



SHERMAN SPECIFICS

A guide to Sherman tank types and terms

By Cookie Sewell

While other tanks were bigger and better, or acquired more notoriety, the M4 Sherman medium tank is one of the most widely modeled subjects ever.

However, there is usually no firm identification with a specific model of the Sherman tank family. What you think of as a Sherman really depends on where you first encountered the Sherman – World War II, Korea, the National Guard, in front of your local American Legion or VFW hall, or on Saturday mornings being stomped into oblivion by Godzilla! It was used around the world, and most users put their own “stamp” on the tank while in their service.

Armor enthusiasts use a lot of shorthand when describing various Sherman models. Here is a list of basic terms, plus descriptions of some of the variations in key parts.

Sherman terminology

VVSS – Vertical Volute Spring Suspension. This is the early type of Sherman suspension. The springs which the tank uses for suspension are mounted vertically inside the suspension

units or bogie assemblies. Its most obvious features are single wheels and a ribbed cast housing over the springs themselves. **1.** **Return rollers** – All Shermans with VVSS had small rollers under the top or return run to prevent the track from jumping off the drive wheels or snagging. There were three basic types of return rollers, or “helper wheels.” The first was mounted directly on top of the suspension unit; some modelers call this the “M3 Style” as it was the same type used on the earlier M3 series tanks. Next was the “straight top” return roller, which bolted on at the back of the suspension unit. Its top was parallel to the top of the suspension unit itself. These rollers often had to have extensions or “pillow blocks” to lift the wheels up high enough to prevent the track from snagging. The last type was the “upswept” return roller, which was slanted upward and to the

rear of the tank to provide more lift in the roller.

HVSS – Horizontal Volute Spring Suspension. This is the later suspension, which let the tank travel better over rough terrain and was more comfortable for the crew. The springs lie flat on the bogie assembly and are fitted in opposed pairs. Its most obvious features are dual wheels with a shock absorber above the cylindrical spring units, **2, 3.** (It also uses wider tracks.)
Nose – The transmission on the Sherman and its predecessors was at the front of the tank with the engine at the rear. An armored cover was placed over the transmission, held in place with bolts for access to replace or repair it. There are three types of covers, called “noses”; three-piece, the first type, which consists of three sections held together with large flanges fastened together with bolts; soft nose, the early type of casting, which rolls under fairly smoothly; and sharp nose, which has a pronounced wedge shape to the front.
Hulls – Shermans came with one of five basic hull types. The *early cast hull* was very smooth with tiny crew hatches, and the *late cast hull* was much more bulbous with large crew hatches. The *early welded hull*, a flat-sided hull with small hatches and a sharply slanting front plate or glacis, was also called the 56-degree hull for its slope. The *late welded hull*, a flat-sided hull with large hatches and a steep angle to its front plate, was sometimes called the 47-degree hull. Finally, the *composite hull* was a flat-sided welded hull with a front section similar to the front of a cast hull welded to it.



Do you have trouble with individually linked tracks? Try doing it full-scale, in December 1944. These 9th Army soldiers are fixing tracks on a mid-production M4 in Germany. U.S. Army photo



Even when fitted with M17 rocket launchers, these Shermans could also be used as chairs during mail call. Note the differences between the welded (left) and cast hulls. U.S. Army photo



Under the protection of an M4 Sherman equipped with applique armor plates, soldiers of the 60th Infantry Regiment advance into a Belgian town Sept. 9, 1944. National Archives photo

rear of the tank to provide more lift in the roller.

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“Early” tanks are also called “dry stowage” as ammunition

was stored in racks; “late” tanks are called “wet stowage” as their racks were ensconced in fluid-filled bins which would put out any fires caused due to damage, lessening the chance of an explosion.

Turrets – Shermans came with one of three basic types of turrets. The first turrets were *single-hatch* types, which had only one hatch on the right for the turret crew to get in and out of the tank. It was usually covered with a two-piece lid, and most of these turrets had a very steeply angled rear to the turret (also called a “low bustle”). All of them carried short 75mm cannons. The later turret type was the *two-hatch* turret, which had a new hatch on the left for the loader to use when entering or exiting the tank. The rear of the turret roof was much flatter (also called “high bustle”), and this turret could mount either a 75mm cannon or a 105mm howitzer. The last turret type was called the *T23* since it looked similar to a turret designed for a prototype tank called the T23. It had two hatches, but was larger and had an undercut at the rear of the turret and a totally flat roof at the rear. This tank mounted a long 76mm gun.

