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OIL

How the current *A World at War* oil rules work

by Bruce Harper

Introduction

It was clear from the start that *A World at War* had to deal with oil, because oil supplies and use were a major component of the Second World War. The problem, though, was that logistical rules have a tendency to become overly complex – and also work well in some situations but not in others.

The idea has always been that oil should be important in the game, but not necessarily determinative of the outcome. In other words, if the Axis (for example) were to collapse because of oil shortages in every game, no matter what they did, the game wouldn't be much fun to play. But equally, no alliance should be able to completely ignore oil. Finding the balance has been a difficult challenge, especially since some players tend to ignore the oil rules as being too time-consuming to apply.

These design challenges have led to several revisions of the oil rules, and the most recent – completed in time for the 2018 third printing of *A World at War* – justifies this article.



What's different

Before reviewing the current oil rules, it's worth noting what has changed. This won't mean anything to new players, but to experienced *A World at War* players

it is as important to understand what rules no longer apply as to understand the newer rules.

Counting

The worst feature of the previous oil rules was the need to count. There has to be some relationship between the number of factors used and the amount of oil required, but micro-managing oil use is tedious and annoying. The oil rules have steadily tried to reduce such counting, but play revealed that they hadn't gone far enough in doing so.

Uninverting air and naval units

Uninversion is no longer related to oil use. Oil determines how many air and naval factors may be used, but not how many may be uninverted after.

Offensives

There is no longer any oil requirement for offensive operations. Not only was this requirement annoying and easily overlooked – it just took the fun out of the game and reduced the amount of fighting in the game.

Western Allied oil use

British and American oil use is distinct:

33.55 BRITISH AND AMERICAN OIL USE DISTINCT:

33.551 British and American air, naval and army oil requirements are distinct and each British and American service branch requires its own oil supply.

A. Oil used for British service requirements covers Commonwealth, Free French and British minor country units.

B. Oil used for American service requirements covers American minor country units and Australian units in the Pacific theater.

33.552 Once the British and American air or naval service requirements are met, additional oil counters, including increments of flexible oil counters (33.8), may be used to allow additional air or naval units to carry out activities.

By definition, this change has no effect until the U.S. is in the war. The employment of American units in Europe then puts greater stress on Western Allied oil supplies, and encourages Britain to use its units in the Mediterranean, without American help, with American forces concentrating in Britain for an invasion of France. Similarly, using British naval units in the Pacific will strain the Western Allied Pacific oil supply.

Most of all, a joint Anglo-American invasion of France will require more oil than before, and the state of the British oil reserve and the transport situation in the Atlantic will be more relevant than it was.

Task Force Composition

A related, and somewhat subtle, change is to TF composition:

20.162 A TF counter, if available, may be placed on the board to represent a naval force, subject to the following:

...

C. TFs may only contain naval units belonging to one major power and its associated and allied minor countries. Vichy French naval units may be included in Italian or German TFs; Free French naval units are treated as British naval units.

British and American naval units therefore now operate separately, which makes it easier to track their oil use. If the Americans employ significant naval forces in Europe, it now costs more oil than before.



Oil Effects

There are now four, not five, oil effects. The oil effects themselves are the same as before:

33.61 OIL EFFECTS: During his player turn, as set out in 33.52, the moving player determines which, if any, of the four oil effects set out below he wishes to offset. Oil effects apply to all members of an alliance faction within the affected supply zones (EXCEPTION: British and American oil requirements are distinct - 33.55). The effects are:

A. AIR: One oil counter is required to offset the air oil effect. This eliminates the air oil effects for 25 air factors and permits the owning player to expend an additional oil counter to use additional air factors. All the alliance faction's AAF, including associated and allied minor country AAF, air transports and jets are counted; NAS, whether land- or carrier-based, interceptors, strategic bombers and kamikazes are not.

