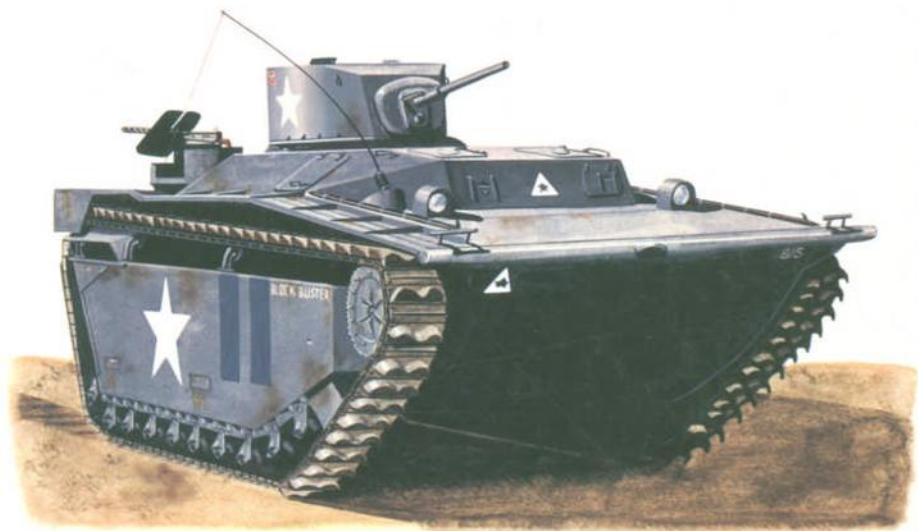


# ARMOUR OF THE PACIFIC WAR



Text and Colour plates by  
**Steven J. Zaloga**

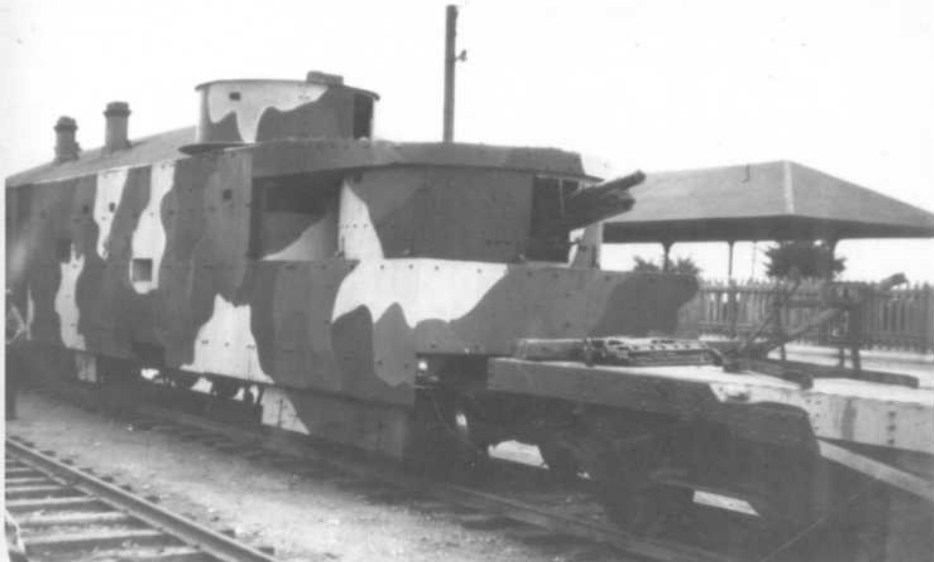
VANGUARD SERIES

EDITOR: MARTIN WINDROW

# ARMOUR OF THE PACIFIC WAR

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## Prelude to War

The colourfully camouflaged artillery car of the armoured train *Hupei* in the Tien-tsin rail yards, 1927. Armoured trains were the principal armoured weapons of the Chinese Civil War; several were crewed by White Russian mercenaries, whose fate if captured alive tended to be lurid. This particular train changed hands several times between the NRA and the warlords. (US National Archives)

*'The enemy's power lies in its tanks. It has become obvious that our general battle against the American forces is a battle against their M1 and M4 tanks.'*

(Gen. Ushima, commanding Japanese 32nd Army, Okinawa, 1945)

Although land engagements, and the role of tanks in these engagements, in the Pacific theatre in World War II have been overshadowed by the dramatic carrier battles at sea, it should be remembered that the US deployed over a third of her total tank battalions in the Pacific. Terrain difficulties, at first thought insurmountable, later encouraged the development of important close-support tactics; and campaigns such as those on the Philippines, Iwo Jima and Okinawa were to see the employment of armour on a scale comparable with that in Europe. Few more classic examples of blitzkrieg exist than the Soviet destruction of the Japanese Kwantung Army on the plains of Manchuria in 1945.

Armour first appeared in Asia during the chaotic civil wars in China in the 1920s. Armoured trains and more conventional AFVs saw action on many occasions, as the Chinese Kuomintang Party's National Revolutionary Army under Chiang Kai-shek struggled to establish a national government against resistance from northern warlords, and later against Communist guerillas. Foreign powers fished in these murky waters; Soviet, and later German assistance reached the NRA, and White Russian mercenaries fought for the warlords. By 1930 the NRA had acquired in various ways about 36 Renault FT-17 tanks and some 24 Carden Loyd machine gun carriers, apart from its armoured train fleet.

Profiting by the general chaos, Japan's Kwantung Army, stationed in Manchuria, provoked excuses to spread Japanese influence. Attacking the city of Mukden, the Japanese had seized all Manchuria by February 1932. The successes of their few tanks and armoured cars around Harbin



Type 89 medium tank of the Japanese 7th Tank Regt.'s 2nd Co. photographed during fighting near Gongkiang, 26 March 1939. The Type 89 was the standard medium tank of Japanese forces in China in the late 1930s. This particular tank is clearly marked with the *10th* insignia of 2nd Company. (James Grandson)

prompted the formation of three tank regiments, two in the Home Islands and the 3rd Tank Regt. in Manchuria, late in 1932. This was soon joined by the Mechanised Mixed Bde., built around a motorised infantry regiment and the 4th Tank Regt., which fielded the new Type 94 tankette. Designed specifically for use in China, this two-man machine gun carrier had a small armoured trailer, and was intended to re-supply isolated infantry under fire. In fact it was much more often used as a light support tank, and was gradually passed on to scout platoons and the tank companies assigned to infantry formations as the 4th Tank Regt. acquired newer equipment.

In 1935 the Mixed Mech. Bde. sent a detachment including tankettes, Type 89 mediums and a new Type 95 light tank to take part in manoeuvres in the Greater Khingan Mountains along with motorised infantry and support units. Deep snow caused problems for the tanks and wheeled transport alike, and the outcome of the exercise proved significant in the development of IJA armoured units. Technical requirements—for better lubricants, and for the greater versatility in extreme conditions offered by diesel engines—were perhaps less important than the doubts raised in the minds of Japanese planners as to the feasibility of mechanised formations. The inability of truck-borne infantry to keep up with tanks pointed to the need for tracked or half-tracked personnel carriers; but, given the high industrial priority enjoyed by the Navy's ship-

building programme, Army resources were barely adequate for a modest production of tanks, let alone a major exercise in infantry mechanisation. Consequently, the Army showed little interest in armoured divisions until after the spread of war in 1941–42.

Nevertheless, the Kwantung Army appreciated the mobility and firepower offered by tanks, and continued to build up its armoured strength as equipment became available. The Mixed Mech. Bde. was assigned an important part in a potential drive on Peking in the event that full-scale war broke out with China; and in the meantime border fighting continued against both the Chinese, and the Soviets in Mongolia and Siberia.

Both enemies built up their armoured units, wary of Japanese intentions. The Special Far East Red Banner Army (OKDVA) was reinforced with five battalions of T-26 and T-27 tanks, which skirmished along the borders during 1934–35. The NRA formed an Armoured Car and Tank Corps at Chungking in April 1932 with a few improvised vehicles, and foreign tank purchases began in 1935. In 1936 three tank battalions were formed under the command of Xu Ting-yao. The 1st Armd.Bn. at Shanghai had 32 Vickers Carden Loyd Amphibious Tanks Model 1931, and some Vickers 6-ton E tanks. The 2nd Armd.Bn., also at Shanghai, had the remainder of the 20 Vickers E tanks which had been acquired; four VCL Model 1936 light tanks; and the surviving VCL machine gun carriers from a batch purchased in 1929. At Nanking the 3rd Armd.Bn. had ten PzKpfw I Ausf.A tanks, 20 Fiat CV-33 tankettes, and a number of SdKfz 221 and 222 armoured cars; a small number of French Renault ZB light tanks were acquired later.

## War Breaks Out

Although border clashes increased following Japan's February 1936 military coup, most of the better Chinese units were still committed to the suppression of 'bandits' and warlords. Finally, on 7 July 1937, Japan opted for all-out war against China: the Kwantung Army attacked from the north, while an expeditionary force supported by about 100 tanks landed from the sea and drove on

Peking through Tien-tsin. The Japanese aim was to seize northern China without delay, and the tanks provided the necessary speed and shock. The IJA assumed that Chiang Kai-shek would accept their seizure of the north; and indeed, within five months they had seized nearly all territory north of the Yellow River, inhabited by 90 million people, without serious resistance. Chiang chose to stand and fight around Shanghai, calculating that the large foreign population in the area would attract the attention, and perhaps the intervention on China's behalf, of the Western powers.

The NRA's best German-trained divisions were sent to Chapei province surrounding the international city, along with most of the small armoured force. The Japanese responded as anticipated. In addition to Marine units already in Shanghai, Marine units with armour and Army units with about 200 tanks and tankettes were landed to contest the NRA build-up. The Chinese units were routed with heavy losses, including most of their armour. Japan's Shanghai expeditionary force moved north, linking up with the Peking expeditionary force which was driving southwards through the coastal provinces. The invasion of China occupied Japanese forces for about a year, the last ports of Hankow and Canton falling in

autumn 1938. The NRA was left largely unmolested in the empty interior of the country, since the IJA barely had the forces to garrison the areas they had already captured. The war in China would drag on, at much reduced intensity, for the next seven years.

The invasion was not entirely without its costs, however. In one of its few battlefield victories the NRA surrounded and destroyed a large enemy force, including 40 tanks and 70 armoured cars, at Taierchuang on 6-7 April 1938. The Chinese infantry units involved in this action were fortunate in being equipped with the German PaK 36 37mm anti-tank gun.

### **Khalkin Gol**

The Soviet Union, anxious over the Japanese invasion, swallowed past differences and helped re-equip the NRA. Soviet loans financed the purchase of 87 T-26 Model 1933 light tanks in 1938, and Soviet advisors assisted in the formation of the 200th Mechanised Division until withdrawn following the Russo-German Non-Aggression Pact in 1939.

**The tiny armoured force of the KNIL in the Netherlands East Indies fielded small numbers of Vickers Model 1936 light tanks (foreground) and of Alvis Strausser armoured cars (background), seen here at their Bandoeng base in 1938. (J. Probst)**



Among other supplies provided were BA-6 and FAI armoured cars, artillery and trucks.

The Soviets soon had their own problems with the Japanese Kwantung Army. There had been long-standing border disputes between Russia's puppet, Mongolia, and the Japanese in Manchuria. In July 1938 fighting broke out at Changkufeng (Lake Khasan) between the Kwantung Army and the joint Mongolian/Soviet OKDVA forces. The Japanese were pushed back, but took heart when, at this critical stage, Stalin's purge of the Soviet officer corps hit the ranks of OKDVA. Japan planned a further confrontation the following summer; but by that time command of an OKDVA heavily reinforced with armour had passed to an energetic young cavalry commander, Georgi Zhukov.

Japanese forces massing in the disputed border area around Khalkin Gol (Nomonhon) on the

**Type 89 medium tank of 1st Co., 7th Tank Regt. crossing an improvised bridge on Highway 6 north of Manila on 3 January 1942, during the Philippines fighting. Obsolete even by the standards of light tanks like the US M3, the Type 89 still proved effective against US and Filipino infantry units without anti-tank guns. The white star bow and turret insignia indicate the company. (US Army)**

Outer Mongolian frontier included an armoured task force, the Yasuoka Detachment, led by Lt. Gen. Masaomi Yasuoka; comprising elements of the 3rd and 4th Tank Regts., it fielded 73 tanks. Col. Yoshimaro commanded two ten-tank companies of the 3rd, with Type 89 mediums; Lt. Col. Tamada commanded three companies of Type 95 light tanks from the 4th. These units were later reinforced, it seems, with some of the newer Type 97 mediums. The Soviets secretly massed a far larger armoured force totalling at least 550 tanks and 450 armoured cars. The 6th and 11th Tank Bdes. had BT-7s; the 7th, 8th and 9th Armd.Bdes. had BA-10 armoured cars. There were also a number of T-26 infantry tank battalions, and the 8th Mongolian Armd.Battalion.

