊ A second damage results in a Knock Out.

• On a result of 81-00, the artillery battery is Knocked Out.

◊ It may not fire for the remainder of the scenario.

◊ Its listed Victory Points are awarded to the opposing side.

7.28.3 Counter-Counter Battery Fire

If both forces possess Counter Battery Fire assets, they are also subject to Counter-Counter Battery Fire. Once Counter Battery Fire is announced and resolved an opposing Counter Battery Fire unit may attempt to locate and fire on the first counter battery unit.

In this case, a Suppression result is ignored. A Damage or Knock Out result eliminates a counter battery unit for the remainder of the scenario. Its listed Victory Points are awarded to the opposing side.

7.29 Bogging Down

Unhidden vehicles are subject to Bogging Down in some terrain types. Reference the Bog column on the Terrain Effects Table on Game Card B. Only those Terrain types with a listed numerical range are subject to Bogging unless otherwise instructed by the Set Up or Special Conditions in a scenario.

Some vehicles have a negative Bog modifier listed in the Movement row or in their Notes section of their Data Cards and on their counters. In addition, all vehicles currently towing another unit, apply a –5 modifier.

> *Reference the German PzKpfw IIIF (Data Card G-2B), it has a B: –5 listed. It applies a –5 Bog modifier.*

If any vehicle has a Move or Short Halt command while occupying one of the listed Terrain types, it first checks for Bogging Down. Vehicles employing the Path or Road bonus are not subject to bogging.

A vehicle entering a hex of the listed Terrain types does not check for bogging. However, if it attempts to exit the hex or move within the hex, e.g., searching for a Hull Down position or entering a building, it must check for bogging before exiting the hex or moving within the hex.

> *A German PzKpfw IIIF, Data Card G-2B, attempts to exit a Rough terrain hex. If the German player rolls (100) with a result of 35 or less (the PzIIIF applies a –5 modifier), it bogs down.*

The controlling player rolls (100). If the net result (modified for any vehicle specific modifiers) falls within the listed range for the Terrain type, the vehicle immediately ceases movement and may not turn for the remainder of the turn.

A bogged vehicle moves during the next turn with no additional penalties. It must again check for bogging before exiting or moving within the hex. Passengers mount or dismount normally from a bogged vehicle. A bogged vehicle still marks a Spot/Move counter.

Vehicles sharing Move or Short Halt commands must maintain Command Range upon completion of their move. However, if one or more of those units bog, thereby limiting movement, all attempts must be made to maintain Command Range upon completion of their move. If this is not possible, there may be cases where the moving units may not be able to maintain Command Range. Units are not required to retrace their movement.

7.30 Narrow Roads & Paths

As dictated by a scenario's Special Conditions roads and paths through Building, Grove, or Light Grove hexes may be classified as Narrow Roads or Paths. This Optional Rule could also apply to a narrow bridge.

In those cases, vehicles and dismounted towed units may not enter or move through a hex occupied by opposing vehicles. Vehicles may only move through a hex occupied by dismounted towed or leg units by Overrun combat. All units may enter a hex occupied by friendly vehicles, towed units or a wreck, but may not exit the hex. Dismounted leg unit movement is not restricted.

Vehicles and dismounted towed units may not exceed stacking limits (see 5.13). The order of entry of the units in a hex are stacked first on top (excluding wrecks).

By expending their entire movement speed allowance, tracked vehicles with a Move command may attempt to push a wreck, immobile vehicle, or towed unit to the shoulder of the road or path hex.

• The pushing vehicle's Weight must be equal to or greater than the immobile unit.

• Roll (100). On a result of 51+, the immobile unit is moved to the shoulder of the road or path, but still considered to be in the same hex. Otherwise, no movement is possible.

• For each full 5 tons of additional Weight the pushing vehicle has over the unit to be pushed, apply a +5 modifier.

• Units pushed to the shoulder of a road do not stop a vehicle from using its Path or Road movement factor.

> *When a German PzKpfw IVD (Data Card G-5A), attempts to push an immobile PzKpfw IB (Data Card G-1A), it applies a +15 modifier.*

This Optional Rule could also apply to sunken roads. Players may at their option or as dictated by a scenario's Special Conditions, allow units to exit the sides of a sunken road. Sunken roads typically have a Height of –1.

7.31 Mines & Minefields

Mines are employed to deny or channel movement into an area or in a certain direction. In some respects, they are an effective offensive weapon not just a defensive weapon.

There are two types of mines: anti-vehicular (effective against vehicle units) and anti-personnel (effective against dismounted leg and towed units). Anti-vehicular mines have the capability of damaging or inflicting track hits on vehicles. Anti-personnel mines can inflict effective results on leg and towed units. Unless otherwise indicated, minefields may contain either or both types.

Mines are not employed individually; they are laid in minefields covering multiple hexes. Correspondingly, there are two types of minefields: Hasty and Deliberate.

The scenarios indicated the type and availability of mines.

7.31.1 Minefield Placement

Minefields typically occupy a multiple hex area of the mapboard. The controlling player plots their location during the setup of a scenario after all terrain counters are placed on the mapboard, but before any units are placed. In most cases, the location of minefields is kept hidden from the opposing side. The scenarios indicate when a visible minefield is in play.

Use the back of the Formations Summary to note their type and location. Once placed, minefields may not move or alter their type.

Minefields may not be placed in bridge (although they may be placed in any path or road hex), building, alley, ditch, gully, Improved Position, rubble, or water hexes. The plotted location of a minefield may surround these terrain types, but may not occupy their hex.

Minefield plots must include the minefield hexes, the type of minefield (Hasty or Deliberate) and the type of mine (anti-vehicular, antipersonnel or both). Unless otherwise indicated, a minefield's hexes must be contiguous.

A legal 5 hex minefield plot includes hexes 29N5, 29O5. 29P6, 29Q6, and 29Q7.

7.31.2 Minefield Combat

Friendly units are assumed to know the exact placement of minefields and the clear paths through them unless otherwise indicated by the scenario. They may freely move through friendly minefield hexes without being attacked.

When an opposing unit *enters* a minefield hex, the controlling player *must* announce that a minefield hex was entered and resolve the minefield attack. The controlling player is not required to announce the entry into a minefield hex if a vehicle enters an anti-personnel minefield or a dismounted leg or towed unit enters an anti-vehicular minefield hex. Once a minefield hex is discovered, the opposing player may place a MINEFIELD counter as a reminder of its location.

Leg or towed units that dismount into an anti-personnel minefield hex are immediately attacked. Leg or towed units that mount a vehicle while occupying anti-personnel minefield hex are not attacked as a result of mounting.

