

U.S. LIGHT TANK M3 STUART

1/35 MILITARY MINIATURE SERIES



To reinforce U.S. armored units, the Army Ordnance Department placed a contract in October 1939 with the American Car & Foundry Company in Berwick, Pennsylvania for the production of 329 M2A4 light tanks, the last variant of the M2 series of light tanks which was armed with the 37mm gun M5.

The M2A4 light tank was developed by Rock Island Arsenal in Illinois on the basis of the preceding M2A3, with the design requiring approximately 3,000 drawings and 14,000 parts. They were supplied to reinforce British armored units, which had lost about two thirds of their tanks during the Battle of France, through the Lend-Lease Act that came into effect on March 11th, 1941. Based on observations of the battles in Europe, it was deemed necessary to strengthen the M2A4's armor protection and suspension system, and Rock Island Arsenal began work to incorporate these improvements into the tank's successor. The protruding sections of the frontal armor were increased to 51mm thickness and other sections increased to 38mm, and the vision ports on the turret were removed to enhance overall turret armor strength. To improve suspension reliability, the raised idler wheels were replaced by ones which trailed on the ground. The engine deck was lengthened to accommodate this, so the armor protecting the engine was revised to offer more effective protection against aircraft strafing attacks. This improved design was adopted as the M3 light tank on July 5th, 1940 and was named after the famous American Civil War Confederate cavalry commander General J. E. B. Stuart. In British use, they were known as General Stuart Mk.I, with diesel-engined tanks designated General Stuart Mk.II. The British also affectionately called them by the nickname "Honey."

After M2A4 production ended, American Car & Foundry produced 5,311 M3 Stuart Mk.I from March 1941 to August 1942 and they were classified into early, mid, and late production variants. The early production variant was powered by a 250hp Continental W670-9A radial 7-cylinder air-cooled gasoline engine and equipped with a vertical volute spring suspension system. Mounted on a hull of riveted construction was an angular turret, also of riveted construction, which had a commander's cupola. In addition to the 37mm main gun, 0.30 (7.62mm) caliber M1919A4 Browning machine guns were mounted on sponsons on each side of the hull, on a turret coaxial mount, and also on the front mount. A 0.30 (7.62mm) caliber M5 Browning machine gun was fitted on the anti-aircraft mount on the commander's cupola.

The mid production model produced from the middle of 1941 was a combination of a new cast turret with a commander's cupola mounted on the early production hull. The cast turret was designed from the end of 1940 with the intention of making the tank lighter and eliminating the danger of rivets being scattered when the tank was hit, and was put into production in March 1941.

The late production model combined a new welded hull with the welded turret of the mid production model. It employed a gyro-stabilizer manufactured by Westinghouse in about 1941 to improve the 37mm main gun's shooting performance while on the move. It also carried a drum-shaped auxiliary fuel tank with a capacity of ninety-five liters on each side of the hull to increase its operation range.

As WWII grew in intensity, the increasing demands from the aircraft industry made it ever more difficult to continue using Continental radial engines for tanks. Under these circumstances, a 250hp T102-G radial 9-cylinder air-cooled diesel

engine developed by Guiberson was installed in the Stuart Mk.I in place of the Continental W670-9A radial engine. These diesel-powered tanks were designated Stuart Mk.II and about 500 were produced. Therefore, combining the production numbers of both the Mk.I and Mk.II, a total of 5,811 examples of the M3 light tank were produced.

Under the Lend-Lease Act, 280 out of the 538 M3 General Stuart Mk.I light tanks manufactured by American Car & Foundry during the three-month period from April to June of 1941 were supplied to the British, in addition to M2A4 light tanks which had already been provided to them earlier. In July of that year, eighty-four tanks were shipped to Suez in Egypt and the port of Massawa and delivered to the tank companies of the 8th Light Cavalry regiment, 4th Armored Brigade, 7th Armored Division "Desert Rats," which had withdrawn from the Libyan Desert to Egypt for rest and reorganization after taking part in Operation Battle Axe. In other British armored units, each regimental headquarters received one to four tanks, and each of the three regimental companies received twenty. These Stuart Mk.I tanks were supplied to replace the Mk.I (A9), Mk.II (A10), and Mk.III (A13) cruiser tanks which were then in use by the British.

