

# U.S. Army M60A1 Medium Tank

1/35 IDENTICAL SCALE SERIES

NO.28 ★IT'S MOTORIZED! ★EASY TO ASSEMBLE ★ALL PLASTIC MODEL

★READY TO CEMENT



On October 16, 1963, the first M60A-1 tank was produced at the Warren Army tank plant located in the outskirts of Detroit, Michigan, the mecca of the U.S. automobile industry. It was the 35,000th tank since the first M2A1 tank in July, 1941, that had been produced at the plant, which was established as the first mass-production tank plant in the U.S.

The M60A-1, the main strength tank of the U.S. Army, is an improved version of the M60 tank. It has been called one of the masterpieces in the whole history of the U.S. tanks thanks to the best-balanced performance of its fire-power, maneuverability and defensive armour altogether.

In March, 1958, new Soviet T-54 tanks each armed with a 100mm gun were disposed throughout the Soviet Union and the Warsaw pact countries. It was reported at the time that the few tanks numbered nearly 30,000. However, the U.S. then had no tank enough to rival the T-54 as its main strength M48A2 Patton tank



M48A2. At the end of 1958, an experimental model was developed consisting of the M48A2 hull equipped with a diesel engine and an American version of a British Vickers L7A1 105mm gun—a M68 gun. In 1959, the Army ordered trial manufacture of the model. One hundred eighty of them were produced and underwent a long performance test. Since May, 1960, a large-scale production programme was put to practice and about 720 were produced in the same year. However, the produced M60 had still to be termed inferior to the Soviet T-54 in overall performance, although in its fire power it was certainly a good match to the latter. Besides, it had many points to be further improved as it had been developed in such a hurry at the "eleventh" hour.

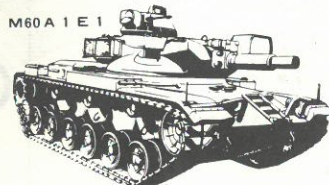
In 1962, a prototype of the M60A-1 was completed. A great difference in its outward appearance was its gun turret of monobloc casting in a much smart shape. Official explanation for this improvement was that it was meant to better bullet- and shell-proof performance. In reality, however, with the improvement, interior space of the gun turret was enlarged, living conditions much improved and number of shells carried was increased from 57 to 63.

The M19 machine-gun turret of a champagne cork shape, which was fixed onto the main gun turret, was able to protect the gunner inside fully from bullets of small-calibre guns and shell splinters of larger guns. The M68 105mm main gun was said to fire shells that could pierce through the frontal armour of the Soviet medium and T-10 Stalin tanks: When the APDS shells were used at the initial velocity of 1450m/sec, while with HEP and HEAT shells, at a distance of 2,000m.

As for machine guns, the tank was mounted with a M85 12.7mm one at the machine gun turret for the tank leader. The MG was specially produced for use aboard a tank. Also, a 7.62mm MG was mounted coaxially with the main gun. Engine was a Continental AVDS 1790 diesel

engine, the same as that of the M60. However, it was a much improved one with less fuel consumption and capable of a much longer cruising radius reaching up to 500km.

To reduce the increased weight as a result of improvements in various sections, aluminium alloy was used to produce light weight suspension arm and upper rollers. Also, the 1st, 2nd and 6th wheel suspensions were newly equipped with shock absorbers to absorb shocks from ground. Superior armour of the M60 was taken over wholly intact. The frontal armour 114mm thick and with a slope of 37 degrees had a first-rate power to resist bullets and shells. For submerged river-crossing, the tank was equipped with a canning tower, a cylindrical diving tube, which enabled it to wade through a river up to



4m deep. Other equipments included various filter devices to protect the tank crew from radiation, chemicals and bacteria. All in all, the M60A-1 was a proud main strength tank of the U.S. Army, credited with suitable equipments and substantial power.

Currently, the M60A-1s together with the M60 A-1E-1s, each armed with a 152mm gun launcher, and the M60A-1E-2s are active as main strength tanks of various mechanized units stationed in West Germany and Mainland U.S. for the defense of the free world.

## Essential Specifications

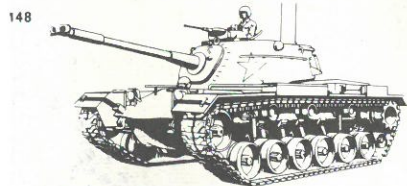
Overall length: 9.44m Overall width: 3.60m  
 Overall height: 3.26m Hull weight: 44.0 ton  
 Engine: A Continental AVDS 1790 diesel V12 air-cooled engine  
 Power: 750HP/2400 rpm  
 Maximum speed: 46.5km/h  
 Cruising distance: 496km  
 Armaments: A M68 • 105mm gun, a M85 • 12.7mm machine gun and a M73 • 7.62mm MG  
 Number of crew: Four



**TAMIYA**

TAMIYA PLASTIC MODEL CO.  
 628 OSHIKA, SHIZUOKA-CITY, JAPAN  
 TELEPHONE 86-5105

KIT NO. MT128



is markedly inferior to the latter in point of overall capability as well as its firepower.

It was the M60 that had been developed in order to overcome this inferiority in quality as far as possible. To shorten the period of development, it was based on the design of the

# PARTS

## Part, A (wheel parts)

- Support Rollers, outside and inside
- Idler Road Wheel, outside
- Idler Road Wheel, inside

## Parts, B (lower hull parts)

- Lower Hull Side Plate, right
- Lower Hull Side Plate, left
- Remote-control Adapter (not necessary in case of "S")
- Upper Hull Front Hook
- Caterpillar Adjusting Link, right
- Mission Adjusting Cover
- Caterpillar Adjusting Link, left
- Infrared "See-in-the-dark" Light
- Final Drive, right
- Drive Sprocket, inside
- Drive Sprocket, outside
- Driver's Hatch Slide Arm
- Final Drive, left
- Exhaust Tube
- Hauling Hook
- Upper Hull Rear Hook
- Front Torsion Bar Arm, right
- Front Torsion Bar Arm, left
- Centre Torsion Bar Arm
- Rear Torsion Bar Arm
- Head Light Guard, left
- Volute Bumper Spring (single), left
- Front Hook
- Volute Bumper Spring (double), left
- Volute Bumper Spring (double), right
- Driver's Hatch Shaft Stopper, right
- Driver's Hatch Shaft Stopper, left
- Support Roller Pin
- Shock Absorber
- Head Light Guard, right
- Volute Bumper Spring (simple), right
- Commander Dummy's Right Arm
- Commander Dummy's Left Arm
- Commander Dummy's Body
- Hatch Shaft