Units that move within a minefield hex are attacked again.

7.31.2.1 Anti-Vehicular Minefield Combat

Reference the Minefield Effects Table on Game Card B and find the column containing the vehicle's GP Defense Factor; the vehicle's target type A, P or S is not a factor. Cross-reference this with the two rows indicating the type of minefield, Deliberate or Hasty.

The player controlling the minefield rolls (100) and the indicated result, if any, is immediately applied with the normal effects for that type. If damaged, a vehicle suffers automatic Hull Damage.

A vehicle with a GP Defense Factor of 3A enters an opposing Hasty Anti-Vehicular Minefield, a roll (100) result of 01-20 is a Damage Hit, a result of 21-50 is a TK Hit, while a result of 51+ has no effect.

Note that transported leg or towed units bailing out into an anti-personnel minefield are immediately attacked.

7.31.2.2 Anti-Personnel Minefield Combat

Reference the Minefield Effects Table on Game Card B and find the Leg & Towed column and cross-reference this with the row indicating the type of minefield, Hasty or Deliberate.

The player controlling the minefield rolls (100) and the indicated result, if any, is immediately applied with the normal effects for that type.

A leg unit enters an opposing Deliberate Anti-Personnel Minefield, a roll (100) result of 01-70 is an Effective Result, while a result of 71+ has no effect.

Squads are reduced to a half-squad and suppressed, while all other leg and towed units are eliminated by an Effective Result.

If a squad, half-squad or section enters or moves within an anti-personnel minefield using Quickmarch (see 6.6.4.2), apply a –20 modifier.

7.31.3 Eliminating Minefields

Minefield are not consumed or used up by attacking ground units. They are deployed densely enough to attack all units that may enter their location for the duration of the scenario. They may be eliminated in three ways: by Indirect Fire, aircraft bombs and rockets, or by engineer leg units.

Minefields have a GP Defense Factor and are treated as a Terrain type. However, in the case of mines, only a single effective result is required for elimination. Unless indicated otherwise in a scenario, Hasty minefields have a GP Defense Factor of 3 while Deliberate minefields have a GP Defense Factor of 6.

7.31.3.1 Indirect Fire vs. Minefields

Both off-map and on-map Indirect Fire attacks visible minefield hexes that fall within the area defined by their SHEAF Patterns. Smoke and Illumination Fire Missions do not attack minefields.

7.31.3.2 Bombs & Rockets vs. Minefields

Aircraft bombs and rockets attack *visible* minefield hexes that fall within the area defined by the bomb or rocket impact patterns.

On the off chance an aircraft crashes into a visible minefield hex, it attacks it with 15 GP Factors.

7.31.3.3 Engineer Units vs. Minefields

Engineer leg units attack visible minefield hexes in the same manner as other terrain types.

Why only visible minefield hexes? It is the cleanest method of dealing with minefield elimination without a great deal of record keeping, delayed elimination determination, or forcing the controlling player to reveal the location of hidden minefields. As an offset, it requires only a single Effective Result to clear a minefield hex.

7.32 Weight Limitations

Bridges may be assigned a weight limitation in a scenario. Unless specifically addressed, the weight limit for a bridge is considered unlimited and any unit may cross it. If a unit is too heavy to cross a bridge, it must use an alternate route; it may not enter the bridge.

7.33 Dual Driving Controls

A few armored cars are equipped with dual-driving controls that enable them to move in reverse without expending the twice normal movement cost for the terrain entered. They expend the same cost as if they are moving forward. Units so equipped have an R following their mode of traction on their Data Card.

Reference the German PSW 231 (Data Card G-16A), it has dual-driving controls.

7.35 Fires

Buildings or Rubble may catch fire and burn as a result of Direct GP Fire that is directed at units located in a building or rubble hex or Indirect GP Fire and aircraft bombs and rockets that includes a building or rubble hex that fall within the SHEAF or impact patterns. Close Assaults, Overruns and Hand-to-Hand combats do not normally start fires.

In all cases, there can only be one fire in a hex; it is either on fire or not. Once a fire starts, it continues to burn for the remainder of the scenario.

7.35.1 Start Fires

Any building or rubble hex, not currently on fire, that had Direct, Indirect or Aircraft delivered GP Fire directed at a unit occupying the hex or if it falls within a SHEAF or impact pattern must be checked to determine if a fire has started. The check for fire starts anytime during the Adjustment Phase. Small arms may not start fires.

Reference the Building Effects Table on Game Card B and cross-reference the building/rubble type with the largest GP Factor that was directed at a building or rubble hex during the turn. No matter how many shots were directed at the hex during a turn, only one fire determination is made.

Roll (100). If the result falls within the listed range a fire starts. Mark the building or rubble hex with an ON FIRE counter.

If checking for a fire start in Rubble hex, apply a –10 modifier.

8 GP Factors are directed at a unit in a Brick Building hex. If the roll (100) result is 10 or less, a fire starts.

Close Assaults, Overruns and Hand-to-Hand combats may not start fires unless a flamethrower was utilized in the attack. If a flamethrower was involved in an attack directed at a target in a building or rubble hex, the fire automatically starts.

7.35.2 Ground Units in Fires

Ground units may not remain in a fire hex. Any ground unit that has not vacated a fire hex by the end of the next turn after the fire started is eliminated and removed from play. Do not place WRECK counters.

7.35.3 Hand-Held Anti-Tank Rockets

As an added option, if a hand-held anti-tank rocket fires at a vehicle located in a building or rubble hex and the shot misses, determine if the errant shot starts a fire; utilized their fixed GP Factor listed in Ammo Type column.

7.35.4 Fire in Groves

As indicated by the scenarios, fires may start in Medium Grove or Light Grove hexes. These Terrain types are not listed on the Game Card as this option is treated as special case only.

The scenario must list that the Medium Grove or Light Grove hexes are treated as if they are a Wood, Brick or Stone Building hex, plus any additional modifiers, for starting a fire purposes.

A scenario's Special Conditions could list that fires may start in Medium Grove and Light Grove hexes (both treated as a Wood Type Building) also applying a –5 modifier.

7.36 Terrain, Time of Day & Weather Conditions

The basic conditions in the game are daytime, clear weather and no adverse conditions. However, in many cases alternative conditions may exist. The scenarios indicate if any alternate conditions are applicable.

7.36.1 Alternate Spotting Conditions

The time of day when a scenario takes place may have limited visibility. Limited visibility applies a –1 to –5 spotting modifiers so it works well to represent dusk, twilight or dusty conditions as well as fog or moonlight conditions.

Battles, other than chance encounters or small unit infiltrations, rarely took place during total night or very poor conditions.