The Japanese made early progress, but their drive was blunted by a counter-attack by the Soviet 11th Tank and 7th Armd.Brigades. Soviet losses to the Japanese 37mm anti-tank guns and Molotov Cocktails were high, amounting to about 120 AFVs; but the Yasuoka Detachment lost over half its tanks when it ran into Soviet 45mm anti-tank





**T-26 Model 1933 light tanks of the Chinese 200th Mech. Div. during the fighting along the Burma-Ledo Road in spring 1942. (US National Archives)**

guns. By the time the Soviets launched a counter-offensive in August the Kwantung Army had few tanks left, while the Soviets could still field 498 tanks and 346 armoured cars.

Japan's crushing defeat at Khalkin Gol had important consequences. The IJA quickly realised that their tanks, armed at best with a low-velocity 57mm gun, were no match for contemporary European designs mounting long-barrelled anti-tank guns. The 45mm weapon of the BT-7 easily proved its superiority over the Type 89 and even the new Type 97 mediums. On the hard clay of the Mongolian plains even the wheeled BA-6 and BA-10 armoured cars had shown themselves effective. This defeat led Japan to begin development of a more heavily armed version of the Type 97, and of a new 47mm anti-tank gun. More importantly, perhaps, the IJA turned away from the smoking wrecks on the Mongolian steppe and concentrated their attention southwards. Unthreatened by the Kwantung Army in 1941-42, the Soviets were able to draw units from OKDVA reserves for the critical defence of Moscow.

## The War Spreads

With Manchuria and coastal China secured, Japan eyed French Indo-China and the oil-rich Dutch East Indies as its next prey; but increasing American pressure led to the fateful decision to challenge US power in the Pacific by destroying the American Pacific fleet at Pearl Harbor as prelude to an ambitious advance through SE Asia.

By late 1941 Japan's armoured force had grown considerably. The Mixed Mechanised Bde. had been replaced by the 1st and 2nd Tank Groups, each with three regiments, stationed with the Kwantung Army; besides these there were more than a dozen other tank regiments, and more were forming. Smaller formations were attached to Army and Marine units: ten infantry divisions each had a nine-tank company, usually with the Type 95 *Ha-*

go, as did the Marine 1st to 4th Mobile Bdes., and nine independent light companies came under Army commands. There were some 41 Patrol Companies of light tanks and tankettes, usually attached to infantry units or formations in place of horsed cavalry scouts. Experienced only in open terrain, and now facing jungle, the Japanese were still far more convinced of the value of tank support than were their opponents.

Allied doubts about the potential of tanks in the tropics were typified by British dispositions in Malaya and Burma, guarded only by a handful of Lanchester and Marmon Herrington armoured cars. The Netherlands East Indies Army (KNIL), more receptive, had taken delivery of only 24 of 75 ordered VCL Model 1936 light tanks by December, and 25 of 600 Marmon Herrington light tanks ordered for six new mechanised brigades. Available armoured car units included one with 12 Alvis

Straussler AC3Ds, one with locally-built Overvalwagen or US M3A1 scout cars, and one with Krupp Panzerkraftwagen. In 1942 B Sqn., King's Own Hussars arrived with 16 Vickers Mk VI light tanks.

The only US tanks in the Pacific were the 108 M3 light tanks of 192nd and 194th Tank Bns. forming the Provisional Tank Group sent to Luzon in November 1941. In addition there were 50 SPMs—'Self-Propelled Mounts', M3 75mm Gun Motor Carriages comprising old French 75mm guns mounted in half-tracks as tank destroyers.

**Type 97 Chi-ha of 1st Independent Tank Co. bogged down in a sandbar and knocked out while trying to cross the Matanikau River on Guadalcanal in October 1942; most of this unit were destroyed in an ambush by US Marine 37mm A/T guns. The unit insignia was the *masu* design in white or dark blue. (US Army)**





# Initial Allied Defeats

## Malaya

Japan's amphibious landings at the northern neck of the Malay Peninsula on 8 December 1941 caught the two British tank regiments requested by Lt. Gen. Percival still at sea. The defenders' conviction that the mountainous jungle was impassable, especially to tanks, was not shared by the Japanese: Yamashita's 25th Army had 211 tanks of the 1st, 6th and 14th Tank Regiments. The 1st, organised like most others in four companies each with ten Type 97 and two Type 95 *Ha-go* plus an HQ company with four Type 95 light tanks, penetrated the Jitra line on 11 December. The most important tank battle was on 7 January 1942, when the 6th Tank Regt. broke the Slim River line north of Singapore; in this fighting the defenders lost their 50

or so Marmon Herrington armoured cars and Bren Carriers. Singapore fell on 15 February. Faced by few anti-tank weapons, the three regiments had proved decisive to Japan's rapid victory.

## The Philippines

Luzon saw the only major tank-vs.-tank fighting of the initial phase of the Pacific war. The IJA's 4th and 7th Tank Regts., and several smaller units, were landed in the Philippines. The US Provisional Tank Group counter-attacked the Lingayen Gulf landings; the first encounter came on 22 December, when Type 95s of the 4th Tank Regt. ambushed a patrol from the 192nd Bn. near Damortis. These units remained in contact as the US forces retreated. On 31 December a skirmish at Baliuag cost

**The crew of an M3A1 light tank of 3rd Marine Tank Bn. pose during a lull in the fighting on Bougainville in October 1943; this unit supported the capture of the airfield. (USMC)**



the Japanese eight Type 95 *Ha-go*. The Provisional Tank Group remained in action, though poorly handled by higher command, and many tanks were lost needlessly in hasty withdrawals. Surviving tanks were among the last of the US rearguard to withdraw into the Bataan Peninsula, and the last tank-vs.-tank action took place on 7 April 1942 when two enemy tanks were destroyed by the M3s.

Several M3s were captured intact, and used to replace losses by the 7th Tank Regt. in later fighting. After the fall of Bataan a special unit was formed for the landing on Corregidor; the 7th Regt. had become convinced that the Type 97 *Chi-ha*'s 57mm gun was inadequate even against the M3, and a few Type 97*kai* (47mm *Shinhoto Chi-ha*) were rushed to Bataan. Two took part in the Corregidor landing of 5 May—though ironically enough, they had to be towed off the steep beach approaches by the detachment commander, Maj. Matsuoka, in a captured M3.

### Dutch East Indies

The IJA 4th Tank Regt., veterans of Khalkin Gol and the Philippines, landed on Java in March 1942, when much of the East Indies had already fallen. They did not see such dramatic service as in earlier battles; there were few Dutch AFVs on Java, and both sides used armour in the secondary, infantry support role.

### Burma

Japanese forces in Burma were supported by the 1st, 2nd and 14th Tank Regiments. Allied forces in Burma fielded two armoured units, the British 7th Armd.Bde. and the Chinese 200th Mechanised Division. The former, consisting of 2nd Royal Tank

**LVT-1 amtrac of the 2nd Marine Amphibian Tractor Bn. stalled on a coconut-log wall at Betio after the bloody fight for Tarawa. The amtracs' vital contribution to this three-day battle led to their use in nearly every major amphibious operation in the Central Pacific; a total of 1,225 LVT-1s were built, nearly all serving in the PTO. (USMC)**





**A single Type 95 Ha-go light tank left its revetment to challenge US Marine tanks during the battle for Tarawa; it damaged the Sherman CHINA GAL, but was itself knocked out by another M4A2. (USMC)**

Regiment and 7th Hussars, was fresh from the Western Desert and newly equipped with M3 Stuarts; it had been diverted to Rangoon when news of the fall of Singapore reached it at sea. Fighting with the rearguard throughout the retreat from Burma, it inflicted its share of damage on the Japanese, but did not encounter enemy tanks; its story is told more fully in Vanguard 17, *The Stuart Light Tank Series*.

The Chinese 200th Mech.Div., partially formed with Soviet help in 1938–39, consisted of one tank and one motorised infantry regiment. The Chinese were reluctant to send any troops—particularly their only armoured unit—to foreign battlefields, but were convinced by Gen. Stilwell's prediction of the consequences to China of the Japanese cutting their supply route from Burma. The unit fought surprisingly well in the Hukwang Valley in March 1942, being singled out for Stilwell's praise; but, like the British 7th Armd.Bde., it lost most of its equipment in the process. The three Japanese tank units enabled the IJA to maintain a relentless pursuit of the Allied forces back to India; but only the 14th Tank Regt. remained in Burma after the campaign.

\* \* \*

Japan's early victories were greatly aided by the skilful and imaginative use of tanks against enemies

who were ill-prepared to deal with them. Shocked out of their complacent contempt for the Japanese, and their misplaced confidence in the imagined natural barriers to enemy armour, some units simply panicked, and others were ham-strung by their lack of adequate A/T weapons.

Nevertheless, these victories were the last of their kind. Forced to appreciate the value of tanks even in extreme terrain, the Allies increasingly provided armour support in subsequent campaigns. In contrast, the IJA was lulled into a false sense of security by its victories in 1941–42. Although the Type 97*kai* made its debut at Corregidor in May 1942, it did not appear in any quantity until the Saipan fighting of 1944—nearly five years after development began in response to the Khalkin Gol defeat, and by which time it was hopelessly out-dated, since the escalation of weapons technology in Europe had bred a more powerful generation of Allied tanks. Another problem was the inability of Japanese industry to satisfy military demands, overburdened as it was by naval requirements.

Interestingly, German successes in Europe, rather than Japan's Asian victories, shaped the



One of the handful of Shermans to stay in action more than a few hours on Tarawa was COLORADO, seen here with M3A1 light tanks of the 2nd Marine Tank Bn.; on the hull side is the elephant insignia of the 1MAC Tank Bn., later inherited by the 3rd Marine Tank Bn. (USMC)

development of the tank force. In July 1942 the Tank Groups in Manchuria were disbanded and a new Mechanised Army was founded at Soppingchieh. This consisted of the 1st and 2nd Tank Divs., each of two tank brigades each of two regiments, plus a motorised infantry and a motorised artillery regiment and supporting units. The division had a nominal strength of 87 light, 249 medium and 40 reserve tanks. Later in 1942 a 3rd Tank Div. was formed in China, and a 4th at the Chiba Tank School in Japan. Only two of these saw combat as complete formations: the 2nd in the Philippines in 1944-45, and the 3rd during the great 1944 offensive in China.

### The Allied Riposte

With Japan on Australia's doorstep in New Guinea, and threatening US forces in the Pacific and, later, on the Aleutians, Allied moves to build up tank strength in the theatre were essential. Australia and New Zealand had already formed units for the Western Desert; the new threat halted further Australian deployments to Africa, and develop-

ment of the indigenous Sentinel tank began—although in the event Australian units used only British and US types in combat. At peak strength in 1942 Australia had four tank brigades, equipped with Matilda, M3 Light and M3 Medium, two brigades forming the 1st Armd.Div.; but manpower problems forced a reduction, and by 1944 only one brigade remained.

New Zealand also formed a number of armoured units, but only one squadron actually saw action in the Pacific.

The US eventually fielded the largest number of armoured units in the Pacific, totalling one-third of all its tank battalions and all its amphibian tank and tractor battalions. The US Army usually attached one tank battalion to each infantry division in combat; their organisation differed little from those serving in the ETO, although occasionally such changes were made as substituting M10 tank destroyers for the M7 or M5 105mm howitzer tanks. The US Marines began receiving light tanks in 1941, intending to attach one battalion to each division, but this was not achieved until 1944; in earlier battles only detached companies were available. In 1943 USMC tank battalions nominally comprised 67 M3 Light tanks, though M4A2 Sherman companies were added as they became available.

# The South-West Pacific

The first use of Allied armour since the 1942 defeats was on New Guinea and in the Solomons. Operations were hampered by lack of enough tank landing barges and, once ashore, by the densely jungled and marshy terrain. Most actions involved dispersed sub-units supporting infantry by routing out Japanese bunkers, and breaking up enemy counter-attacks with machine gun and canister fire. The first offensive deployment was the landing in August 1942 of Co.A, 1st Marine Tank Bn. on Guadalcanal; the close-quarter fighting here was so savage that Gen. Vandergrift recalled the blood-splashed tanks 'looking like meat-grinders'. Lacking anti-tank weapons, the Japanese infantry would climb on to the tanks, trying to pry open hatches and fire through vision slits; they were mown down by US infantry, or by other tanks using machine guns and canister. The first company was later reinforced, and in November Co.B, 2nd Marine Tank Bn. also landed. Late in October the Japanese Sumiyoshi Force was landed for a counter-offensive

across the Matanika River; it was supported by 12 *Chi-ha* medium tanks of the 1st Independent Tank Co., formed from veteran crews of the 4th Co., 2nd Tank Regt., but most were destroyed by Marine 37mm A/T guns while crossing the river.

