New Vanguard

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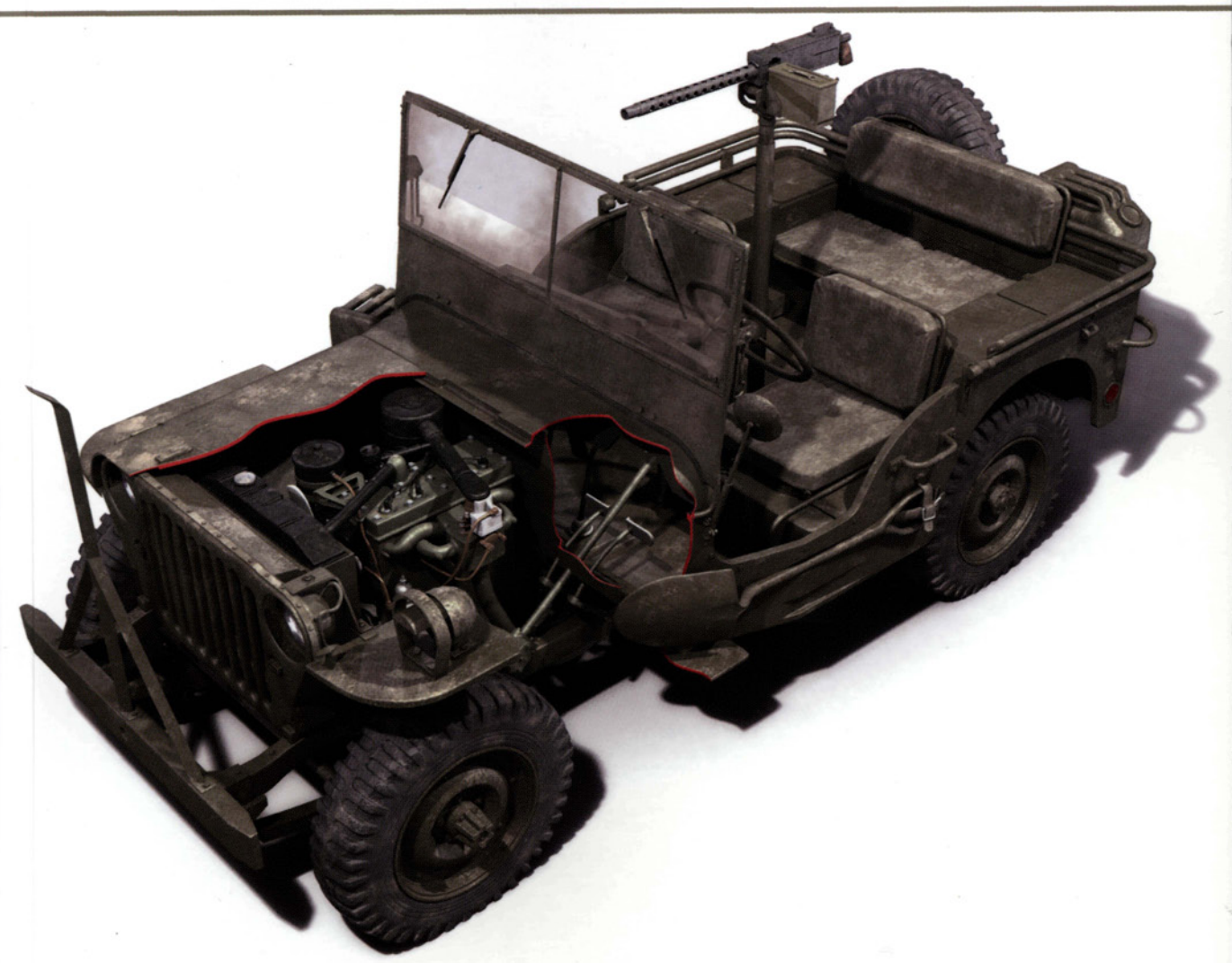
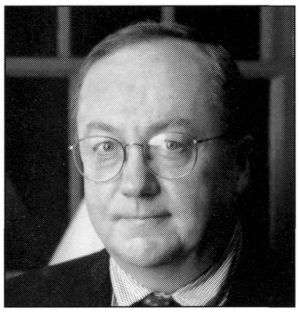
Jeeps 1941–45



Steven J Zaloga • Illustrated by Hugh Johnson



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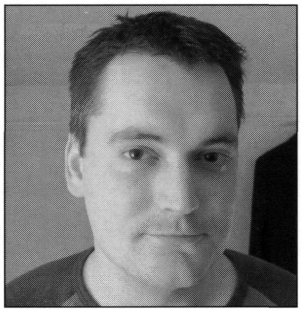

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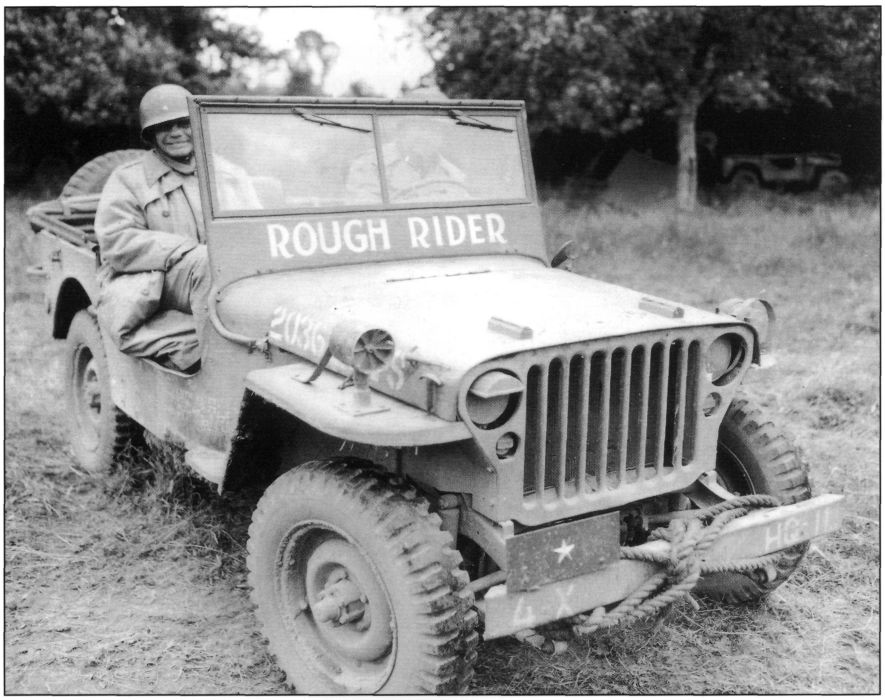

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Artist's note

INTRODUCTION

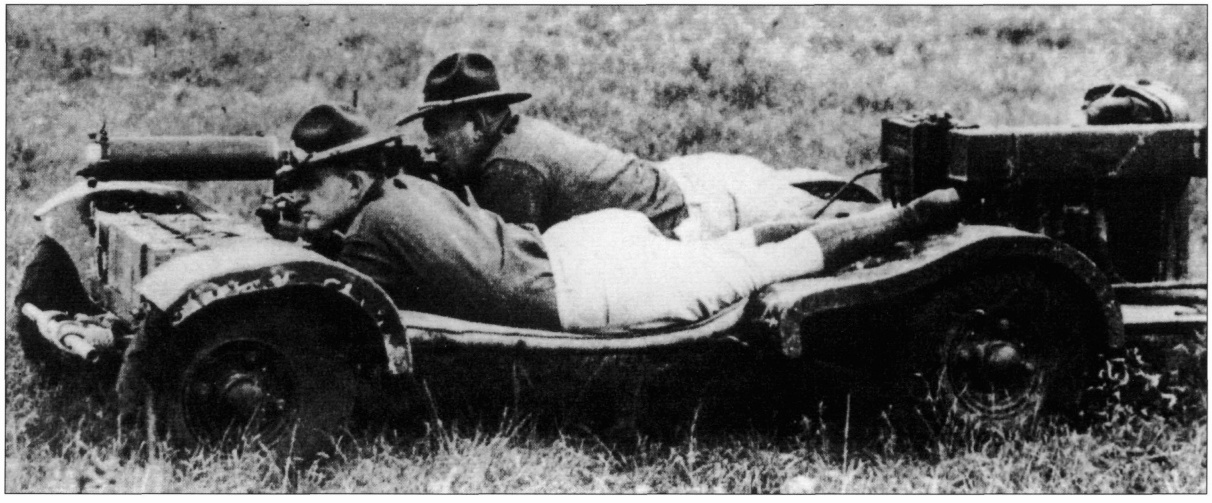
The US Army's ¼ton truck, popularly known as the jeep, was the most influential military tactical vehicle of the 20th century. The jeep emerged at a critical point in the history of military motorization at a time when armies worldwide were switching from the horse to the motor vehicle. The jeep was a superb balance of mobility, durability, and practical design that could be manufactured in large numbers at low cost. Besides being used by the US Army, the jeep was extensively exported, with almost 30 percent of its production shipped to other armies, primarily those of Britain and the Soviet Union. The legend of the jeep only increased after World War II since so many surplus jeeps were sold to civilians in both Europe and the United States, thereby reinforcing the spread of motor vehicles worldwide. After the war, the jeep influenced many military tactical vehicles, and served as the ancestor of the contemporary sport utility vehicle (SUV) so popular around the world.

The jeep was enormously popular with privates and generals alike. The son of former president Teddy Roosevelt, Brigadier-General Theodore Roosevelt Jr was the assistant commander of the 4th Infantry Division on D-Day where he earned the Medal of Honor. Unlike some of the more flamboyant generals, his jeep was fairly ordinary except for the siren on the right fender and the name in honor of his father's famous Spanish–American War unit. (NARA)

JEEP ORIGINS

Until the late 1930s, the US Army, like all armies worldwide, was primarily horse-drawn. The US Army Quartermaster Corps (QMC) and the Army in general were very supportive of motorization as soon as possible, but this required both economical and practical vehicle designs as well as an ample defense budget. The QMC strongly favored the adoption of a minimum number of standardized vehicles rather than the purchase of a wide range of commercial vehicles as had occurred in World War I; because they did not share common parts, there had been problems supporting the vehicle fleet in 1917–18. During the 1930s the QMC attempted to create a family of standardized army vehicles, but the small peacetime budgets limited actual purchases. The advent of World War II greatly accelerated US Army motorization, and the interlude between the start of the war in Europe in September 1939 and the US entry into the war in December 1941 provided a vital period for Army motorization to take root.

The US Army had had a standing requirement for a small motor vehicle since the early 1930s. The Infantry Board in 1932 recommended acquiring some British Austin roadsters with oversize tires for use in the reconnaissance role and also to perform messenger duties. While the Army was already experimenting with motorcycles for both roles, the motorcycle had distinct limitations in cross-country service. Motorcycles were very noisy, making them unsuitable for reconnaissance, and they were more accident-prone in rough terrain than conventional four-wheel vehicles. In spite of these requirements, a shortage of funds prevented the Army from acquiring anything more than a handful of vehicles for trials. Another Army requirement to emerge in the 1930s was a more practical way to move machine guns and light weapons around the battlefield. In 1936, the commandant of the Infantry School at Fort Benning ordered the construction of a motorized carrier for a machine gun along with its one- or two-man crew. The vehicle, later dubbed the Howie Machine-Gun Carrier, was developed under the direction of Captain Robert Howie of the school's tank section and was completed in April 1937. Although an interesting concept, the idea of having the crew lie prone to reduce the



The Howie Machine-Gun Carrier was an Infantry School attempt to develop an all-terrain vehicle to transport infantry light machine-gun teams. Although it had little to do with the technical features of the jeep, it was one of the inspirations in drawing up the requirements for a ¼ton 4x4 truck. (MHI)

silhouette of the vehicle proved impractical. The Army began to consider whether the existing 1 ½ton 4x4 cargo truck might be satisfactory in a smaller, lighter configuration, and a ½ton 4x4 version with a pick-up truck body was purchased in 1938 for trials. While much more satisfactory than the 1 ½ton version, officers still felt it was excessive in size and cost for their requirements. The infantry's requirement was for a small 4x4 vehicle weighing about 1,000lb and suitable for communications requirements in the infantry battalion, improving the mobility of the battalion's heavy weapons company, and providing transportation for company and platoon leaders.

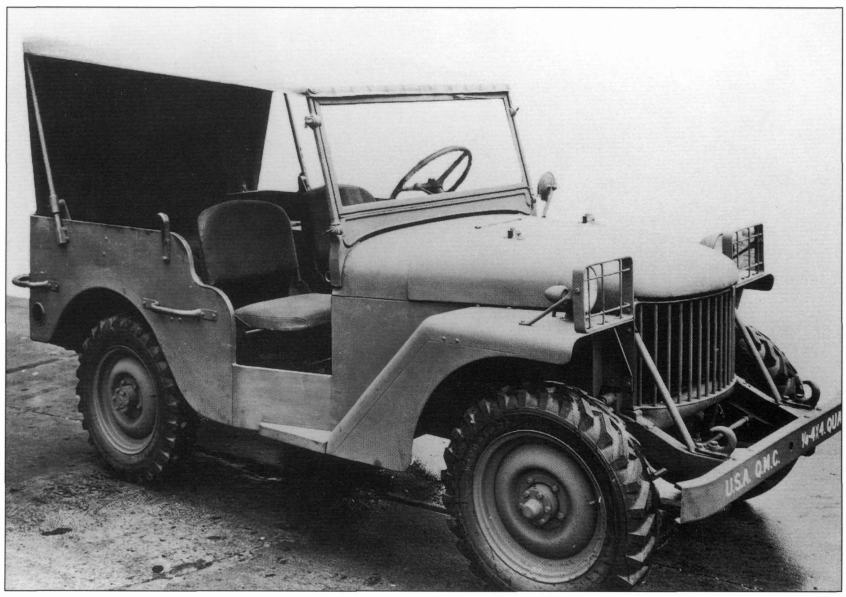
In 1940, the QMC began to examine whether the light passenger cars manufactured by the American Bantam Company might not satisfy these requirements. Although the development of tactical and administrative vehicles was the responsibility of the Quartermaster, Ordnance had responsibility for combat vehicles, and so the machine-gun carrier/reconnaissance functions of the new vehicle attracted their attention. Consequently, Ordnance joined this investigation in connection with a possible adaptation of the Howie Weapons Carrier to a Bantam chassis. A special subcommittee that included Major Howie was formed in June 1940 to coordinate these activities. Tests were conducted at the Bantam plant in Butler, Pennsylvania using civilian cars. The tests were successful enough that the Army began to draw up more specific recommendations for the future vehicle including a maximum weight of 1,200lb, a wheelbase of 75in, 4x4 configuration, and certain military features such as a telescoping pedestal mount for a .30-cal. machine gun, and military pattern headlights. The combat arms showed considerable interest in the vehicle, and the infantry requested enough vehicles to experimentally equip a single infantry regiment plus six more for the Infantry Board, for a grand total of 40 vehicles. The cavalry agreed with the

This Bantam Mark II is the sixth production vehicle from the original contract and is seen here on maneuvers with the 1st Armored Division at Fort Knox in 1941, armed with a Browning .50-cal. heavy machine gun. The Bantam was easily distinguishable from later ¼ton trucks by its round front hood. (MHI)

general specifications and requested an additional 20 vehicles, and the Field Artillery wanted another ten.