- All air units have their Air Nationality DRM reduced by one.
- Land-based air units may not conduct offensive operations, search, provide air cover, or attack enemy naval units at sea.
- Offensive strategic warfare by strategic bombers, flying bombs and rockets is prohibited.
- Defensive air activities, including providing defensive air support, opposing enemy bombing and intercepting enemy air transport activities, are permitted only in the hex in which the air units are based. Interceptors defend normally, but the lack of operational air bases limits the hexes in which they may engage the attacker (26.443).
- The restrictions on searching, providing air cover, attacking enemy naval units at sea and on defensive air activities do not apply to Japanese air units in Japan.
- Air units may stage and redeploy freely from affected bases.

B. NAVAL: One oil counter is required to offset the naval oil effect. This eliminates the naval oil effects for two TFs and permits the owning player to expend additional oil counters to use additional TFs.

- All naval units have their Naval Nationality DRM reduced by one (EXCEPTION: Western Allied naval units, including ASW, in the Atlantic, Pacific and Indian Ocean SW boxes are not subject to oil effects - 33.4715E).
- Naval units may not conduct offensive operations, protect sea supply, provide or protect sea escort, or intercept (EXCEPTION: Submarines in fortified ports - 32.248).
- Submarine warfare is prohibited.
- Transports may not be used for onboard sea escort (21.64G).
- Naval units may change base and redeploy freely from affected ports.
- The restrictions on intercepting do not apply to Japanese naval units in Japan.

C. ARMY: One oil counter is required to offset the army oil effects.

- All ground units of all types have their CTL reduced by one.
- Ground units may not sea transport or conduct seaborne invasions from a location subject to the army oil effect.
- Ground units may not be taken as attrition losses from a supply zone from which sea supply was last traced to their attrition zone (14.52A).
- Armor units and Western Allied mechanized infantry units in Europe lose their mechanized component and act as infantry units, although they may conduct offensive operations and their combat factor for attrition and defensive purposes is unaffected. Such units have their movement factor reduced to three factors in Europe and two factors in the Pacific, lose their ZoC, may not create breakthroughs or exploit, and may be subject to a -1 DM if attacked by exploiting enemy armor. These effects do not apply to armor units which exploited in the previous turn and retain their exploitation supply status (16.61) or to Japanese armor units in Japan.
- Airborne units may not airdrop.

The air, naval and army oil effects have the same effect on air, naval and ground units as partial supply (30.52). Oil effects are not cumulative with the effects of partial supply.

D. CONSTRUCTION: Construction at normal construction costs requires the expenditure of oil counters. Subject to overall construction limits: the affected alliance faction may build up to 25 BRPs of units at normal construction costs if one oil counter is expended; up to 50 BRPs if two oil counters are expended; up to 75 BRPs if three oil counters are expended, and so on (27.35). Additional units are built at double the normal construction cost (27.13B; see also 27.14). A major power is considered to have incurred the construction oil effect if its alliance faction does not spend at least one oil counter to allow up to 25 BRPs of builds at normal construction cost.

The economic oil effect has been removed, mainly because it was somewhat pointless to automatically use one oil counter to prevent a 10% BRP base reduction. Instead, all construction at normal costs requires oil (previously the first 25 BRPs of construction was exempt).

Oil still affects each major power's BRP base, in an indirect fashion (one oil counter is required for every 25 BRPs of base growth). This also replaces a short-lived rule that tied oil reserves to BRP base growth:

E. ECONOMIC: There is no economic oil effect during game turns. During the YSS, one oil counter must be used for every 25 BRPs of base growth. Flexible oil counters may be used (33.81D). Oil reserves do not affect major power BRP growth rates.

Air

One change is to the type of air units that require oil to be used. From 33.61A:

All the alliance faction's AAF, including associated and allied minor country AAF, air transports and jets are counted; NAS, whether land- or carrier-based, interceptors, strategic bombers and kamikazes are not.

Naval air units are not counted for oil consumption, nor are interceptors and strategic bombers.

One oil counter offsets the air oil effects for 25 AAF, air transports and jets. A second oil counter allows the full use of all such air units, while a player has the option of using part of an oil counter in order to use more than 25, but less than 50, air factors.