7.36.2 Cautious Movement

During periods of limited visibility, units naturally were more cautious when executing movement.

If the scenario calls for it, reduce vehicle movement factor by ½ (round down). Squads and half-squads may not quickmarch. During limited visibility conditions, vehicles reduce the vehicle path and road movement factor by ½ (round down); during very limited visibility conditions vehicles may not use the path or road movement bonus (see 4.5.1.1.5).

7.36.4 Khamsin

Khamsins are desert dust and sand storms that swept the battlefield in North Africa. During Khamsins, spotting modifiers apply as well as Combat modifiers and potentially Cautions Movement. The specific Khamsin effects are listed in the scenario's Limited Spotting Table.

Khamsin effects are only applicable if specified in a scenario's Setup Conditions. For example, scenarios 71 and 73 have Khamsin effects.

7.37 Artillery Reconnaissance by Fire

The standard artillery rules do not allow the possibility of calling fire against an unsighted hex, i.e., the target hex must contain at least one spotted unit. In reality, the ability to target open areas is a major force multiplier of artillery fire. It is strongly recommended that this Optional Rule only be employed if the Hidden units option (see 7.2) is also in play.

To call artillery reconnaissance fire, the observer must have a clear line-of-sight to the target hex and must be within the maximum range of the firing unit. Only an FO may call artillery reconnaissance by fire and only from a single artillery battery; on-map units may not be utilized. It must be a Closed SHEAF, GP Fire mission. In addition to all the other Fire Response modifiers, the FO must also apply a –2 Fire Response modifier.

The fire must check the next turn; it may not be adjusted or continued.

> Why a –2 Fire Response modifier? Yes, it is really not any more difficult to call reconnaissance by fire than standard Indirect Fire. However, having the knowledge of where the opposing forces are most likely located, even if employing hidden units, is a very large advantage those in the real world do not possess. The –2 modifier just balances that out.

7.38 Special Units

A few units have special capabilities that require some explanation and a few additional rules.

7.38.1 British Mounted Fire [B-5A & B-8B]

HMG, OML 2-in Mortar, and OML 3-in Mortar Sections transported by Universal Carriers may fire without first dismounting.

Their field-of-fire and their fire capabilities are unaffected if they fire while mounted. They may dismount and fire normally. They are not required to fire while mounted.

7.38.3 British FO Tanks [B-9B]

British observation post tanks (OPs) mounted dummy wooden guns in place of the 6 pdr gun that normally equips the tanks, requiring the tank to utilize the turret mounted coax machine-gun as their main weapon. The OP tank turret does not traverse. When these vehicles are fielded as FO tanks, they must use just the GP-OP (MMG) row on their Data Cards. Non-OP tanks of the same type do not utilize the GP-OP row.

7.38.4 British White Scout Car [B-15B]

The US designed/built White Scout car was often pressed into service for infantry transport. When utilized in that role, change the transport capacity to Tr: 0-2, but reduce the transported squad's GPD to 2S due to the extra troops.

7.38.12 Italian L3/35 Lf [I-5A]

The L3/35 Lf was a specially modified version of the standard L3/35 tank with an added flamethrower capability.

The flame fuel was towed in a detachable armored trailer. The trailer could be quickly jettisoned if it became damaged or knocked out.

7.38.12.1 Flame Combat

The tank's flamethrower was mounted in the hull front in place of one of the MMGs. Therefore, the flamethrower is limited to a front field-of-fire. As long as the fuel trailer is connected to the tank, it may not move in reverse.

7.38.12.2 Fuel Trailer Hits

The fuel trailer is subject to being hit separately from the towing tank unit and it must be determined if any Rear-Side or Rear Hit Locations hits actually hit the fuel trailer instead of the tank itself. Note that HS hits from the Front-Side may not hit the fuel trailer.

Roll (100):

- For HS hits, if the result falls within 01-25 the trailer is hit. Otherwise, resolve the hit normally on the tank.
- For HR hits, if the result falls within 01-60 the trailer is hit. Otherwise, resolve the hit normally on the tank. The trailer has an armor value of 2 from all angles and elevations. If the hit penetrates, damage is applied normally.
- If a BU result, the trailer is immediately jettisoned. No further flame combat is possible. The tank is immediately suppressed (AG) along with any friendly units in the same hex.
- If a KO result, the trailer is immediately jettisoned. No further flame combat is possible.
- If a Dmgd result, the Ammo Limit for the flamethrower is immediately reduced to A: 4. Place the DMGD counter at the rear of the tank or under it to indicate that the damage applies just to the flamethrower. If damaged a second time, the trailer is immediately jettisoned. No further flame combat is possible. Once the trailer is jettisoned for any reason, the tank may continue to operate normally. It may be voluntarily jettisoned at any time whether it is damaged or not.

7.38.13 British CS Tank Howitzers

The early war A9 (B-2A) and A10 (B-2B) Close Support (CS) tanks fielded a 3.7in. howitzer that primarily fired smoke. At the time, the tactical theory was to "smoke parts of an enemy force" to cut them off from the battle to secure a numerical, if limited, advantage over the remaining force. It has an ammo limit of A: G3 reflecting its limited GP fire capability.

In contrast, the Crusader I (B-5B), Crusader II (B-6B), and Matilda II (B-10A) Close Support (CS) tanks fielded a 3in. howitzer with full GP fire capability and less focus on the use of smoke.

7.39 Morale & Vehicle Bailout

Morale status does have an impact when attempting to bail out from broken and hesitating vehicles. When employing this option, apply the following:

- If the vehicle is Broken, the modifier is –20
- If the vehicle is Hesitating, the modifier is –10.

7.40 Road/Path Movement [Expanded]

Vehicles may move at the road/path rate of 1 movement factor per hex (not at the bonus movement rate or change elevation bonus) when on a road/path through terrain even if they did not start on a road/path when moving along a road/path. It must maintain facing while moving.

7.41 Removing Spot Counters

This Optional Rule is secondary part of the Limited Spotting Optional Rule (see 7.7) where eligible Spot/Fire and Break/Off counters are checked to see if they are removed. Employing this Optional Rule will add a fair amount of play time to a scenario. Reference the Spot Removal Table on Game Card B.

During the Spotting Phase of each turn for each unit with a Spot/ Fire and Spot/Fire counter: Spot counters not eligible for removal:

- Spotted unit occupies None-type Cover.
- Spotted unit is adjacent to one or more Unsuppressed, Non-Full Cover, Unbroken opposing combat units.

Spot counters eligible for removal:

- Spotted unit occupies Light, Medium or Heavy Cover. Note that all Building hexes are treated as Heavy Cover for spotting for leg units and for vehicles and towed units inside the buildings.