## Parts, C (upper hull parts)

- Rear Hook
- Air Cleaner Cover, left
- Air Cleaner Cover, right
- Gun Travel Lock, upper
- Gun Travel Lock, lower
- Driver's Seat
- Gun Travel Lock Hinge
- Head Light
- Air cleaner's Main Body, left
- Air cleaner's Main Body, left
- Air cleaner's Main Body, right
- Lower Hull Suspension Hook
- Driver's Seat Rear Plate
- Infrared "See-in-the-dark" Light Side Panel, left
- Infrared "See-in-the-dark" Light Side Panel, right
- Rear Panel
- Hauling Hook Base Section
- Hauling Hook Arm, left
- Hauling Hook Arm, right
- Upper and Lower Hulls Stopper Parts
- Tool Box Cover, A, right
- Tool Box Cover, A, left
- Driver's Floor
- Air cleaner Side Plate, right
- Air cleaner Side Plate, left
- Driver's Hatch
- Infrared "See-in-the-dark" Light Rear Plate
- Infrared "See-in-the-dark" Light Head
- Tool Box Cover, B, left
- Tool Box Cover, B, right
- Oxygen Bomb

## Parts, D (gun turret parts)

- Loader's Hatch
- Commander's Hatch
- Range Finder Cover, left
- Range Finder Cover, right
- M19 Cupola, upper section
- M19 Cupola, lower section
- Gun Shield
- Infrared "See-in-the-dark" Light Stay, A
- Gun Barrel Drum
- Ventilator Cover
- Tank
- Infrared "See-in-the-dark" Light Stay, B, right
- Infrared "See-in-the-dark" Light Stay, B, left
- Turret Hook
- Gun Shield Hook
- Gun Barrel, left
- Gun Barrel, right
- Turret Hook, B
- Upper Gun Turret

## Parts, E (hand-rail parts)

- Basket Stay, A
- Basket Stay, B
- Basket Pipe, A
- Basket Pipe, B
- Basket Stay, C
- Gunner's Hand-rail, right
- Basket Pipe, D
- Basket Pipe, C
- Gunner's Hand-rail, left

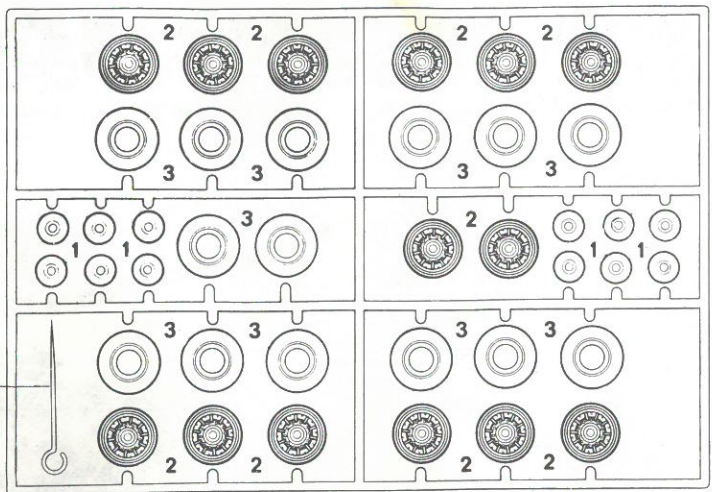
## Parts, F (polycap parts)

- Idler Road Wheel Cap
- Sprocket Wheel
- Upper and Lower Hull RX Cap (including one auxil (including one auxiliary parts)

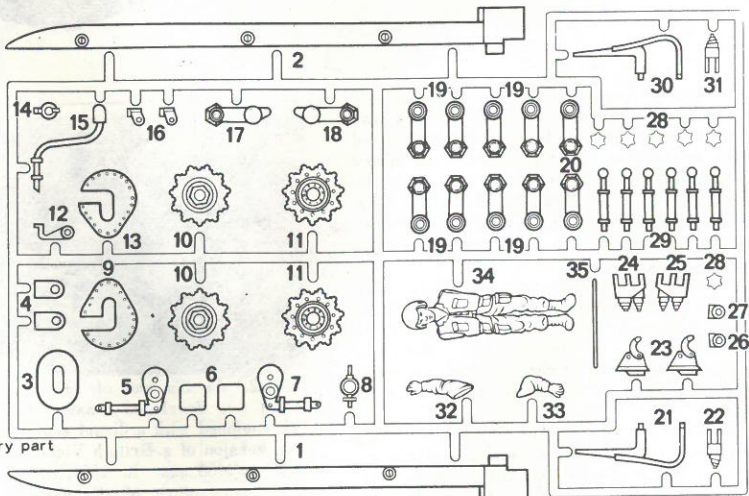
## Parts, M (metal parts)

- Pinion Gear, (1)
- Gear Box, (1)
- Motor Bracket, (1)
- Bracket Stopper Vis
- Gearbox Stopper Vis, (1)
- Battery Receptacle Metal, (1)
- Reverse Switch, (1)
- Front Shaft, (1)
- Drill Shaft, (1)