By this stage, the subcommittee regarded the reconnaissance car requirement and the Howie Weapons Carrier as fulfilling the same requirement, and also concluded that the QMC and not Ordnance should manage its development. The requirement was also broadened to suggest that, if the vehicle was satisfactory, it should replace the motorcycle with sidecar. There remained some controversy over the issue of four-wheel steering. Both the infantry and the cavalry preferred four-wheel steering since it would offer better turning in tight conditions, but the QMC adamantly opposed this feature because of both the cost involved and the fear that the added mechanical complexity would slow production and lead to maintenance problems in the field.

The focus of the development of the new reconnaissance car was the QMC's Holabird Quartermaster Depot in Baltimore, Maryland and the American Bantam Car Company. Holabird drew up the basic configuration of the vehicle, and Bantam began shopping around for suitable components. The QMC had been funding the development of a standardized four-wheel drive system and so Bantam turned to Spicer Manufacturing for their axle system, which had been developed for this type of requirement. Bantam also decided to opt for a larger engine than in their passenger cars, a Continental Motors design. The eventual series production of the reconnaissance car caused some controversy in the Army's bureaucracy, with some officers preferring an expedited development process and a single bidder, namely Bantam, while others preferred the standard Federal practice of competitive bidding. The latter approach was considered sound legally, so when the invitation for bids was announced in July 1940, other firms were permitted to participate. Two companies submitted bids: Bantam, and the Willys-Overland Company of Toledo, Ohio. Willys had been trying to interest the Army in adopting some of its light vehicles, so the reconnaissance car contract fitted into their plans.



The original Willys Quad pilot bore a close resemblance to the Bantam with its rounded hood, but this feature disappeared on the MA production vehicles. (USAOM-APG)

In the end the first contract, on July 25, 1940, went to Bantam for the construction of 70 ¼ton reconnaissance cars, with the delivery of the first pilot of the Bantam Model 60 to Holabird in 49 days. The first problem to crop up in the manufacturing effort was the issue of weight. The requirement was for a 1,275lb weight limit, but Bantam engineers complained that it would be impossible to meet these goals using existing technology while at the same time keeping the design durable enough for tactical use. The Chief of Infantry was adamant that the weight limit be met, but the QMC officers at Holabird were more lenient, realizing the urgency of the requirement. The first Bantam pilot was received on schedule and put through a rigorous test at Holabird in September 1940. The test made it clear that numerous changes and improvements would be needed, and these were applied to the remaining 69 Bantam reconnaissance cars, now called the Mark II. The contract called for the production of 62 with conventional front steering, and eight with four-wheel steering.

The initial Holabird tests had proceeded sufficiently well for the QMC now to consider seriously a transition from testing to standardization and full-scale production. Although Congress had authorized the Army in July 1940 to waive the traditional competitive bidding in urgent cases, the QMC favored competitive bids for the reconnaissance car production contract. At least three companies showed an interest in the production program: Bantam, Willys, and the Ford Motor Company. The QMC was somewhat concerned over whether Bantam could handle a major Army contract. Bantam was a small firm with fewer than 500 workers and a small plant, compared to an industrial giant like the Ford Motor Company with 100,000 workers and numerous plants. Furthermore, both Bantam and Willys were in a shaky financial condition in the aftermath of the Depression, and both firms were still dependent on government loans. The leadership of the QMC desperately wanted to throw the weight of a major industrial firm like Ford behind this program, which they knew had enormous potential for Army motorization.

The Bantam 40 BRC began to take on the more distinctive look of the wartime ¼ton trucks with its new slat grill. It can be distinguished from the Ford GP and Willys MA by the recessed mount for the headlights on the front fenders. (NARA)

Bantam officials complained to the Secretary of War that they should be given credit for the development of the vehicle, and protested at the involvement of other firms. Army officials disagreed, pointing to Holabird's important role in the truck's origins. A meeting of the relevant Army agencies was held in mid-October to iron out problems over the next phase of the program, and a consensus was reached that 1,500 more vehicles should be purchased for further trials, as well as to iron out problems with the supply of the Spicer four-wheel drive axles and other key components that were in short supply. The combat arms were quite happy with Bantam's work on the reconnaissance car and did not favor bringing in other manufacturers. The QMC wanted to split the 1,500 vehicle order two or three ways, since they saw a requirement for 11,800 further vehicles through mid-1941 and were doubtful that Bantam could tool up quickly enough for such a contract. By now, the Army had accepted the fact that the vehicle would be heavier than originally planned, with the goal now set at 2,160lb.

The fight over future production raged in Washington for several months. The US Army General Staff favored the infantry viewpoint and recommended a sole-source contract to Bantam, while the Defense Commission (later called the Office of Production Management) supported the QMC view that multiple sources were desirable. A compromise was finally reached in November 1941 with three contracts awarded to the three competitors for 1,500 vehicles each. The controversy spilled out of Washington in November when a number of left-wing magazines began charging that the Army was intentionally favoring Ford over underdog Bantam, leading to calls for a Congressional inquiry.

Under the contract, the two new entrants delivered a pair of pilot models to Holabird for trials and, after approval, the remainder of the production run followed. The Ford design was nicknamed the Pygmy, while Willys offered a design originally called the Quad. The Willys pilot was seriously overweight compared to the Bantam and Ford entries, but this was in part due to the decision to use the more powerful 55hp

The Ford GP shows close similarities to the standardized jeep but can be distinguished by its slat grill. This is the 67th production vehicle from the original contract and is seen here during tests at Fort Sam Houston in April 1941.

"Go-Devil" engine, which also mandated use of a heavier transmission. The decision to use a more powerful engine proved beneficial in the long run, since it resulted in a vehicle more suitable for cross-country travel and helped distinguish the Willys design from its competitors. To avoid losing the contract, Willys redesigned the Quad by reducing the weight in every possible fashion. The resulting Willys MA was distinguishable by a new front end. The definitive Ford design was called the Ford GP. The revised Bantam was designated the Bantam 40 BRC (Bantam Reconnaissance Car).

The production plan called for delivery of the first 1,500 vehicles from all three companies in April–May 1941. A strike at the Spicer plant complicated this effort, and although Ford delivered its GP ¼ton trucks by May 19, 1941, Bantam didn't complete delivery of its new BRC vehicles until June 26, 1941 and Willys only on August 4, 1941. The infantry was still annoyed that their opinions had been overridden by the QMC in contracting with Ford and Willys, so they insisted on another round of tests at Fort Benning in June 1941 for the Ford GB and the Willys MA. In general, the tests favored the Willys design because of its more powerful engine, transmission advantages, a stronger frame, and a better radiator. The Bantam 40 BRC and Ford GP each had details in their favor, such as the better steering on the Bantam and better springs on the Ford. The report concluded by recommending that the Willys design be selected but with the Ford shift lever and handbrake arrangement.

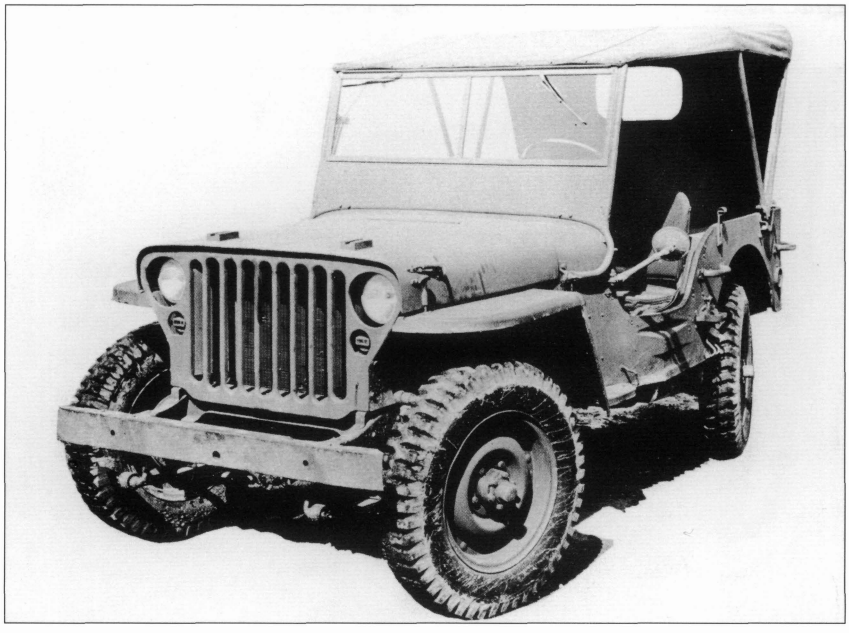
While the Bantam BRC was losing out on technical grounds to its Willys and Ford rivals, the company was also in a precarious position trying to compete in pricing with industrial giants like Ford, which was able to continue to lower its prices, beating out Bantam in the contract negotiations. With all three designs being judged acceptable, the QMC now wanted to shift focus to the mass production stage. The overriding concern of the Army in this phase was to adopt a single design rather than three separate types. The next contract was expected to be for 16,000 "¼ton truck 4x4" as the vehicle was now officially called. The QMC wanted to award the contract sole-source to Ford, which it felt was

The Willys MA introduced a reconfigured body with a slat grill, but distinguishable from the later MB by the truncated hood with Willys logo and fender-mounted headlights. (MHI)

the only one of the three companies able to manufacture the truck in the quantities required. The Office of Production Management (OPM), now in charge of war production, disagreed with the QMC decision and made it clear that they did not care if two or even three companies manufactured the truck, so long as it was based on a common design with interchangeable parts.

As a result, the next contract was put out to competitive bid and there was a surprise entry from the Checker Cab Manufacturing Company. The Army quickly eliminated Checker even though it had the lowest bid, since it would take it much longer to gear up for production. Of the three remaining bids, Willys was the lowest at $648.74 per truck, Ford in the middle at $782.59 and Bantam at $788.32. The QMC and the OPM were still at loggerheads over the contract, with QMC favoring Ford because of production delivery assurances, and OPM arguing that Willys should receive the award since it was the lowest bidder and had the most satisfactory design. Owing to the greater bureaucratic muscle of the OPM, the Under Secretary of War approved the contract to Willys on July 31, 1941. This was not the end of the story, however, as supporters of Bantam in the US Congress and in the press managed to reopen the issue in front of the Truman Committee, a Congressional body aimed at examining reports of abuse in defense contracting. This had little impact on future production as the testimony made clear that Bantam was not as well prepared as either Ford or Willys to undertake massive production, in spite of its early role in developing the basic design along with Holabird.

Regardless of continued QMC support to extend the ¼ton truck production to Ford, the Army's resistance to adopting two different truck designs remained the most significant barrier to Ford's participation. After its experiences in World War I, the Army was very insistent on standardization to the greatest extent possible, a point of view that was especially strong in the combat arms. To get around this bottleneck, Ford



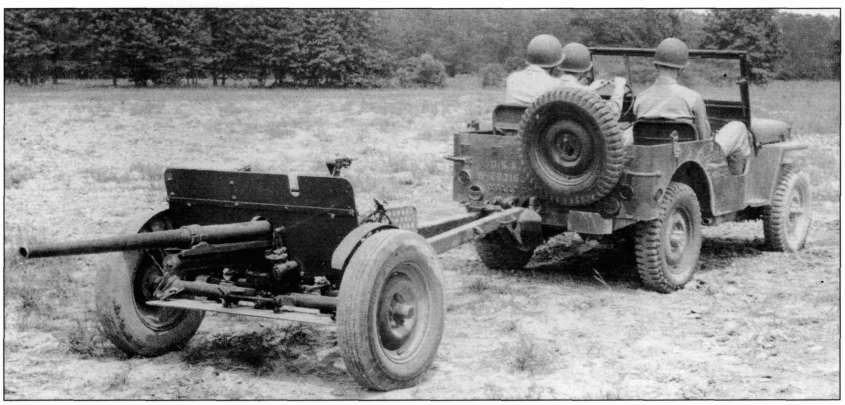
The Army continued to experiment with four-wheel steering as seen on the Ford GPW, but the Quartermaster Corps objected to the feature because of the added complexity, cost, and maintenance burden. (MHI)

made a critical concession in the late summer of 1941, offering to manufacture the ¼ton truck on the basis of the Willys design, and sweetening the deal by offering to provide separate tooling for many of the key assemblies such as axles, constant velocity joints, and transfer cases that the QMC knew would be bottlenecks to production. Willys realized that it would have a hard time meeting production schedules because of its dependence on subcontractors for many key components. Rather than risk losing future contracts in another winner-take-all contract, Willys decided to offer their truck design as an irrevocable non-exclusive license to the US Government in consideration for which the government would continue to contract with Willys in accordance with its own productive capabilities.

The final factor encouraging a second source for the contract was the growing demand for US military equipment that had been triggered by the Lend-Lease Act. A number of early production ¼ton trucks had already been shipped to Britain and the Soviet Union, and there was interest in much larger supplies. These issues were finally settled in October 1941 with a letter of intent to acquire a further 15,000 ¼ton trucks from Ford based on the Willys design, called the Ford GPW. In a novel arrangement, the government maintained ownership of key tooling equipment associated with the production of the ¼ton truck. The QMC effort to expand ¼ton truck production to Ford proved to be vitally important to the success of the program owing to Ford's enormous industrial capacity. Even before the Ford contract had been formally signed, Japan attacked Pearl Harbor on December 7, 1941, completely altering US defense needs.

Jeep or peep?

One of the enduring controversies about the ¼ton truck is the origin of its most common name, the jeep. The US Army did not name its vehicles, and the QMC during World War II did not use the "M" designation system employed by Ordnance, such as M4 tank. Designations such as MB and GPW were internal company designations for the ¼ton truck by Willys and Ford, not government designations. The new vehicle was known to the Army simply as the ¼ton truck 4x4, sometimes amplified by its standard nomenclature list (SNL) group number used for ordering parts, which was G-503. The term "jeep" had been around for many years, used as casual slang in the Army for anything that was insignificant, awkward, or silly, and sometimes used in the form "jeepy" to mean foolish. It was also used by army mechanics during World War I to refer to any new vehicle. The term



The jeep was sometimes used as a prime mover for the 37mm antitank gun in early 1942, but it was supplanted in this role by the ¾ton truck. This is one of the first Willys MBs, built in November 1941 and showing some of the characteristic features such as the Willys logo stamped on the rear plate and the Tiger-Eye reflectors mounted above the rear lights. (NARA)

became more popular in September 1937 with the arrival of the cartoon character "Eugene the Jeep" in E. C. Segar's Popeye comic strip. Jeep crept back into army slang in the 1930s as a term for a new recruit, instead of the World War I slang "cooky." Several firms applied the name to their products, including a Halliburton electric logging device and a Minneapolis-Moline tractor tested by the Army as a prime mover. The army slang gradually mutated from a reference to a new recruit or any new army vehicle to the new ½ton command reconnaissance truck. The name jeep finally made the leap from the ½ton truck to the new Willys ¼ton truck owing in large measure to Irving "Red" Hausmann, a Willys-Overland test driver. Hausmann used it during the trials at Holabird to distinguish the Willys vehicle from its Bantam and Ford competitors. The name spread from Hausmann to the staff at the Willys Toledo plant, and finally into the public eye after a *Washington Daily News* story in February 1941 about the new US Army ¼ton trucks, the first public use of the term jeep.

A popular but mistaken idea is that the word jeep was a contraction for the army term GP or General Purpose. In fact, there was no such army designation and the Ford GP designation was based on their industrial parts designation system, with G indicating a government vehicle contract, and P assigned to all 80in wheelbase reconnaissance cars. The later GPW added the W to recognize it was a Willys design, and GPA to recognize the Amphibian version.