Count of the number of Unsuppressed, Non-Full Cover, Unbroken opposing combat units who are able to spot the unit. Based on the count above, for each Cover type, two values are listed: if the spotting range for any of the units included in the above count is equal to or less than ½ of the maximum spotting range (round down) use the first value; for ranges greater than ½ up to the maximum range use the second value.

Roll (100) if the net result is less than or equal to the listed value, the Spot counter is removed.

Apply the following modifiers:

- Based on the highest Unit Grade of any of the units included in the above count, apply the indicated modifier.
- If one or more Recon units are included in the above count, a +10 modifier applies.

> *An OQF 6-pounder ATG with a Spot/Fire counter is located in a Grove hex. No German units are adjacent to its hex. Two Seasoned PzKpfw IVF1s and a single Veteran PzKpfw IVF2 are able to spot it. The two Mark IVF1s are at a range of 10, while the Mark IVF2 is at a range of 6.*
>
> *Cross-referencing the Medium Cover row with the 3-5 units column on the Spot Removal (OR) table, the values listed are 20/40. Since at least one of the German tanks is at 1/2 range or less (15/2, round down), the 20 value is applicable. The British player rolls (100) and applies a +10 modifier for the Mark IVF2's Veteran Grade. If the net result is 20 or less, the Spot counter is removed.*

7.42 Staggered Initiative

This is an alternative method of determining the Initiative for each turn as opposed to the single roll (100) method (see 4.3 & 6.3). Depending on the granularity employed, it may add a fair amount of play time to a scenario.

In this approach, Initiative is triggered on a formation-by-formation basis. To keep it manageable, base it on the largest formations possible. In scenarios that field multiple companies per force, use companies as the basis. With smaller scenarios of a single company per side, use a company's individual platoons

and sections as depicted in the force summaries; or use any predetermined grouping. The players need to agree upfront as to the initiative organization used and maintain that structure throughout the scenario.

It should be noted that this option requires that players note the order in which the Initiative was triggered, because the same order, in reverse, is followed during the Movement Phase [Exception see 7.42.3].

7.42.1 Determining Initiative – Initial First Player

During the Initiative Phase each Force selects a specific formation, rolls (100) and applies their Force Grade Modifier to their roll; the net result may be greater than 100 or less than 0. Reroll ties unless instructed otherwise in the scenario Special Conditions. Note that while formations trigger initiative on a formation-by-formation basis, Force Grade, not Formation or Unit Grade determines the modifier to apply.

The Force rolling the higher result is the First Player for the Indirect Fire Combat Step and resolves all Indirect Fire followed by the Second Player. Flip the Turn counter to indicate the initial First Player.

In scenarios where one or both Forces apply a Initiative DRM based on whether or not they won the Initiative during the previous turn, its application is determined by which Force was designated as the initial First Player the previous turn.

The First Player from above then utilizes the announced formation to resolve its fire first during the following Direct Fire Combat Step. Make a note of the formation executing its Direct Fire.

7.42.1.1 Subsequent Formations

After resolving the initial formation's Direct Fire, each Force again identifies a formation and rolls (100) and applies their Force Grade Modifier to their roll. The Force rolling the higher result is next to resolve its formation's fire during the Direct Fire Combat Step. The formation now firing may be from the same Force or the other Force. Make a note of the formation now executing its Direct Fire.

Continue identifying formations to next resolve their Direct Fire until all Direct Fire is complete. Note that one Force may have a greater number of formations than the other or resolve all of its Force's Direct Fire before the other Force. In that case, all of a Force's remaining formations resolve their fire in any order desired. The order of execution is still noted.

7.42.1.2 Combining Fire

All of a formation's fire on a single opposing unit must be announced before any of that formation's fire is resolved. Subsequent formations may again fire on this same unit by announcing all fire against the same opposing unit before any of that formation's fire is resolved.

Note that this is an exception to the rule where all units had to announce their Direct Fire against a single opposing unit before that fire was resolved (see 4.4.1, 6th bullet).

A unit that must take a Morale Check due to Direct Fire, takes a single check after all fire directed at it is resolved from all opposing formations. Use Under Fire counters as necessary to note pending checks. However, it must take the Morale Check before

it resolves its own Direct Fire even if all opposing units have not yet fired. It still only takes a single Morale Check.

7.42.1.3 Overwatch Fire

After all formations have executed their Direct Fire, resolve all Overwatch Fire with the original First Player announcing and resolving its Overwatch Fire followed by the original Second Player.

7.42.2 Movement Phase

During that Step, the initial First Player announces and resolves all Close Assaults/Hand-to-Hand Combats followed by the initial Second Player.

During the Movement and Overrun Combat Step, formations execute their movement in reverse order with the last formation to resolve its Direct Fire moving first followed in reverse order ending with the formation that resolved its fire first moving last.

Overwatch Fire may trigger normally as each formation resolves its movement.

A unit that must take a Morale Check due to being Overrun, takes a single check after all Overruns directed at it are resolved.

7.42.3 Streamlined Movement Phase

The Movement Phase is executed as described in the Basic and Advanced Game. This eliminates the need to note the formation order in which the Initiative was initially triggered. The initial Second Player moves all units, followed by the initial First Play.

7.43 Recon Unit Capabilities [Expanded]

In addition to their current capabilities, recon units may also apply:

- +1 Spotting modifier on the Spotting Ranges Table
- +10 modifier when employing OR 7.7
- –1 modifier when employing OR 7.24
- +10 modifier when employing OR 7.41

7.46 Artillery Air Bursts

All Indirect Fire, mortar Direct Fire and aircraft delivered bombs or rockets directed at targets located in Light Grove or Grove hexes may cause additional damage due to shrapnel/splinters created from explosions in the trees.

Affects all 'S' and 'P' type targets and Open 'A' type targets (OR, see 7.8) by applying +10 modifier.

7.47 Dismounted FOs

Integrated vehicle crew-based FOs may separate from the crew and dismount and move independently from their parent vehicle. The FO dismounts normally; add a leg unit section to represent the dismounted FO. If required due to combat results, it may not bail out from the parent vehicle grew and act as an independent leg unit.

When dismounted, it functions as a leg FO unit. However, it applies a –10 modifier for all GP Fire, Close Assault and Hand-to-Hand Combats it initiates. The parent vehicle is unaffected and may operate normally as an independent unit.

The FO section may remount its parent vehicle normally; remove the leg unit section. It may also mount a different vehicle as a normal passenger unit.

7.48 Delayed Reaction

Units may not be prepared for action or may be surprised by the appearance of opposing forces. Therefore, there is a delay in responding to sighting opposing units. This is represented by a delay before the unit may operate normally. Until that time, the unit must have an N/C command marked.