Having seized New Britain and New Ireland in August 1942, the Japanese garrisoned Rabaul with their 8th Tank Regt.; some areas in New Guinea were also occupied. In September their attempted landings at Milne Bay were supported by Type 95 tanks. The Australian Army responded, and detachments of M3 Stuarts of 2/6th Armd.Regt. first saw action around Cape Endaiadere. This unit's continued close support during the bloody Buna campaign, lasting into 1943, was seen as essential by the Australian infantry, despite the enormous difficulties of tank employment in the New Guinea jungle. In October 1943 the Australian 1st Tank Bn. entered combat on the Huon Peninsula, and its Matildas—proof against the enemy's 37mm guns—were an immediate success. Indeed, in the

**Valentine Mk III of the New Zealand Special Tank Sqn. during the fighting on Green Island in 1944—the only operation by New Zealand tanks in the Pacific War. (US National Archives)**



fighting around Pabu, one Matilda took no less than 50 hits from 75mm guns without a single penetration.

In July 1943 the US Army and Marines attacked towards Munda airfield on New Georgia supported by three M3A1 platoons from the USMC 9th, 10th and 11th Defense Bns.; again, the deadly spray of pellets from canister rounds proved their value. In November the fighting spread to Bougainville, which proved to be one of the most long-drawn-out campaigns. The 3rd Marine Tank Bn.'s M3A1s helped capture the airfield during the initial landings at Cape Torokina, but were then halted by dense jungle and heavy rains. In 1944 the US Army's 754th Tank Bn. proved more successful. In July 1945 the Australian 2/4th Armd.Regt. sent Matildas to North Bougainville to rout out enemy

forces on Buka, and though the ground was too swampy for close support their long-range supporting fire was successful.

The horrors of the terrain were nowhere more extreme than at Cape Gloucester. Marine 1st Tank Bn. Shermans and light tanks landed in December 1943, with some limited successes; but some enemy strongpoints were so inaccessible that Shermans were loaded on to LCMs and used as miniature warships to bombard bunkers near the shore. Attention shifted westward in spring 1944 when Gen. MacArthur ordered a bold insertion of troops far down the coast at the Japanese supply bases of Hollandia and Aitape, bypassing many strong garrisons. In April these objectives were captured, the 632nd Tank Destroyer and 44th Tanks Bns. landing later to help extend the perimeter. Nearby Biak Island was the next target, and M4A1 Shermans of the 603rd Sep.Tank Co. gave short shrift to six Type 95 *Ha-go* stationed there. In August 1944 Australian troops relieved US units at Aitape, and pushed eastwards towards Wewak supported by the invaluable Matildas of 2/4th

**M3 75mm GMC, better known in the Pacific as the 'SPM', coming ashore at Cape Gloucester in December 1943. Each Marine division had 12 in a Special Weapons Bn., and they proved very useful for bunker-busting and anti-tank defence. This vehicle from the 1st Marine SW Bn. is painted in a three-colour camouflage, and has some unofficial crew marking on the hull. (George Balin)**



Armd.Regiment. The sole employment of New Zealand tanks took place in February 1944 when the Special Army Tank Sqn., with Valentine IIIs, supported the landings on Green Island.

There had been plans to commit Australian troops to the Philippines campaign at the end of 1944; instead, however, it was agreed that they would take over any further operations against Japanese garrisons on New Guinea, and would attack Borneo to capture important oilfields and port facilities. In April 1945 2/9th Armd.Regt. Matildas landed in support of 26th Inf.Bde. on Tarakan, which was feelingly described as 'a raft of mud anchored in the Celebes Sea'—not surprisingly, the Matildas' operations were somewhat limited. Landings at Brunei Bay followed; and 2/9th Armd.Regt. detachments took part in the seizure of Brookton and Labuan Island. The largest single deployment of Australian tanks came in July 1945 when the 1st Tank Regt. took part in the landings at the Balikpapan oilfields, the gun-tanks being given effective support by the 'funnies' (Frog flame-thrower tanks, Matilda bulldozers and a Cov-

enanter bridgelayer) of the Armd.Sqn. (Special Equipment). Although Balikpapan was far more 'tankable' terrain than the New Guinea jungle, the Matildas were still widely dispersed to support the infantry.

## The Central Pacific

In contrast to tactics in the South-West Pacific, tanks were used in much larger numbers, and in novel and effective ways, during the island-hopping campaign in the Central Pacific. While bearing little resemblance to traditional tactics as employed in Europe, the bunker-busting, flamethrower attacks and amphibian fire support that characterised these operations were still central to the conduct of the campaign.

**Type 95 Ho-go of the SNLF tank company attached to 4th Co., Japanese 9th Tank Regt. on Saipan. Used in a counter-attack against the northern edge of the US beachhead on the night of 15/16 June, it was destroyed by a direct hit from an M4A2 Sherman of 2nd Marine Tank Bn. (USMC)**





Before dawn of 16 June 1944 on Saipan, the 9th Tank Regt. launched the largest single Japanese tank counter-attack of the Pacific War; only 12 of 44 tanks committed survived the attempt. Photographed after the battle, a Type 97 *Chi-hi* (foreground) can be seen to have taken at least three 75mm hits; the ensuing fire has charred the *hikusai* turret emblem characteristic of this unit, but the 5th Co. insignia can still be seen—see Plate F2. In the background is a Type 95 *Ha-go* of the same unit. (US Navy)

## Tarawa

The struggle for this wretched coral atoll in the Gilbert Islands played a great part in shaping future US armour employment in the Pacific. The main enemy defences were on Betio islet, where the élite 7th Sasebo Special Naval Landing Force (the Japanese equivalent to the US Marines) was dug in, with the 6th Yokosuka SNLF, and seven entrenched Type 95 light tanks.

Tarawa saw the first use of amtracs in a contested landing—though they had been used at Guadalcanal for logistic support—and the first landing by tanks on a beachhead under direct fire. Originally developed to transport supplies, the amphibious tractors had shown their potential for landing troops on atolls where off-shore reefs prevented conventional landing craft from reaching the beaches. The LVT-1 version was unarmoured, although a little light plating had been added to the forward superstructure of most of those used at Tarawa. Little more armour was carried by the

improved LVT-2, and the troop compartments were completely open. The tanks assigned to support the 2nd Marine Division's landing were M4A2 Shermans of Co.C, 1 Marine Amphibious Corps Tank Bn., and M3A1 Light tanks of B and C Cos., 2nd Marine Tank Battalion. The landing took place on Betio on 20 November 1943.

About 100 LVT-1 and LVT-2 amtracs were used by the initial three assault waves; they proved their value not only as transport over the reef, but in offering the Marines some limited protection from the fierce fire which greeted them on the beach—later waves, brought in on landing craft because of lack of amtracs, suffered heavy casualties. Thin as it was, the armour of the LVT-2 proved its worth, and the LVT-1 was subsequently withdrawn from use in contested landings. More firepower was needed, however; the amtracs' exposed machine guns were useless against bunkers or even entrenched troops, and dangerous to use because of enemy snipers. This led to the provision of armoured shields, and the development of the LVT(A)-1 and (A)-4 amphibious tanks.

The first tanks to hit Beach Red 1 were six Shermans dropped 1,200 yards offshore. The shallows hid huge shell holes left by the naval bombardment, and one Sherman was lost in one at once. Prevented from moving off the beach by



thickly scattered Marine casualties, the others tried to move through the shallows, and three more flooded their engines in shell holes. The surviving CHICAGO and CHINA GAL moved inland again; CHICAGO was knocked out, but CHINA GAL survived a lucky hit from a *Ha-go* which jammed her turret ring, and promptly rammed the Japanese tank, damaging her own gun in the process. CHINA GAL made it back to the beach, and used her hull machine gun to support the infantry.

Eight Shermans from 2nd and 3rd Platoons, dropped some 500 yards off Red 3, lost one of their number in a shell hole. The three survivors of 2nd Platoon went into action on Red 2; one was knocked out by a Japanese infantryman with a magnetic mine, and another became bogged in a shell hole. The platoon had two tanks back in action on D+1, when one was lost in a shell hole while trying to approach an enemy position through the shallows, and the other was knocked out by US mortar fire. The four Shermans of 3rd Platoon were all knocked out, one by a US Navy dive-bomber and three burning after hits by an enemy gun; however, COLORADO returned to the battle after her driver put out the flames by driving into the sea. That night one of the bogged tanks off Red 1, CECILIA, was recovered, and fought on D+1 alongside the 'toothless' CHINA GAL, and the charred but feisty COLORADO.

No M3A1s got ashore on D-Day, four LCMs carrying tanks of 2nd Platoon, Co.C, 2nd Marine Tank Bn. being sunk off the beach. Two tanks got into action on D+1, but one was lost to a magnetic mine. The other two platoons landed all 12 of their M3A1s successfully on D+2. The 18 tanks of Co.B began landing on D+1, losing five to engine flooding and shell holes. During the fighting the Stuarts' canister rounds wreaked their usual havoc on banzai-charges, but the 37mm gun was ineffective against ferro-concrete bunkers — to the extent that some frustrated tankers drove right up to the target and fired HE directly through the gunslits.

After continued mopping-up operations Betio was finally taken 76 hours after the initial landing, at a cost of 1,113 dead and 2,290 wounded Marines; the 2,600 Japanese Marines and 2,200 labour personnel were wiped out. The Stuart, standard equipment of the USMC battalions, had been clearly shown to be inadequate, but the Sherman had proved both offensively and defensively successful. Re-equipment was carried out company by company in USMC tank battalions. The need for flamethrower tanks, to burn out bunkers which

**The ill-fated attack of 16 June was commanded by Col. Hideki Goto. This is the *Shinhoto Chi-ha* of his adjutant, Lt. Col. Goshima. Named after Aso province—note hull markings—it bears the broken white turret band commonly used by command tanks of the 9th Regt. (US National Archives)**



resisted gunfire, was also noted; initially the Marines experimented with flamethrowers mounted on light tanks and amtracs.

## Makin

The Army attack on neighbouring Makin Island was swift and cheap compared with Tarawa. There were two Type 95 *Ha-go* on Makin, but they were not encountered by the 193rd Tank Bn., which supported the landing — the only US unit in the Pacific to use the M3 Lee tank in combat.

## The Marshall Islands

On 1 February 1944 the US Army and Marines landed at Kwajalein, the largest atoll in the world — more than 60 miles long, with a lagoon 20 miles wide. Despite American fears of a second Tarawa, the Japanese defenders were more scattered and less

4th Div. Marines pose with a Satan flamethrower tank of the 4th Marine Tank Bn. on Saipan. There were supposed to be 24 of these in each USMC tank battalion in 1944, but in fact there were seldom more than 18. The Satan was an obsolete M3A1 with its main gun replaced by a Canadian Ronson flamethrower; not an entirely successful design, it suffered from short range, inadequate fuel stowage, and a very cramped interior. (USMC)

well equipped. The 4th Marine Div. was targeted on the adjoining Roi-Namur Islands, while Army units attacked other islands in the atoll. The 75 amtracs of the 4th Amphibian Tractor Bn., mainly LVT-2s with bolt-on armour, carried out the initial assault, which was handicapped by the inexperience of the crews; luckily, Roi's defences had been heavily pounded by the Navy. With the 23rd Marines ashore, ten Shermans and three M5A1s of, respectively, Cos.C and A, 4th Marine Tank Bn. landed in support. They blasted across the airfield in the centre of the island, and in two hours Roi had fallen. Namur, a tougher objective, was taken by the 24th Marines supported by ten M5A1s of Co.B; some bogged in the sand, and all were attacked by swarming enemy infantry, who were swept off their decks by machine gun and canister fire. The Shermans from Roi later crossed a sand spit to reinforce the Stuarts, but their little remaining fuel and ammunition had to be pooled and loaded into four tanks—JENNY LEE, JEZEBEL, JOKER and JUAREZ. That night the Shermans broke up a furious Japanese counter-attack, and next day they led the final assault. A few enemy tankettes and





**ALMIGHTY**, an M32 ARV of the 3rd Marine Tank Bn., recovers a Type 95 *Ha-go* of the 24th Independent Tank Co. after the Guam fighting of July 1944. The 24th used a white turret band with a Kanji letter marked in the centre. The ARV displays the battalion's elephant insignia on the hull side. (USMC via Bill Auerbach)

one Type 2 *Ka-mi* amphibious tank were found while mopping up later.

Meanwhile the Army's 7th Div. attacked the main headquarters on Kwajalein and positions on surrounding islets. The Army's premier 708th Amphibian Tractor Bn. (Provisional) spearheaded the assault. This was an amphibian tank battalion, re-configured because not enough of its LVT(A)-1s had been delivered. These armoured LVT-2s, fitted with a 37mm gun turret derived from the M5A1, and two .30cal. machine guns, were intended to provide fire support for amtrac units during the landing, and to continue giving support for the infantry once ashore. For Operation 'Flintlock' 17 LVT(A)-1s were available, and the 708th also had some LVT(A)-2s with manpack flamethrowers in improvised bow mountings. The 708th Bn. landed with LVT(A)-2s in the centre, flanked by the LVT(A)-1s, and followed by waves of unarmed LVT-2s.

The 7th Div. was supported by the mixed 767th Tank Bn., with M4A1 Shermans, M5A1 Stuarts, an M10 tank destroyer platoon and flamethrower tanks — a total of 72 tanks, dispersed in sub-units around the islets. There were 30 of these in all, and US troops had to fight for ten of them. The atoll fell in a week, and, substantially due to the tanks and amtracs, casualties were much lighter than had been feared.