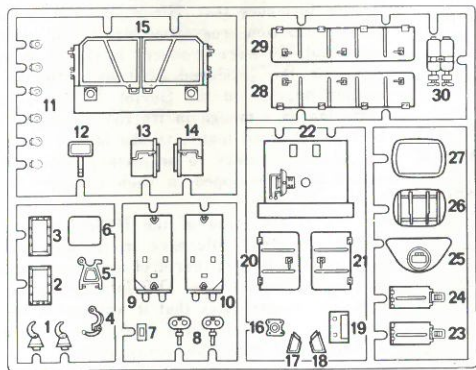
**A**



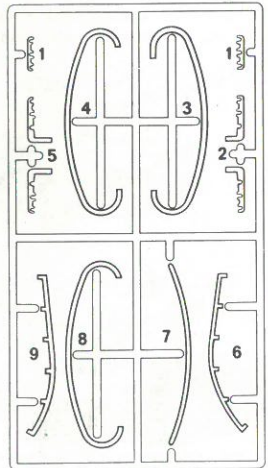
**B**



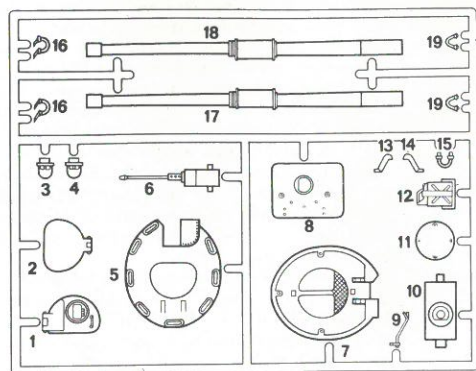
**C**



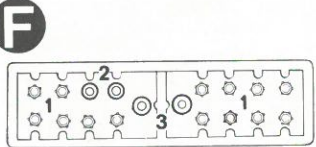
**E**

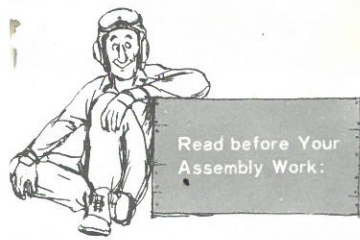


**D**



**F**





Read before Your Assembly Work:

★Don't start your assembly work in haste but be sure to read the following instructions and diagrams carefully beforehand.

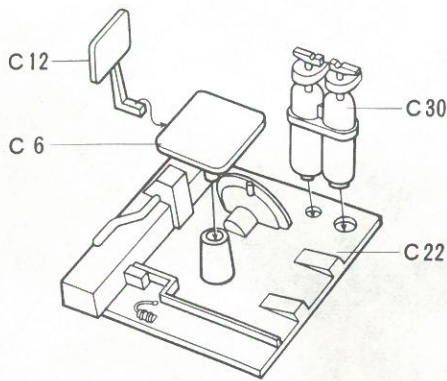
★When removing parts from the runner, don't wrest it with your hand but be sure to cut it off carefully with a knife, a pair of nippers, or the like.

★Don't apply adhesives too much but little by little onto both surfaces to be glued together.

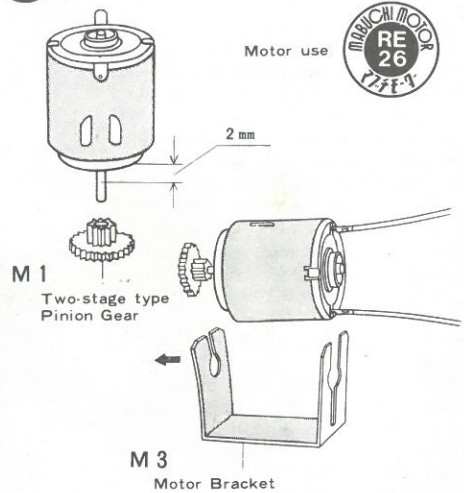
★When painting smaller parts, do an easier job and paint them while they are still on the runner.

★Have a small driver, a pincette, a knife, Scotch tapes, etc., ready at hand.

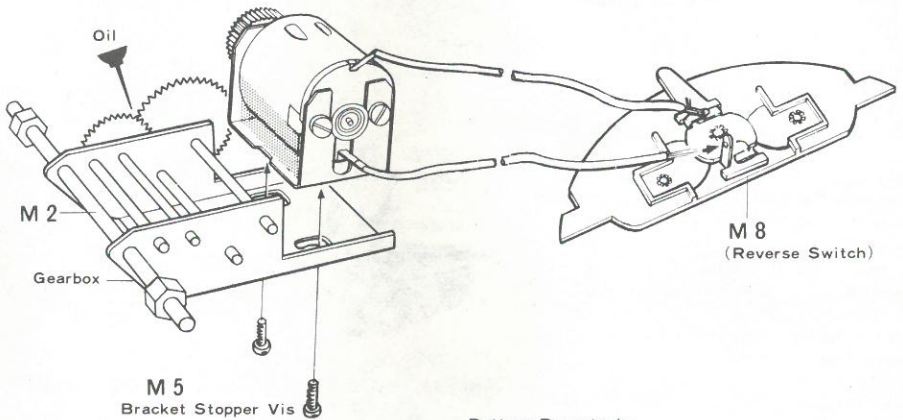
### 1 Construction of Driver's Seat



### 2 Fixing of Pinion Gear



### 3 Fixing of Motor inside Gearbox



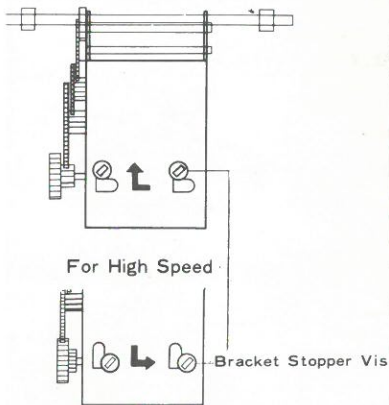
### 4 Construction of Switch

### 2 Fixing of Pinion Gear Drive Motor Shaft into Pinion Gear with 2mm or so gap in between.

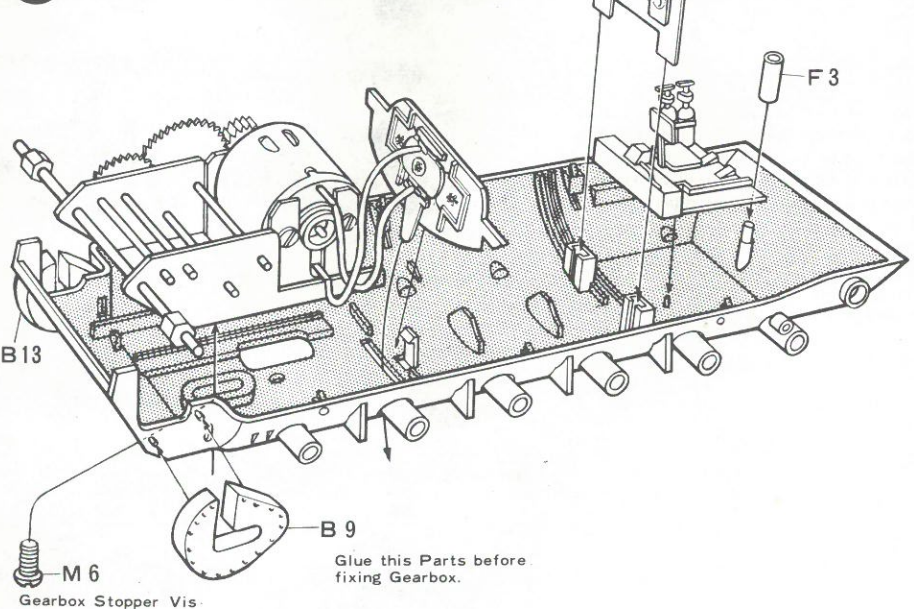
### 3 Fixing of Motor inside Gearbox (Changing of Speed in two ways)

By different way of Bracket fixing, you can have speed either low or high. In case of low speed, fix and fasten Bracket in the arrowed direction as shown in the figure below. In low speed, you can expect the model run powerfully even when climbing a steep slope as its horse-power is much increased. Engagement between Gearbox Gear and Pinion Gear can be adjusted by loosening and sliding Bracket Stopper Vis.