Scenario 49 has Delayed Reaction. For example, if an Italian tank crew spots a British unit moving during turn 5, it may mark a Move command starting in turn 6.

7.49 Vehicle Assault Cover

Vehicles normally provide Light Cover for leg units when located in the same hex. With this Optional Rule, when advancing, a limited number of leg units are also able to utilize the cover from vehicles.

All vehicle types may provide assault cover for leg units. Each vehicle provides Light Cover for a squad, or two half-squads, or a half-squad and a section, or 2 sections sized units. Covered leg units do not apply the –2 GP Defense Movement modifier.

The covered leg unit(s) must be dismounted, not in Full Cover and start its turn in the same hex as the vehicle. The vehicle and the covered leg unit(s) must share the same MOVE or SHORT HALT command. If the units are from different formations (exception to 6.2.1.1.3), the shared command may be from either formation. During their Movement Phase, the vehicle and covered leg unit(s) are moved at the same time to indicate Vehicle Assault Cover and must remain in the same hex.

Leg units may utilize Vehicle Assault Cover to execute Hand-to-Hand or Close Assault Combats against adjacent units or to advance into Hand-to-Hand or Close Assault Combats both with a MOVE command.

The vehicle and the covered leg unit(s) may be individually targeted for Direct and Overwatch Fire. Thanks to Randall Garlington for suggesting this optional rule.

7.50 Defensive Fire

The Command Control rules limit the number of unique commands each company may utilize per turn potentially forcing some of the units to mark N/C commands (see 6.2.1). Typically, a unit may not perform any actions when marked with an N/C command.

When employing this option, units with N/C commands may defend themselves, but only when fired upon with Direct AP or GP Fire. If fired upon, the unit may return fire, as if Overwatching, against a single firing unit if it can spot the unit and it is within its Field-of-Fire. If also employing Optional Rule 7.8 Turrets, see section 7.8.4.

It must apply a –2 AP Hit Modifier or a –10 GP Fire Modifier in addition to any other applicable modifiers including the applicable Overwatch modifier.

If later attempting to recover from a Suppression or Morale Break after utilizing Defensive Fire, apply the Command other than N/C +20/–20 modifier.

7.52 Command Span

Even in a tactical setting, command units perform critical roles beyond the function of morale support and recovery. By maintaining communications with their subordinate units, they effectively carry out a command role.

To maintain communications, subordinate units must be within a certain range of their command unit(s). In turn, the command units must be within a certain range of higher-level command units. In game terms, these various ranges are called Command Span.

While many different command elements are affected, Command Span focuses on a subordinate unit's ability to engage in combat and maneuver across the battlefield.

Combat is a more basic element than maneuver. Units commanded to Fire or Overwatch are much more able to carry out those commands without interaction from their command unit(s) than those units ordered to Move or Short Halt. N/C commands are unaffected by Command Span.

Company (CHQ)

The CHQ is the smallest, or lowest command level. The Command Span from any CHQ is 10 hexes to any subordinate unit from its formation. A subordinate unit only needs to be within range of a single CHQ from its formation if more than one CHQ is available. CHQs do not provide any command authority for units outside of their formation.

Typically, the company-level Command Span is not modified for Formation Grade, although it may increase or decrease due to other factors, for example, nationality, a large number of subordinate units (decrease) or a defensive posture (increase).

- If *any* company-level subordinate units are out of the Command Span, excluding recon units, and any units will be moving, again excluding recon units, (Move and/or Short Halt commands), regardless if those specific units are out of the Command Span or not, the maximum number of Move and/or Short Halt commands available is equal to ½ (round down) of the total available commands (minimum 1). The total number of available commands is not affected.

- After the loss of *all* company CHQs (elimination, bail out, knock out or brew up), there is a permanent reduction of the total available Move and/or Short Halt commands by ½ (round down) of the total available commands. The total number of available commands is not affected.

- Units without radio sets (see 7.4) have their Command Span reduced to 0.

Reference Scenario 50: Operation Compass: Breaching the Fortress. The Italian Infantry CHQ Command Span is decreased to 5 hexes due to troop quality and the size of the company.

At full-strength and all leg units mounted, the company has 23 combat units. With Regulars Formation Grade, it has a total of 11 available commands. If any of the company's units are greater than 5 hexes from the CHQ Half-Squad, the number of available Move and/or Short Halt commands is limited to 5 (11/2 round down) of the available 11 commands.

Battalion (BHQ)

The BHQ is the intermediate, or middle command level. All CHQs are subordinate to one or more BHQs. The Command Span from *any* BHQ is 20 hexes to its subordinate CHQs.

Typically, the battalion-level Command Span is not modified for Formation Grade, although, like company-level command spans, it may be increased or decreased due to other factors.

In many cases, BHQs will be positioned somewhere off map, since they are not listed as part of a scenario's forces. In that case, it is assumed that any CHQs are within the 20 hex Command Span even if located more than 20 hexes from the mapboard edge. A scenario could include special conditions where this could be modified or adjusted.

- If a CHQ is out of the Command Span from its BHQ, its formation must move two rows down in the Available Commands table, minimum Green, when determining its available commands.

- After the loss of all BHQs (elimination, bail out, knock out or brew up), there is a permanent move of two rows down in Available Commands table, minimum Green, when determining its available commands.

- Units without radio sets (see 7.4) have their Command Span reduced to 0.

Regiment (RHQ)

The RHQ is the highest, or top command level. All BHQs are subordinate to one or more RHQs. The Command Span from any RHQ is 20 hexes to its subordinate BHQs.

Typically, the regiment-level Command Span is not modified for Formation Grade, although, like battalion-level command spans, it may be increased or decreased due to other factors.

In just about all cases, RHQs will be positioned off map, since they are not listed as part of a scenario's forces. In that case, it is assumed that any BHQs are within the 20 hex Command Span even if also located off map or located more than 20 hexes from the mapboard edge. A scenario could include special conditions where this could be modified or adjusted.

- If a BHQ is out of the Command Span from its RHQ, *all* of its company-level formations must move two rows down in the Available Commands table, minimum Green, when determining its available commands. Cumulative with Battalion-level above.

- After the loss of all RHQ (elimination, bail out, knock out or brew up), there is a permanent move of two rows down in Available Commands table, minimum Green, when determining its available commands. Results are cumulative.

- Units without radio sets (see 7.4) have their Command Span reduced to 0.

7.53 Voluntary Bail Out

Bailout is normally a non-player-controlled event triggered by specific combat results. However, this may result in challenging situations when employing the Command Span optional rule (see 7.52).