Even though the name jeep had been associated with the Army ¼ton truck since 1940, it was not the only name, nor was it the most commonly accepted name in the Army. In 1941–42, many soldiers still used "jeep" to refer to the ½ton truck, which led to the smaller ¼ton being called "son of jeep" or "baby jeep." Within the cavalry, all ¼ton trucks were called bantams after their original manufacturer, and "bantam" remained very common among troops well into 1945, especially in cavalry reconnaissance units. The Armored Force frequently used the term "peep" for the ¼ton truck since one of its main missions was reconnaissance and "peep" seemed a nice fit. This was reinforced by the tendency to call the Dodge ¾ton command car the "beep." So for a time in 1942, there was a certain

The US Navy acquired jeeps under separate contracts as well as through US Army contracts. This example is the jeep of the Eniwetok Atoll commander, Captain "Bat" Cruise, with visiting Admiral Chester Nimitz in August 1944. (NARA)

logic to the army slang: peep (¼ton), seep (amphibious ¼ton), jeep (½ton), and beep (¾ton); but this was never official.

What cemented the name jeep to the ¼ton truck was the power of advertising. Hausmann's use of jeep during the Holabird trials had caught on in the Willys plant in Toledo, and when Willys began to promote its role in the American war effort in magazine advertisements in 1942, it regularly referred to their ¼ton truck as the jeep. Other firms soon followed, including Ford. For much of the war, jeep was the popular civilian name for the ¼ton truck, while multiple names continued to be used in the Army, including jeep, peep, and bantam. The issue came to a head in 1947 when Bantam tried to sue Willys to stop it from using the name "Jeep" on its civilian jeeps, arguing that their firm had developed the concept. The court ruled in favor of Willys, and Jeep subsequently became a registered trademark of the Willys company, now part of the Daimler Chrysler corporation. Other names were used overseas. In Britain, the ¼ton truck was typically designated as the Willys 5cwt 4x4 car, though "Blitz Buggy" was its most popular name.

THE JEEP AT WAR

The US entry into World War II led to the need for a massive increase in military production. Since the production contract had not yet been signed with Ford, the Army added two increments to the first contract for 966 Ford GPs and for 50 4-wheel steering Ford GPs, bringing total GP orders to 2,516. Likewise, Bantam received additional orders for the BRC.

Prior to the start of production of the standardized ¼ton trucks in 1942, the QMC insisted on a series of changes for the final design. Willys designated the resulting vehicle as the MB, while Ford called their standardized ¼ton truck the GPW. Both designs were nominally identical although in fact there were many minor design differences. The Willys manufacture of the MB predated the GPW, starting in late October 1941. The original contract batch of Willys MBs kept the same type of slat grill that had been common on all the early production ¼ton trucks. When Ford started manufacturing its GPW in February 1942, it introduced one of the signature features of the standardized jeep, the pressed-steel grill, which had been introduced to simplify manufacture. This feature was

The jeep lineage of the Ford GPA "seep" is evident from some external details such as the windshield and wheels. This example is being used for training by the US Army in the spring of 1942. (NARA)

JEEP DETAIL CHANGES

Date	Change
Dec 41	Windshield on Willys MB changed to taller design with higher metal base under glass panels
Feb 42	Squared-off fuel tank switches to rounded bottom on Willys MB
Feb 42	Glove compartment box added to Willys MB, fire extinguisher moved as a result to driver's side
Feb 42	Willys MB switches from commercial to combat wheels
Feb 42	Willys MB adopts modified chassis frame
Mar 42	Willys MB adopts pressed grill pioneered on Ford GPW since Jan 42
Mar 42	Black plastic steering wheel rim changed to olive drab
Mar 42	Ford GPW adopts modified chassis frame
Apr 42	Modified glove box door on Willys MB
May 42	Oval muffler substituted for round muffler on Willys MB
Jul 42	Willys stamped script removed from rear panel
Jul 42	Pintle hook at rear changed
Jul 42	Blackout light added to left fender; kit released for retrofit to earlier production vehicles
Jul 42	Gas can support added to left rear panel
Aug 42	Gearshift cover switched from rubber to leather
Aug 42	Ford stamped script removed from rear panel of Ford GPW
Sep 42	Hood windshield blocks switched from wood/rubber to plain wood on Willys MB
Sep 42	New fuel tank adopted; steering wheel design changed on Willys MB
Dec 42	New shock absorber on Willys MB
Jan 43	Ignition switch changed from key to toggle switch
Jan 43	Radio outlet box added
Mar 43	Gas can bracket fitted to Willys MB; red reflector moved down parallel to rear light
Aug 43	Rear panel reinforcement kit issued to prevent damage to rear panel due to the addition of the gas can
Sep 43	Rifle bracket added to inside base of windshield frame
Oct 43	Spare wheel carrier changed from three- to two-stud design
Nov 43	New grease gun fitting under hood
Dec 43	Radio suppression system on Willys MB improved
Dec 43	First aid containers added behind passenger seat
Dec 43	Composite body adopted by both Ford and Willys
Dec 43	Tow bar field kit for tandem hitch kit released
Jan 44	Fitting for hood grease gun improved
Mar 44	Capstan winch field kit released
Mar 44	Winterization field kit released
Jun 44	Decontamination pump fitting added under passenger seat instead of on right fender
Feb 45	Cast pintle hook changed to stamped type

adopted as standard and began appearing on Willys jeeps manufactured in March 1942 after some 25,808 "slat-grill" MBs had been manufactured. There were numerous small detail changes to the standardized jeep through the course of production. The chart above lists some of the more significant changes, but is by no means exhaustive. In addition, it should be kept in mind that the dates listed are approximate. Many changes were introduced gradually and only after existing stocks of the earlier parts were exhausted.

It is also worth noting that some changes were introduced in contracts for foreign customers. So for example, a contract by the Canadian Army in early 1942 led to the introduction of driver-side electric windshield wipers on a February 1942 production batch, a detail not found on the parallel US Army contracts.

Besides the improvements that were accepted for the jeep, there were many other schemes that never left the development stage. In 1942, potential metal shortages led to some interest in metal substitutes for non-essential components. As a result, three firms were contracted to develop wooden bodies for the jeep including the Canadian-American Truck Company, Alma Trailer Company, and the Covered Wagon Company. These entered trials in early 1943, but some of the designs were heavier than the normal jeep body. By the time testing was complete, there was little pressing need to use wood for jeep construction, so the project was abandoned.

JEEP ¼TON TRUCK PRODUCTION 1940–45

	1940	1941	1942	1943	1944	1945	Total
Bantam Mk. II	70						70
Bantam BRC		2,572					2,572
Willys MA		1,500					1,500
Willys MB		7,629	83,739	91,955	108,806	56,720	348,849
Ford GP		3,700					3,700
Ford GPW			88,987	80,721	73,262	34,908	277,878
Sub-total	**70**	**15,401**	**172,726**	**172,676**	**182,068**	**91,628**	**634,569**
Ford GPA			5,033	7,741			12,774
Total	**70**	**15,401**	**177,759**	**180,417**	**182,068**	**91,628**	**647,343**

Ford production was undertaken at six of the firm's plants: Chester (Pennsylvania); Dallas (Texas); Dearborn (Michigan); Edgewater (New Jersey); Louisville (Kentucky); and Richmond (California). Total production of jeeps during the war is a matter of some minor dispute owing to discrepancies among several official sources. The chart above is based on *Summary Report of Acceptances, Tank-Automotive Materiel 1940–45, Army Service Forces* completed in December 1945. One of the reasons for the discrepancies between government production figures and those of the companies, especially the annual totals, was that the government often counted items on the basis of "acceptance" – that is, when a vehicle was turned over to an official agency – while the company counted it on the basis of the date the vehicle completed manufacture.

The Ford GPA amphibian jeep did not prove popular in US Army service and the North African theater was one of the few campaigns where it was widely seen. This example is an early GPA, the 32nd built, and is seen here in Casablanca in November 1942 following the Operation *Torch* amphibious landings. (NARA)

The Ford GPA "seep" proved popular in the Red Army where it was widely used by reconnaissance units in the 1944–45 campaign. The seeps seen here carry the typical Soviet-style registration numbers painted on the rear of the hull. (NARA)

The massive scale of jeep production, along with the vehicle's enormous versatility, led to expanding use of the jeep in the US Army. The original scheme had been to deploy 36 in each infantry regiment, but by 1944 this had increased fourfold to 149. Each US infantry division was allotted 612 jeeps under the 1943 tables of organization and equipment (TO&E), while the armored divisions operated 449 per division.

International use

The jeep's enormous impact on world automotive trends was due in no small measure to its widespread export during World War II. This took two forms. In 1941–42, countries such as Britain and Canada bought various types of ¼ton trucks from the manufacturers through commercial contracts. For example, of the 2,572 Bantam 40 BRCs, 1,422 were purchased by the US Government under Quartermaster contracts, while the remainder was purchased under commercial contracts. This practice gradually evolved into the more common practice of the foreign governments' contracting for vehicles through US agencies. In total, 55,490 ¼ton trucks and 70 Ford GPA amphibians were purchased in this fashion. Finally, some of the jeeps that were shipped overseas under the Lend-Lease program were originally purchased under US Army contracts, and then diverted through Lend-Lease. The total quantity of jeeps and jeep-related trailers delivered under the Lend-Lease program is listed below. These numbers somewhat understate the actual number of jeeps delivered to various armies, as there were additional transfers within theater during the course of the fighting in 1943–45. For example, the First French Army, as part of the US Sixth Army Group, received jeep replacements for combat losses that were not registered as Lend-Lease transfers.

LEND-LEASE ¼TON TRUCK SHIPMENTS 1941–45

	Command	Amphibian	¼ton trailer
Britain	104,430	852	11,952
Soviet Union	49,250	3,520	2
Canada	8,200	22	554
France	9,736	24	3,007
China	6,944	40	1,204
Latin America	2,977	22	430
Other	1,060	6	50
Total	**182,597**	**4,486**	**17,199**

The Willys MB-L was an attempt to reduce the weight of the jeep; two of the pilots are seen here flanking a normal Willys MB. (USAOM-APG)

JEEP VARIANTS

Amphibious jeeps

In December 1941, Marmon Herrington proposed adapting the jeep to an amphibious role, in conjunction with the maritime design firm Sparkman and Stephens. The Army was intrigued by the idea and in December 1941 awarded contracts to both Marmon Herrington and Ford to proceed with the design. Marmon Herrington built their QMC-4 pilots using Willys MA components, while Ford built three pilots of their design, designated as the GPA (GP-Amphibious), the first based on their GP jeep and two later ones on the standardized GPW jeep. The Ford GPA performed much better than the Marmon Herrington QMC-4 and, in April 1942, the Army gave Ford the tentative go-ahead to start production of the GPA as the ¼ton 4x4 amphibian truck. It was quickly dubbed the "seep," for sea-going jeep. The first operational use of the seep was during the North African campaign in November 1942

The Willys WAC "Jeeplet" was one of several attempts to develop a lightweight jeep. It used an air-cooled motorcycle engine mounted in the center of the chassis, which accounts for its unconventional configuration. (USAOM-APG)

The final wartime attempt at a lightweight jeep was also the most futuristic, the Willys JBC Jungle Burden Carrier. Although too late to enter production, it pioneered the way for similar vehicles after the war, such as the M274 ½ton 4x4 Mechanical Mule. (USAOM-APG)

where its water-crossing abilities were not particularly necessary. In contrast to the conventional jeep, the seep was never very popular in US Army service. The design did not have enough freeboard to operate in any type of rough water conditions, and the seep had a hard time getting in and out of typical European rivers where steep riverbanks and soft mud along the river edge posed significant terrain obstacles. Ultimately, the most successful user was the Red Army, which received the seep under Lend-Lease. The Red Army attached seeps to forward reconnaissance units, and found the vehicles handy during the many river crossing operations of 1944–45. The seep provided the Red Army with a method for rapidly deploying forward detachments over rivers and quickly establishing bridgeheads before the Germans could react.

Lightweight jeeps

The infantry had insisted on keeping the weight of the ¼ton truck down to about 1,200lb in the original specification, a weight that eventually doubled by the time mass production began. As it transpired, the standard jeep was widely accepted in service and there was no significant demand for lightening the design, owing to the recognition that this was likely to adversely impact its highly valued durability. Nevertheless, the Army still thought that a lighter 4x4 vehicle might be desirable for some missions, including use in jungles and employment by airborne troops. As a result, in 1942 a program was initiated for an extra-lightweight 4x4 truck. At least five companies proposed designs: Crosley, Chevrolet, Ford, Willys, and Kaiser. The Crosley CT3 Pup was an entirely new design using a 13hp engine. It was by far the smallest and lightest of these vehicles, but was so small and light that it was never clear what use it might serve. The rest of the competitors generally resembled the standard jeep, but were smaller. The Kaiser Model 1160 was powered by a 42hp engine and weighed 1,300–1,410lb depending on the type. Six pilots were built and delivered to the Army for trials. They were an acceptable design, but as a result of compressing the features into a smaller vehicle, the ground clearance was too low and access to the engine and other components was impaired. Chevrolet offered a more radical chassis design using a center spar instead of a traditional frame design with an integral transmission and transfer

Radio-equipped jeeps were widely used by the US Army. This one, equipped with the SCR-284 radio, is of the 29th Signal Company, 29th Division in Tidworth, England in March 1943 on a training exercise. (NARA)

case. A pilot underwent trials and was well received by army engineers. Willys designed a shrunken version of the basic MB called the MB-L (MB-lightweight), which was delivered for trials in early 1943. The pilots ranged in weight from 1,565–1,577lb without fuel. Ford also built its own lightweight jeep, but did not bother to submit it for army trials, presumably because it saw little business opportunity in the concept. The problem with all these designs was that the lightweight versions sacrificed convenience, durability, and practical features in the quest to minimize weight.

Rather than simply mimic the jeep layout, in mid-1943 Willys proposed the more radical solution of designing a lightweight 4x4 vehicle from scratch. The new design, called the WAC (Willys Air Cooled), was powered by a Harley Davidson 24hp two-cylinder motorcycle engine mounted in the center of the vehicle. A pair of pilots were constructed and delivered in late 1943 for trials. After initial testing, an improved type called the Jeeplet was designed, which permitted the front-wheel drive to be disengaged for normal road travel. Although the WAC reduced the weight to 1,050lb, the vehicle was noisy, uncomfortable, and difficult to maintain. The Army recognized that such a vehicle was not versatile enough to replace the jeep, but the lightweight design seemed likely to be useful for more specialized applications. As a result, the Army contracted Willys to evolve the design in a more radical direction, the Jungle Burden Carrier, or Willys JBC. This design was based on the WAC and Jeeplet designs, but instead of conventional seating, the vehicle was a simple load-carrying platform. It weighed only 561lb, including fuel, and could carry 800lb. The design evolved from the original November 1944 configuration with a center-mounted driver station to an early 1945 configuration with the driver offset to the left to provide more load space. The JBC was not mature enough for production in World War II, but the design paved the way for the Willys M274 Mechanical Mule of 1951.