#### Fixing of Bracket for Low Speed



### 5 Fixing of Inside Parts of Lower Hull



### 5 Fixing of Inside Parts of Lower Hull

Fasten Switch Plate by placing its pin at the backside onto the pin in Lower Hull and gluing them together. In so doing, push Switch Plate from above so that part of it come through the hole in Lower Hull.

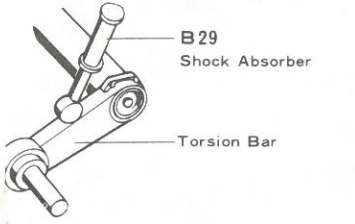
**6** Fixing of Lower Hull Parts  
 Firstly, glue Parts, B2 and B1, onto Lower Hull.

**7** Fixing of Torsion Bar  
 Note: There are four kinds of Torsion Bar Parts—B17, B18, B19 and B20. So, be sure to have a right one ready when fixing.

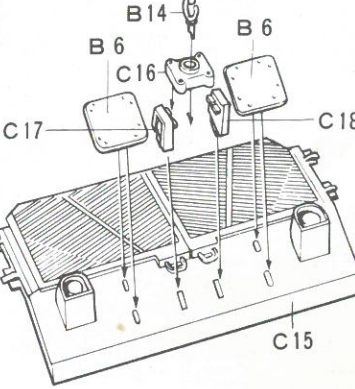
When all Torsion Bar Parts have been fixed into Lower Hull, place the latter on a level surface such as a desk for about 10 minutes. So that all Torsion Bar be on the same level.

Note: When gluing Parts, B29, be sure to have adhesives not overflow onto Support Roller, A1.

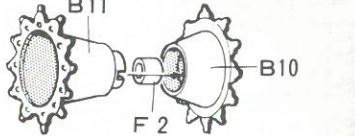
Respective Fixing Positions of Shock Absorber & Torsion Bar.



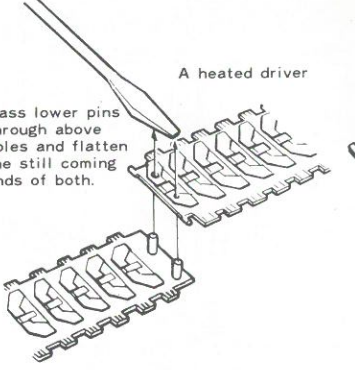
Construction of Rear Panel



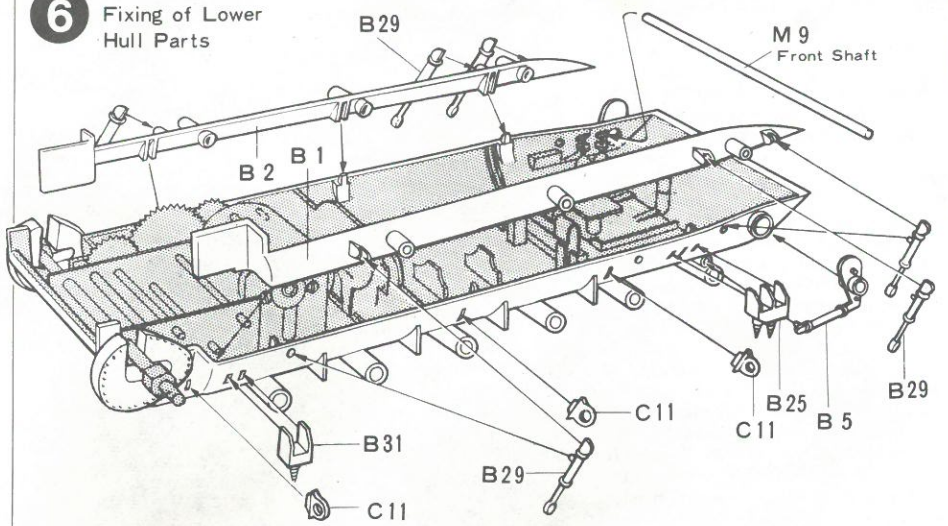
Construction of Sprocket Wheel



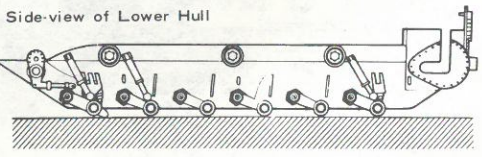
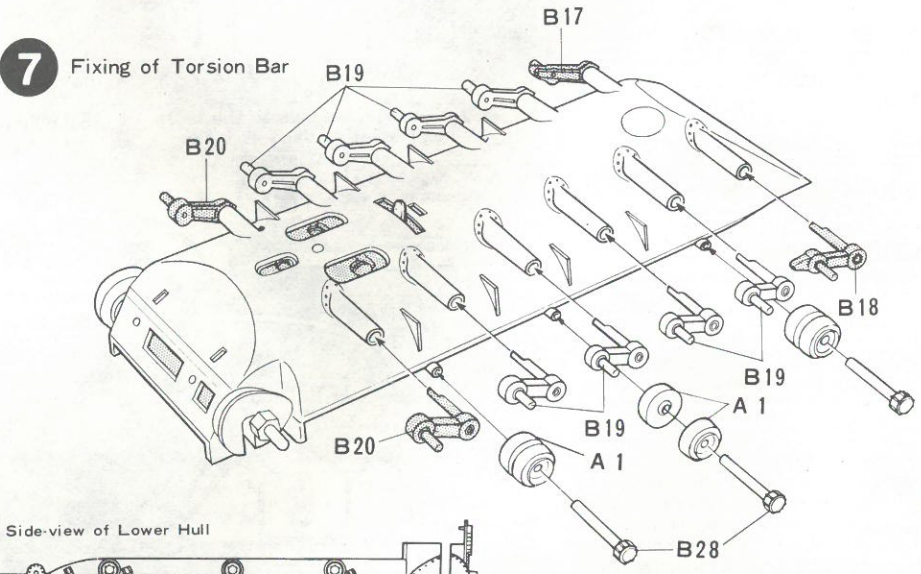
Construction of Caterpillar