### Eniwetok

A similar atoll to Kwajalein, Eniwetok was assaulted using the same tactics: naval bombardment, and amtrac attack quickly followed by tank landings. The 708th Bn. totalled 17 LVT(A)-1s and 102 amtracs. The Marines provided the Shermans of the 2nd Separate Tank Co., and the Army, the 766th Tank Bn.; the Shermans blasted defenders from the ruins of Engebi Island during the initial fighting of 18 February 1944. Light tanks of Co.C, 766th Bn. supported the 106th Infantry on the more stubbornly defended Eniwetok Island, and the 22nd Marines and 2nd Sep. Tank Co. also came across from Engebi. A few dug-in Type 95 *Ha-go* were overrun, and the usual counter-attacks, blasted by the Shermans, quickly exhausted the defenders.

On 22 February the 22nd Marines attacked Parry Island, three *Ha-go* tanks being quickly destroyed by Shermans of the supporting 2nd Sep. Tank Co.; the remainder of the enemy tank company on Parry was as briskly dealt with during a night counter-attack, the last Japanese effort on the island. During the following weeks 29 other islets in the atoll were taken.

## The Marianas

This was the decisive battle of the campaign; the islands were the first of Japan's inner defensive belt to be attacked, and offered airfields for operations against the Home Islands. The large enemy garrison had been reinforced with the IJA's 9th Tank Regt., with Type 95 light tanks, Type 97 mediums and a few of the new Type 97*kai Shinhoto Chi-ha*. The 1st and 2nd Cos. were on Guam, the 3rd, 5th and 6th on Saipan. There were also nine *Ha-go* of an SNLF company on Saipan, and the similarly equipped 24th Independent Tank Co. on Guam. The garrison had additionally begun to receive the excellent new 47mm Type 1 anti-tank gun.

Saipan was tackled first: on 15 June 1944 700 Army and USMC amtracs carried ashore a two-

**The contemptuous attitude of American tankers towards their Japanese counterparts could hardly be exemplified better than by this curious photo of the crew of an M4A2 Sherman with a Type 94 tankette lashed on the rear deck as war-booty. KILLER, a tank of Co.C, 4th Marine Tank Bn. photographed on Namur in February 1944, sports the coat of oak planks which Marine tanks acquired after experience of Japanese hand-emplaced magnetic mines. (US Navy)**

pronged assault by the 2nd and 4th Marine Divisions. The 708th Amphibian Tank Bn., re-constituted since Eniwetok, was now the first unit of its type to see combat with a full tank complement. It consisted of an HQ Co. with three LVT(A)-2s and one of the new LVT-4s; and four line companies, each of 13 LVT(A)-1s and four LVT(A)-4s—the latter with an open-topped 75mm turret from the M8 Howitzer Motor Carriage. Two of its companies were assigned to each of the Marine regiments of 4th Div. attacking the southern beaches; they opened fire some 300 yards offshore, and escorted the amtracs up the beach and some way inland. Losses from enemy mortar and artillery fire were heavy among the amtracs and LVT(A)-1s, and the 708th was later awarded a Presidential Unit Citation for its part in the landings.

On the afternoon of the 15th the LCMs began landing the tanks of the 2nd and 4th Marine Tank Bns., which by this date had been re-organised with 46 M4A2 Shermans instead of the original 54 light tanks. For Saipan, each battalion also had an





additional 14 to 24 M3A1 Satan flamethrower tanks.

The Shermans began attacking enemy gun positions which were causing havoc along the 900-yard deep beachhead. That night detachments of a Japanese SNLF, supported by several Type 2 *Ka-mi* amphibious tanks, landed near Garapan on the left flank of the northern beaches. (The Type 2, based on the Type 95, was given buoyancy by front and rear pontoons, dropped after landing.) Alert Marines called in naval star shell illumination, and the Type 2s were blasted by bazookas and Sherman guns. Dawn attacks by the SNLF Type 95 company and 4th Co., 9th Tank Regt. with supporting infantry were devastated by tank fire.

The next day the Marine tanks led the break-out from the beachhead, supported by some of the LVT(A)-1s and -4s. Although answering the long-felt requirement for an amphibious tank gun heavier than the 37mm, the LVT(A)-4 proved a mixed

**Amphibious tanks of the Marines' 1st Amphibian Tractor Bn. survey a Japanese landing craft which they have just destroyed during the Peleliu fighting of September 1944. To the left is the original amphibian tank, LVT(A)-1; beside it is a new LVT(A)-4, which first saw combat at Saipan in June 1944. A total of 509 LVT(A)-1s and 1,890 LVT(A)-4s were built for the Army and Marines during the war, and they were used exclusively in the Pacific. (USMC)**

blessing. The larger turret was open-topped, and had forced the deletion of the LVT(A)-1's two rear-mounted machine guns—an often fatal combination, in the face of Japanese infantry attacks pressed to hand-to-hand range. Experience on Saipan led to the fitting of two shielded .30cal. guns on the turret sides, and various bow gun improvisations.

During the break-out Sgt. Robert McCard's Sherman was isolated and knocked out by enemy artillery; McCard lost his life while holding back the Japanese with machine gun fire and grenades long enough for his crew to escape, and was posthumously awarded one of only two Congressional



The deletion of the aft machine gun tubs from the LVT(A)-4 design proved a serious mistake, and after bad experiences on Saipan Marine amtracs began to sprout defensive machine guns on the turret. This vehicle, photographed during mopping-up operations on Tinian in July 1944, has an additional .30cal. on the left turret side, and the standard .50cal. at the turret rear has an improvised shield added around the ring mount to protect the gunner from snipers. (USMC)

Medals of Honor won by tankers in the Pacific.

Later that day landings by the Army's 27th Div. were supported by Cos.B (Shermans) and D (M5A1s) of the 762nd Tank Bn., and Co.D (M5A1s) of the 766th.

On the evening of 16 June Vice-Admiral Nagumo ordered an all-out counter-attack; and Lt. Gen. Saito ordered Col. Hideki Goto of the 9th Tank Regt. to lead the attack. Reduced from 90 to 44 tanks by detachments to Guam and 11 losses on the beaches, the unit formed up noisily with the 136th Inf.Regt. in the rubble of Garapan. They were heard by the 1/6th and 2/2nd Marines, who called up a Sherman platoon from Co.A, 2nd Marine Tank Bn.; several M3 75mm SPM half-tracks also took up position behind the entrenched

infantry. At 0300 on the morning of 17 June the largest single Japanese tank attack of the island war began.

Illuminated by naval star shells, the lead tanks were quickly knocked out by bazooka and 37mm gun fire; in the confusion of blazing tanks others strayed into nearby swampland, becoming stationary targets. The Marines counter-attacked, and at dawn the SPMs and tanks moved up to shell any enemy tanks which did not seem sufficiently burned. Only 12 Japanese tanks survived the attack, six each Type 97 mediums and Type 95 *Hago*; half of these were lost in an unequal contest with Shermans of Co.C, 2nd Marine Tank Bn. outside Garapan on 24th June, and the rest were destroyed piecemeal by Army M5A1s.

The Marine tankers, delighted with the 'tankable' terrain, continued to provide fire support, routing out bunkers and caves with gunfire and flamethrowers. Nevertheless, tank losses were quite heavy, both to artillery and to magnetic mines. Japanese mine-teams soon found that their weapons were only effective if carefully placed on

vulnerable points of the Sherman, such as the rear fuel tank; but such was their enormous bravery that US infantry had to work very closely with the tanks to protect them. Saipan was finally declared secure on 9 July.

On Tinian, assaulted on 24 July by Marines backed by the 2nd and 4th Marine Tank Bns., the enemy's 18th Inf.Regt. had 12 Type 95 *Ha-go* tanks under command. The Marines encountered only light initial resistance, knocking out two of the tanks. The rest were kept for the now-familiar night counter-attack, which was beaten off at a cost of five more Type 95s. Fighting continued on Tinian for another week.

Meanwhile the 3rd Marine Div. assaulted Guam, supported by the 2nd and 4th Marine Sep. Tank Cos., the 3rd Marine Tank Bn. and the Army's 706th Tank Bn.; Japanese tank units comprised the 1st and 2nd Cos., 9th Tank Regt. with 29 *Chi-ha* and *Ha-go*, and the 24th Ind. Tank Co. with nine *Ha-go*. Five *Ha-go* of 1/9th Regt. attacked the beachhead shortly after the landings at Agat on 21 July, and all were destroyed by bazookas and by Shermans of the 4th Separate Tank Company. The rest of the 1st Co. were destroyed by the 2nd Sep. Tank Co. when five *Ha-go* attacked the 22nd Marines, and three more were knocked out from the air. The Japanese 24th

Ind. Tank Co. was virtually wiped out by the same units during reckless counter-attacks.

The remaining tanks of the 2/9th Tank Regt. were withdrawn north to Tarague; daytime encounters had proved futile, and they were gradually expended in a series of ferocious night attacks in support of infantry. Five *Chi-ha* survived their last night attack on 8/9 August, since the disgusted Marines found that their rain-soaked bazooka rockets were not usable. The next day Shermans routed out the last enemy strongpoint, destroying two tanks in combat and finding the last seven scuttled for lack of fuel and parts. Saipan and Guam saw the most aggressive use of Japanese tanks of the whole Pacific War—and underlined the obsolescence of the *Ha-go* and *Chi-ha*, whose guns were useless against the Sherman, but whose armour could be penetrated by bazookas, heavy machine guns, and even by rifle-grenades.

In the excellent tank country of the Marianas the LVT(A)-4s were also able to operate inland in the support role.

**Due to the large concentration of Japanese tanks on the Philippines, the US Army landed three tank destroyer battalions; here a pair of M10s of the 632nd TD Bn. patrol in northern Leyte at the end of 1944. The tank destroyers saw very little anti-tank action; and they were not as useful in infantry support as normal tanks, since their open turrets made them vulnerable to the much-feared close infantry attacks favoured by the Japanese. (US Army)**





On 29 January 1945 the 637th TD Bn. intercepted a column of tanks and trucks of the Japanese 10th Tank Regt. near Clark Field; they knocked out four *Shinhoto Chi-ha* tanks, and wiped out the convoy. The tank on the right has the company insignia, a Katakana letter 'T', painted on the turret. (US Army)

### The Palau Islands

On 15 September 1944 the 1st Marine Div. suffered heavy losses in landing on Peleliu, another heavily fortified coral crag like Betio. In the first wave 26 LVTs were lost and many more damaged. Every one of the first tanks which the 1st Marine Tank Bn. put ashore in the fourth wave was hit by gunfire. Late that afternoon the IJA 14th Inf.Div.'s company of about 15 Type 95 *Ha-go* charged across the island's airstrip in support of an infantry attack, into the fire of bazookas, 37mm A/T guns and three Shermans. The Shermans' AP rounds were seen to pass clean through the thinly armoured Type 95s without apparent result; switching to HE, the Marines quickly blew the small tanks apart, so thoroughly that they could not later count the number destroyed with any certainty. A few which reached Marine lines were quickly accounted for. Once the main resistance had been overcome the Army's 710th Tank Bn. landed to help mop up; and

subsequently the M10s of the 819th TD Bn. landed on neighbouring Anguar Island.

### The Philippines

The largest numbers of tanks employed in the Central Pacific saw action on the Philippines. On Luzon the IJA committed the 2nd Tank Div.; the 7th Ind.Tank Co. (Type 89 *Chi-ro* mediums) and a company of Type 95 *Ha-go* were on Leyte. Anticipating armoured resistance, the US Army assigned seven tank and three tank destroyer battalions and a separate tank company to the landings, alongside the amphibian tank and tractor battalions.

The October invasion of Leyte was not seriously hampered by the few enemy tanks, which were mainly destroyed by bazooka teams; US tanks were free to support their infantry in the way which had become standard in the Pacific.

Recognising their inadequacy, Gen. Yamashita ordered the tanks of his 2nd Div. dispersed in static defensive detachments to delay the US advance, while his other units withdrew into rugged terrain in northern Luzon. The *Shinhoto Chi-ha*'s 47mm gun



could penetrate the side, though not the frontal armour of the Sherman. Japanese tanks were dug into adobe revetments under heavy camouflage as the nuclei of defence systems; alternative positions allowed tanks to be moved around perimeters at need. Detachment sizes varied widely: the smallest, at Urdaneta, had nine tanks, while the 7th Tank Regt.'s Shigemi detachment at San Manuel had 45, and the 6th Tank Regt.'s Ida Detachment at Munoz had 52, both the latter mainly *Shinhoto Chi-ha*.