33.71 OIL REQUIREMENTS FOR AIR OPERATIONS: Oil counters are required for air operations as follows:

A. AIR OPERATIONS PROHIBITED: If an oil counter is not used to offset the air oil effect, air operations are restricted as set out in 33.61A.

B. 25 AIR FACTORS: If an oil counter is used to offset the air oil effect, up to 25 air factors may conduct air operations during both the owning major power's player turn and the opposing player's turn. Different air factors may be used during each player turn.

C. ADDITIONAL AIR FACTORS: An alliance faction that has offset the air oil effect has two ways to use more than 25 air factors:

- A second oil counter allows all that alliance faction's remaining air factors to be used, regardless of the number.
- The use of a flexible oil counter allows additional air units to be used in increments of five air factors (33.81A).

With respect to air, each turn a player has four options:

- Don't use any oil counters. This is only a realistic option where there are very few air units to use and oil consumption is an issue, or where oil supplies are exhausted.
- Use one oil counter. This fuels 25 air factors, which will often be sufficient (Britain and Japan rarely have more than 25 air factors; on some turns Germany may not use all its air).
- Use one oil counter, plus a portion of a second oil counter. This option is often adopted by the European Axis, when 35 to 45 AAF are being used.
- Use two oil counters. This option resolves all oil issues for air, and is generally reserved for the European Axis if the German AAF force has been expanded or for the United States late in the war.

Naval

Naval oil use is similar to air oil use. One oil counter offsets the naval oil effects for two TFs. Each additional oil counter allows the use of two additional TFs. Partial oil counters may be used for increments of 10 naval factors; 25 naval factors on the board are treated as a single TF. On board submarines and naval units based in SW boxes are exempt from oil requirements.

33.72 OIL REQUIREMENTS FOR NAVAL OPERATIONS: Oil counters are required for naval operations as follows:

A. NAVAL OPERATIONS PROHIBITED: If an oil counter is not used to offset the naval oil effect, naval operations are restricted as set out in 33.61B.

B. TWO TASK FORCES: If an oil counter is used to offset the naval oil effect, up to two TFs may conduct naval operations during both the owning major power's player turn and the opposing player's turn. Different TFs may be used during each player turn.

C. ADDITIONAL NAVAL UNITS: An alliance faction that has offset the naval oil effect has two ways to use additional naval units:

- Each additional oil counter used allows two additional TFs.
- The use of a flexible oil counter allows the use of additional naval units in increments of ten naval factors (33.81B).

D. ON BOARD NAVAL FACTORS: Up to 25 naval factors on the mapboard which are not in TFs are treated as a single TF for oil purposes.

E. SUBMARINES: Submarines based on the mapboard are not counted towards oil use, provided one oil counter is used to offset the naval oil effect.

F. UNSUCCESSFUL INTERCEPTIONS: Unsuccessful naval interceptions and counter-interceptions do not use oil.

Army

This is the simplest of the three service requirements. One oil counter allows full use of all of an alliance faction's ground units, including armor. No more counting exploiting armor units.

Construction

As noted above, one oil counter is now required for every 25 BRPs of units built at normal cost. Partial oil counters may be used for increments of 5 BRPs of units.

Flexible oil counters

Flexible, or partial, oil counters are essential to the new oil system.

33.81 FLEXIBLE OIL COUNTERS: Each alliance faction may use one or more oil counters flexibly to maximize oil efficiency, for some or all of the following purposes:

A. AIR: To allow additional air factors to operate, once an oil counter has been used to offset the air oil effect.

B. NAVAL: To allow additional naval operations, once an oil counter has been used to offset the naval oil effect.

C. CONSTRUCTION: To allow additional units to be constructed at the normal BRP cost.

D. BRP BASE GROWTH: To allow BRP base growth during a YSS.

33.82 INCREMENTS OF FIVE: Flexible oil counters must be applied in increments of five: a flexible oil counter could allow the use of up to 5, 10, 15 or 20 additional air factors; up to 10, 20, 30 or 40 naval factors; the construction of up to 5, 10, 15 or 20 BRPs of units at normal cost; or BRP base growth of up to an additional 5, 10, 15 or 20 BRPs.