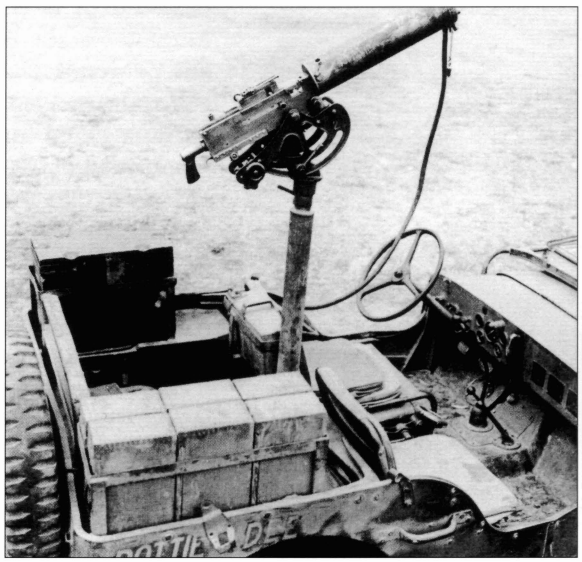
An artillery forward observer's Willys MB of the 151st Field Artillery Regiment, 34th Division, seen on the Cassino front in Italy on January 17, 1944. The artillery used FM radios in the SCR-600 family. (NARA)

Britain undertook its own efforts to develop locally a lighter jeep for use by the airborne forces as a prime mover. Nuffield Mechanizations took a standard Willys MB, reduced the length and width of the vehicle, and stripped off as many parts as possible. The resulting "Morris 4x4 light airborne tractor" was tested by the Wheeled Vehicles Experimental Establishment, but was not accepted for further conversion or series manufacture. Although this project proved to be a dead end, the Airborne Forces Development Centre in Wiltshire supervised an extensive modification program for jeeps used in airborne units. Numerous modifications were undertaken, some to conserve weight, others to make it possible to shoe-horn a jeep within the limited confines of a Horsa glider. Besides basic modifications, other adaptations were made for specific missions such as machine-gun mountings for recce jeeps, stowage racks to transport supplies, and litter frames for ambulance jeeps. These airborne jeeps were used in a number of actions including D-Day in Normandy, Operation *Market Garden* in Holland in September 1944 and Operation *Varsity* on the Rhine river in March 1945.

The standard armament on machine-gun jeeps was the .30-cal. – though not usually the water-cooled version as seen here with the "Peep Troops" of the Americal Division on New Caledonia in 1942. This is a locally constructed pedestal mount, not the standardized M31, which had more bracing. On this jeep the water reservoir has been mounted behind the driver and improvised ammunition racks have been added in the rear. This is an early Willys MB without the glove compartment. (NARA)

Communication jeeps

One of the primary roles intended for the jeep was as a command vehicle and, in view of the growing importance of radios for tactical communication in World War II, numerous types of radios were fitted to the jeep. The first standardized fitting was for the SCR-193 transmitter-receiver, which was mounted on either side of the rear compartment. For proper functioning of a radio on the jeep, a radio interference suppression shielding system was developed; jeeps with this feature could be externally identified by the letter "S" added as a suffix on their registration number painted on the hood side. As the Army shifted to FM radios in 1943–44, standardized fittings were developed for these as well. There were at least fourteen standard configurations covering the SCR-187, SCR-193, SCR-284, SCR-499, SCR-506, SCR-508,



This Ford GPW of the II Corps Provisional Ordnance Group in Tunisia in May 1943 shows an early attempt at mounting the .50-cal. Browning HB heavy machine gun on a side pintle mount instead of the more common central mounting. Another unusual detail is the wire cutter at the front, one of the first times this feature was seen, and British-pattern blackout lights on the fender. (NARA)

SCR-510, SCR-522, SCR-528, SCR-542, SCR-608, SCR-610, SCR-619, SCR-628, SCR-694, SCR-808, SCR-828, and VRC-1. The different radio types had different applications, for example armored units used channels covered by the SCR-500 series, while the artillery used channels covered by the SCR-600 series. Depending on the size of the radio, they were mounted either on the sides of the rear compartment over the wheel wells, or transversely across the tops of the wheel wells for larger sets. Besides the standardized mountings, there were a number of field fits including sets such as the infantry SCR-300. Other armies made similar adaptations for their jeeps, such as the British use of the Number 19, 22, 62, and other types.

Machine-gun armed jeeps

Two of the initial missions of the jeep were to serve as a reconnaissance vehicle and to carry infantry machine-gun teams. These roles led to the development of methods to mount machine guns in firing positions on the jeep. The first effort in March 1941 was the T47 pedestal mount, which was a simple tubular pedestal that could be fitted with either the .30-cal. or .50-cal. machine gun. Trials revealed that the pedestal was not rigid enough during fire with only a single brace, so triple bracing was adopted prior to series production as the M31 pedestal mount. This was the most common official jeep machine-gun mounting during the war, with 31,653 produced. It was followed by the improved M31C in March 1945, though this was not widely used in combat in World War II. Besides the official pedestal mounts, units in the field often created their own pedestal mounts or adapted other types of pedestal mounts, and some examples are seen in photos here. The most common pedestal mounts were for the .30-cal. and .50-cal. machine guns, though other weapons were mounted.

In 1943, the M48 bracket mount was accepted for use to attach the .30-cal. machine gun or .30-cal. Browning Automatic Rifle in front of the passenger seat. As in the case of the pedestal mount, there were numerous field-improvised bracket mounts used by US troops in World War II. In 1943, Ordnance tested the D76272 assembly as an improved alternative to the M48 bracket mount, but it was not commonly used in World War II.

The jeep was used widely for trials of various weapons mounts during World War II, but in many cases these were not intended for actual use on the jeep, the jeep serving merely as a convenient platform for testing various type of ring mounts, multiple machine mounts, and other weapons.

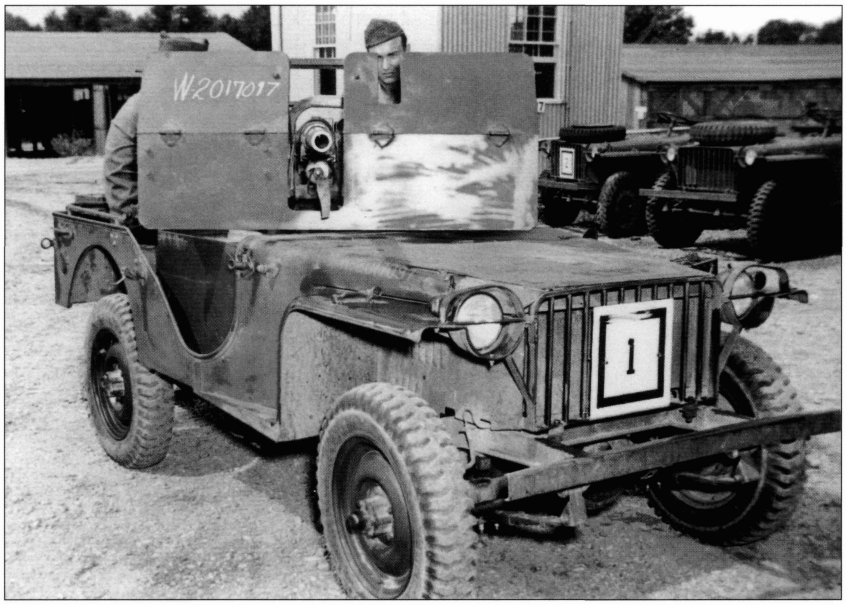
Because of the widespread use of the jeep in other armies, there were many variations in armament. The most systematic efforts were undertaken by Britain. Perhaps the best known of these were the jeeps modified by the SAS in Egypt in 1942 for use in desert raiding. These jeeps had a variety of armament fits, commonly using a twin Vickers K gun on the passenger side. Some of these served as a pattern for later armed British jeeps, notably the airborne jeeps that were armed with single Vickers K guns.

Many units preferred to carry the .30-cal. machine gun on a bracket mount in front of the passenger seat. This example is from the 2d Battalion, 442d Infantry Regiment (Nisei), the famous Japanese-American unit, on October 13, 1944 near Chambois, France. This jeep has some other typical field modifications such as the wire cutter, and an added rifle rack in a vertical position instead of the usual windshield mounting.

Gun-armed jeeps

In early 1941, the US Army's Tank Destroyer Command was urgently in need of a method to make its antitank guns more mobile, the better to fulfill its new tactical doctrine. There had been articles published about the success of the French Army in using light antitank guns mounted on the rear of trucks during the 1940 campaign, so Ordnance began considering possible designs. One of the most obvious solutions was to mount the standard 37mm gun on a ¼ton truck and the first of these, designated the T2 37mm gun motor carriage (GMC), placed a 37mm gun in the rear-bed of a Bantam 40 BRC with the gun pointing over the hood. Seven of these were built, starting in May 1941, but the configuration was awkward and so the pilots were rebuilt to normal truck configuration. This was followed by the T2E1 37mm GMC, which

The Tank Destroyer Command was the first to experiment widely with gun-armed jeeps. This Willys MB, produced in December 1941, has been locally modified by a tank destroyer battalion at Camp Funston prior to the arrival of standardized self-propelled tank destroyers. (NARA)

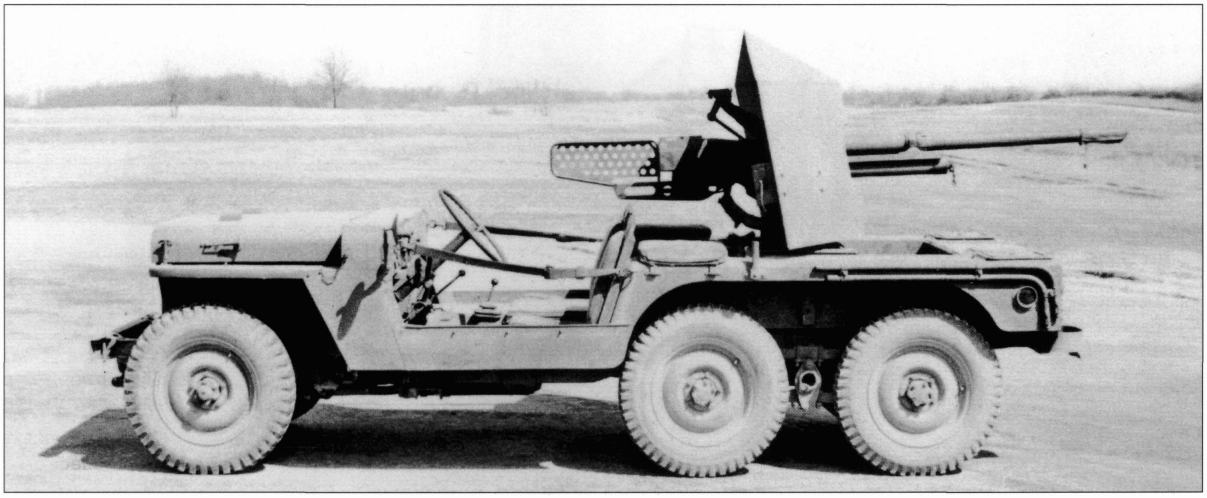


The T2 37mm GMC was the first of several attempts to build a tank destroyer on a jeep chassis. This forward-firing configuration on a Bantam BRC proved awkward and was abandoned in favor of the T2E1. (NARA)

reoriented the gun to fire over the rear of the vehicle, and 11 were built for trials. Although better than the T2, the T2E1 was difficult to employ since it was hard to service the gun in such an awkward configuration. Most of the T2E1 GMCs were converted back to trucks, but at least one was rebuilt by removing the rear bodywork to lighten the vehicle. The idea was that in this configuration, the gun would be oriented to fire over the front and the crew could service the gun from behind the vehicle. Once again, the configuration was awkward, to say the least, and this project was abandoned.

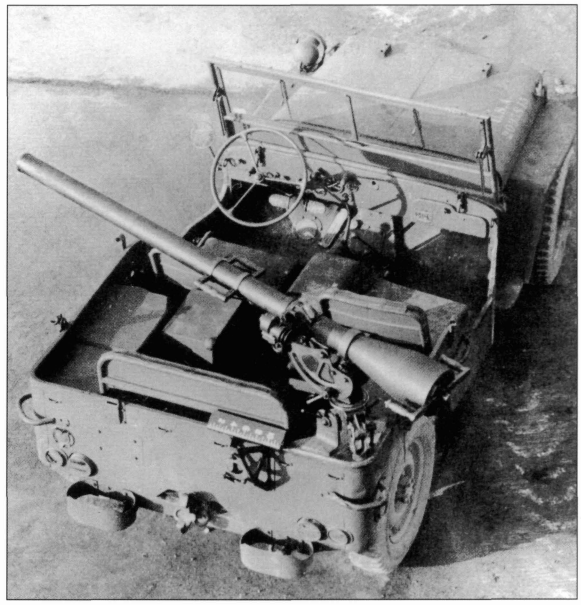
In July 1941, the QMC had considered developing a lengthened ¼ton truck with a 6x6 configuration for specialized roles; one of its original missions was seen as being a gun carrier for the 37mm gun. In July 1941, Willys was contracted to develop the T13 and T14 37mm GMC based on a stretched MA chassis. The T13 had the gun pointed forward but, as a result of earlier experiments with the T2, this configuration was

The lengthened chassis of the Super Jeep was the most suitable carriage for the 37mm antitank gun, and it emerged as the T14 37mm GMC in 1942. However, the M6 37mm GMC based on the ¾ton truck was already in production, so this effort was doomed. (NARA)



dropped before the pilots were constructed. Instead, two pilots of the T14 were built and the first was delivered to Aberdeen Proving Ground in January 1942. Although the T14 was judged to be the most satisfactory of several 37mm tank destroyers tested by the Army, the Tank Destroyer Command had already decided to manufacture the M6 37mm GMC based on the ¼ton truck. This marked the end of considerations for a jeep-based tank destroyer, but the 6x6 jeep continued development in various configurations as the "Super Jeep", which is described below.

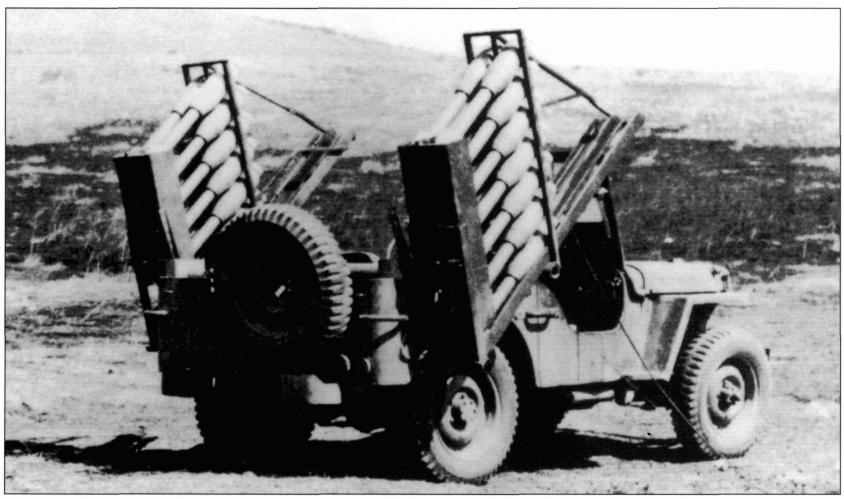
There were a number of other attempts to develop armed jeeps late in the war. The 82d Airborne Division actually mounted a 57mm antitank gun on the rear of a jeep in March 1945, but the war ended before it could be used. In 1944, Ordnance developed a mount for the large 4.2in mortar with a large hinge in the rear compartment that permitted the heavy base-plate to be folded up for travel, and then deploy behind the jeep for firing. Although a pilot was tested, there was never enough demand for such a weapon to justify production. The jeep was regularly used to carry infantry mortars, though these were not usually fired from the jeep. Some units developed racks for 81mm mortar ammunition for these mortar jeeps.