The Luzon landings began on 15 December 1944; apart from a skirmish near Binalonan the first tank battle was on 24 January 1945 at San Manuel, when the Shigemi Detachment was attacked by the 161st Inf. supported by divisional M7 HMCs and Co.C, 716th Tank Battalion. The HMC's 105mm gun was effective in blasting away the adobe revetments, and the infantry slowly gained ground in bloody fighting. The 30 remaining IJA tanks launched a three-wave charge with infantry support in the early hours of 28 January, and were wiped out. American AFV losses had been three

Shermans and one M7. The Ida Detachment at Munoz was encircled and smashed during 1-7 February, a break-out attempt being stopped by artillery and the M5A1s of the 716th Tank Battalion. The last major Japanese element, the 10th Tank Regt., was destroyed around Lupao on 7-8 February. By 5 March US forces had destroyed 203 *Chi-ha* and 19 *Ha-go* tanks, and two 15cm *Ho-ro* SP howitzers. The 2nd Tank Div. had paid a heavy price for success in delaying the US advance, the poor quality of its equipment forcing passive tactics which posed little threat to American armour, which was heavily committed to infantry support thereafter. Among units which distinguished themselves in the Manila fighting were the 44th and 754th Tank Bns., and the 637th TD Bn. (M18s) won a Presidential Unit Citation.

**The only US tank unit to take part in the destruction of Japan's 2nd Tank Div. was the 716th Tank Bn.; here a Sherman from Co. C, CLASSY PEG, passes one of four *Shinhoto Chi-ha* of the 7th Tank Regt. knocked out on 17 January 1945 near Linnangansen. This company later took part in the destruction of the Japanese tank concentration at San Manuel. Note the famously gaudy battalion insignia, a 'Big Bad Wolf' head, painted here on the hull side and sometimes on the turret. (US Army)**



## Iwo Jima

The 3rd, 4th and 5th Marine Tank Bns. supported their divisions after the landings of 19 February on this sulphuric volcanic island, the toughest and bloodiest Marine battlefield of the war. Battalion establishment had now grown to 67 Shermans, of which nine had E4-5 flamethrowers. The fighting involved costly attempts to rout well-entrenched defenders from the caves which riddled the island by 'corkscrew and blowtorch' tactics—opening up enemy positions with tank fire or satchel charges, and burning them out with flamethrowers. Tank losses, especially to mines, soon reduced most battalions to about 60 per cent strength, although most damaged tanks were recovered later. Lt. Col. Nishi had hoped to use the *Shinhoto Chi-ha* tanks of his 26th Regt. as a roving 'fire brigade', but was ordered to deploy them as entrenched pillboxes, and most fell victim to bazookas. Fighting continued until 26 March.

## Okinawa

The largest Army/Marine combined operation of the war involved over 1,000 amtracs, apart from other landing craft. Past experience prompted the landing of more armour than ever before: eight Army and two USMC tank battalions, two amphibian tank battalions, and two USMC independent tank companies, totalling over 800 tanks. In addition there were hundreds of Marine amphibious tanks, Army SP guns, half-tracks and other AFVs. Tank/infantry tactics had become so refined that Gen. Shepherd of the 6th Marine Div. later commented that 'if any one supporting arm can be singled out as having contributed more than any other during the progress of the campaign, the tank would certainly have to be selected.' The only

**M7 105mm HMC, M20 command car and M18 tank destroyer of 637th TD Bn. crossing the Magot River in northern Luzon, 12 June 1945. The only M18 unit to fight in the Pacific, the 637th was credited with nine tank 'kills', winning a Presidential Unit Citation for its part in the liberation of Manila. (US Army)**





IJA armour encountered was the 27th Tank Regt., with only 13 *Ha-go* and 14 *Shinhoto Chi-ha*, largely wiped out in the ill-fated 5 May counter-offensive.

After Okinawa preparations began for the dreaded invasion of the Home Islands, which would have enormously costly. Enemy tank strength would have totalled 2,970 in two divisions, six brigades and many smaller units. The US landings planned for November 1945 would have included at least three armoured divisions and several dozen tank battalions, had the A-bomb not brought about Japan's surrender in August.

## The Asian Mainland

### Burma

The most extensive use of armour outside the Central Pacific area was in Burma. British and Indian forces increasingly deployed tanks in close support of infantry after successes in the Arakan fighting of 1943, rising to a peak strength of over a dozen regiments. The final advance of 1945 took tank units out of close country and on to the flatter

Men of B Co., 44th Tank Bn. after their famous advance as the spearhead of the flying column which led the attack into Manila. The battalion used chevrons and other geometric shapes as company insignia on their M4s. (US Army)

terrain of central Burma, where tanks spearheaded a record 300-mile advance on Rangoon in three weeks. (This story is told in some detail in Vanguard 6, *The Lee/Grant Tanks in British Service*, and Vanguard 17, *The Stuart Light Tank Series*.) The only significant Japanese tank unit to serve in Burma in this period was the 14th Tank Regt.; ironically, its 4th Co. used Stuarts captured from the retreating British 7th Armd.Bde. in 1942. Unsuccessful against British armour in the Imphal campaign, it was reduced by July 1944 to only four tanks. It was rebuilt, partly with Type 97*kai*, and fought at Meiktila; in March 1945 its last tanks were wiped out on the Mandalay Road by Shermans of 255 Tank Brigade.

In the Burma Road area the US formed a jointly-managed Provisional Chinese Tank Group with four battalions of M3A3 Stuarts and two of M4A4 Shermans. The only significant Chinese tank units to see combat after 1942, they supported Chinese troops with some success.

## Manchuria

The largest single mechanised operation of the Far East war is probably the least known. In August 1945 the USSR invaded China and Manchuria, and the Kwantung Army was overrun in two weeks by a brilliant pincer movement. Tank strength accumulated to guard against a Soviet drive had been drained away since 1943, to the Central Pacific and to Home Islands defences. Although the IJA 3rd Tank Div. and several regiments had been available for the 1944 offensive in China, by 1945 the Kwantung Army had only the inexperienced 1st and 9th Ind. Tank Bdes., and various companies attached to infantry formations. The 1st (34th and 35th Tank Regts.) was at Mukden, and the 9th (51st and 52nd Tank Regts.) at Ssuningchich.

**In the Philippines each US infantry division had a 'cannon company' of 12 M7 105mm HMCs, and these proved very effective against the emplaced tanks of the Japanese 2nd Tank Division. This is OLD SARGE of the 27th Div. Cannon Co., credited with 12 tanks and four artillery pieces on Luzon—and note Purple Heart tally. Some of its victims were Type 1 Ho-ni 75mm tank destroyers, which first saw combat with the Japanese 2nd Mech.Arty.Regmt. on Luzon. (US Army)**

The three-pronged Soviet pincer involved the 6th Guards Tank Army of the Transbaikial Front making a surprise attack over the supposedly impassable Greater Khingan Mountains, while the 1st and 2nd Far Eastern Fronts drove south from Khabarovsk and Vladivostok, the three fronts meeting at the base of the Korean Peninsula. Anticipated re-supply difficulties led the Soviets to throw all their resources into an all-out lightning grab for Manchuria. Of the total of over 5,000 AFVs—more than had been used at Kursk—some were old BT-7s and KVs, stored in the Far East since 1941; but most were T-34/76s and /85s, crewed by German Front veterans.

The war ended before the Red Army reached the main defence line where the IJA brigades were stationed, so tank fighting was limited. Nevertheless, the operation is widely studied in the USSR as a model blitzkrieg offensive, whose lessons may have future significance.



## Summary

After Japan's successes in 1941–42 taught the Allies that tanks could be valuable even in Pacific terrain, most subsequent Allied operations involved tanks subordinated to infantry for close fire support. Nevertheless, in battles such as Saipan, Okinawa, the drive on Rangoon and the Manchurian invasion, tanks played a primary role. In many other battles it was tanks which made infantry advances possible, and less costly, in the face of the very skilled Japanese defensive tactics. The Central Pacific fighting pioneered the use of armoured amphibious troop transporters, vital to success in contested landings; had these been available for the Normandy invasion, the landings would probably never have been placed in jeopardy.

In contrast to Allied successes, Japanese use of tanks after 1942 was an unbroken series of failures, due in no small measure to the poor quality of the tanks themselves. The root of the problem lay in

IJA complacency, even in the face of the Khalkin Gol defeat of 1939, and in the low priority given to tank production by Japan's badly overstretched war industry. But apart from technical weakness, Japanese tanks were also uniformly poorly handled after 1942. Tactics ranged from the passivity of the 2nd Tank Div. on Luzon, to the reckless heroism of ineffectual night banzai-charges on many other islands. Tank units were subordinated to higher commanders ignorant of armoured warfare, whose orders limited the tactics of unit commanders — e.g. the 26th Tank Regt. on Iwo Jima.

It must be acknowledged that Allied air supremacy, overwhelming naval gunfire, and availability of infantry weapons such as the bazooka, all placed extreme restraints on Japanese tank employment. Had IJA infantry been equipped with a bazooka-like weapon in place of crude hand-

**A crew from the 754th Tank Bn., veterans of Bougainville and Luzon, pose by their M4A3, DRAGON LADY. The circled '2' in white indicates second tank, and C Co.; the three 'hash marks', 3rd Ptn.; the name is painted in red outlined in white on the rear appliqué armour panel. (US Army)**





M3 Lee tanks of C Sqn., 150th Regt. RAC—a wartime unit formed from an infantry battalion of the York and Lancaster Regt.—during the dash for Mandalay on 13 March 1945. To counter enemy charges, escorting infantry ride the tanks. COSSACK, the leading tank, has the York and Lancaster Regt.'s tiger badge on the front plate beside the driver's visor, and a large Allied star on the hull side. On 20 March the Union Jack flew over Mandalay after the city had fallen to these tanks and to infantrymen of the 15th Punjabis. (US Army)

placed charges, Allied tank losses would have soared.

The quality of Allied tank tactics also varied. British and Indian tank use in Burma's nightmare terrain was surprisingly effective. US Marine tanks in the Central Pacific tended to be used far more aggressively than Army tanks, pressing ahead fast and leaving isolated enemy outposts to be dealt with later. The USMC encouraged the use of tanks right up front to spearhead attacks, accepting the artillery fire this inevitably attracted. Army tank units, often lacking the thorough preparatory tank/infantry training upon which the Marines insisted, sometimes behaved in a more circumspect manner. Army infantry units were often uncomfortable with tanks; and because of the fire they attracted some divisional commanders insisted that they be called forward from behind the line only when specific targets had been identified—hardly

the best use for them. In one area the Army excelled, however: their amphibian tank battalions had far more practice than their Marine counterparts, and until late in the war were usually better organised in their shore attacks.

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## The Plates

*A1: Vickers Carden Loyd Amphibious Tank Model 1931, Chinese 1st Armoured Battalion; Battle of Shanghai, 1937*

Chinese tanks generally retained delivery schemes, here a dark bronze-green base with angular blotches of dark brown and buff and black demarcation. Company identification in this unit was by red geometric designs such as this shield, a four-point star, or a circle (inset). An animal name or a number was painted in the design, the most popular apparently 'dragon', seen here on the tank and the inset.

*A2: Type 94 TK Tankette, Japanese 2nd Independent Light Armoured Vehicle Company; Kuangte, China, 1937*

Japanese Army tanks in China in 1937 bore a four-M4A4 Shermans of the Indian Army's 19th (King George V's Own) Lancers provide fire support near Udaung, Burma, during the fighting in the Arakan in late December 1944. (US Army)



colour scheme of 'khaki', 'parched grass', earth brown and yellow. Some question remains as to exact shades. 'Khaki' has been interpreted both as a mid-stone, and an olive green; we follow the latter interpretation, based on several colour photos. 'Parched grass' has been described as ochre; here we prefer a dull dark green. The very dark chocolate brown could fade in use to a rusty shade akin to automotive primer. The yellow was painted in bands; instructions recommended a cross arrangement when seen from above, the arms meeting centrally on the turret, but this was not invariable.

No regulations governed the use of unit insignia. Some units polished or painted the small metal Japanese Army star fastened on the bow. Other tanks displayed on the bow a small painted flag, the red sun on a white rectangle. Some regiments painted names on hull sides. The 2nd Tank Regt. painted bird names on tanks of 1st Co., mountain

**M3A3 Stuarts of 3rd Chinese Tank Bn., Provisional Tank Group prepare to leave the Ramgarh Training Centre for the Burma front on 31 December 1944. The solid yellow shapes painted on the hulls were company insignia in the sequence diamond, circle, square; the yellow square with a white number indicated the battalion and the vehicle respectively. (US Army)**

names on 2nd Co., and animal names on 3rd Co., in the phonetic Kana alphabet rather than the ideographic Kanji.

Very popular was the use of Kana letters on turret sides; these had various meanings. For instance, at the beginning of the Pacific war the 1st Tank Regt. used the letters *chi*, *ku*, *shi* and *no* for the 1st to 4th Cos. respectively, in reference to the unit's Chikushinohara training grounds. When a fifth company was added in 1943 the letters changed to *ka*, *u*, *ryo*, *no*, *mi* and *ya* for the 1st to 5th Cos. and the maintenance company, in reference to Koryonomiya Jinja, a Shinto shrine at the regiment's original Kurume home base.