33.83 RETENTION: Unused portions of a flexible oil counter may be retained for future use. An alliance faction may never retain more than 80% of an oil counter, because anything greater than that would be consolidated into a full oil counter.

Oil use, and the erosion of an alliance faction's oil reserves, may be measured in terms of 0.2 of an oil counter. This is easy to track, and gives the oil system some flexibility (there is no need to use an entire oil counter to use an additional three or four AAF).

Strategic Implications

The current oil system is clearly easily to use, as there is less counting and the system is more intuitive. In addition, uninversion no longer is based on oil use. But what are the strategic implications?

These may be assessed, in the most general way, by looking at the expected oil production for each alliance faction (which is unchanged), then comparing likely oil use.



European Axis

The European Axis begin tracking oil once Germany and Russia go to war:

33.4424 INITIAL EUROPEAN AXIS OIL RESERVE: Until the start of the first Axis player turn following the outbreak of war between Germany and Russia or the RGT level reaching 45, European Axis oil consumption is not tracked and the European Axis oil reserve is deemed to contain ten oil counters (33.422A).

The European Axis will normally get at least five oil counters per turn (two from German synthetic oil plants and three from Ploesti). This can be augmented by an additional oil plant (a large RP investment early in the war) or the capture of Russian or Iraqi oil centers (never a sure thing). **Five Axis oil counters per turn** may be considered "normal".

European Axis oil consumption may be estimated as:

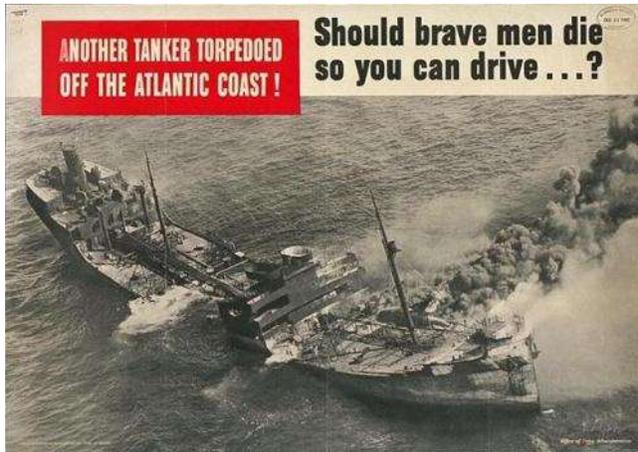
- **Air:** One oil counter, plus a portion of a second oil counter.
- **Naval:** One oil counter.
- **Army:** One oil counter.
- **Construction:** One oil counter, plus a portion of a second, depending on German losses.

Axis oil consumption will be around **five oil counters per turn, and possibly six oil counters**, depending on how many Axis air units are used and exactly how much oil is required for construction. In some turns, such as Spring and Winter turns, less oil may be needed; in other turns, the Axis may have to dip into their reserve.

The European Axis also have the option of not using oil for construction, instead spending double to build some units. Obviously this impacts German or Italian BRP growth.

The European Axis oil strategy involves managing air unit use and unit construction, as well as the costs and benefits of producing an additional synthetic oil

plant or capturing additional oil centers. The Axis player must also keep in mind that it isn't enough just to increase oil production – the source(s) of the increased production must be defended (mainly from the Red Army and Western Allied strategic bombers).



The Western Allies (Europe)

The Western Allied obligation to track oil consumption is triggered by the fall of France:

33.48 INITIAL WESTERN ALLIED OIL RESERVE: Until the start of the first Allied player turn following the fall of France, Western Allied oil consumption is not tracked and the Western Allied oil reserve is deemed to contain six oil counters.

After that, Britain will receive one oil counter for every three Atlantic transports (round up), while it will receive three oil counters every turn from Mosul, unless the Axis take it.