Cannon – A British 17-lb gun was mounted for Shermans in Commonwealth service; French 75mm or 105mm weapons were used for Israeli service.

U.S.-based Shermans carried four different main guns, including either the very short M2 75mm gun (first seen with a large counterweight on its end to compensate for the difference in weight with the M3 gun) or the more common M3 75mm gun. Shermans also mounted the M4 105mm howitzer for close



support artillery in U.S. divisions.

The final U.S. models carried the M1 76mm gun, which was primarily designed for tank-versus-tank combat. These came with a smooth barrel or a threaded muzzle for a muzzle brake. Some early 76mm tanks came with a smooth "keeper" which screwed over the mount for the muzzle brake until production muzzle brakes were issued (see Italeri's 1/35 M4A1 kit above).

Tracks – There are a large number of track types used on Shermans. Of all the aftermarket accessories for Sherman kits, tracks are by far the most popular. Modelers have names for tracks which have to be "translated" in order to get the ones desired. They include the following:

VVSS Tracks
Rubber block – either T41 "reversible" or T51 "non-reversible" (thicker on one side than the other). Smooth, flat track links.

1 Sherman models come in all scales and mediums. Here are three styrene kits – Arai's 1/350 scale M4A1 76mm (middle), the Heiser's Models 1/87 scale M4 (bottom), and Italeri's 1/35 scale M4A1 76mm. Cookie Sewell photos pp 36-37

Rubber chevron – T48 tracks. A thick V shape on the outside of the track link, which when correctly installed on the tank has the "V" shape when viewed from the front.

Steel chevron – comes in U.S. (T54 and T62 types) or UK patterns; UK ones are more rounded. T54E1 tracks have gaps on either side and are the most common U.S. ones used.

Three-bar cleat – T49 tracks, an all-steel link with two bars on one side and one on the other for increased traction on hard ground and ice.

Canadian dry pin – Canadian-produced steel links which required only one pin to hold them together. These were found

2 The Dragon M4A3 (76) W HVSS Sherman model. This version was originally dubbed E8 for the suspension modification to the HVSS changes, but was usually just called HVSS or wet stowage if referred to as anything other than a medium tank, 76mm.

on Canadian-produced or -used vehicles using M3 and M4 tank chassis.

All VVSS tracks could be fitted with "grousers," or bars which clipped on across the joints between track links to increase traction, as well as "duckbill" extensions to increase the ground area for better flotation on soft ground.

HVSS tracks
Cast links – T66-type single-pin tracks, used on late WWII Shermans.

Steel chevron – T80 pattern. Shermans used a unique guide in the middle of the track which looked like a hollow

3 This is a Tamiya M4A3 hull with an Italeri M4A1 turret. With a modified suspension from the old Tamiya M4A3E8 Sherman, it was rebuilt to portray an M4A3 76mm HVSS tank in Korea. Now you can build one with Dragon's M4A3E8 kit.

square instead of a tooth.

Rubber chevron – T84 pattern. Similar to the T80 but with a wide rubber chevron on the face of the link.

Once you can "decode" the various Sherman types, you'll be ready to look for the right Sherman kit. In the March issue I'll cover the pros and cons of available kits. FSM

Did you guess correctly?
 The Sherman on page 34 is an early-production M4.

Background reading: Four essential books on Shermans

The Sherman Tank in U.S. and Allied Service by Steven J. Zaloga, Osprey, New Vanguard No. 3, is a concise operational history of the Sherman tank in U.S. and other Allied service.

Walk Around: M4 Sherman by Jim Mesko, Squadron/Signal Publications, is a great detailed single-source reference for modelers of Shermans.