In contrast, the 8th Tank Regt. used two Kana letters for each of its four companies: *i se*, *ha se*, *a se*, and *yo se*. The first referred to the company commander (respectively Imada, Hara, Agano and Yonehara); the second was an abbreviation of *sensha chutai* — 'tank company'. A style used by the 13th and 28th Tank Regts. featured the letters *i*, *ni*, *sa*, *yo* and *ko*, as abbreviations of the company numbers in Japanese — *ichi* is one, *ni* is two, *san* is three, and so forth.







On the tankette shown here is the insignia of Mt. Fuji, and the name beside the serial number is 'Fuji': both refer to the unit commander, Maj. Fujita. The unit insignia was also carried centrally on the hull and trailer rear. The inset shows a samurai fan insignia used by another Type 94 company in China, applied in the same fashion. At left are pre-1940 tank signalling flags. The top flag is that of the company commander. The left row are the flags of the first to fourth vehicles of the 1st Platoon; the 2nd Platoon were identical, but with blue bands. The right row are, top to bottom, the 'message', 'formation', 'alert' and 'communication' flags. Measuring 60cm × 40cm, these flags were replaced by at least two different systems later in the

Matildas of A Sqn., 1st Australian Armcd. Regt. near Balikpapan, Borneo. Markings include individual tank name and number on hull side and suspension cover (foreground, LOMA, above '82158' in white Cyrillic digits); a coloured A Sqn. triangle enclosing a white troop number low on the turret cheeks; and on the hull front, the regimental code flash ('1' over '52') and the sign of the parent 4th Armcd. Bde.—an alligator over a boomerang on a palm tree, in white on black. (Australian War Memorial via G. Balin)

war; but as most tanks had radios their use became uncommon.

*B1: Vickers Carden Loyd Light Tank Model 1936, KNIL bataljon Vechtswagens; Bandoeng, Dutch East Indies, 1941*

Dutch tanks retained delivery schemes, in this case dark bronze-green. The simple markings consisted

of the Dutch tricolour bearing 'D/V/O', duplicated on the bow with a white 'D' between, over a white four-digit serial; and — in this battalion — a white vehicle number on the hull side. The Marmon Herringtons carried the flag marking larger on the hull side.

*B2: Panzerkampfwagen Ib, Chinese 3rd Armoured Battalion; Nanking, 1937*

Vehicles received from Germany remained in their dark grey delivery scheme. While at Nanking most were marked with the Kuomintang sunburst national insignia, but no tactical markings were carried by this unit.

*C1: Type 95 Ha-go Light Tank, 2nd Company, Japanese 7th Tank Regiment; Luzon, Philippines, January 1942*  
This tank is finished in the same four-colour scheme as A2. This unit identified companies by traditional Japanese motifs: the *hoshi* (star), *sasa* (bamboo leaf), *oka* (cherry blossom) and *hata* (flag) for 1st to 4th Cos. respectively, painted fore and aft and on both turret sides. The four-digit serial number began with two indicating type (here, '95') and ended with two identifying the individual vehicle. Again, this was painted on both sides as well as fore and aft.

**M4A2s of the 3rd Marine Tank Bn. move toward the airstrip during the Iwo Jima fighting of February 1945. Note hull insignia between appliqué plates—a winged star, in the style of the national aircraft insignia. (USMC)**



*C2: M3A1 Stuart Light Tank, Australian 2/6th Armoured Regiment; Papua New Guinea, December 1942*

Australian Stuarts were modified in various ways before being issued; a metal ring cover was fitted at the turret base to prevent jamming, and a stowage box was added to the right fender. Tanks were repainted dark bronze-green. Squadron markings were in normal British style: a triangle, square and circle for 1st to 3rd Sqns. respectively, with the troop number inside. Marking colour was a regimental distinction—for the 2/6th, yellow. Individual tank names beginning with the squadron letter—here, CABBY—were usually painted at the upper edge of the turret sides. The 1st

Australian Armd. Div. insignia (inset, right) was carried on the left front fender and right rear hull.

*D1: Valentine Mk III CS, 3rd New Zealand Division Special Tank Squadron; Green Island, 1944*

Largely based on the research by J. E. Plowman published in *Tankette* magazine, this shows a special heat-resistant dark bronze-green paint used on the upper surfaces of this unit's Valentines, with a

**Composite-hull M4 Sherman of the 713th Flamethrower Tank Bn. burning out enemy positions in the caves along Okinawa's shoreline during mop-up operations in June 1945. The only flamethrower battalion to see combat in the Pacific, the 713th was usually broken up into companies attached to Army and Marine tank battalions for 'corkscrew and blowtorch' operations. (US Army)**





The rolling hills of Okinawa offered excellent 'going' for tanks. Here a group of Shermans take a breather on a reverse slope. The two in the foreground are 713th Bn. 'blowtorches', being held in reserve until needed to support gun tanks. In the background new 105mm howitzer tanks of a headquarters company, with HVSS suspension, display an improvised camouflage of mud. (US Army)

middle bronze-green on side and other surfaces. The darker shade extended over the rear engine deck, and patches of the lighter green were added over the dark areas. At least one tank bore these yellow blotches sprayed over the side surfaces. The squadron retained the dragon rampant insignia of the NZ Army Tank Bde., and the old regimental flash of '2 Tanks'—white '26' on a red square. Troop numbers were painted in white or yellow Roman numerals on turret sides and rear; HQ tanks carried the numbers '1' to '4' in an 'HQ squadron' diamond marking. Photos show that not all these markings were carried by all unit tanks. The brigade insignia is shown inset; on some tanks the design was somewhat simplified.

*D2: M3A1 Light Tank, US Army 193rd Tank Battalion; Makin Island, November 1943*

US tanks in the PTO were painted Olive Drab, a somewhat browner shade than the British equivalent, especially when faded. Army tanks carried standard white star insignia, usually on the turret sides and, rather larger, on the engine deck for air

identification. A 'speed number' (here '42') was usually carried on the turret cheeks; unlike other tactical numbers, these had no significance as to company or platoon, as they were issued consecutively to tanks of a whole battalion. On the hull side is the usual Blue Drab serial number, and chalked above it the landing craft number 'LCM-4'; the word CAL, circled ahead of this, is unexplained.

While battalions in the Pacific used the same company/vehicle bumper code system as in the ETO, battalion codes were not applied. Many units carried battalion insignia instead. On the right rear hull of this tank is a Co. C bumper code and tank number ('C/42'), while to the left is the 193rd Bn. insignia, a red square on a yellow triangle. This is repeated in the inset drawings, which are (left to

right): 193rd, 763rd, 775th and 716th Tank Bns.; not all battalions seem to have used these insignia, though their small size makes photo research difficult. Only the 713th Flamethrower Tank Bn. used standard battalion bumper codes.

*E1: LVT(A)-1 Amphibian Tank, US Army 708th Amphibian Tank Battalion; Saipan, June 1944*

Amtracs and amphibian tanks were originally painted in a light blue; after their combat debut the Marines started painting bands of colour over this, as it was hardly ideal camouflage once ashore. Army vehicles retained the scheme until the Marianas campaign, but in response to crew complaints a factory scheme of Olive Drab was later substituted. Older vehicles could still be seen in the original blue, however.

White stars were conventionally marked on turret and hull sides. Vehicle names, usually starting with the company letter, were painted high at the front of the side sponson — here, BLOCK BUSTER. On the bow is the battalion insignia, a star on a triangle, sometimes repeated on the superstructure front since the bow was often submerged. On

the opposite side of the bow is the company/vehicle bumper code 'B-15'. The 708th also used geometric company insignia, a white square for A and a red triangle for B—the inset at right shows the location and relative size of this marking on the turret rear of BLOCK BUSTER, above the rear hull markings, US ARMY/ C-170631 B-15. The stripes were a common marking on both Army and Marine amphibious vehicles, indicating the assigned landing beach, and used as a forming identification. Cos. A and B of the 708th landed at Blue Beach 2 on Saipan, hence two blue stripes. The other two companies landed at Yellow Beach 2, but used white stripes as no yellow paint was available.

*E2: Type 95 Ha-go Light Tank, Divisional Tank Company, Japanese 14th Infantry Division; Peleliu, September 1944*

Regulations of 1942 dropped the yellow from the

Type 97 Chi-ha tanks of the Japanese 34th Tank Regt., one of four tank regiments that faced the Soviet invasion of Manchuria. The stylised *kikusui* turret emblem is the regimental insignia; the two diagonal lines radiating from the half-circle in the centre of the design identify 2nd Co.; and the Kanji script beside the vehicle number '183' is an Ai-koku presentation marking.



four-colour scheme through some older tanks retained it, and recommended that tanks destined for the South-West Pacific used a base of willow green in place of the usual 'khaki'. The two subsidiary colours – 'parched grass' and brown – were unchanged. It was also advised that gun barrel undersurfaces, and the whole area below the fenders, be painted in 'parched grass', as this paint had anti-rust properties. However, the scheme of this Type 93 shows how regulations are often ignored. Although finished in the new willow green, it is camouflaged with the old yellow bands and brown blotches, and has no areas of 'parched grass' colour.

This company selected a traditional rising sun motif, which readers may recognise as the corporate emblem of Mitsubishi Industries. The two platoons seem to have painted it in contrasting colours, red and white. Some tanks of this company had empty 55gal. drums fastened over the rear fenders – to carry troops into action! It was not a pleasant ride...

*F1: M4A2 Sherman, US Marine 4th Tank Battalion, Saipan, June 1944*

Marine tanks originally arrived in Olive Drab finish, and usually retained it even though nominally the regulations specified a dark forest green. In the Marianas this unit painted turret tops white, with large numbers, presumably in order to co-ordinate air strikes. Some had painted numbers, as here; others had some type of detachable canvas display. Marine divisions used a system of geometric insignia, sometimes printed on uniforms and other divisional gear: the 4th used a half-circle, as seen here enclosing a code number '33'. At the time of Kwajalein the 4th Tank Bn. used names starting with letters from the middle of the alphabet: Co. A used 'H' or 'I', e.g. BOYHEAD, IRONSIDES, etc.; Co. C used 'J' and 'K', e.g. DINGLE, JIM KING, KING, etc.; another company used 'F' and 'G', e.g. GOONYBOD, GOLDBRICK, JR. and our subject, FIRE BALL. After re-equipping for Iwo Jima the battalion seems to have adopted new names starting with 'B', 'C' and 'D', probably referring to companies e.g. BLACKJACK, CRISPY, DORIS, etc.

The 1st Marine Tank Bn. did not display a divisional device, though it did use a system of geometric company signs. The 2nd Marine Tank Bn. did not use signs, but combinations of the

company letter and a small tactical number, and a company-initialled name: e.g. A-20, AWO, C-40, CAESAR, DEATH ST, etc. The 3rd Marine Tank Bn. on Bougainville used, in some companies, tactical numbers inside large rectangular markings, and in others, small geometric shapes. When re-equipped with Shermans it inherited the elephant insignia of the 1MAC 1st Marine Amphibious Corps: Tank Bn., and added its own device – a white star with 'wings', akin to that used on USMC aircraft.

*F2: Type 97 Chi-ha Medium Tank, 5th Company, Japanese 9th Tank Regiment, Saipan, June 1944*

A good example of the 1942 scheme of 'khaki', 'parched grass' and brown. The unit had a distinctive system of company markings in green and white, shown inset – see and left to right, 1st to 5th Cos. – and most had two small national flags on the bow. Most also had a provincial name on the hull side, in this case 'Miyate'. Some regimental tanks used this elaborate *kikusui* turret emblem, symbolising a chrysanthemum over flowing water. The contrast between the Japanese penchant for elegant flower motifs, and the savage bravery of their troops, may seem incongruous to Westerners unfamiliar with a completely alien cultural tradition. The *kikusui* is traditionally associated with the 14th-century hero Masashige Kusunoki, famed for his ill-fated but determined defence of his emperor – the emblem is thus a mark of fealty to the Imperial house. The 9th Regt.'s command tanks used a broken white band around the upper edge of the turret sides: Lt. Col. Goshima's tank had the provincial name 'Aso' on the hull, while the detachment commander on Guam had a star turret insignia as well as the band.

*G1: Type 2 Ka-mi Amphibious Tank, Kite 101st SNLF, Ormoc Bay, Leyte, 1944*

One of the tanks landed at night during the battle for Leyte in an attempt to block the US advance on Ormoc Bay. The *Ka-mi* served with the Special Naval Landing Forces (Japanese Marines), and were painted in IJN standard dark blue-grey (though SNLF Type 95 light tanks were painted in Army camouflage). The traditional SNLF insignia was the rising sun flag, painted on the turrets of *Ka-mi* and Type 95 tanks; and tank serial numbers were often preceded by their anchor insignia, rather than



the Army star. On this *Ka-mi* the serial '651' was carried on each separate assembly at least once: twice on the front pontoon, once on the rear pontoon, once on the engine hood, etc. Unit insignia were not usual, but one unit did use the crescent moon motif shown inset.