The advent of recoilless rifles made a heavily armed jeep more practical. This is a test example at Aberdeen Proving Ground in February 1945, armed with one of the new T21 75mm recoilless rifles on a T36E1 mount. (USAOM-APG)

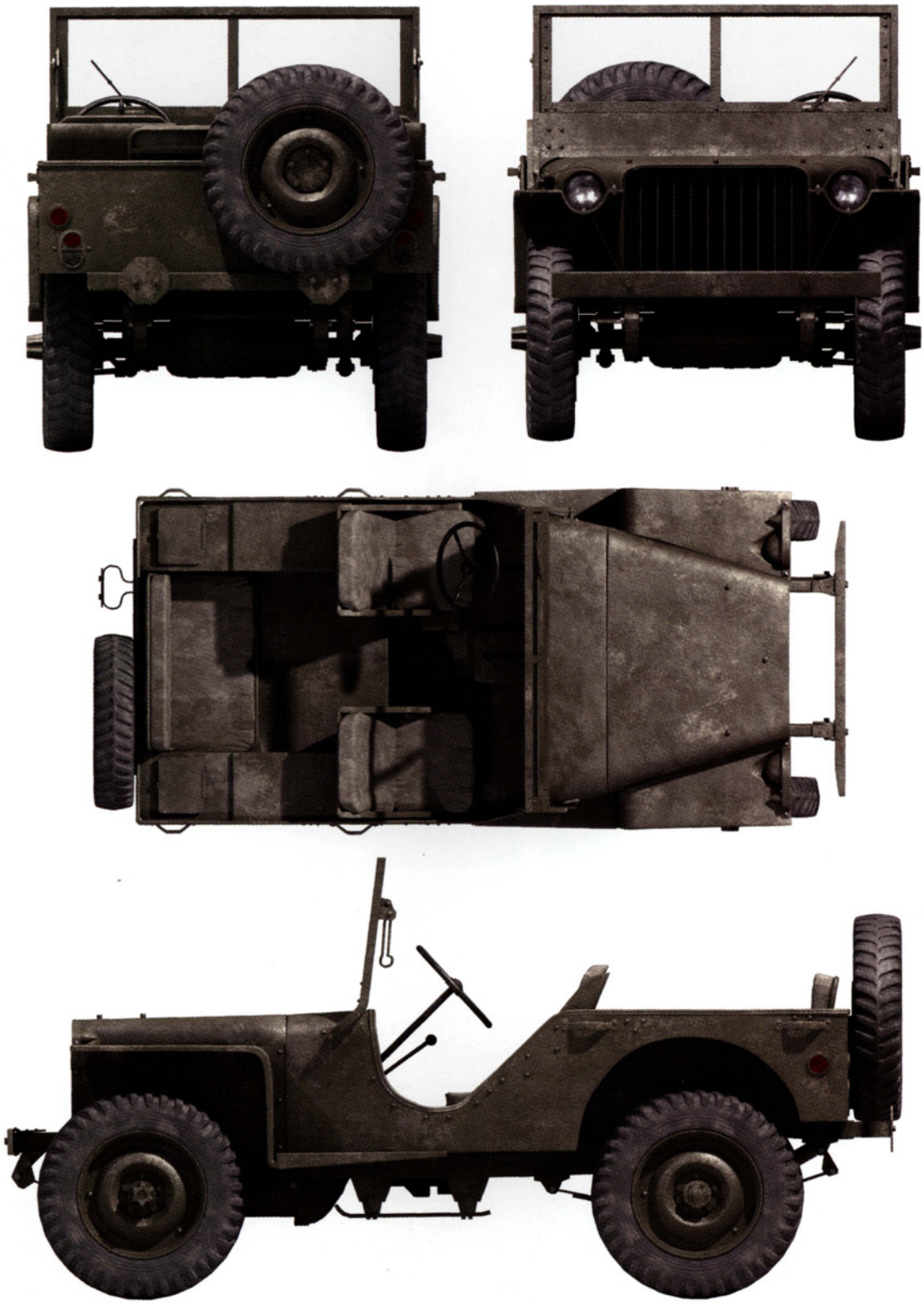
Rocket jeeps

The jeep was too light to mount any substantial guns, but it could mount some of the newer rocket artillery weapons that did not have the same debilitating level of recoil as conventional tube artillery. Under Navy direction, the California Institute of Technology developed two 4.5in launchers for the jeep, the Type 2 Mod 1 ten-rail barrage rocket launcher with a rail launcher over the roof of the jeep, and the Type 8 (Army designation: T45) with two racks on either side of the rear of the jeep with



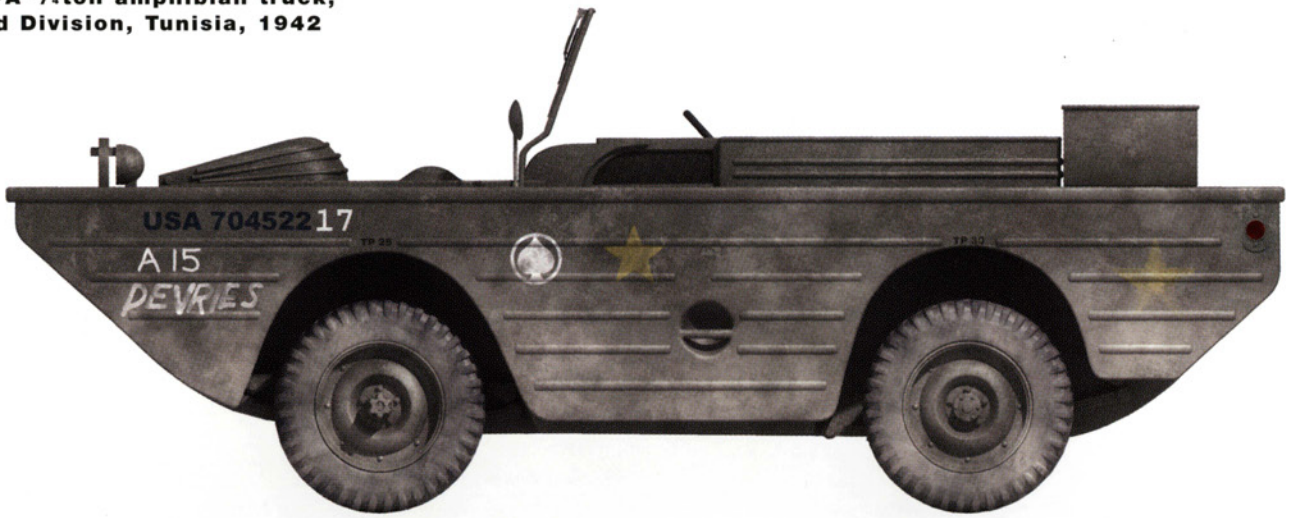
The Navy developed this experimental 4.5in Type 8 launcher for US Marine Corps use. Although generally used from larger trucks, some Marine rocket detachments on Saipan apparently mounted the launchers on jeeps as well. (NARA)

A: Bantam BRC 1/4ton command truck, US Army, 1941

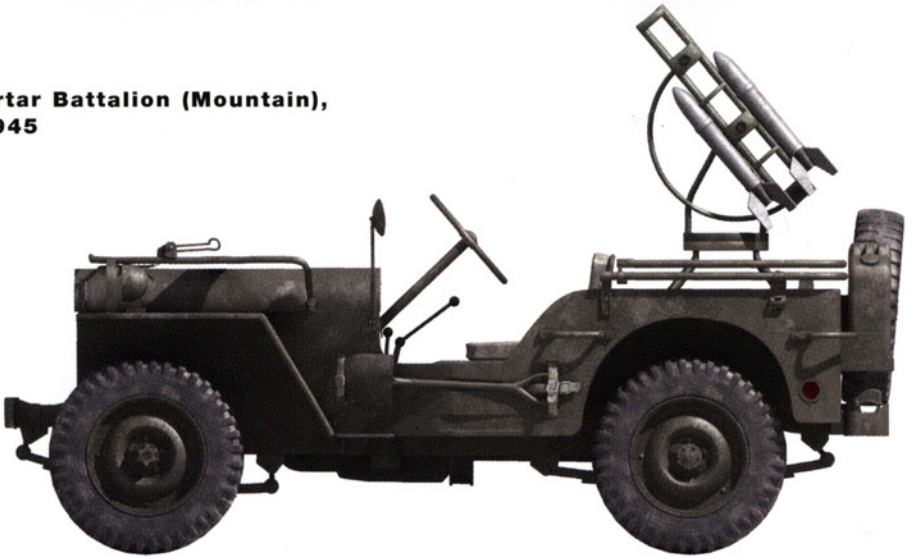



B: Willys 5cwt 4x4 car, "L" Detachment, SAS Brigade, Western Desert, 1942

C1: Ford GPA 1/4ton amphibian truck, 1st Armored Division, Tunisia, 1942



C2: Willys MB, 2d Guards Mortar Battalion (Mountain), Red Army, Czechoslovakia, 1945



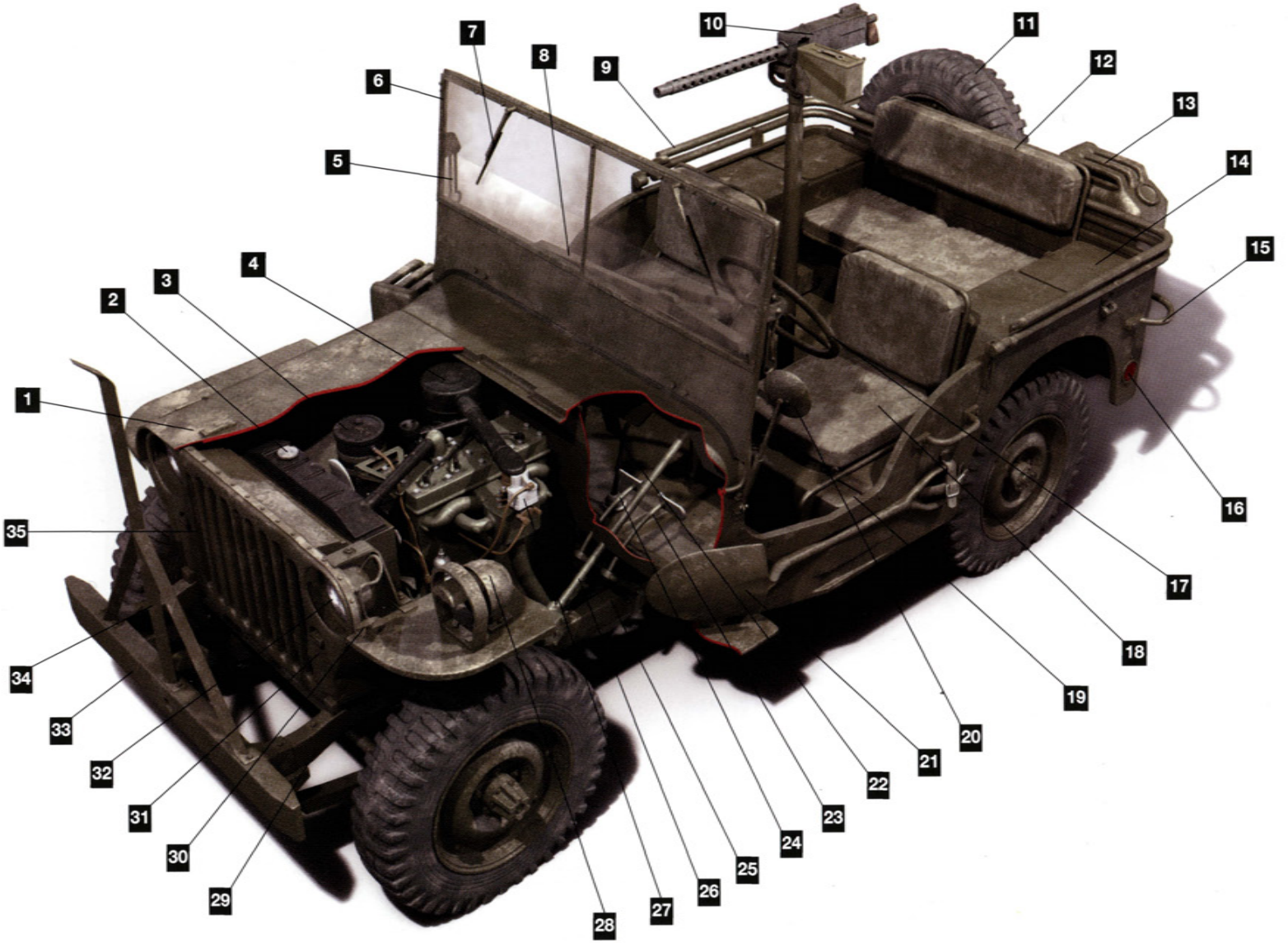
D: 1/4 TON COMMAND TRUCK, WILLYS MB, 116TH INFANTRY REGIMENT, 29TH DIVISION, US ARMY, 1944

KEY

1 Bumper for folded windshield
2 Radiator
3 Oil filter
4 Air filter
5 Windshield frame adjustment arm
6 Folding windshield
7 Manually operated windshield wiper blade
8 Rifle stowage rack
9 Folded frame for canvas top (top under right seat)
10 Pedestal-mounted Browning .30-cal. light machine gun
11 Spare tire
12 Folding rear seat back
13 Spare jerrican
14 Tool locker
15 Lifting handle
16 Reflector
17 Steering wheel
18 Driver's seat
19 Gasoline tank
20 Rear view mirror
21 Shovel
22 Gear shift lever
23 Clutch pedal
24 Gas pedal
25 Chassis frame
26 Steering column
27 Carburetor
28 Blackout driving lamp
29 Suspension leaf spring
30 Hood clamp
31 Blackout headlamp
32 Headlight
33 Bumper
34 Protective wire cutter (field improvisation)
35 Stamped radiator grill

TECHNICAL DATA

Capacity: 4 (two front, two rear)
Length: 132.2in
Width: 57in over body, 62in over handles
Height: 69.7in with top up; 40in over hood
Wheel track: 49in with combat wheels
Wheelbase: 80in
Road clearance: 8.7in at axles, 10.1in at center of vehicle
Weight: 2,450lb unloaded
Engine: Willys Model 442 "Go-Devil" 4-cylinder 134 cubic inch, 55hp @ 3,600rpm
Fuel: 15 gallons, with consumption of 27 miles per gallon @ 20mph, 13mpg @ 60mph
Range: 218 miles @ 35mph; 116 miles @ 50mph
Max. speed: 60mph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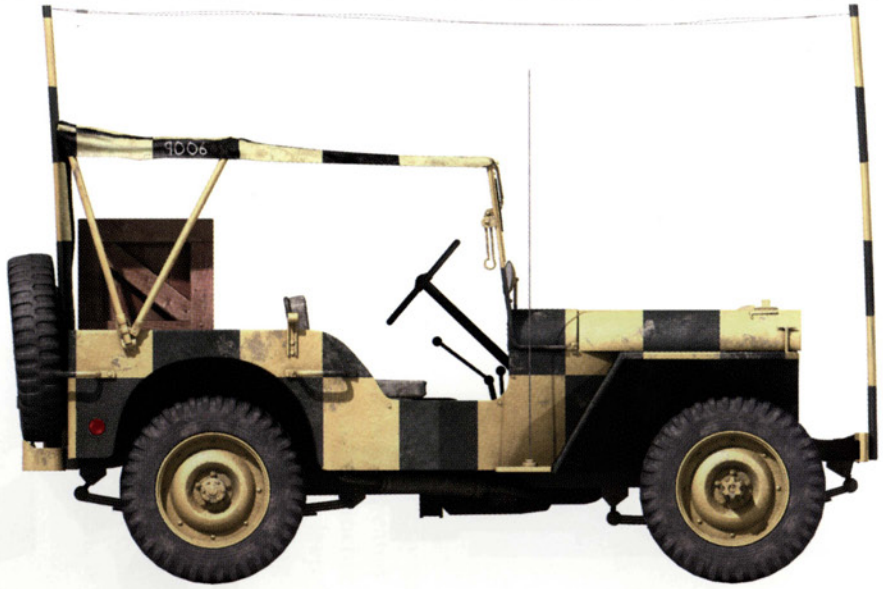
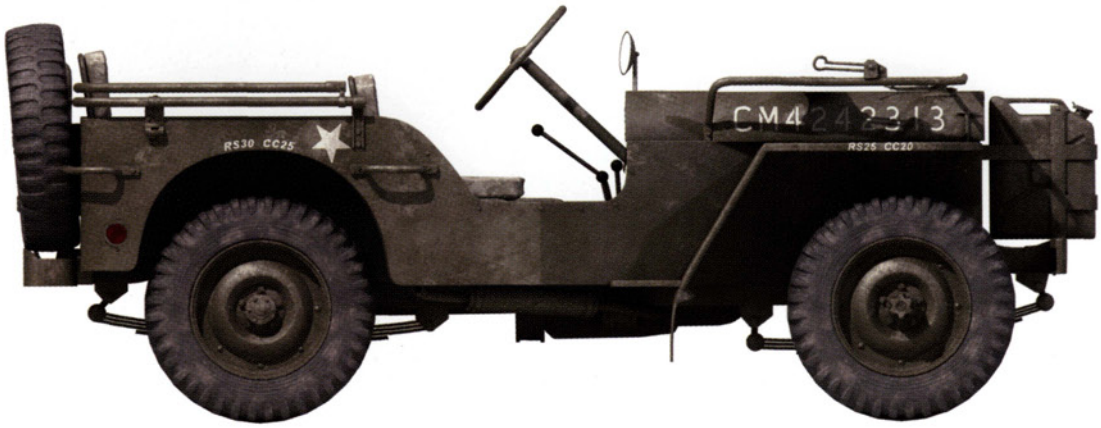
E: Willys 5cwt 4x4 car, C Troop, Recce Squadron,
British 1st Airborne Division, Arnhem, September 1944