On November 18th, 1941, the M3 General Stuart Mk.I light tanks of the British 8th Army, which had withdrawn to the Egyptian border, defeated German Africa Corps armored units and reoccupied Cyrenaica. Thereafter, the British initiated Operation Crusader for the purpose of occupying Tripolitania. M3 light tanks were deployed with the 8th Light Cavalry, 3rd Armored, and 5th Armored Regiments of the 4th Armored Brigade, 7th Armored Division, XXX Corps which were in the van of the attack. Thus, these 165 tanks were the first American tanks to see action in the North African front as part of the British forces. Afterwards, M3 Stuarts served as reconnaissance tanks in the armored reconnaissance regiments of armored divisions and saw action in Italy and other parts of Europe until the end of 1944.

In the Pacific Theater, the M3 Stuart first saw action on January 21st, 1942 during the Battle of the Pockets in Bagac in the Philippines against the 20th Infantry Regiment, 16th Division of the Japanese 14th Army. At that time, the 192nd and 194th Armored Regiments (these did not have B Company), equipped with fifty-four M3 light tanks each, made up the armored force of the U.S. Army Forces Far East. However, since the tanks were divided into small groups, they did not achieve any successes and were defeated by Japanese forces. After the Battle of Corregidor, several captured M3 light tanks were sent back to Japan for study and evaluation and were displayed for public viewing. At the end of 1943, Allied units under the command of the South East Asia Command, such as the Indian 254th Armored Brigade, deployed M3 General Stuart Mk.I light tanks in Burma together with M3 General Lee Mk.I medium tanks. The 5th Company of the Japanese 14th Armored Regiment was equipped with five M3 light tanks which they had captured when they pursued the British 17th Indian Division during their offensive toward Imphal. On 22nd March 1944, the 5th Company threw these five captured M3 light tanks into battle near Thonze to support the 2nd Battalion of the 214th Infantry Regiment, but four of them were destroyed on the roads by mines laid by the retreating forces. Thus a battle between M3 light tanks from both sides never materialized.

Research and support courtesy of Yukio Kawai



**READ BEFORE
ASSEMBLY.**
**ERST LESEN
— DANN BAUEN.**

★Study the instructions and photographs before commencing assembly.

★You will need a sharp knife, a screwdriver, a pair of tweezers, a file, and a pair of pliers.

★Do not break parts away from sprue, but cut off carefully with a pair of pliers.

★Before finally cementing each part together, be sure that parts fit correctly together. And that you are of the next sequence to be followed.

★Use glue sparingly. Use only enough to make a good bond. Apply cement to both parts to be joined.

★Painting Your Model

As well as improving the reality of your completed model, painting will give you greater satisfaction to make your own model. Moreover, paint coat ensures a good application of decals.

★Small parts and internal parts should be painted while still on the sprue.

★For your painting scheme, refer to instructions on the opposite page.



This mark shows which colour to be painted.

(How to Construct Your Stuart Model)

See the figures carefully, and follow each construction step in the order of wheels assembly, lower hull, upper hull, and then turret. Fix upper and lower hull halves together with glue.

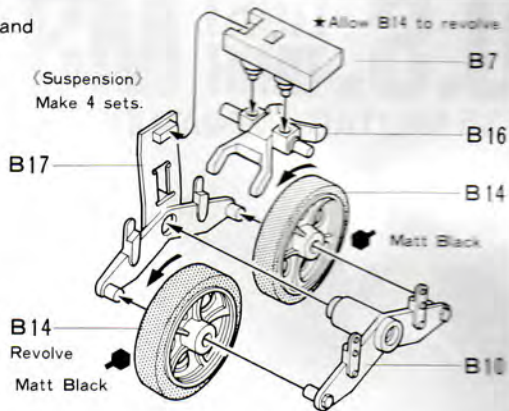
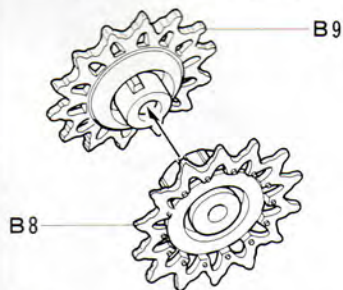
(Construction of Tracks)

Use a heated screwdriver, or a nail. Pass pins through holes and heat-weld pin heads.