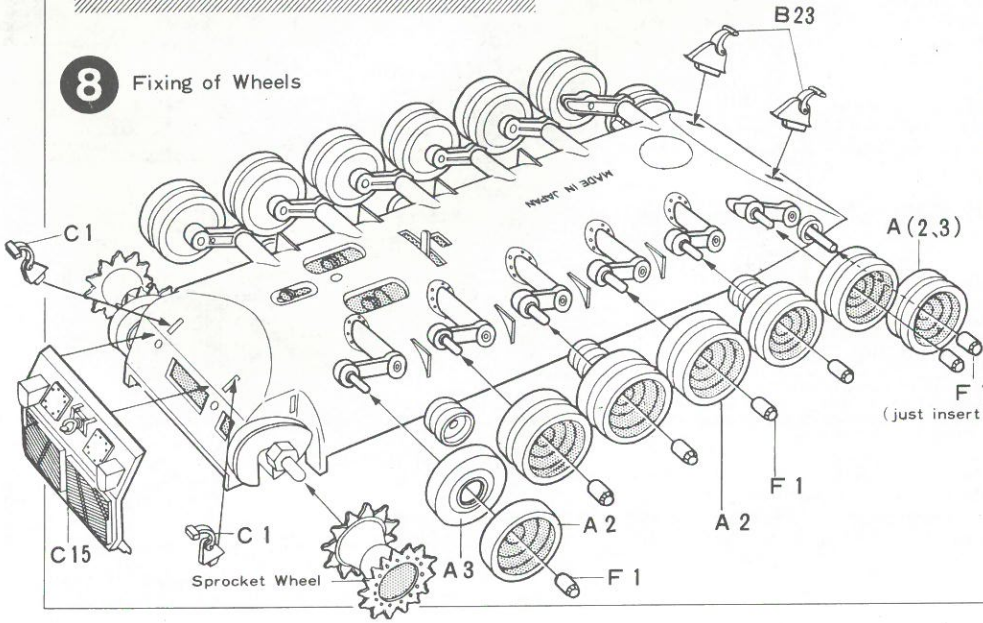
**6** Fixing of Lower Hull Parts



**7** Fixing of Torsion Bar



**8** Fixing of Wheels



**9** Construction of Upper Hull Driver's Hatch. C25, should be just held down with Scotch tapes but not glued as it will be fully constructed according to the instructions of Fig.10 below.

**10** Fixing of Backside Parts of Upper Hull  
When constructing Driver's Hatch, be sure not to have adhesives overflow between Parts, C25, and Hull.

**11** Construction of Gun Barrel  
In order to have the frontal surface of Infrared Light look glassy, glue Scotch tape over the surface. In so doing, cut off the unnecessary, protruding portion of the tape with a knife.

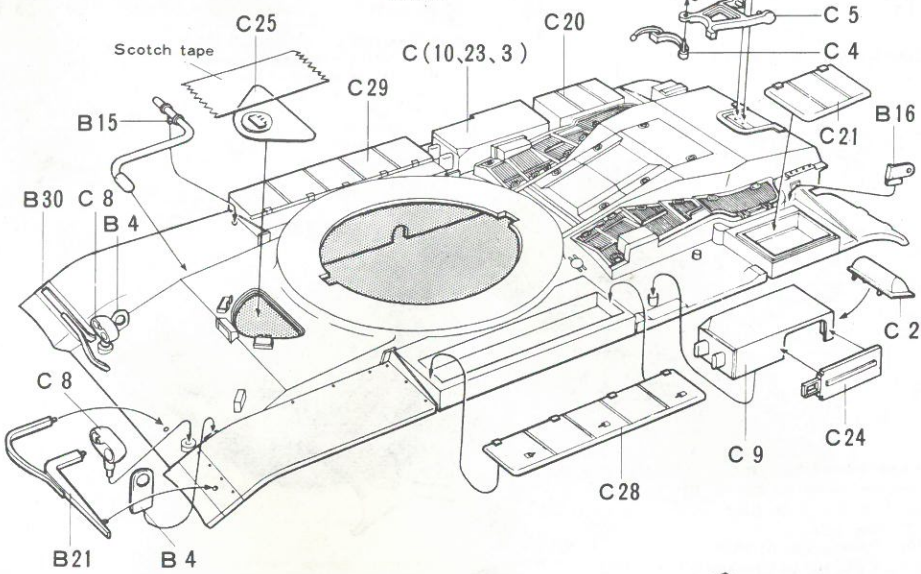


When transporting the tank, by train, the gun turret is fastened by Gun Trav-Lock at Rear Hull as use of the gun turret is not expected during the transportation.

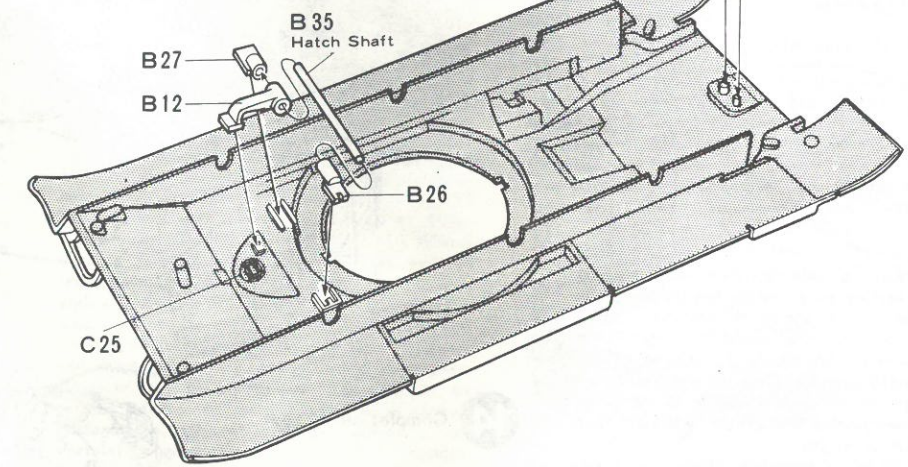


**9** Construction of Upper Hull

★ Flatten the pin-head that still comes out of the hole with a heated driver.