F1: US Army Air Force airfield control jeep, 490th Bomb Group, Britain, July 1944



F2: Rotabuggy rotary glider jeep, Airborne Forces Experimental Establishment, Britain, 1944

G: Willys 5cwt 4x4 car, HQ Canadian First Army, France, August 1944



An ordnance unit in the US Seventh Army built a 4.5in rocket launcher on a jeep using M14 launch tubes designed for fitting on aircraft. This example is seen in action in Alsace in December 1944. (NARA)

a total of 24 rockets in a cascading frame launcher. The Type 2 underwent a limited combat test with the Marines in 1944. The Type 8/T45 was first used by US Marine Rocket Detachments mounted on the ¾ton truck during the Saipan campaign in the summer of 1944, but there are some Marine accounts that suggest that they were also fitted to jeeps. The Army tested jeeps with the T36 eight-tube launcher built by McCord Radiator and Manufacturing, and the Navy's T45 launcher for 12 4.5in rockets. Ordnance units in Europe built a small number of field expedient launchers using aircraft 4.5in rocket launchers that resembled the T45. None of the jeep-mounted rocket launchers were manufactured in any significant number, as it was more efficient to use larger trucks that could carry more rockets.

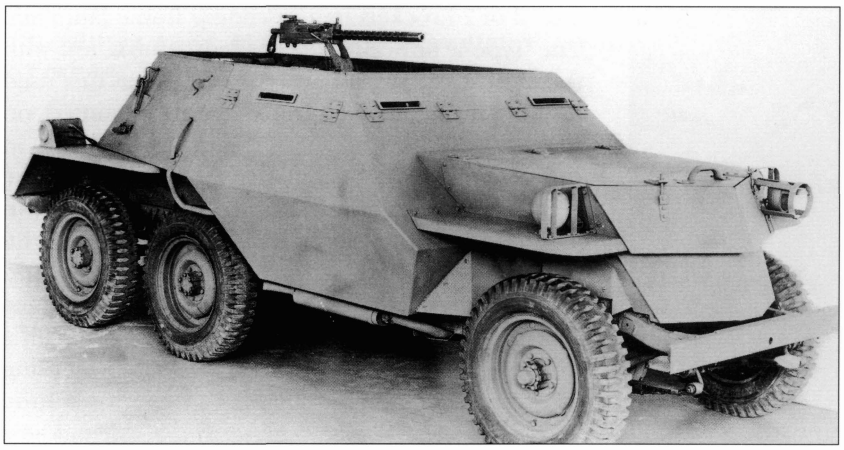
The Red Army used rocket-armed jeeps in small numbers. Twelve of these were created in December 1944 by mounting a small 12-rail "mountain launcher" version of the M-8 82mm rocket launcher in the rear bed of the jeep. They were used by the 2nd Guards Mortar Battalion (Mountain) during the fighting in the Carpathian Mountains in the winter of 1944–45.

A more fruitful direction for research was in the new category of recoilless rifles, which offered the firepower of conventional direct-fire guns but in a lighter weapon. There were a number of experimental mountings of recoilless rifles on jeeps in 1945, but while these proved a practical weapon, it was not until after World War II that they saw any extensive use.

Armored jeeps

Since the jeep was intended to be used for reconnaissance, there was interest almost from the outset in an armored version for the scout role. The Smart Engineering Company offered an elementary armor kit for the jeep in 1941, but trials at Aberdeen Proving Ground found that the extra weight adversely affected automotive performance.

There were numerous attempts to arm jeeps with the 2.36in bazooka antitank rocket launcher. This jeep, along the Rapido river in Italy in January 1944, has been fitted with an improvised frame mounting to mount at least four bazookas for some salvo firepower. (NARA)



Ordnance experimented with several types of armored jeep, including the T24 on a lengthened 6x6 Super Jeep chassis. However, the 1942 decision by the Palmer Board to standardize on the M8/M20 light armored car ended this project. (USAOM-APG)

The Army had already sponsored the development of a lengthened jeep for the T14 tank destroyer mentioned above, so there was some interest in whether this chassis might be more suitable for an armored jeep to satisfy a Tank Destroyer Command requirement for a lightly armored reconnaissance car. Starting in April 1942, the second T14 prototype was converted into the T24 scout car. Although the T24 was deemed successful in trials, the project was cancelled in the autumn of 1942 as part of an effort to quash the excessive number of armored car programs that had been undertaken by Ordnance in favor of concentrating on a single design, the M8/M20 light armored car.

In parallel to the T24 project, Ordnance was pushed into further work on a 4x4 scout car based on the jeep, owing to interest by Army Ground Forces. Starting in June 1942, Ordnance sponsored development of the T25 scout car, which used different configurations of armor in the T25, T25E1, T25E2, and T25E3 models. The added armor plate overloaded the chassis 785–1,265lb beyond its rated load and, as was discovered earlier, badly affected automotive performance. The program was terminated, but a number of US Army units developed their own improvised armor kits in the European theater in 1944–45.

The 82d Airborne Division developed its own standardized armor kit for its recon jeeps, as seen here during the Battle of the Bulge in January 1945.

Super Jeeps

In its quest for maximum standardization, the QMC considered the possibility of adapting the ¼ton truck into a 6x6 configuration that could fulfill some of the roles of the larger ¾ton truck. The first of these lengthened 6x6 jeeps was the T14 tank destroyer, mentioned earlier, which was based on the Willys MA. The Army continued to feel that this configuration had potential applications so, in March 1942, the specifications were modified to adapt the standardized Willys MB to this role as the new MT 6x6, also known as the Super Jeep. The Army tested this in a variety of configurations including as the 1ton 6x6 truck for service as a personnel carrier or as a field ambulance. The Marine Corps considered it a personnel carrier. The US Army Air Force also showed some interest

Among the configurations of the Super Jeep was the MT-CA 6x6 ambulance. Like the rest of the 6x6 jeeps, it never reached series production.

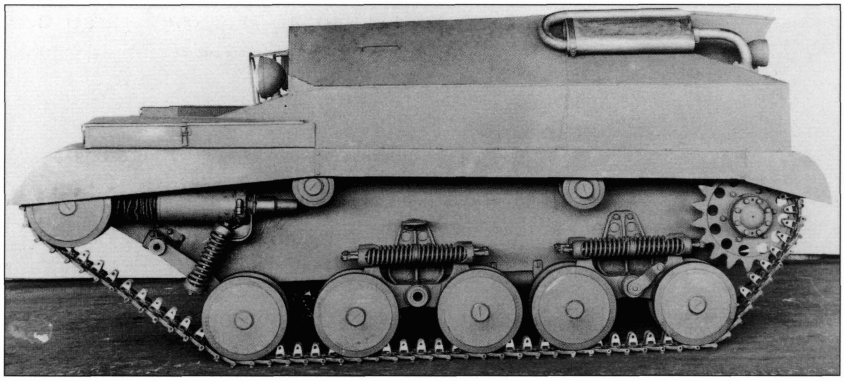
in the design as a towing vehicle for airfield use, the MT-Tug. In the end, the Army did not feel that any of the Super Jeep designs merited production as they duplicated roles already being undertaken by successful vehicles such as the ¾ton and 1 ½ton trucks.

Besides the lengthened jeep, in 1944 Willys also pursued the idea of an improved jeep capable of carrying a ½ton load. The MLW-4 jeep resembled the normal jeep but had improved axles, a lengthened wheelbase, wider tires, and a cargo-style rear-bed. This type never entered production.

Tracked jeeps

In the autumn of 1942, the Canadian Army Proving Establishment at Orleans, Ontario, built a "tracked jeep" using a Willys Go-Devil engine and jeep components along with a lightly armored hull. The "Bantam Armoured Tracked Vehicle" was intended for use by airborne troops both as a reconnaissance vehicle and as a combat vehicle against enemy infantry. Since most of the automotive components came from Willys, in June 1943 the Canadian Army approached Willys about creating five pilots, with Marmon Herrington to provide the hulls. The first Tracked Jeep Mark 1 was completed in April 1944, and all five pilots were sent to England for testing; however, testing was delayed until September 1944. Although the Canadian officers wanted to deploy two to the front line for combat trials, they were turned down by the head of Canadian forces,

Some US units lengthened jeeps in the field to provide more passenger space in the rear. This is one from the 127th Ordnance Maintenance Battalion in Belgium on January 23, 1945. (NARA)

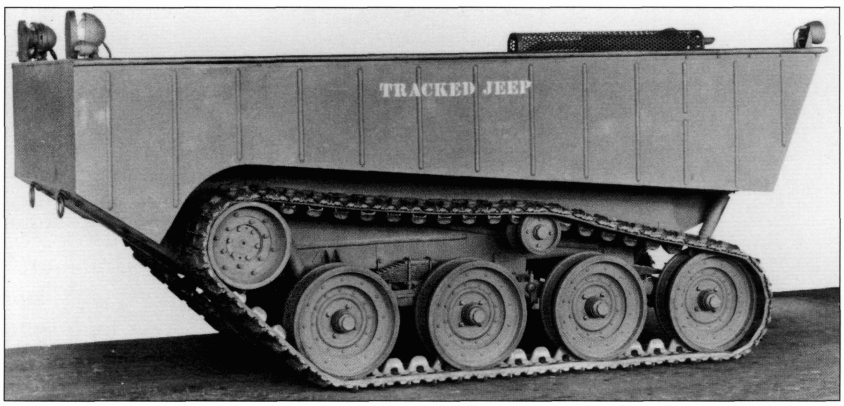


The Willys TJ was a Canadian project to develop a tracked jeep using jeep components. Although sent to England for trials in late 1944, it was developed too late in the war to reach the production stage. This is the original Mark I version. (USAOM-APG)

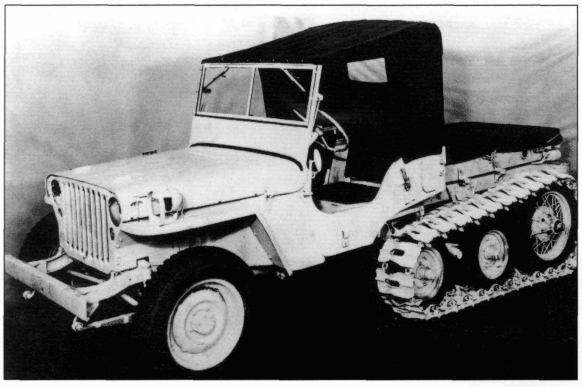
General H. D. G. Crerar, who felt it was too late to spend much time on this vehicle. Results of the trials led to the development of the improved Tracked Jeep Mark 2 that was designed to be transportable by air in the standard C-47 (Dakota) transport aircraft. Although ordered from Willys in late November 1944, the six pilots were not completed until 1946, by which time there was little interest in pursuing the program.

The US Army also considered the idea of a tracked jeep in 1944, but rather than using it as an armored combat vehicle, viewed it as an all-terrain vehicle that would be amphibious enough to cross small streams and swamps. Willys called the resulting vehicle the WT-C Tractor Jeep, and the US Army designated it as the T26 ¼ton carrier. It bore practically no resemblance to the tracked jeep developed for Canada, using a different type of suspension with Goodrich endless belt rubber tracks. The two pilots were completed by the end of 1944 and entered trials at Aberdeen Proving Ground in January 1945. They did not offer any particular advantages over the existing Studebaker M29C Weasel so no production was ever undertaken. However there were a number of private ventures in building tracked vehicles using jeep components, such as the O'Laughlin tracked jeep.

Besides these fully tracked jeeps, Willys was also involved in the development of half-track configurations. The first of these was a January 1943 program to develop a snow vehicle, the T29. This used a Willys MT 6x6 chassis, but with the rear pair of wheels replaced by a tracked suspension and the front wheels replaced by skis. This proved successful enough in trials that a more refined design, the T29E1, was



The Willys W-TC, first called Tractor Jeep, then Tracked Jeep as seen here, was intended to develop a light utility vehicle with the low cost and dependability of its wheeled namesake and an all-terrain tracked suspension. The Studebaker M29 Weasel already fulfilled this role, so the WT-C never entered production. (USAOM-APG)



The Willys MT-ST Snow Tractor was one of a number of attempts to develop a semi-tracked suspension for the jeep for use in difficult terrain conditions. These could be fitted with wheels or skis on the front axle. (USAOM-APG)

assembled, which had an improved cargo bed, new fenders to prevent snow from spraying into the driving compartment, and a new hybrid wheel/ski configuration on the front axle. A third configuration, the T28 Penguin Jeep, was built in late 1944 on the basis of the T29E1, but for use as an ambulance with a canvas-enclosed rear compartment suitable for carrying litters. Ford also built its own half-track jeep, but these vehicles offered no particular advantages over the Allis Chalmers M7 snow tractor that had been in production since 1944.

Aside from these attempts to employ tracks to enhance the mobility of the jeep, there were other schemes as well. Snow chains were regularly issued to US Army units, based on the standard commercial pattern used in the northern US and Canada in the winter. While these offered better traction in shallow snow, they were ineffective in deep snow. This led to plans to mount a drum to the jeep wheel, in the expectation that the increased surface area would reduce ground pressure enough to provide traction in deep snow. This configuration was not particularly successful.