1 Construction of Suspension and Drive Sprocket

(Drive Sprocket) Make 2 sets.

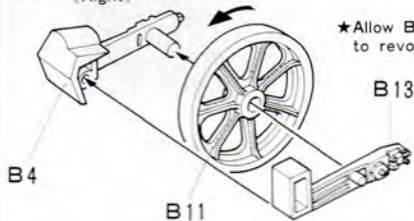
(Suspension) Make 4 sets.



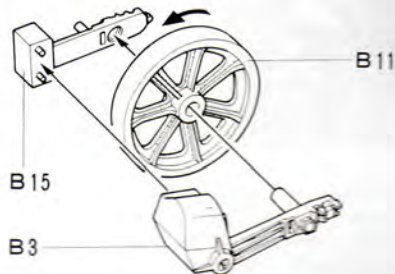
2 Construction of Idler Wheels

(Right)

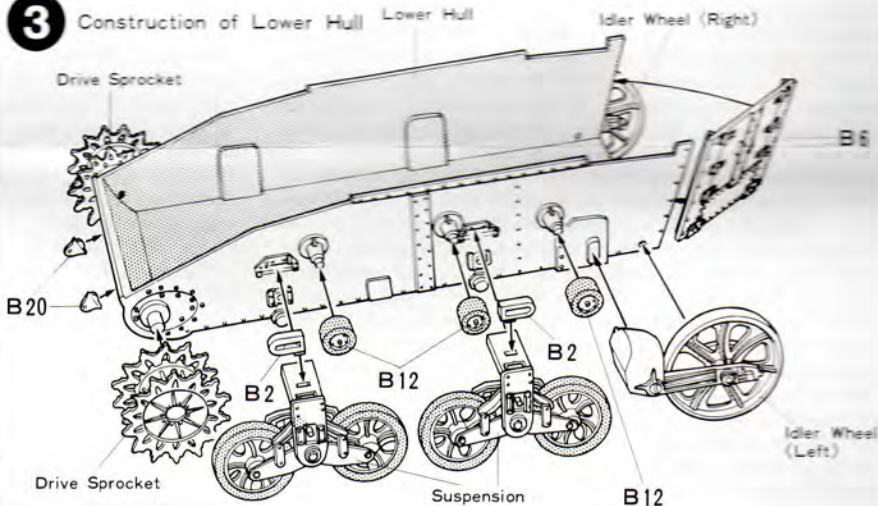
★Allow B11 to revolve.



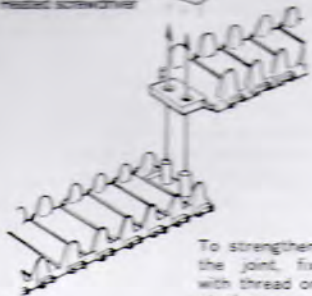
(Left)



3 Construction of Lower Hull



Heat screwdriver



To strengthen the joint, fix with thread or staplers.

(How to Make Antenna)

Heat the runner and when its centre portion begins to melt, stretch both ends to the thinness wanted and hold it still to cool. Cut an 8cm-long piece and cement.



★Caution: Careless handling of fire may cause injury or fire accident.