Since Britain will never have more than 25 AAF in the Middle East and North Africa, and will rarely have more than two TFs in the eastern Mediterranean, the three Mosul oil counters will be enough to cover the British forces in that area. This changes if American units, such as a 5-6 armor unit or additional AAF, are deployed to increase the British striking power. Then oil from Persia or the South African (or even the Indian) oil reserve will have to be used, which would require Indian Ocean transports.

Unless Britain uses a large number of naval units in support of an invasion, British oil consumption in the west will be:

- **Air:** One oil counter.
- **Naval:** One oil counter.
- **Army:** One oil counter.
- **Construction:** One oil counter, plus a portion of a second in some turns.

Britain's unit construction limit will normally be 40 BRPs per turn, but this will be reduced by transport losses. 30-35 BRPs is more normal, which would mean that Britain would use an additional 0.2 or 0.4 of an oil counter each turn. This generally won't be a problem, because Britain will ship five or more oil counters each turn, and in any case can always take the army oil effect in turns in which it isn't conducting any active operations on the western front. Britain will often do this if its oil reserve isn't full.

The situation in the west changes when the U.S. enters the war, because British and American units track oil consumption separately. Initially this won't matter very much, because there won't be enough American units of any type to be worth offsetting any of the American service effects. But after several turns the U.S. will want to take a more active role in the war (otherwise the benefits of American entry are limited), and the resulting increases in oil consumption will tend to match the increasing Western Allied ability to ship oil as the Atlantic transport situation improves.

The biggest change occurs when the Western Allies invade France or undertake a comparable operation with American forces elsewhere on the board. Western Allied oil consumption will roughly double, rising to 7 or 8 oil counters per turn. To ship this amount of oil, 19 or more operating Atlantic transports are required.

Without digressing into an extremely long analysis of the Battle of the Atlantic, by mid-1943 the Western Allies might be expected to have 41 or 42 transports, with a minimum of 5 in the Indian Ocean and 10 in the Pacific, leaving 26 or 27 in the Atlantic. If Germany can sustain its submarine campaign, about 10 transports will be sunk or chased from the Atlantic SW box each turn, leaving around 16 or 17 usable transports. These will ship around 6 oil counters. If Germany has an advanced sub, this will reduce oil shipments by an additional oil counter each turn.

This isn't quite enough, although the Western Allies can get by for a few turns by dipping into the British oil reserve to make up any shortfall. A truly large invasion, though, may use 4 or 5 oil counters on its own, which will tend to deplete the British oil reserve.

The implications are fairly obvious – unless the Western Allies can break the German submarine campaign (mainly by overloading the German unit construction limit, so that rebuilding submarines results in unbuilt German AAF and ground units), sustained oil consumption at this level will likely require significant increases in the Western Allied transport force pool.

These will be greater than before, especially considering that a) the assumption that only the minimum required Indian Ocean and Pacific transport level will be sufficient will likely be optimistic in practice; and b) the U.S. will be using more than 25 AAF per turn once the Western Allies take on the Germans in France, so Western Allied oil consumption will go up by one oil counter per turn late in the game.



Russia

As before, Russia doesn't track oil consumption until it loses an oil center (usually Maikop):

33.4624 INITIAL RUSSIAN OIL RESERVE: Until the Axis capture Maikop, Grozny or Baku, Russia does not track its oil consumption. If the Axis capture a Russian oil center, Russia tracks its oil consumption and the Russian oil reserve is considered to be at the maximum level permitted by 33.422C. If Russia restores its prewar oil situation by recapturing all its oil centers and starts its player turn in control of Maikop, Grozny and Baku and with six oil counters in its oil reserve, it is no longer required to track its oil consumption.

If this occurs, usually in the second year of a German attack, Russian oil consumption may be estimated as:

- **Air:** One oil counter.
- **Naval:** One oil counter, although this could easily be none if Russia doesn't have a resistance problem and naval operations in the Black Sea are important.
- **Army:** One oil counter.
- **Construction:** Two oil counters, give or take some fractions.