*G2: M4A2 Sherman, 1st Marine Tank Battalion; Okinawa, April 1945*

By this time most Marine tanks had received heavy additional protection against magnetic mines and the 47mm A/T gun; in this unit track shoes were welded on the sides, and sand bags stacked on the glacis. Unlike the Army, some Marine units regularly camouflaged their AFVs, both amtracs and tanks. The source of the paint, and therefore the exact shades, are obscure; but period colour film indicates sand and red-brown in the 1st Tank Bn., while other units apparently used swathes of sand-colour only. Amtracs were sometimes painted in these colours, and sometimes had one or more grey shades added over the base light blue. On Okinawa the only unit markings used by the 1st Tank Bn. were these numbers inside geometric shapes, pre-

**T-34/85 tanks of the Soviet 6th Guards Tank Army traverse the Greater Khingan Mountains during their lightning two-week advance into Manchuria in August 1945. Much of the motorised transport in this picture consists of captured German vehicles. (Sovfoto)**

sumably company insignia (inset); this tank has a circled '1' high on the turret side between two track shoes.

*H1: T-34/85, 10th Mechanised Corps, Soviet 1st Far Eastern Front; Manchuria, August 1945*

Essentially similar to the finish of tanks operating in Europe, this overall dark olive green is enlivened only by white tactical numbers on turret sides and rear, and a broad white band adopted by the 1st Far Eastern Front for air identification (inset). Note that it barely extends on to the hull front and rear, and only part of the way along the gun barrel.

*H2: Type 97kai Shinhoto Chi-ha, Japanese 11th Tank Regiment; Shumushu Island, Kuriles Group, August 1945*

This unit fought the last tank battle of the war, on 18-20 August, several days after the armistice had officially brought the war to an end. The Soviet

attempt on Shumshu cost both sides heavy casualties.

The regimental turret insignia was the Kanji symbol *shi*, 'samurai' (inset left); this was actually a play on words, since it could also be interpreted as the Kanji numeral '11', the regimental number. Additional bar markings were probably company insignia; here two small vertical bars are carried on the turret, but other tanks had diagonal bars from

edge to edge of the hull sides. The circle on the hull sides here is believed to indicate company commander. Inset right is the style of license plate carried by IJA tanks on the hull rear. The star indicates Army SNLF tanks would substitute an anchor. The top row of Kanji symbols are the abbreviation of *senba rental* 'tank regiment'—and the bottom row is the number of the regiment. The Arabic numerals are the individual tank number.

### Notes sur les plaques en couleur

As Les chars d'assaut chinois conservaient normalement la couleur d'un tableau de couleur et de l'écran. Des dessins géométriques comme ce bouclier, cette croix à quatre bras ou ce cercle au centre sur les chars japonais. Les lettres ou les numéros des chars étaient peints à l'encre sur le dessin. Le dessin ou la gravure de gauche montre le nom populaire 'dragons'. Au Les numéros affichés des chars étaient écrits 'khaki', 'brun desher', 'noir de sucre et pain', cependant les numéros restèrent les mêmes. Le 'khaki' avait une couleur vert-bleu, 'brun desher' était un vert sombre sans reflet. Les unités éléphantines leurs propres couleurs, écumoire, etc. Ce croquis de tourelle ainsi que les petits symboles (M) figuré le commandant de l'unité et le commandant de la pièce. Les petits chiffres de devant les lettres pour signifier d'autres chiffres précédant l'après. Les lettres à gauche des numéros pour indiquer à droite, l'achèvement du zone. Probablement des rayures bleues au lieu de rouge.

As La marque en forme de croix avait été un marque national, le numéro servait à identifier le char. Les lettres de la première lettre allemande ont comme à la tradition, avec chaque nationale Koordination.

As Les deux premiers chiffres du numéro de série indiquent le type du char (1) et (2). Les deux chiffres suivants indiquent le véhicule individuel. Les symboles de compagnie, du let an grade, étaient respectivement une étoile, une feuille de laurier, une fleur de cerisier, et un dragon. Ce Les symboles sur la tourelle signifiaient à gauche l'unité, l'achèvement, et le véhicule individuel, et à droite, l'unité, le numéro de la *Emp* à l'intérieur. 'Café' est le nom du char, toujours que la garde-boue de la *Armada Amovable* Bureau.

As La couleur de la tourelle est l'identification de la *Emp*. L'insigne est celui de la *Armada* *Emp* *Tank* *Unité*, '6' est l'identité d'un de l'unité régimentaire, et *Yuki* *Rég*. Des numéros de tourelle étaient inscrits en un cercle qui tous les numéros du bataillon et un chiffre ou deux autres chiffres ou triple ou double compagnie. Les petits dessins de devant les numéros du bataillon peints sur la capote arrière gauche. *Armée*, *Armée*, *77* *ème* et *218* *ème*.

As Colorés originaux. Les unités japonaises soulevés des rayures de camouflage en vert-bleu sur eux, plus tard tous les chars furent totalement peints en vert-bleu. La marque étoile-croix-jaune indique le bataillon. 'R' est l'identification de la compagnie et du tank individuel, le chiffre rouge à l'intérieur de la tourelle est un autre chiffre de la compagnie. Deux rires bleus servaient à identifier un tank assigné à 'Blue Branch'. Ce Le croquis de tourelle est le commandant de l'unité et le numéro de la tourelle précédent. Les numéros des tourelles et les logos sur un blanc pour les deux peloton étaient l'identification de la compagnie.

As La marque en forme de croix ou de cercle au-dessus du nom du tank indique *pl* *Armée* *Division*, des lettres initiales et ainsi sur le cas de la tourelle servait à la reconnaissance aérienne. *En* l'achèvement du régime que se trouve sur la tourelle est le *Kobun*, dernière à trouver la devise de la *Armée* compagnie. Les petits chiffres montrent l'insigne national initial d'un bataillon et les numéros de la liste à la *Armée* compagnie.

As L'entree grille 'idell' *Assault*, et par un autre essai qui se trouvent au début du numéro de série de char. Les symboles des chars des 'Forces Spéciales' de Département de la Marine' des lettres marines. Ce Notre la protection supplémentaire ajoutée au moyen de chevilles supplémentaires, des rires de câble, et un cercle de devant de camouflage couvrant tout le surface. Les marques de la tourelle représentent certainement l'insigne de la compagnie avec le nom de char individuel d'un peloton.

As Des numéros de plaque similaires à celles indiquées en Europe, avec à la fois marines. Certains furent ajoutés pendant cette campagne pour servir à des fins d'identification aérienne. *Ha* Chose de l'unité qui a été ajoutée pendant la dernière bataille de Hainan de la guerre de 1941-1942, après l'annonce officielle. La forme d'acier plaque la tourelle est un véritablement caractéristique de, noir à la lettre 'samurai' et 'N'. Les lettres sous des marques de la compagnie, le cercle indique probablement le commandant de la compagnie.

### Farbtafeln

As Colorés de la Panzer behielten meistens die Farben bei, in denen sie geliefert wurden. Figuren wie dieser Schild, der vierzackige Stern und der Kreis (Gesichtsbild) der jeweiligen Kompanie. In der Eigenen nach oben Nummer haben. Nummer des Panzers. Die Bild auf der linken Seite trägt den heiligen christlichen Namen 'Theobald'. Die Offiziere, Farbtönen hingegen waren z. B. 'Khaki' 'vergrünertes Grau', 'braunrot' und 'schwarz', aber es gab viele Variationen. Khaki auf dem olivgrünen Ton, vergrünertes Grau von stumpfes Dunkelgrün. Die Einheiten bestimmten ihre eigenen Hauptquartier Namen, die selbst. Diese Geschütznummern und der Name *bezeichnet* den *Mittel* *Emp*. Der Kreis (ausland der Einheit war Major *Emp*). Die einzelnen Zeichnungen zeigen Signalfarbe von *Emp*. Links des ersten Zug, rechts die Mittelabgabe. Der zweite Zug (dagegen hatte keine Signale).

As Die Markierung vom auf dem Rumpf sind nationale Insignien, die Nummer bezieht auf den Panzer. *En* Es enthält ein deutsches Kreuz geliefert mit mit nationaler Koordination markierung versehen.

As Die ersten beiden Ziffern der Seriennummern bezeichnen den Panzertrupp (hier '6') die nächsten beiden waren die jeweiligen Fahrzeugnummern. Die Zeichen der 1. bis 3. Kompanie waren Stern, Rautenschild, Kreisblitz und Fahne. Ce An den Symbolen auf dem Geschütz (erkant man die Schwadronen) bezeichnet auf links die *Emp* und der 2. *Emp* Nummer nach 'Café' (die der Panzertrupp). Auf dem Kreis (ausland der Insignien der 1. Armada *Armovable* Bureau).

As Die die Geschütznummer ist ein der 1. *Emp*, und die Insignien sind die des *Armada* *Emp*. *Emp* *Tank* *Einheit*. '6' bezieht sich auf die gleiche Regiment, das mit *Tank* *Rég*. *Emp*. Das ganze Battalion wurde mit Geschütznummern, das hundert. Die Nummern in einem Kreis nicht der *Emp*, sondern ein Kompanie oder *Emp*. *Tank* *Unité* auf dem Rumpf steht nach der entsprechenden Zeichnungen der Battalionnummern. (1) : 203 : 275 : 009 (70).

As Originales Farbfarbe, von diesen Farbtönen malten ein dunkelgrüne oder olivfarbene Stroben als Tarnung auf Sparen Fahrzeug war ein *Emp* *Unité*. Der Stern auf dem Dreieck bezieht sich das Battalion. 'R' beschreibt die Kompanie und den jeweiligen Panzer. Weitere Kompanie nummern und Initialen auf dem Geschütz in einem roten Kreis, *Emp* *Unité*. Zwei (diese Stroben) kennzeichnet einen Panzer der 'Blue Branch'. Es 1942 wurde der 'khaki' Farbtönen durch 'vergrünertes Grau'. Die Kompanie-Abkürzung waren die roten ihre wessenen Geschütznummern der beiden Züge.

As Die halbkreisförmige Markierung über dem Panzername verbot auf die 6th marine Division (1). Die ersten Nummern auf dem Dach des Geschützes stehen der *Emp* und der *Emp*. *Emp* *Regiment* *Abteilung* auf dem Geschütz in den *Armada* *Abteilung* die *Bezeichnung* der 3. Kompanie. Die einzelnen Zeichnungen sind die in diesem Battalion verwendeten nationalen Insignien sowie die der 1. und 3. Kompanie.

As Grau Farbe, die Markierung einer 'Fakus' mit adäquater 'Serien' und manchmal ein Anker von der Panzertruppnummer sowie für Panzer der Spezialartilleriegruppen der *Armada*. Ce Zusatz der *Reifen*, *Schwadron* und auf die ganze Oberfläche verstreute Lufttülle hatten eine Schote. Die Geschützmarkierungen waren wahrscheinlich Kompanie nummern mit nationalen Panzer nummern.

As Ein altes farbes Schild, wie es häufig in Europa verwendet wurde, mit breitem, wässrigen Strahlen, die in diesem Feldzug zur Erkennung aus der Luft. *Emp*. Die Panzer der Einheit, die von 28. *Emp* August 1942 nach dem siebenten Waffentillstand die letzte Panzertrupp führt. Die flügelartige Figur auf dem Geschütz in das Schriftzeichen *ha*, das sowohl 'samurai' als auch 'N'. (1) *Emp*. Die Stellen sind vertikale Markierungen der Kompanie und der Kreis bezieht sich wahrscheinlich den Kompanieoffizier.



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**Avec annotations en français sur les planches en couleur**

**Mit Aufzeichnungen auf deutsch über die Farbtafeln**

- |   |   |
|---|---|
| (3) US 1st Infantry Division 1939-45                        | (29) The M47 & M48 Patton Tanks   |
| (6) The Lee/Grant Tanks in British Service                  | (30) Polish Armour 1939-45  |
| (8) US 1st Marine Division 1941-45                          | (31) US Half-Tracks of World War II   |
| (13) The Churchill Tank                                     | (32) The SdKfz 251 Half-Track   |
| (15) The Sherman Tank in British Service<br>1942-45         | (33) German Light Panzers 1932-42   |
| (16) The Panzerkampfwagen III                               | (34) M113 Series  |
| (17) The Stuart Light Tank Series                           | (35) Armour of the Pacific War  |
| (18) The Panzerkampfwagen IV                                | (36) Long Range Desert Group  |
| (19) Armour of the Middle East Wars 1948-78                 | (37) Modern Soviet Combat Tanks   |
| (20) The Tiger Tanks  | (38) Mechanised Infantry  |
| (21) The PzKpfw V Panther                                   | (39) US Armour Camouflage and Markings<br>1917-45                                 |
| (22) The Centurion Tank in Battle                           | (40) US Light Tanks 1944-84; M24 Chaffee, M41<br>Walker Bulldog and M551 Sheridan |
| (23) British Tanks in N. Africa 1940-42                     | (41) The M1 Abrams Battle Tank  |
| (24) Soviet Heavy Tanks                                     | (42) Armour of the Vietnam Wars   |
| (25) German Armoured Cars and Recce Half-<br>Tracks 1939-45 | (43) The M2 Bradley Infantry Fighting Vehicle                                     |
| (26) The Sherman Tank in US and Allied Service              | (44) Anti-Tank Helicopters  |
| (27) Armour of the Korean War 1950-53                       | (45) Amtracs: US Amphibious Assault Vehicles                                      |
| (28) The 6th Panzer Division 1937-45                        | (46) The Renault FT Light Tank  |

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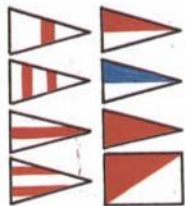




1: Vickers Carden Lloyd amphib. Tank M1931 of Chinese 1st Tk.Bn.; Shanghai, 1937. (Inset) Company insignia.