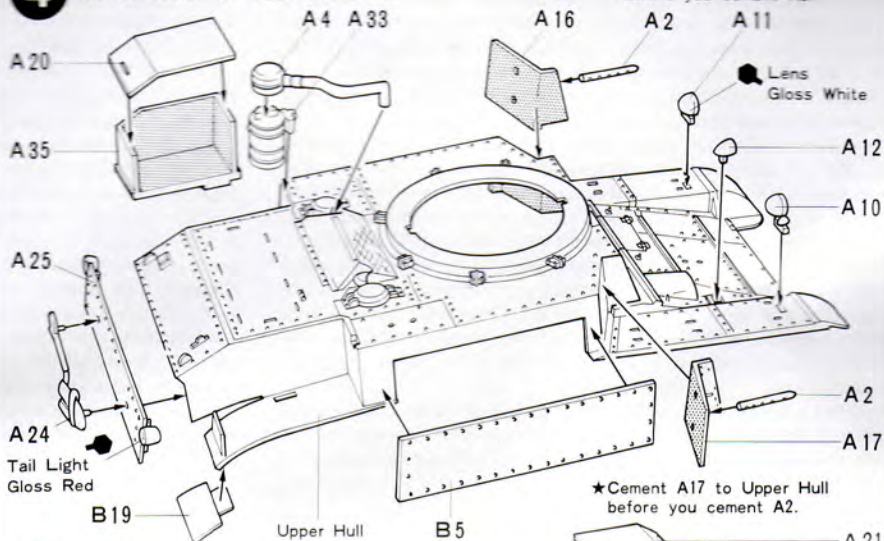
(Construction and Painting of Figure)

Construct Figure as shown below. If you prefer to place Figure to Turret, cement Hatches A30 and A31 in open position. Place Figure after the painting has finished and the paints dried thoroughly.

Olive Drab
Gloss White
Flesh

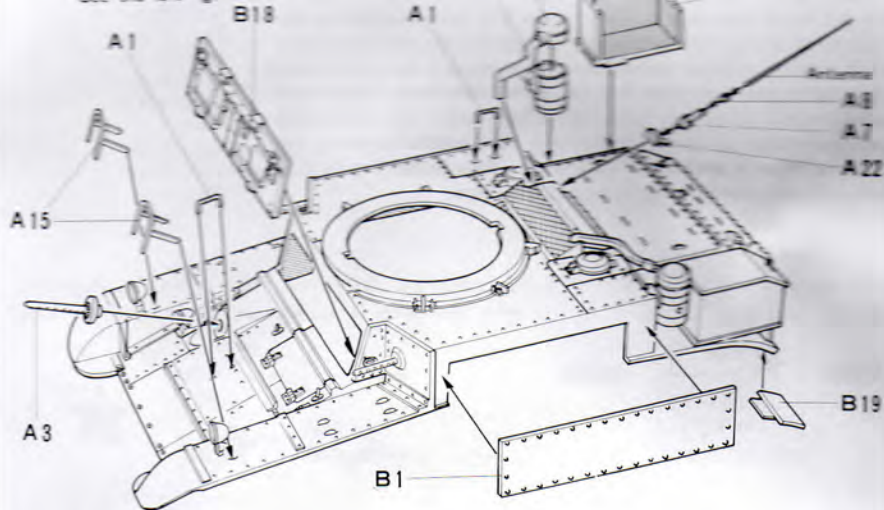


4 Construction of Upper Hull (1)



5 Construction of Upper Hull (2)

See the left figure and make Antenna.



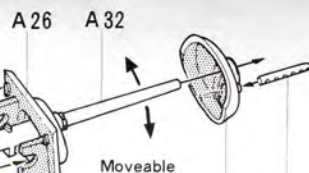
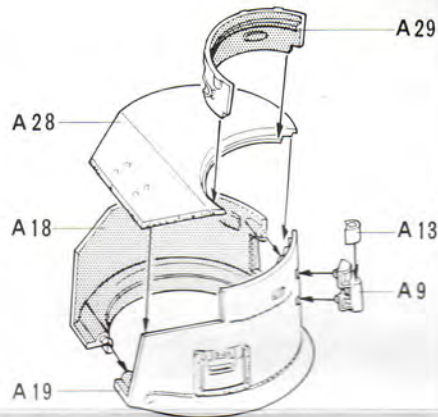
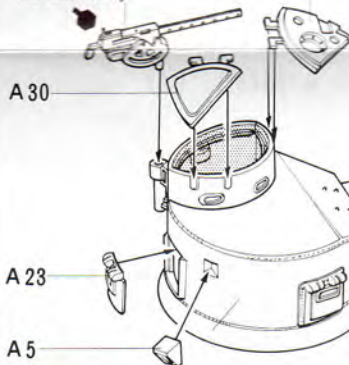


6 Construction of Turret

- ★A32 is moveable. Do not cement to A26.
- ★Fix Hatch Halves A30 and A31 in either open or closed position.
- ★If you prefer to mount Figure, cement Hatch Halves in open position.