Until Russia loses a second oil center, it almost certainly won't have an oil problem. In contrast to the Western Allies, Russia also won't have an oil problem even when its entire force pool is operating and it is rebuilding losses at a high rate, other than in the unusual (but not unheard of) situation where it presses forward into Europe without bothering to retake Maikop and Grozny. Even then, Russia is unlikely to consume more than 6 oil counters per turn, and it will probably be

producing at least 4 oil counters per turn. Since the Western Allies can grant oil, there are ways for Russia to get around this sort of problem.

The only types of games in which the new oil rules really impact Russia are those where the Caucasus have collapsed, and Russia is forced to use 2 oil counters to offset the air and army oil effects, while using another 3 oil counters for builds (75 BRPs per turn). For this to really hurt, Russia would probably have to have had its oil reserves depleted further by the loss of one or more of Leningrad, Moscow and Stalingrad. At some point, the Western Allies might have to ship oil rather than BRPs, and if the BRP routes are cut off as well, a Russian oil collapse may well be part of a general Russian collapse, as it war before.



Japan

Historically Japan was one of the most oil-sensitive warring powers, so the Japanese oil situation under the new oil rules is worth especially careful examination.

There are no changes to the USJT or oil embargo rules, so Japan will go into a Winter 1941 with the Western Allies with close to 10 oil counters in its reserve.

In the first turn of its attack, Japan will consume something like:

- **Air:** One oil counter.
- **Naval:** Two or three oil counters (enough for four to six TFs).
- **Army:** One oil counter.
- **Construction:** Fragments of one oil counter (normally Japan runs of BRPs in Winter 1941).

Japan will therefore use something like 5 to 6 oil counters in the first turn of its attack, and perhaps 6 to 7 oil counters after that. Then Japan should settle down into using about 5 oil counters per turn, while receiving 6 oil counters per turn.

The oil changes don't seem to impact Japan unduly, at least for the part of the war. Once Japan's transports start to go, its oil supply will drop, while at the same time it will want to use some oil counters for economic growth. But Japan will still have the expedient of taking the army oil effect once it is defending, and its air force will not exceed 25 AAF, so Japan should run short of oil just about when it always does.



The Western Allies (Pacific)

In the Pacific, the Western Allies only have to worry about the three service requirements, and in turns in which the Western Allies are defending, they can take the army oil effect. But normally, the Allies oil consumption will look like this:

- **Air:** One oil counter.
- **Naval:** One or more oil counters (depending on how big the USN has gotten).

- **Army:** One oil counter.

The basic 10 Pacific transports will supply four oil counters, which allows the Western Allies to use four TFs without dipping into the Pearl Harbor or Australian oil reserves. By mid-1943, the Western Allied will likely be spending 3 oil counters for naval use, and this will go up to 4, then 5, oil counters.

This will necessitate an increase from 10 transports to 13 transports, then 16 transports – just about when the demands on the Atlantic transports will increase as well. This stands to reason – as the American armed forces increase in size, the need for Western Allied oil increases as well.

Conclusion

The main effects of the oil rule revisions should be felt on the European Axis and the Western Allies in Europe. Russia, Japan and the Western Allies in the Pacific will be less affected.

For the Western Allies, one of the most important aspect of the changes is that Western Allied oil consumption is tracked separately and therefore having both British and American forces engage in combat in the same front will place greater demands on oil supply. The Western Allies may also find that more late war production and American mobilizations must be diverted to transports.

Air		➔	1-4	1-4	1-4	Jet	Not	1	1	1-3
		➔	25 AF		➔	All other AF				
Naval		➔	Every 2 TF	TF1	TF2	25 NF =	TF1	Not	1	
Army		➔	Army oil effects offset for all units; exploitation, airdrops allowed.							
Construction		➔	One oil counter for every 25 BRPs of builds at normal cost by all alliance faction members (EXCEPTION: U.S).							
BRP growth		➔	One oil counter for every 25 BRPs of base growth during the YSS.							
Flexible oil		➔				Oil may be applied flexibly, in increments of five.				