2: Type 94 TK tankette, Japanese 2nd Ind. Lt. Armd.Co.; China, 1937. (Inset) Signal flags; alternative company insignia.





1: VCL light Tank M1936, KNIL Bataljon Vechtwagens; Bandoeng, 1941.



2: PzKpfw Ib, Chinese 3rd Armd.Bn.; Nanking 1937.





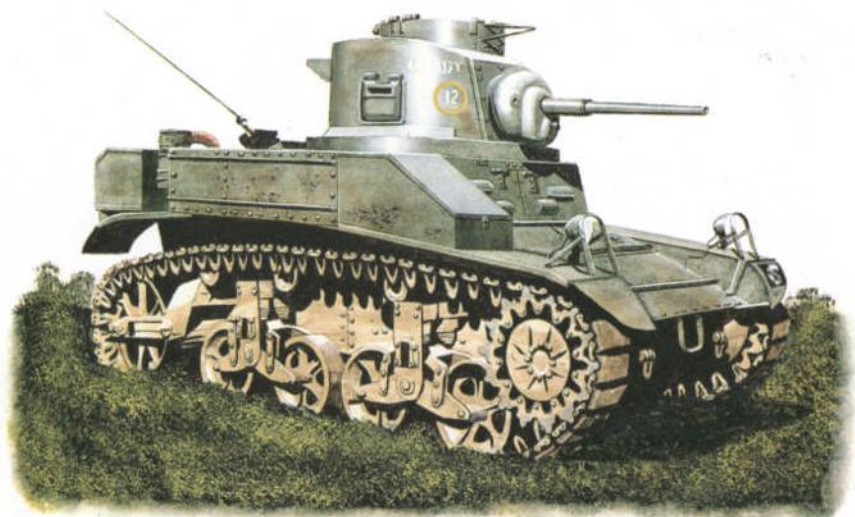
(Inset) Company insignia.

1: Type 95 Ha-go, 2nd Co., Japanese 7th Tank Regt.; Luzon, 1942.

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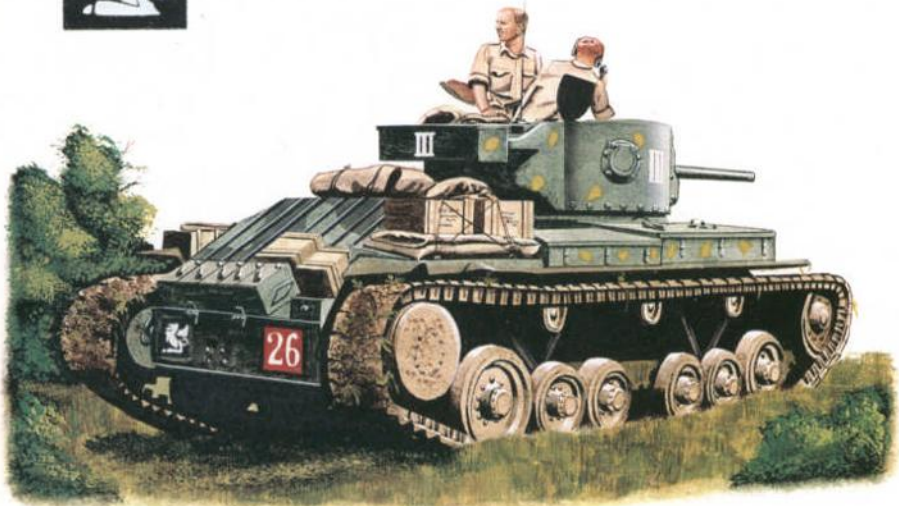
12

2: M3A1 Stuart, Australian 2/6th Armd. Regt.;  
Papua/New Guinea, 1942.  
(Inset) Turret & brigade insignia.





1: Valentine Mk III CS, 3rd NZ Div. Special Tank Sqn.;  
Green Island, 1944. (Inset) Former brigade insignia.

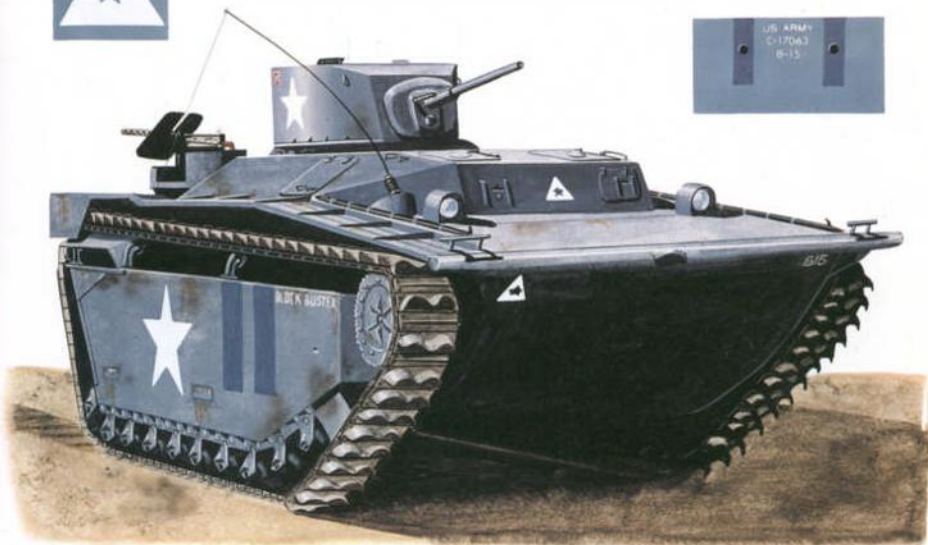


2: M3A1, US Army 193rd Tank Bn.;  
Makin Island, 1943.  
(Inset) Alternative battalion  
insignia.

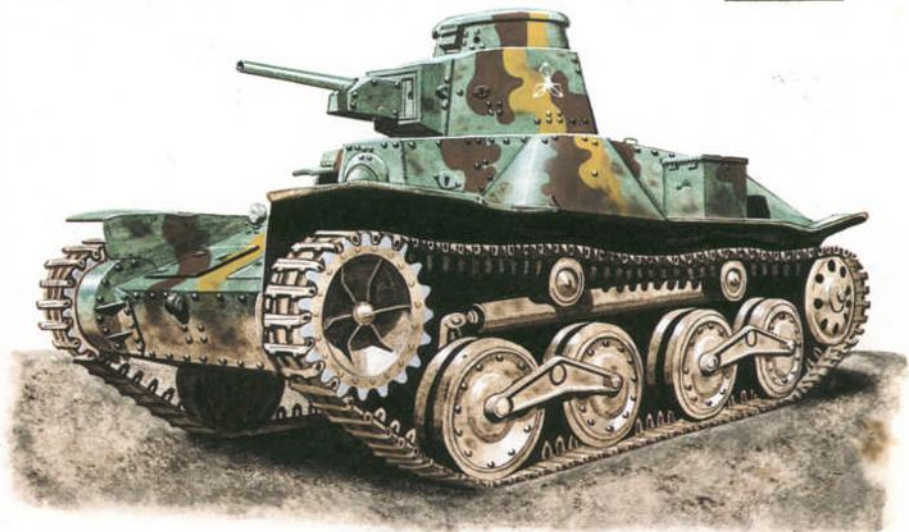


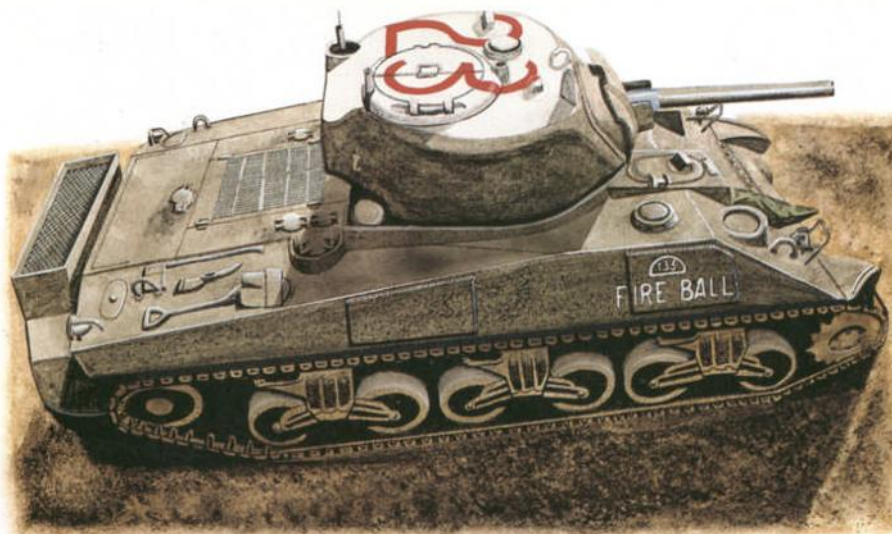


1: LVT (A)-1, US Army 708th amphib. Tank Bn.; Saipan, 1944. (Inset) Battalion, company, and rear hull insignia.



2: Type 95 Ha-go, Div. Tank Co., Japanese 14th Inf. Division; Peleliu, 1944. (Inset) Platoon variations of company insignia.



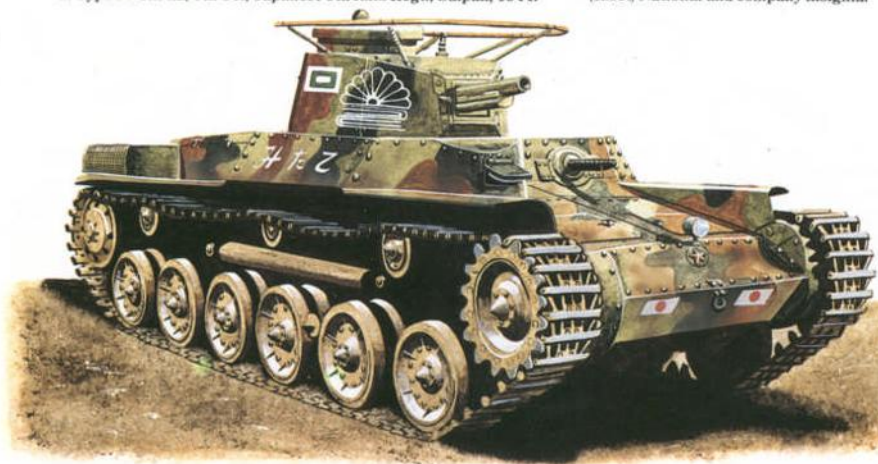


1: M4A2, USMC 4th Tank Bn.; Saipan 1944.

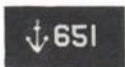


2: Type 97 Chi-ha, 5th Co., Japanese 9th Tank Regt.; Saipan, 1944.

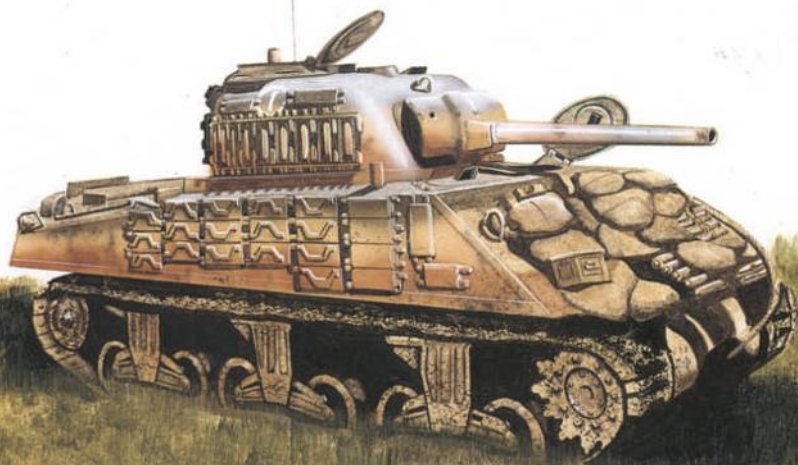
(Inset) National and company insignia.



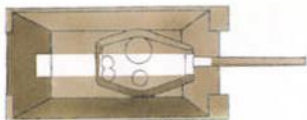
1: Type 2 Ka-mi amphib. Tank, Kule 101st SNLF; Leyte, 1944.  
(Inset) Alternative insignia detail.



2: M4A2, USMC 1st Tank Bn.; Okinawa, 1945.  
(Inset) Company insignia.







1: T-34/85, 10th Mech. Corps, Soviet 1st Far Eastern Front; Manchuria, 1945. (Inset) Top surface detail.



2: Type 97kai Shinhoto Chi-ha, Japanese 11th Tank Regt.; Kuriles, 1945.  
 (Inset) Insignia detail.