Damaged Vehicles or vehicles with just Hull Damage (see 7.56) and Track hits invariably fall behind, causing gaps in the required command span when commanding moving units.

Players may prefer to place those vehicles out of action. When the situation arises, during the Adjust/Remove Counters Step (see 6.8.4) of the Adjustment Phase, place a Bail counter on or next to the vehicle.

7.54 Quickdraw

Quickdraw is a method by which a Second Player Unit (SPU) simultaneously executes Direct Fire against a First Player unit (FPU) that just announced Direct Fires against that SPU. To execute Quickdraw, the SPU:

- Is unsuppressed, unbroken and not hesitating.
- Must have an unrevealed Fire Command.
- Must have spotted the FPU during the current turn's Spotting Phase and has the FPU within its current field-of-fire.
- Must have Unit Grade superior to that of the FPU.
- Reduces its RoF to 'N' if not already 'N'.

A first player Crusader I with Seasoned Unit Grade announces Direct Fire against a second player PzKpfw IIIF with Veteran Unit Grade with an unrevealed Fire Command. The two vehicles (the Panzer III must fire its 37mm gun with a RoF of N) resolve their Direct Fire in any order, only applying any combat results after both have resolve their fire.

7.55 Leaders
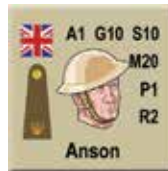
Leaders add a powerful dynamic to Panzer. They represent individuals of various ranks and skills that can influence gameplay in a number of unique ways. In almost all cases, scenarios do not indicate the presence of any particular leader or leaders. Players may freely add any number of leaders or none at all. Just decide by mutual agreement. Follow the recommended command structure below, or just go with whatever works. There is no correct or incorrect approach as battlefield conditions make for very fluid situations. There may be occasions where junior officers or NCOs find themselves in overall command or senior officers are commanding only a small contingent.

For the purposes of these rules, RHQ level (regiment/brigade) commanders are not addressed. Those commanders are considered to operate off-map or, when on-map, without a named leader.

7.55.1 Leader Employment

At the start of a scenario, leaders must attach to any vehicle, leg or towed unit; they may not attach to aircraft. They may also arrive later in a scenario as part of a relief or reinforcement formation, again attached to any vehicle, leg or towed unit.

Leaders never operate independently. They must attach to a combat unit at all times; place the leader counter under the attached unit. A unit may only have a single attached leader. The attached unit's Grade or its Formation Grade is unaffected by the presence of a leader.

Leaders are never individually targeted. If in play, they are visible at all times unless part of a hidden unit. If the attached unit is lost (elimination, bail out, knock out or brew up), the leader is permanently removed from play. Leaders do not have VPs and, therefore, do not factor in when determining victory in a scenario whether they are present, survive or are lost.

No VPs? What value can be placed on the impact a leader or leaders does or does not have on the outcome of a scenario? In many cases, it could be purely subjective or emotional. There may be a favorite leader or one that turns the tide of battle or has no measurable impact. It is really up to the players to make that determination.

If attached to a vehicle, leg or towed unit designated in a scenario as an FO or command unit (BHQ or CHQ), the leader automatically assumes the role as that FO or command unit. Leaders do not gain or lose FO or command statues when transferring to a new unit even if that new unit is also an FO or command unit. Integrated vehicle crew-based FO leaders may dismount; exception to below (see 7.47).

Leaders attached to a vehicle may never transfer to another unit; they remain with that vehicle for the duration of the scenario. Leaders attached to leg or towed units, may transfer to another leg or towed unit from the same formation when located in the same hex; they may not transfer to vehicles. If an FO or command unit (BHQ or CHQ) that status transfers with the leader.

No specific command is required to transfer, just shift the leader counter to the new leg or towed unit at the conclusion of the Adjustment Phase after all of the adjustment steps are complete.

Leaders may not transfer from a leg or towed unit that is suppressed, hesitating and/or broken. However, they may transfer to a suppressed, hesitating and/or broken leg or towed unit.

7.55.2 Leader Effects

- (A) AP Combat: + AP Hit modifier
- (G) GP Combat: + GP dice roll modifier

Also used for Close Assault, Hand-to-Hand and Overrun combat resolutions

- (S) Suppression Recovery: – dice roll modifier
- (M) Morale: + dice roll modifier
- (P) Spotting: + Spotting Ranges modifier
- (R) IF Response: + Indirect Fire Response modifier

General

Command: In the same manner as Recon units, all leaders automatically command the attached unit; this command does not count towards its formation's command limit.

Leader modifiers are cumulative with all other combat, suppressed, morale, spotting or IF response modifiers. Leaders may apply any and all applicable modifiers during a turn. If more than one leader could be applicable, only the modifiers from a single leader come into play. Multiple leader modifiers are never applicable at the same time on the same unit.

It is not necessary to utilize the same leader for all actions; if there is a choice, utilize the leader that offers the greatest advantage.

AP and GP Combat

(A) AP and (G) GP Combat modifiers apply to all of the attached unit's weapons and any attached weapons. If the leader is also acting as a command unit (BHQ or CHQ), a single leader's (A) AP or (G) GP Combat modifiers are applicable to all other units' weapons and any attached weapons from the same formation within command range.

Close Assault and Hand-to-Hand Combat

Close Assault and Hand-to-hand Combat modifiers apply singly per combat, not per unit in the combat, and only to the combat including the leader regardless if the leader is also acting as a command unit (BHQ or CHQ). The attached unit does not need to be the primary attacker.

Overrun Combat

Overrun modifiers apply only to the attached vehicle. They do not apply to any other Overrun combats even against the same target unit regardless if the leader is also acting as a command unit (BHQ or CHQ).

Suppression

The (S) Suppress modifier applies only to the attached unit unless the leader is also acting as a command unit (BHQ or CHQ). In those cases, a single leader's (S) Suppress modifier is applicable to all other units from the same formation within command range.

Morale

The (M) Morale modifier applies only to the attached unit unless the leader is also acting as a command unit (BHQ or CHQ). In those cases, a single leader's (M) Morale modifier is applicable to all other units from the same formation within command range.

This modifier is an exception and is in addition to the +20 Command Unit with in Cmd Rng limit (see 7.1.4).

Spotting

The (P) Spotting modifier applies only to the attached unit regardless if the leader is also acting as a command unit (BHQ or CHQ).

If attached to a recon unit, this modifier is in addition to the +1 Recon Spotting modifier (see 7.43).

Spotting modifiers do not apply to optional rules 7.4 and 7.7; the application of those rules is unaffected by attached leaders.