Another good book is *The Modeler's Guide to the Sherman: A Complete and Comprehensive Guide to Modeling the U.S. Gun Tank in 1/35 Scale* by Pete Harlem, Ampersand Publishing. It includes photos of the models under construction and finished, actual Shermans, and a number of plans and detail views of specific items of "Shermania."

If money is no object the best single-source reference is *Sherman: A History of the American Medium Tank* by R.P. Hunnicutt, Presidio Press. It now costs \$100 but in 575 pages it covers a true wealth of material on the M2, the M3 and the M4 series tanks, plus Commonwealth variants and all of the "cousins."
 – Cookie Sewell

Versions and features

The M4 fixed the one great problem of its predecessor (the M3 Lee) by having a large rotating turret with the 75mm cannon and a coaxial machine gun, plus a flexible bow gun and an anti-aircraft machine gun. The cannon and machine gun calibers changed over the M4 production run, as did the design of the hull, turret, and running gear, but all were clearly recognizable as M4 series tanks. More than 49,000 M4 series tanks were built. The following is a "cheat sheet" for Sherman types:

M4 medium tank (6,748 built) – M4 tanks had a solid engine deck and a Wright/Continental air-cooled radial engine. They came in variations as M4 Early (three-piece nose, 56-degree hull, single-hatch turret, 75mm gun), M4 Late (soft-cast nose, 47-degree hull, double-hatch turret, 75mm gun) and M4 Composite (sharp-cast nose, composite hull, double-hatch turret, 75mm gun)

M4 howitzer (105) tank (75 built) – sharp-cast nose, 47-degree hull, double-hatch turret, 105mm howitzer

M4A1 (6,281 built) – All M4A1 tanks had a solid engine deck and a Wright/Continental air-cooled radial engine. M4A1 Early (three-piece nose, rounded hull, single-

hatch turret, 75mm gun) and M4A1 Late (soft-cast nose, rounded hull, single-hatch turret, 75mm gun)

M4A1 medium tank (76) wet stowage (3,426 built) – sharp or soft nose, bulbous hull, T23 turret, 76mm gun

M4A2 medium tank (8,053 built) – all M4A2 tanks had a small set of grille doors in the engine deck and twin GMC diesel engines (soft-cast nose, 56-degree hull, single-hatch turret, 75mm gun)

M4A2 medium tank (76) wet stowage (2,915 built) – sharp-cast nose, 47-degree hull, T23 turret, 76mm gun

M4A3 medium tank (1,690 built) – all M4A3 tanks had a large set of grille doors in the engine deck and a Ford GAA V-8 engine (soft-cast nose, 56-degree hull, single-hatch turret, 75mm gun)

M4A3 medium tank (75) wet stowage (3,071 built) – sharp-cast nose, 47-degree hull, double-hatch turret, 75mm gun

M4A3 medium tank (76) wet stowage (4,542 built) – sharp-cast nose, 47-degree hull, T23 turret, 76mm gun

M4A3 howitzer tank (105) wet stowage (3,039 built) – sharp- or soft-cast nose, 47-degree hull, double-hatch turret, 105mm howitzer

M4A3E2 assault tank (254 built) – special 40-ton

"Jumbo" model with thicker armor
M4A4 medium tank (7,499 built) – all M4A4s had an extended hull and a Chrysler "Multibank" 30-cylinder engine (three-piece nose, 56-degree extended hull, single-hatch turret, 75mm gun)

M4A6 medium tank (75 built) – the M4A6 had an Ordnance-designed air-cooled radial diesel engine (sharp-cast nose, composite hull, double-hatch turret, 75mm gun)

British versions used a simple designation system:
Sherman I M4
Sherman II M4A1
Sherman III M4A2
Sherman IV M4A3 (never used)
Sherman V M4A4

The most common British versions were the II, III and V. The British created "Firefly" models with 76.2mm 17-lb guns; these carried a suffix letter C (e.g. Sherman VC Firefly). Other suffixes were A for 76mm gun models, DD for "Duplex Drive" or "swimming" tanks, and Y for HVSS-equipped tanks. A Canadian M4A1, dubbed the "Cruiser Tank Grizzly I," was only briefly produced, as U.S. sources were able to meet Commonwealth needs. – Cookie Sewell