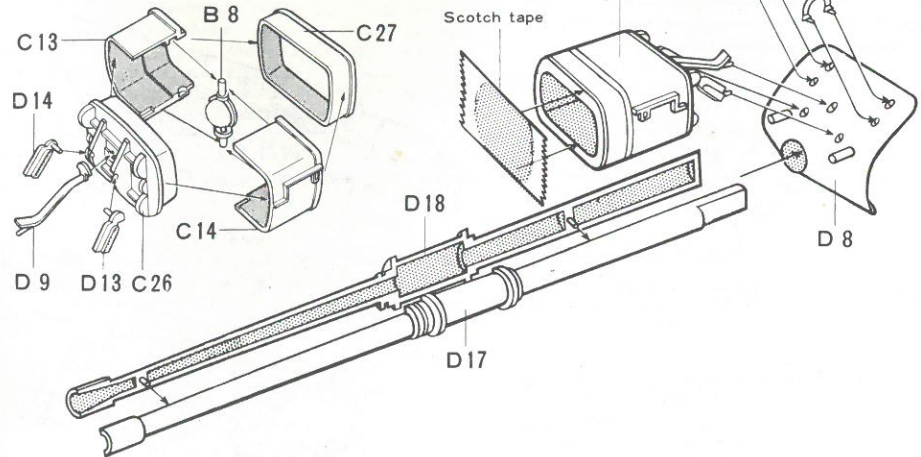


**10** Fixing of Backside Parts of Upper Hull



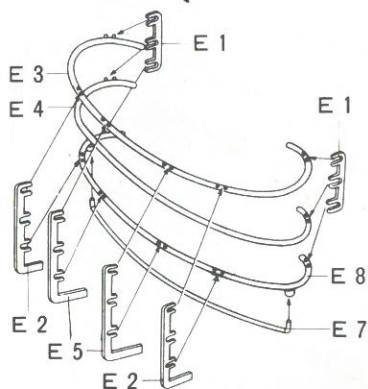
**11** Construction of Gun Barrel

Construction of Infrared Light



**12** Construction of Gun Turret, A  
 Be sure not to apply adhesives to Loader's Hatch, D1, and Commander's Hatch, D2, as these two Parts are just to be fixed but not glued.

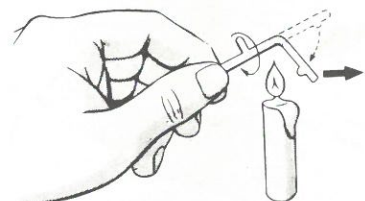
**Construction of Basket**



When removing E parts from the runner, be sure to cut it off carefully with a knife, a pair of nippers, or

**14** the like  
**Completion of Hull**  
 Insert the pin in Lower Hull into Parts, C19, & lower down Upper Hull to fix the two Hull portions together firmly. Lastly, fix Gun Turret onto Upper Hull and the construction work of the model will be completed.

**Construction of Antenna**

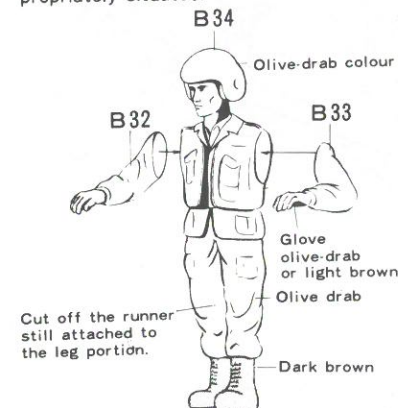


★ Warm a suitable runner while turning it around by a candle fire as shown in the figure above. When the upper portion of the warmed runner hang down, pull it slowly to extend to the length desired. Cool the extended runner as it is for about 15 seconds. When cooled enough, cut it in half, each 7cm in length.

★ While warming the runner, watch out well for fire.

**Construction of Dummy**

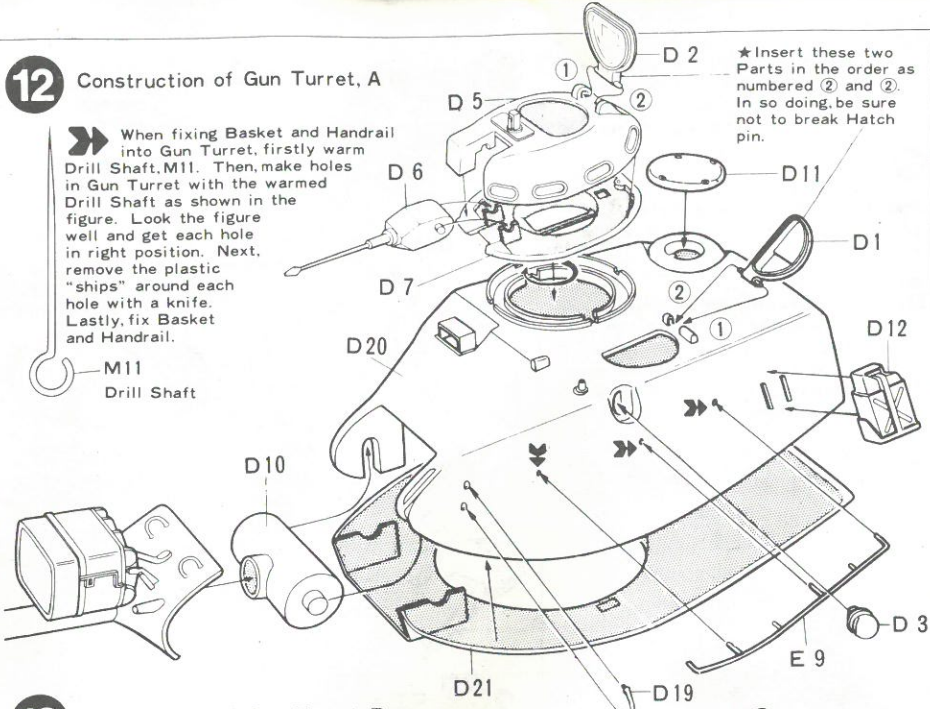
When constructing Dummy, place it onto Gun Turret while adhesives applied to its arm are still wet. Then, have adhesives dried up and glue the arm firmly to Dummy body when it is most appropriately situated.