Load Figure here.

A14
Do not cement.
Metallic Grey

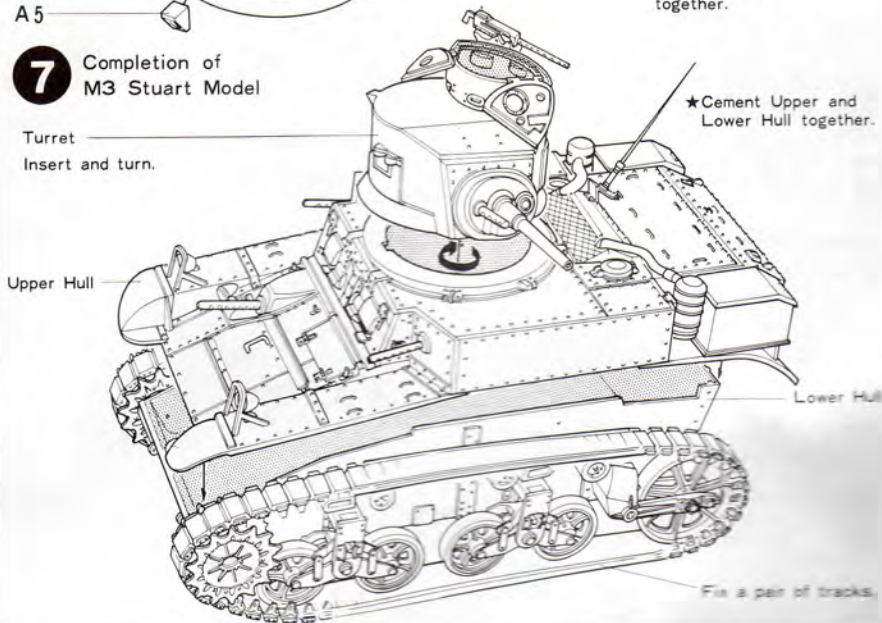


A27 A2
Cement A27 and A32 together.

7 Completion of M3 Stuart Model

Turret
Insert and turn.

★Cement Upper and Lower Hull together.



Fix a pin of tracks.

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《Painting of the M3 Stuart》

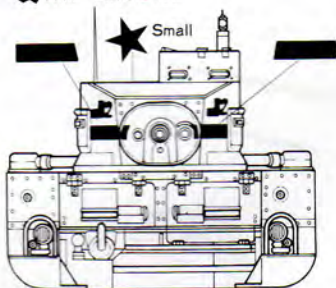
The M3 Stuart was not only used by the U.S. Army but also by the majority of Allied armies such as the British, Italians, and Canadians. Paint schemes differed depending on each nation's army and where they saw service. U.S. tanks featured overall Olive Drab. British tanks in North Africa featured a base coat of Dark Yellow and some tanks had camouflage patterns applied over it. Canadian tanks in the European Theater were overall Dark Green. Many British Stuarts were equipped with side skirts and smoke dischargers.

《Paint Colour List》

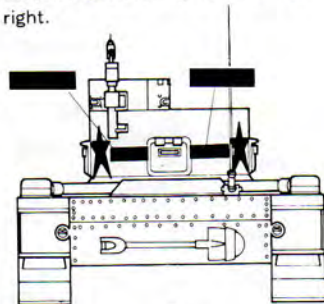
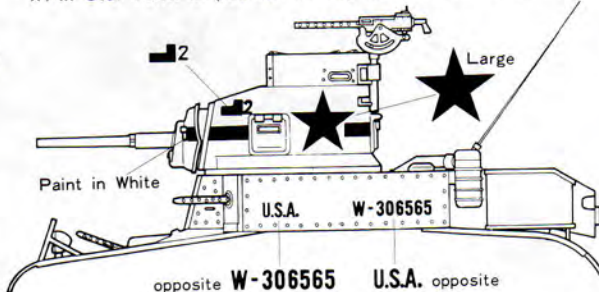
Matt Black	Gloss White
Matt Brown	Flesh
Dark Green	
Light Grey	
Gloss Red	
Khaki	
Matt White	
Dark Yellow	
Olive Drab	