IF Response

The (R) IF Response modifier applies only to leaders when acting as FOs, command units (BHQ or CHQ), or attached to recon units and applies only to the attached unit regardless if the leader is also acting as a command unit (BHQ or CHQ).

If the result is an unmodified 1, a Danger Close friendly fire incident may still occur (see 6.5.1.10).

7.55.3 Force Leaders

Ten double-sided leader counters are included for each force for a total of twenty individual leaders—two of each rank.

Rank titles are not included on the individual Leader counters. Some are just too long or the requisite abbreviations would not be clear. So, just the leader surnames along with their national rank insignia are included.

Across the forces, equivalent ranks do not exist across all of the nations. Some interpretations were made to keep the information consistent.

The following tables summarize each force's leaders to assist in associating the various rank insignia with the rank titles and leaders. Also included are recommended command structures.
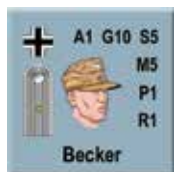
German

- **CHQ:** Lieutenant or Captain; additional CHQ from same formation the same rank or one or two ranks lower
- **BHQ:** Major or Lt. Colonel; additional BHQ from same formation the same rank or one or two ranks lower
- **FO:** Typically, a junior officer or senior NCO
- **Platoon:** Typically, a junior officer or senior NCO

In the German Heer, there was a strictly defined system of corps colors on collar patches, uniform piping and the colored edging around the shoulder boards or shoulder straps. This system of colors, Waffenfarben, denoted combat service branches, administrative and ministerial areas, and the general staff.

Rose-Pink: all Panzer Troops, e.g., Sauer

White: Infantry, e.g., Winter

Golden-Yellow: Reconnaissance, e.g., Pfeiffer

Copper-Brown: Motorcycle Infantry, e.g., Klein

Red: Artillery, Assault Guns, e.g., Otto

Meadow-Green: Panzergrenadiers, Motorized Infantry, e.g., Winkler

Black: Pioniere, Armored Engineers, e.g., Haas

These are provided for illustrative purposes only, and do not limit the use of leader counters in any particular scenario or setting. Other colors, not included here, were also utilized, e.g., blue for supply troops.

German Leaders		
Haas	Corporal	Unteroffizier
Voigt	Corporal	Unteroffizier
Stein	Jr. Sergeant	Unterfeldwebel
Sommer	Jr. Sergeant	Unterfeldwebel
Otto	Sergeant	Feldwebel
Brandt	Sergeant	Feldwebel
Winter	Staff Sergeant	Oberfeldwebel
Bergmann	Staff Sergeant	Oberfeldwebel
Pfeiffer	Sr. Sergeant	Hauptfeldwebel
Sauer	Sr. Sergeant	Hauptfeldwebel
Löwe	2nd Lieutenant	Leutnant
Wagner	2nd Lieutenant	Leutnant
Becker	Lieutenant	Oberleutnant
Schultz	Lieutenant	Oberleutnant
Klein	Captain	Hauptmann
Wissmann	Captain	Hauptmann
Jassen	Major	Major
Köhler	Major	Major
Winkler	Lt. Colonel	Oberstleutnant
Jäger	Lt. Colonel	Oberstleutnant

Italian

- **CHQ:** Lieutenant or Captain; additional CHQ from same formation the same rank or one or two ranks lower
- **BHQ:** Major or Lt. Colonel; additional BHQ from same formation the same rank or one or two ranks lower
- **FO:** Typically a junior officer or senior NCO
- **Platoon:** 2nd Lieutenant or senior NCO

Italian Leaders		
Alessi	Corporal	Caporale
Donato	Corporal	Caporale
Sangiamo	Senior Corporal	Caporale Maggiore
DiBrico	Senior Corporal	Caporale Maggiore
Romagnolo	Sergeant	Sergente
Contino	Sergeant	Sergente
Gaspari	Senior Sergeant	Sergente Maggiore
DeVita	Senior Sergeant	Sergente Maggiore
Leonardi	Warrant Officer	Maresciallo Maggiore
Ricci	Warrant Officer	Maresciallo Maggiore
Giovine	2nd Lieutenant	Sottotenente
Sposaro	2nd Lieutenant	Sottotenente
Falconi	Lieutenant	Tenente
Ferenzi	Lieutenant	Tenente
Benigni	Captain	Capitano
Russo	Captain	Capitano
Oriani	Major	Maggiore
Talarico	Major	Maggiore
Evangelisti	Lt. Colonel	Tenente Colonnello
Graziano	Lt. Colonel	Tenente Colonnello

British

- **CHQ:** Lieutenant or Captain; additional CHQ from same formation the same rank or one or two ranks lower
- **BHQ:** Major or Lt. Colonel; additional BHQ from same formation the same rank or one or two ranks lower
- **FO:** Typically a junior officer or senior NCO
- **Platoon:** Typically a junior officer or senior NCO

British Leaders	
Wright	Lance Corporal
Robinson	Lance Corporal
Lewis	Corporal
Jackson	Corporal
Thompson	Sergeant
Ames	Sergeant
Dunbar	Staff Sergeant
Ransom	Staff Sergeant
Joyce	Sergeant Major
Green	Sergeant Major
McRoberts	2nd Lieutenant
Craig	2nd Lieutenant
Harker	Lieutenant
Matherson	Lieutenant
Stevens	Captain
Burton	Captain
Anson	Major
Adams	Major
Crofts	Lt. Colonel
Kirkland	Lt. Colonel

7.57 Tank Crew Size

Following their debut during the Great War, tank design went through a number of innovative stages. By the late 1930s, it was determined that crew effectiveness was not only governed by the physical positions within a tank, but also the by the distribution of duties, i.e., commander, gunner, loader, driver, and, possibly, other roles, e.g., hull machine gunner.

As such, a three-man crew was considered the minimum size for an effective distribution of duties. With one crew member acting as a driver, and the remaining two crew members assuming the roles of gunner, loader and commander.

It goes without saying that a tank commander's effectiveness was reduced by splitting time between roles like commander/loader or commander/gunner. That is why the most effective tanks had four- or five-man crews, where each crew member assumed only a single role.

A number of early war tanks had two-man crews where the commander also acted as the loader and gunner or in some rare cases, three-man crews where the commander still performed all three roles. This placed a huge demand on him and, understandably, had a negative impact on his situational awareness, thereby reducing his effectiveness in all three roles.

In those cases where one man had to perform all three roles, these tanks have a "CREW" notation listed on their Data Cards. This is found immediately below the vehicle's Points in the upper right corner of their data card, e.g., F-1A R-35.