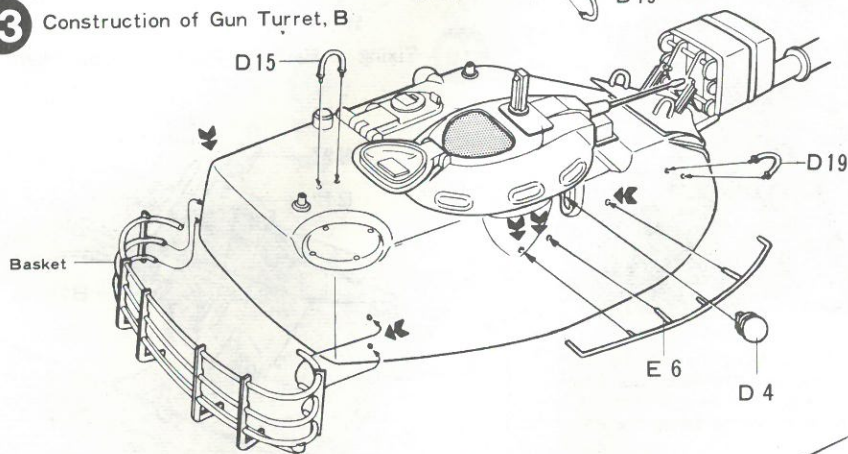
Cut off the runner still attached to the leg portion.

**12** Construction of Gun Turret, A

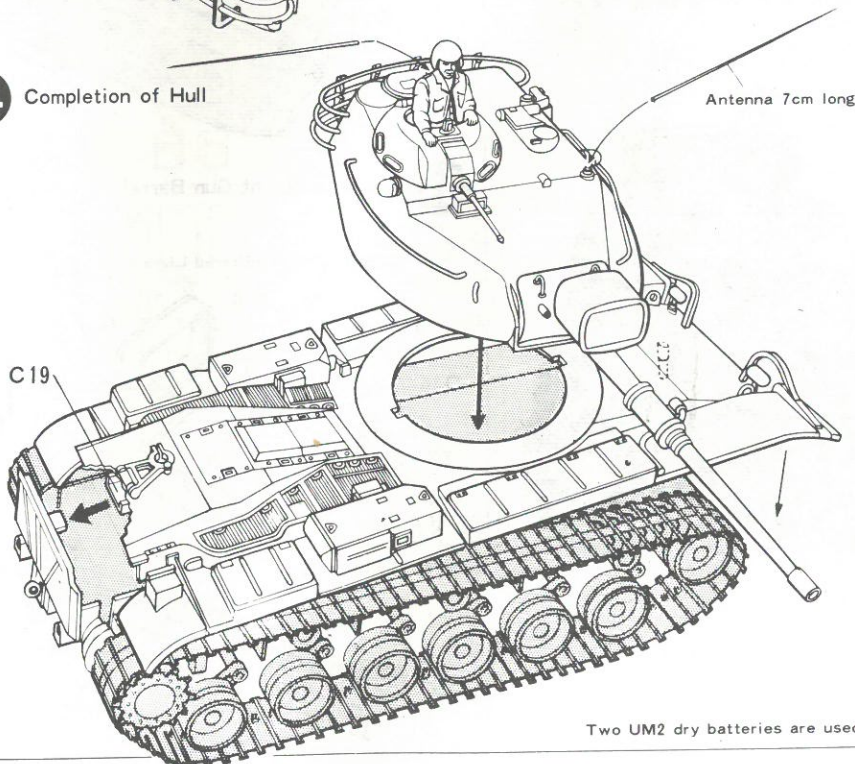
➔ When fixing Basket and Handrail into Gun Turret, firstly warm Drill Shaft, M11. Then, make holes in Gun Turret with the warmed Drill Shaft as shown in the figure. Look the figure well and get each hole in right position. Next, remove the plastic "ships" around each hole with a knife. Lastly, fix Basket and Handrail.



**13** Construction of Gun Turret, B



**14** Completion of Hull



Two UM2 dry batteries are used.

# APPLYING DECALS

**3** The Third Cavalry Division of the U.S. Army, nicknamed, "Spearhead", during the World War II, had distinguished itself brilliantly in many combat operations in the Normandy-line area, the Forest of Ardennes and the middle Europe. In 1941, on the 1st day of April, the division was created at the Camp Bimarygard in Louisiana with 600 officers and 3,000 non-commissioned officers and men from the 1st Cavalry Division under the command of General Patton. Simultaneously, many arms and equipments were transferred from the same division. However, the 3rd Cavalry Division had since undergone several reorganizations until in April, 1959, it became the main strength force of the 7th Army stationed in West Germany. The division was placed with the 5th Corps of the 7th Army, locating its main units in Hanau, east of Frankfurt in Main.

- 12** This mark shows the unit of the Division to which a tank belongs. In this case, the No.2 tank of the 1st Platoon.
- This is a silhouette mark shows the vehicle is an M60 tank.
- 3A2A32** This mark shows a tank belongs to the 2nd Battalion, the 32nd Mechanized Regiment, the 3rd Cavalry Division.
- A-12** This mark shows a tank is the No.2 tank of the 1st Platoon of the A Company.
- 53** This mark shows a tank belongs to the 3rd Cavalry Division, the 5 Corps, the NATO Forces. This is a NATO mark.
- ★ This mark on the upper turret, is a friend identification mark. The friend airplanes identify a friend tank by this mark.

**U.S.ARMY 9B3106**  
 This mark shows a registered number of a vehicle. In this case, the mark stands for a tank with vehicle serial number of "3106". The number "9B" means the vehicle is a tank, while the "9B" shows the tank is one of the U.S. tank series from the M48A2 to the M60. Also, it is specified at a number of four figures like the "3106" be used for a serial number of a vehicle. It may be added for your information that those tanks which belong to any one of the former tank series before the M48A1, used to be represented by the mark, "9A".

**194ΔBG4Δ68**  
 The 194th Independent Cavalry Brigade was created on April 17, 1968. It was the first independent mechanized brigade ever organized in the U.S. Army. It consisted mainly of 6 battalions, formerly under the command of the 16th Cavalry Group, which was disorganized to form its brigade. The Group used to be located its headquarters at Fort Knox, Kentucky. The Brigade, also, serves as a strategic reserve unit in Mainland U.S. while helping the military school for mechanized operations in the latter's training programme. In the last aspect of its work, the Brigade is a training mechanized brigade.

**F.THOMSON M.J.LINSKY E.D.BOGAN**  
 Name of driver Name of the tank commander Name of the loader

**4ΔBG4Δ68**  
 This shows that a tank belongs to the 4th Battalion, the 68th Cavalry Regiment, the 194th Independent Cavalry Brigade. The letters, "BG", stand for a battle group.