《U.S. Army, Tunisia》 No. 2

● Hull—Olive Drab

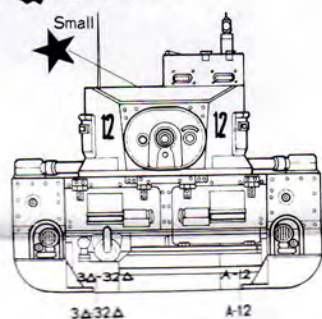


C Company, 1st Battalion, 13th Armoured Regiment, 1st Armoured Division (Late 1942)
★ Fix Star Mark in position on top of turret as shown below right.

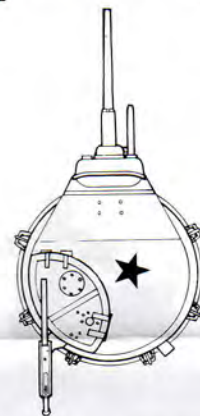
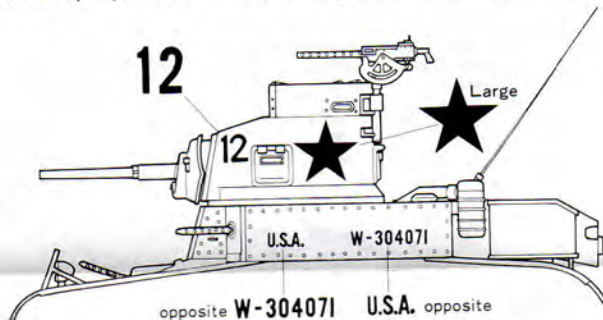


《U.S. Army, Europe》 No. 12

● Hull—Olive Drab

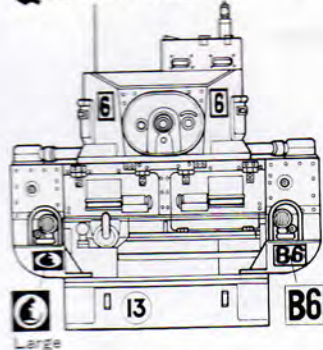


A Company, 32nd Armoured Regiment, 3rd Armoured Division.

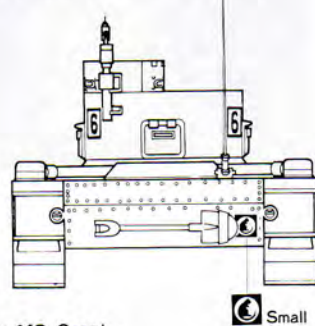
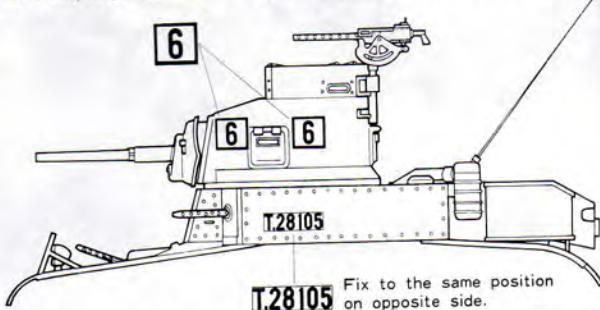


《British Army, Africa》 No. 6

● Hull—Dark Yellow



B Company, 8th Lt. Cavalry Regiment, 4th Armoured Brigade, 7th Armoured Division.



《Canadian Army》 C Battalion, 22nd Armoured Regiment, 4th Canadian Armoured Brigade.

● Hull—Dark Green