Flying jeeps

The most bizarre jeep variant developed in World War II was the British Rotabuggy flying jeep. The idea behind this design was to add an auto-gyro-type rotor assembly above the jeep cabin that would permit the jeep to be towed into the air by a transport or bomber tug. The Rotabuggy would then be towed to the drop zone as a rotary-wing glider. The Rotabuggy was the brainchild of Raoul Hafner, and the Airborne Forces Experimental Establishment, starting in early 1942, sponsored the program. The actual conversion work was carried out by R. Malcolm Ltd. Besides the rotor assembly, the Rotabuggy also required a fuselage to shield the crew during flight, as well as a tail assembly for lateral stability. The first trial, using a Diamond T lorry as a tug, was conducted on

There were a number of attempts to improve jeep performance in the snow, including several configurations of drums added at the wheel to decrease ground pressure in deep snow, as seen on this early production Willys MB slat grill of the 981st Engineer Maintenance Company in Belgium on January 15, 1945. This jeep has several other common field modifications, including the common antiwire device on the bumper and a stowage bin added at the rear. (NARA)

Jeeps were widely used as field ambulances, but their small size led to improvisations to carry the litters. This October 1943 Ford GPW from the 6th Armored Division in England in June 1944 shows the addition of simple frames to permit the carriage of four litters. (NARA)

November 16, 1943, but the lorry could not get up enough speed to get the Rotabuggy into the air. As a result, the Rotabuggy did not take to the air until November 27, 1943, with a more powerful vehicle being used as the tug. A Whitley bomber was used on the December 8, 1943 test flight, but at around 50mph the Rotabuggy began to suffer severe vibration, so the next trials reverted to vehicle tugs. The Rotabuggy was vibration-prone at speeds over 45mph and during one trial the rotor struck a tail fin. After improvements were made, a long series of test flights were conducted, finally resulting in a flight speed of 70mph on February 1, 1944. After about 60 tests, on September 11, 1944 the Rotabuggy was finally towed aloft behind a Whitley bomber, flying for about ten minutes at an altitude of 400 feet and a speed of 65mph, before finally being released and conducting a successful, though "precarious," landing. The program proceeded no further, as by this time the transport gliders such as the Waco CG-4 or Horsa could carry jeeps into combat with a great deal less risk and complexity.

Jeep copies

Starting in 1955, Hotchkiss in France manufactured the wartime Willys MB under license. The first 465 were a direct copy, while a further 27,628 built up until 1967 were the Hotchkiss M 201 VLTT (Voiture de Liaison ¼ton), which was essentially a Willys MB with a number of local modifications, such as the use of a 24-volt electrical system.

This jeep with the 334th Infantry, 84th Division during the Battle of the Bulge on January 9, 1945 shows a typical configuration with a frame over the hood to permit two litters to be carried on the front. (NARA)

While Soviet 4x4 ¼ton trucks have been described as jeep copies, this was not the case. The first of these, the GAZ-64, was built according to Red Army requirements that were based on combat lessons learned from the Russo-Finnish war of 1940. Development using commonly available commercial components started in early 1941, the pilot was completed on March 25, 1941, and production began in August 1941. Production of the GAZ-64 was very modest – only 672 through 1943 – owing to the decision to use the chassis for the more important BA-64 armored car, as well as the availability of the superior American jeeps via Lend-Lease. The term "Villis," derived from Willys but with the "W" pronounced in central European

The British ambulance configuration used a frame to hold the litters over the top of the jeep, like this one, crossing a tactical bridge near Caen in late July 1944. (NARA)

fashion, became synonymous in Russia for a 4x4 vehicle. A requirement for a locally manufactured jeep-equivalent was issued in 1943 aimed at correcting the main defect of the GAZ-64, its narrow wheel track, which made it prone to tipping over. The resulting vehicle, the GAZ-67B, was closer to the American jeeps in performance, and was locally dubbed the "Ivan-Villis." Production from January 1944 until the end of the war was only about 2,500 vehicles, but some 92,843 were manufactured by the time production ended in 1953.

Jeep accessories

Over the course of its production, a large number of accessories were developed for the jeep. Although there were others, this listing covers the major items.

¼ton trailer – One of the most extensively used jeep accessories was a ¼ton trailer specifically developed for use by jeeps. From 1942 to 1945, Bantam manufactured 73,569 T3 trailers and Willys a further 59,956 MBT (MB Trailer) with ten other firms manufacturing 9,843 for a grand total of 143,368.

Desert cooling kit – Early British use of the jeep in North Africa in 1942 revealed the need for a surge tank for the radiator in extreme heat. These were locally developed in Egypt, but later both the US and Britain manufactured kits for this purpose. The surge tank was usually mounted on the right front side of the engine grill.

Wire cutters – A frequent problem in field conditions was the presence of communication wires inadvertently strung over roads or deliberately strung across roads to injure motorcycle or vehicle crews. The simplest solution to this problem was to mount a vertical bar on the bumper that would either snap the wire or push it over the passenger compartment. The first examples of these were seen in Tunisia in 1943, but they became commonplace in Italy in 1943–45, and especially in France in 1944. The actual construction varied, but some ordnance units created standardized kits that usually had refinements such as a small cut-out at the top of the bar that trapped and snapped the wire.

Wading kit – Because of the need to disembark vehicles during amphibious landings, a deep water fording kit was developed in 1943 that could be fitted to the jeep. This permitted the jeep to be driven off landing craft such as the LCM into shallow water without flooding out the engine or short-circuiting the electrical system. After a number of temporary kits were issued, the Army finally standardized the universal G9-5700769 kit, which could also be used with the 2 ½ton truck. This kit contained flexible hoses for both the exhaust and the air intake, as well as suitable waterproofing equipment.

Baggage rack – Many units in the field created baggage racks that could be attached to the rear of the jeep to accommodate more stowage. These varied in detail but, in some cases, large numbers of standardized racks were locally manufactured by ordnance companies and distributed to units. The British airborne jeep modification program included kits for this purpose.

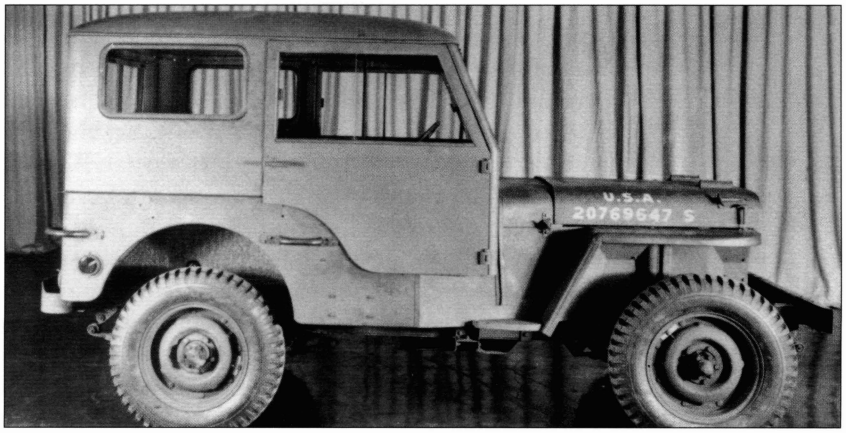
Ambulance kits – Jeeps were widely used in medical units, and were frequently employed for front-line casualty evacuation. Litters could be carried on the hood, or across the rear compartment, but many units developed simple frames to permit the jeep to carry two litters on the front and two in the rear. A common British litter kit was a frame assembly over the jeep body that permitted two litters to be carried over the main compartment.

Winterization kit – Willys developed a winterization kit for operations in extremely cold climates. This included a cold-starting stove, crankcase ventilator, primer, hood insulation blanket, radiator blanket, body enclosure kit, defroster/de-icer, and snow chains. These kits were frequently unavailable so local units resorted to their own devices, particularly in creating various type of enclosure kits to protect the crew during inclement weather. These ranged from simple canvas skirts to elaborate wood and metal enclosures. Snow chains were available separately from this full winterization kit, and were widely used in the winter of 1944–45.

Tandem hitch – An "A" frame tandem hitch was developed, which replaced the front bumper. The idea behind this was that two jeeps could be hitched together in tandem to tow weapons that would otherwise require a 2 ½ton truck, such as the 105mm howitzer. It does not appear to have been widely used in this role.

Snowplows – Geldhill Road Machinery Company built two types of snowplows for use by jeeps in winter conditions. The 7T1NE snowplow was an angled single blade while the JV5.5E was a V-shape design. The Wausau Iron Works built two similar designs designated as the J and JB snowplows. Neither of these types appear to have been commonly issued to units in combat. Photos of snowplows in use in the European Theater of Operations (ETO) tend to show locally improvised plows, probably consisting of adaptations of existing civilian snowplows found in France, Belgium, or Germany.

Rail travel kits – Jeep users in various theaters soon realized that the jeep could be easily adapted to ride on railroads by substituting steel rimmed wheels for the usual wheels. The methods were locally developed, sometimes using available railroad wheels, but in some cases modifying the normal jeep wheel minus the tire to run on rails. These were widely used in the Pacific theater by US, British, and Commonwealth forces, and were especially popular for use in the Burma theater as mini-locomotives.



The late production Willys MB served as the test-bed for a body enclosure developed in response to complaints from the field after the winter of 1944–45. This enclosure provides a hint of post-war civilian jeeps. (USAOM-APG)

Snowplows were developed for the jeep; many of those used in World War II were local improvisations, as seen here on a jeep outside Bastogne on January 5, 1945. (NARA)

Communication cable layers – The need to lay communication cable led to the development of cable reels that could be operated from vehicles, such as the RL-31 reel unit. When fitted to the jeep, they were generally positioned at the rear of the cargo compartment, slightly to the left to permit the spare tire to be stowed on the side of the reel rather than in the usual location.

T-1 Compressor – Westinghouse developed a small compressor that could be mounted in the engine compartment or in a small box on the rear of the right front fender. The idea behind this compressor was that it could be used in conjunction with a special cross-country tire. When in particularly soft terrain such as mud or snow, the tires could be deflated for more ground contact, and then pumped up again afterwards for normal road travel. This was released under an October 1944 maintenance work order.

Capstan winch kit – A capstan winch was developed for the jeep, powered off the motor. This was intended for extracting other jeeps trapped in the mud or snow or for self-extraction.

FURTHER READING

The popularity of the jeep has led to a wealth of published material. This account was based on published material as well as on unpublished archival material on the history of the jeep from the US Military History Institute at Carlisle Barracks, Pennsylvania and the US National Archives and Records Administration (NARA) at College Park, Maryland. Jeep books fall into roughly three main categories – general histories, books aimed at modelers and hobbyists, and books aimed at jeep restorers and owners – with the last category predominating. Since so many jeeps ended up in private hands, there are numerous books providing extremely detailed accounts of jeep parts necessary for restoring jeeps to their original wartime condition.

The jeep is particularly popular in France owing to the many that ended up in private hands after the war as well as to the availability of the post-war Hotchkiss copy. Some of the better recent French accounts are

The jeep was often adapted to run on rails, using both kits and local improvisations. This Ford GPW produced in August 1942 is seen being used as a rail tug in Australia in August 1943, with the standard 1ton trailer also being adapted for use on rails. (NARA)

listed here because the wealth of illustrated material in these volumes makes them useful references even for those not reading French.

Besides the books listed here, there are innumerable other sources of information. *Jeep World* magazine from Britain is devoted to the jeep, while there is jeep coverage almost every month in the many military vehicle-oriented magazines such as *Military Vehicle* and *Army Motors* published in the US, and *Military Machines International* and *Classic Military Vehicle from Britain.* There were also many jeep articles in the magazine *Wheels & Tracks* from the UK, which is no longer in print. Owing to the popularity of jeep restoration, much of the wartime jeep documentation such as the technical manuals are widely available in reprint form.

The list below is far from comprehensive, as there are dozens if not hundreds of books devoted to the jeep.

Askew, Mark, *Rare World War 2 Jeep: Photo Archive 1940–45*, Jeep World (2001). This excellent photo album provides extensive coverage of the many odd and lesser-known jeep derivatives.

Baan, Mocina, & Rob van Meel, *British Airborne Jeeps: Modifications and Markings 1942–45*, Groucho (1997). A fine study of the many modifications made to British airborne jeeps with many illustrations from the original documents.

Becker, Emile, & Guy Dentzer, *Jeep: Bantam-Willys-Ford*, G. Willems (1994). Published in French in Luxembourg, this heavily illustrated volume is a virtual encyclopedia of information on jeep history and components, and one of the best single volumes on the wartime jeep.

Birch, Gavin, *The Wartime Jeep in British Service 1941–1945*, Jeep Books (2004). An excellent photographic survey of the jeep in British service.

Cowdrey, Ray, *All American Wonder*, USM (1986, 1993). This is one of the classic jeep accounts aimed primarily at restorers. The first volume, revised in 1993, provides an overview of jeep history followed by detailed examination of key jeep components. Volume 2, published in 1999, adds more detail on various issues including components and jeep lore.

Crismon, Fred, *All-American Wonder Vol. 3: The Photographic History of the US Military ¼ton Truck* , Victory Publishing (2005). The most thorough photo history of US ¼ton trucks, from World War I automobiles to the HMMWV, with extensive photographic coverage of the wartime jeep.

Farley, John, *The Standardized War-time Jeep 1941–45*, Jeep World, (2002). This meticulously researched and heavily illustrated book is the most complete examination of the evolution of the jeep and its components during its wartime production, tracing the changes on a month-by-month basis of both the Willys MB and Ford GPW. Destined to be one of the jeep classics.

Jeudy, J. G., & M. Tararine, *The Jeep*, EPA (1981). Published in both French and English editions, this heavily illustrated book is one of the few general histories of the jeep, and covers the wartime jeep as well as its many relatives such as the postwar French Hotchkiss jeeps.

Koran, Frantisek, & Jan Mostek, *Jeep in Detail*, WWP (Vol. 1:1999; Vol. 2: 2003). These two soft-covers provide exhaustive photo coverage in color of restored jeeps, with the first volume covering the basic jeeps and the second volume adding more detail as well as armored jeeps and a restored SAS jeep. Although primarily oriented towards modelers, they are also of value to restorers.

Ohtsuka, Yasuo, *Jeep, Jeep, Jeep*, (Vol. 1: Hobby Japan, 1983; Vol. 2: Jeep Books, 2002). This is an excellent pair of photo albums on the history of the jeep by Japan's best-known jeep enthusiast.

Rifkind, Herbert, *Jeep Genesis: The Rifkind Report*, ISO-Galago (1988). This is a reprint of the wartime Rifkind report dealing with the controversies surrounding the jeep's early design and procurement.

Scott, Graham, *Essential Military Jeep*, Bayview Books (1996). A short and nicely illustrated overview aimed at jeep owners.

Sejourne, Robert, & Christophe Chevalet, *Le Guide de La Jeep*, ETAI, (2001). A well-produced book in French covering the history, identification, evolution, restoration, repair, and markings of the jeep.

Wells, Wade, *Hail to the Jeep*, Harper (1946). Probably the first serious attempt at a history of the jeep, this small volume includes an interesting account of the origins of the jeep along with a number of photos of jeeps in wartime service.