Apply the following modifiers and effects:

- –1 Direct Fire AP modifier
- –5 GP Direct Fire modifier
- If also acting as a CHQ, –1 total available commands (minimum 1). If more than one "Crew-Type" CHQ is available to the formation, the modifier is still only –1.
- If also acting as a BHQ, reduce its Command Span to 10 hexes to its subordinate CHQs. If already less than 10 hexes, retain that Command Span.
- If also acting as a RHQ, reduce its Command Span to 15 hexes to its subordinate BHQs. If already less than 15 hexes, retain that Command Span.

Note that Morale, Called Artillery Response and Overrun Combats are not affected since the tank commander is considered to be fully focused on those actions at the time of execution.

Note that the design of this optional rule excludes those vehicles armed only with machineguns (MMGs), e.g., German G-1A PzKpfw 1B, and those armed with guns and heavy machineguns (HMGs) fed by multi-round magazines, e.g., B-13A Humber Mk. II/III.

As published, no vehicles with a "CREW" notation are included.

COMBAT EFFECTS SUMMARY

AP DF vs. A, P, or S-Type Vehicle

AP combat with hit determination, number of hits, hit location, armor comparison, damage determination and bail out.
- S-Type: -2 Damage Modifier; N/A with CE-Ammo.
- Optional (7.11) Special +2 BU modifier with KO/BU damage determination.

Basic Game Damage
- If the Penetration Factor is equal to or greater than the Armor Factor by 1-3, the target suffers a Damage Hit.
- If greater by 4-9, it suffers a KO.
- If greater by 10 or more, it suffers a BU.

GP (any) DF/IF vs. Leg or Towed

GP combat with the listed results determination.

Non-Small Arms GP DF/IF vs. A or P-Type Vehicle

GP combat with special results determination and bail out.
- If a Suppressed result, the vehicle is suppressed.
- Effective Result only if shooter's maximum GP Effectiveness factor is greater than or equal to the target vehicle's GP Defense Factor. Otherwise, the target vehicle is suppressed by an Effective Result.
- If an Effective Result and the final modified result ends in 5, the vehicle suffers a Damage hit. The shooter rolls (10). If the result is equal to or less 4, place a TURRET DMGD counter on or next it; otherwise place a HULL DMGD counter. If an unarmed vehicle is damaged, it suffers automatic Hull Damage.
- If an Effective Result and the final modified result ends in 10, the vehicle suffers a TK hit.
- If an Effective Result and not a Damage or TK hit, roll (10) to determine KO or BU. BU if equal to or less than shooter's maximum GP Effectiveness factor, otherwise KO. Optional (7.11) Special -2 BU modifier with damage determination.
- Optional (7.8.3) Effective Result vs. open A-Type vehicle: the target vehicle suffers turret damage if shooter's maximum GP Effectiveness factor is less than the target vehicle's GP Defense Factor.

Non-Small Arms GP DF/IF vs. S-Type Vehicle

GP combat with results determination and bail out.
- If a Suppressed result, the vehicle is suppressed.
- If an Effective Result and the final modified result ends in 5, the vehicle suffers a Damage hit. The shooter rolls (10). If the result is equal to or less 4, place a TURRET DMGD counter on or next it; otherwise place a HULL DMGD counter. If an unarmed vehicle is damaged, it suffers automatic Hull Damage.
- If an Effective Result and the final modified result ends in 10, the vehicle suffers a TK hit.
- If an Effective Result and not a Damage or TK hit, roll (10) to determine KO or BU. BU if equal to or less than shooter's maximum GP Effectiveness factor, otherwise KO. Optional (7.11) Special -2 BU modifier with damage determination.

Small Arms GP DF vs. A-Type Vehicle

GP combat with results determination.
- If an Effective or Suppressed Result at pointblank range, the target vehicle is Suppressed.
- If an Effective Result at short range, the target vehicle is Suppressed.
- Otherwise no effect.
- Optional (7.8.3) Effective Result at pointblank range vs. open vehicle: the target vehicle suffers turret damage.

Small Arms GP DF vs. P-Type Vehicle

GP combat with results determination and bail out.
- If a Suppressed Result at pointblank or short range, the target vehicle is Suppressed.
- If an Effective Result at pointblank range, the target vehicle is Damaged. The shooter rolls (10). If the result is equal to or less 4, place a TURRET DMGD counter on or next it; otherwise place a HULL DMGD counter. If an unarmed vehicle is damaged, it suffers automatic Hull Damage.
- If an Effective Result at short range, the target vehicle is Suppressed.
- Otherwise no effect.

Small Arms GP DF vs. S-Type Vehicle

GP combat with results determination and bail out.
- If a Suppressed result, the vehicle is suppressed.
- If an Effective Result and the final modified result ends in 5, the vehicle suffers a Damage hit. The shooter rolls (10). If the result is equal to or less 4, place a TURRET DMGD counter on or next it; otherwise place a HULL DMGD counter. If an unarmed vehicle is damaged, it suffers automatic Hull Damage.
- If an Effective Result and the final modified result ends in 10, the vehicle suffers a TK hit.
- If an Effective Result and not a Damage or TK hit, roll (10) to determine KO or BU. BU if equal to or less than 1/2 of shooter's GP factor (round down), otherwise KO. Optional (7.11) Special -2 BU modifier with damage determination.

Close Assault vs. Type A, P, S-Type Vehicle

GP combat with results determination and bail out.
- If a Suppressed result, the vehicle is suppressed.
- If an Effective Result and the final modified result ends in 5, the vehicle suffers a Damage hit. The shooter rolls (10). If the result is equal to or less 4, place a TURRET DMGD counter on or next it; otherwise place a HULL DMGD counter. If an unarmed vehicle is damaged, it suffers automatic Hull Damage.
- If an Effective Result and the final modified result ends in 10, the vehicle suffers a TK hit.
- If an Effective Result and not a Damage or TK hit, roll (10) to determine KO or BU. BU if equal to or less than 1/2 of the primary attacker's Close Assault GP factor, otherwise KO. Automatic BU if attacker has a flamethrower. Optional (7.11) Special -2 BU modifier with damage determination.

Non-Small Arms GP DF/IF vs. Terrain

GP combat (Close Assault with engineers) with results determination.
- With two Effective Results the terrain type is destroyed; otherwise no effect.

Hand-to-Hand vs. Leg or Towed

Both sides roll (100) and compare results with immediate step loss or elimination.

Aircraft/AA Combat

AP/GP combat with Speed and Altitude modifiers.
- Aircraft Combat: In the 1st and/or 2nd Air Phases, acquire and spot ground units based on their speed and altitude.
- AA Combat: In the 1st and/or 2nd Air Phases, track aircraft based on their speed and altitude.