This is a June 1944-manufactured Willys MB of Brigadier-General Louis Fortier, commander of the 94th Division, called "War Eagle" with added fenders and a rear stowage bin. It is seen here being used by General George S. Patton during an inspection of the division in July 1945; Fortier's single star emblem on the bumper has been covered and a plaque with Patton's four star rank attached during the ceremony. Patton's own customized jeep is currently on display at the Patton Museum at Fort Knox. (NARA)

COLOR PLATE COMMENTARY

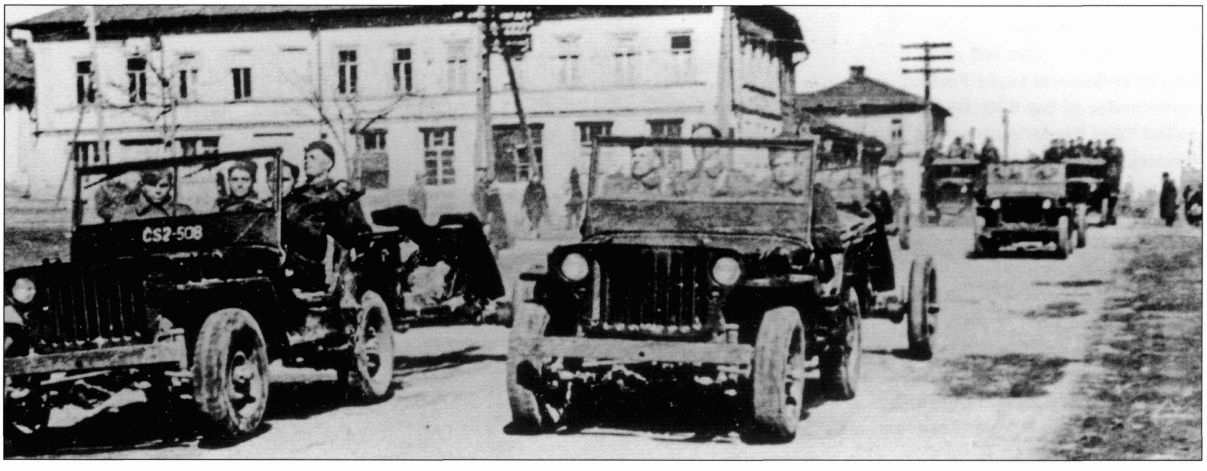
JEEP COLORS AND MARKINGS

During the late 1930s, US Army tactical vehicles were painted in either gloss or lusterless (flat) olive drab, but on October 12, 1940, the Quartermaster Corps issued orders that all new material under procurement be painted with Color No. 22 olive drab lusterless enamel under the tentative specification ES No. 474 (also known as Quartermaster Color No. 22 or QM Color 22, and later called Engineer Color 9). All jeeps manufactured during the war were painted in the same lusterless olive drab, though the paint formulation changed during the war as a result of improvements in paint as well as wartime pigment shortages. A single batch of 653 Ford GPWs was manufactured under a Navy contract in 1942 and it is possible that the contract specified Navy gray rather than Army olive drab, but documentation is lacking. In the event, Navy jeeps were frequently painted in gray. Some internal components of the jeep were delivered in other colors, with many engine components being painted in a semi-gloss black.

When manufactured under US Army contracts, the jeep was assigned a registration number that was painted on either hood side. These numbers were assigned with each contract and, while they were consecutive within a contract or contract amendment, they were not consecutive through all jeep production, in order to prevent enemy intelligence from determining the scale of US wartime production. Known registration numbers for US Army jeeps are listed below. In place of the prewar white registration number, the QMC experimented with several colors in the autumn of 1940 to reduce its visibility, and in November 1940 finally selected Blue Drab, a medium blue-gray. This was officially mandated in an Adjutant General memo in December 1940 and affected all vehicles procured under the fiscal year 1941 budget. As a result, virtually all US Army jeeps manufactured through February 1944 had their registration numbers in blue drab, at which point the Army reverted to lusterless white. It should be noted that units in the field generally disliked the use of blue drab registration numbers since it was difficult to read them when performing routine administrative and maintenance tasks, and as a result they were frequently repainted in white. In addition, vehicles were often repainted in the field by

ABOVE **The airborne divisions were obliged to mount their equipment on lighter vehicles than was the case with normal infantry units. Here, the 511th Airborne Signal Company, 11th Airborne Division has mounted a high-power SCR-499 radio on a jeep with the accessories in the normal 1ton trailer instead of on the usual truck. (NARA)**

BELOW **The jeep was widely used by the Red Army, and the Soviets also turned some over to Allied formations that they formed in Russia. This column from the Czechoslovak 1st Independent Brigade is seen towing 45mm antitank guns during operations in Czechoslovakia in the spring of 1945. These jeeps are marked in the Soviet fashion with the registration numbers painted on the lower windshield panel and the rear. (Ivan Bajtos)**



Ordnance or other units as a result of repair or after the removal of waterproofing material during shipment, and when blue drab paint was unavailable, these numbers were usually repainted in white. Jeeps that were manufactured under a defense aid (Lend-Lease) contract generally did not receive a US registration number. In the case of some contracts, notably British and Canadian contracts, the contracts specified M (British) or C-M (Canadian) census numbers.

Other markings on the jeep were added once the vehicle had been issued to its unit, but this subject is so vast that only a brief overview is possible here. The US Army had established a system of unit identification before the war, but this system was in flux during the first year of the war, until codified in the August 1942 edition of Army Regulation (AR) 850-5. This was the first time that the white US star was authorized as a form of US national identification, though the Armored Force had used the yellow star since January 1942. The August 1942 AR-850-5 also outlined the unit identification system that was used with slight modification through the war. In the case of the jeep, these "bumper codes" were painted on the front bumper and rear bumperettes in lusterless white. In general the markings were divided into two halves, with the markings on the left indicating the higher formation such as division/regiment, while the marking on the right generally indicated company/platoon. There were numerous variations to this system that are too complicated to relate here.

Although AR-850-5 governed the basic markings applied to tactical vehicles in the US, it gave discretion to local commands to amend markings in combat theaters. For example, in the spring of 1943, the Allied Forces Headquarters in the Mediterranean theater ordered the addition of a circle around the star to prevent its misidentification as a cross at long ranges. This was again modified in July 1943 to a thicker circle, preferably in yellow, in time for the Operation *Husky* landing on Sicily. Supreme HQ Allied Expeditionary Force (SHAEF) issued its own guidelines under Operation Memo 20 in early 1944 specifying that all tactical vehicles would be painted on their upper horizontal surface with the Allied star, consisting of a five-pointed white star on a dark background surrounded with a four-inch-wide circle. Details of the way this marking was applied varied considerably and some jeeps had it painted on the hood and sometimes on the canvas windshield cover as well. Although the standard bumper codes were widely used in the European theater through the war, HQ-ETO in 1942 issued a "standard operating procedure" (SOP) for units in movement such as amphibious assault forces, which substituted a four- or five-digit unit code number with an associated colored three-bar code in place of the usual bumper markings to frustrate enemy intelligence collection. In the Italian theater, the unit code was sometimes retained after landings in place of the more obvious bumper codes, while in June 1944 in France it was not uncommon to see US tactical vehicles with both the standard bumper codes and the movement markings.

A: BANTAM BRC ¼TON COMMAND TRUCK, US ARMY, 1941

Markings on the early-war jeeps were very simple until the adoption of the star as the national insignia. The factory finish is lusterless olive drab and the markings were originally limited to the blue drab registration numbers applied at the factory.

US ARMY JEEP REGISTRATION NUMBERS

Registration Numbers	Type	Army Acceptance
2015324–2015393	Bantam Mk II	Sep 40–Dec 40
2015919–2017368	Bantam BRC	Mar 41–Jun 41
2030494–2030515	Bantam BRC	Jun 41–Dec 41
2029179–2029228	Bantam BRC (4W)	Jun 41–Dec 41
2017422–2018921	Ford GP	Feb 41–May 41
2029494–2030459	Ford GP	Jun 41–Dec 41
234075–234124	Ford GP (4W)	Jun 41–Dec 41
2054778–2069777	Ford GPW	Jan 42–Apr 42
20100000–20160851	Ford GPW	Apr 42–Oct 42
20161445–20163085	Ford GPW	Oct 42
20185869–20207599	Ford GPW	Nov 42–Jan 43
20207601–20207869	Ford GPW	Feb 43
20260783–20260792	Ford GPW	Feb 43
20207873–20209016	Ford GPW	Feb 43
20160836–20160845	Ford GPW	Feb 43
20364863–20443316	Ford GPW	Feb 43–Jan 44
20512064–20558510	Ford GPW	Jan 44–Aug 44
20577981–20604516	Ford GPW	Aug 44–Jan 45
20722020–20739977	Ford GPW	Jan 45–Jul 45
2018932–2020431	Willys MA	Jun 41–Aug 41
2031575–2047574	Willys MB	Oct 41–Feb 42
2047614–2050213	Willys MB	Feb 42–May 42
2073506–2078606	Willys MB	May 42
20209017–20256076	Willys MB	Jun 42–Jan 43
2083804–2088730	Willys MB	Jun 42
20298626–20364862	Willys MB	Jan 43–Oct 43
20443317–20458966	Willys MB	Nov 43–Mar 44
20467064–20512063	Willys MB	Mar 44–Aug 44
20561624–20570435	Willys MB	Sep 44
20604517–20663200	Willys MB	Oct 44–Mar 45
20750930–20778081	Willys MB	Mar–Aug 45
702104–709999	Ford GPA	1942–1943
701000–7012103	Ford GPA	1943
7012105–7014878	Ford GPA	1943

B: WILLYS 5CWT 4X4 CAR, "L" DETACHMENT, SAS BRIGADE, WESTERN DESERT, 1942

The legendary Special Air Service made their reputation in the Western Desert campaign raiding Luftwaffe airfields deep behind enemy lines. Their preferred mount was the jeep, modified for desert use by the addition of a surge tank for the radiator. Extra jerricans were carried for fuel and water, and the jeeps received a variety of armament. One of the most common mounts was a pair of .303-cal. Vickers K guns mounted on the passenger side. The jeeps were locally refinished in desert colors, Light Stone BS No. 61, which was standard until October 1942, and then Desert Pink Z.I.

C1: FORD GPA ¼TON AMPHIBIAN TRUCK, 1ST ARMORED DIVISION, TUNISIA, 1942

Tunisia was one of the few theaters where the GPA was widely used in a combat zone. The overall scheme is lusterless olive drab. The Armored Force adopted low-visibility markings painted in Air Corps Yellow No. 4 in January 1942, as seen here in the form of the yellow stars.

A standard companion for the jeep was the ¼ton trailer manufactured primarily by Bantam and Willys. This example is seen near Formia, Italy on May 19, 1944. (NARA)

Army Regulation 850-5 in August 1942 established a white star as the standard national insignia, but vehicles with the yellow star often were left painted in this fashion. The registration number is seen here in the usual blue drab. There are various markings chalked on in white, and the tire pressure markings above the wheels (TP 25, TP 30) are in blue drab. The white encircled spade was probably the marking of the division's 47th Medical Battalion (Armored) but surviving records are unclear on this point.

C2: WILLYS MB, 2D GUARDS MORTAR BATTALION (MOUNTAIN), RED ARMY, CZECHOSLOVAKIA, 1945

A dozen jeeps were modified to carry a lightweight mountain launcher for the M-8 82mm rocket, which was fitted in the rear bed. The Red Army tended to leave Lend-Lease equipment in its original lusterless olive drab, though the launcher is in the standard Soviet 4BO dark green. The rockets are in pale gray with black fins, with the arming propellers on the nose in natural brass.

D: ¼TON COMMAND TRUCK, WILLYS MB, 116TH INFANTRY REGIMENT, 29TH DIVISION, US ARMY, 1944

See plate for full details.

E: WILLYS 5CWT 4X4 CAR, C TROOP, RECCE SQUADRON, BRITISH 1ST AIRBORNE DIVISION, ARNHEM, SEPTEMBER 1944

The jeep was widely used in British airborne divisions for a wide range of roles including reconnaissance, towing artillery, command and communications, transport, and many other functions. There were some 904 jeeps in both of the British airborne divisions, and the smaller airborne formations also used jeeps in significant numbers. There was an organized program for modifying jeeps for the airborne role including adaptations to make it easier to fit jeeps into Horsa gliders. Some of these features are seen here on a recce jeep near the railroad culvert towards Wolfheze where an action involving the two jeeps of Lieutenant Peter Bucknall's C Troop took place. The windshield was deleted, stowage racks were added, the steering wheel was modified to permit it to be folded, and the spare wheel was moved to the front to permit more stowage on the rear. This particular jeep is fitted with a radio as well. The airborne jeeps were generally finished in Shade No. 15 olive drab, which replaced Standard Camouflage Colour No. 2 khaki brown in April 1944. This color was very similar to US olive drab, and was adopted in part to avoid the need to repaint US Lend-Lease vehicles. The British registration numbers were painted in medium blue, and the airborne jeeps also carried a small vertical yellow bar marking on the side panels as a center-of-balance marking.

F1: US ARMY AIR FORCE AIRFIELD CONTROL JEEP, 490TH BOMB GROUP, BRITAIN, JULY 1944

Jeeps were widely used by the USAAF for airfield utility roles. It was common to paint these jeeps in a garish yellow and black checkerboard scheme when operating near runways to make them as conspicuous as possible. In some cases, these runway jeeps were used in the "follow-me" role, directing bombers to their proper parking spots. This is a radio jeep with a large transmitter fitted in the rear compartment, with four wooden antenna poles on the corners.

F2: ROTABUGGY ROTARY GLIDER JEEP, AIRBORNE FORCES EXPERIMENTAL ESTABLISHMENT, BRITAIN, 1944

One of the more outlandish jeep variants was the Rotabuggy, a scheme to make it possible to tow a rotary glider jeep into flight using a free-spinning rotor. The Rotabuggy was painted in typical RAF colors during trials, consisting of the usual dark green/dark brown camouflage scheme, with RAF roundels and fin flash. In addition, it carried the standard

RAF prototype marking, a yellow P inside a yellow circle on the fuselage side.

G: WILLYS 5CWT 4X4 CAR, HQ CANADIAN FIRST ARMY, FRANCE, AUGUST 1944

This was the command jeep of Lieutenant-General H. D. G. Crerar in Normandy. The Canadian Army procured jeeps under their own contracts, and their vehicles carried Canadian census numbers, preceded by CM. The Canadian Army largely followed British practices in terms of markings and camouflage. The Canadian First Army switched from SCC 2 to olive drab in May 1944, though it apparently used US-supplied olive drab rather than the similar British SCC 15. The inset drawing here shows the standard Allied air identification star carried on the hood mandated by Op Memo 20 prior to the D-Day landings. The British and Commonwealth pattern was generally a full circle while the US Army often used a broken-stencil style for the circle around the star. The bright green blob next to the star is a patch of gas detection paint, which changed color to red-brown in the presence of chemical agents. Other markings include the Canadian First Army insignia, the headquarters symbol (white 9 on a black square over a white bar), tire pressure markings over the front and rear wheels (road surface/cross-country), and yellow bridge weight circle.

RIGHT **The intelligence and reconnaissance platoon of the 60th Infantry, 9th Infantry Division developed their own improvised bazooka launcher for their armored scout jeeps, as seen here during the Battle of the Bulge in Belgium on January 16, 1945. (NARA)**

ABOVE **The British airborne forces and SAS developed their own standardized machine-gun mounts for their recce jeeps, evident on this SAS Ford GPW of the French 4th Battalion seen near Florenville, Belgium on December 26, 1944. The armament includes a pair of Vickers K guns on the passenger side and a Bren gun on the driver's side. The driver is protected by armored plate and what appears to be a panel of armored glass. (NARA)**

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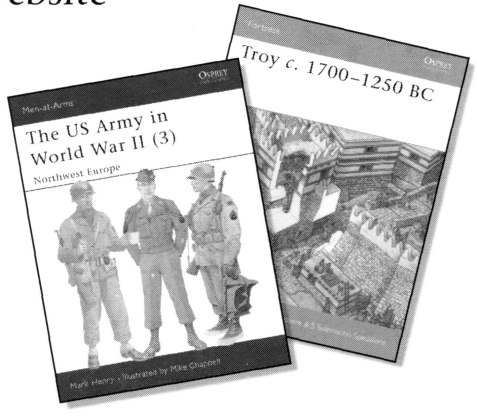

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