**-3A77** This stands for the 3rd Battalion, the 77th Cavalry Regiment, the 5th Mechanized Infantry Division. This battalion locates its headquarters in Mainland U.S. and serves as an operational training centre.

As you readily see, from the figures on the right, marks of a military unit number, vehicle registration number and the name, are located on a tank to a certain rule.

**A** A tank that belongs to the U.S. 3rd Cavalry Division, the "Spearhead" (This mark should be glued onto Gun Turret as shown in Fig.C)

**12** ★

U.S.ARMY 9B3106 U.S.ARMY 9B3106

On the opposite side, glue the "U.S. Army" mark together with the "9B3106" at a little distance from the former.

**53**

3A2A32 A-12

3 A 2A32 A 12

**B** A tank that belongs to the 194th Independent Cavalry Brigade

★ E.D. BOGAN M.J. LINSKY On the opposite side.

Mark that stands for the 68 Cavalry Battalion Glued onto both sides.

U.S.ARMY 9B3106

★

U.S.ARMY 9B3106 Do likewise with the opposite side. At a little distance from it.

J.F. THOMSON

**20**

194ΔBG4Δ68 -14

194Δ BG4Δ68 B 14

**C** A tank that belongs to the 5th Mechanized Infantry Division

★

At a little distance.

5-3A77

**53** ★

A-26

U.S.ARMY 9B3106

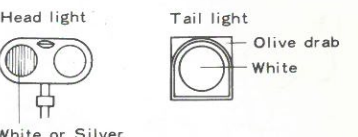
About the painting of a U.S. tank:  
 The standard painting of a U.S. tank is a unicolour of olive-drab sprayed all over. In fact, all the vehicles of the U.S. Army have been painted with this colour, and finished dull and matted without any gloss. In case of a new tank just out of the production-line of a factory, all the tools and accessories such as a shovel, which have been fitted on the hull and the gun turret, are also painted in this colour. In order to increase a real-tank-like appearance, a so-called dirtying method will be effective.

It may be interesting, if you bring out method.

- A bullet-, or shell-hitted surface with scooped-out portions here and there just like in a real war.
- A dirty surface smeared with a desert or a dog.
- An exhaust pipe smeared with soot.
- A gleaming teeth of a sprocket wheel due to wear and tear,
- and repainting of tools such as an ax, a shovel, etc., for an imagined readiness for action.

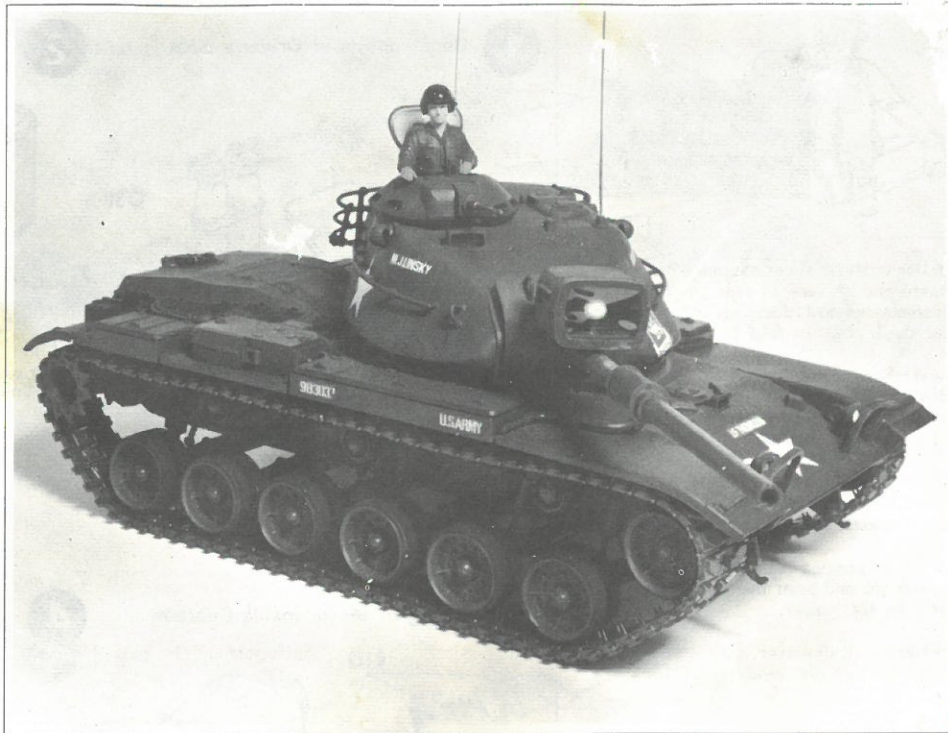
Painting of Details  
 The following listed informations that tell off what kinds of materials are actually used in a tank, will be a good guide to your painting work. In this connection, we highly recommend that you find the best suited colour for each material by yourself regardless of the colour suggested in each bracket.

Front portion of Fender: Covered with rubber film to avoid mud (matted black)  
 Peripheries of Road Wheel & Support Roller: Rubber material (matted black)  
 Infrared sensor light: Transparent lens (white or silver)  
 Base portion of the above: A concave mirror (white or silver)



Inside of hull (white) (However, those inside portions such as backside of hatch that could be seen from the outside when hatch was opened during combat operation, were painted in the same colour as that of the tank's surface.)

Buds of a caterpillar: Rubber material (matted black) Eight observation windows above Cupola: Several combined pieces of special glass.



## 1/35 SCALE SERIES

<p>T-10 JS III</p>	<p>Jagdpanzer V JAGDPANTHER</p>	<p>RUSSIAN MEDUSA TANK T34 TYPE 85</p>
<p>Panzer Kampfwagen III Ausf. M/N</p>	<p>Kampfpanzer LEOPARD</p>	<p>RUSSIAN TANK DESTROYER SU-100</p>
<p>KING TIGER</p>	<p>GERMAN ORG. PANZERKAMPFWAGEN VI TIGER I (SOPKF. 1911) AUSLEHRUNG E TIGER I</p>	<p>M4 SHERMAN</p>
<p>HUNTING TIGER</p>	<p>U.S. TANK M4A1 WALKER BULLDOG</p>	<p>U.S. TANK DESTROYER M36 JACKSON</p>
<p>Panzerkampfwagen V PANTHER</p>	<p>KV-1</p>	<p>U.S. ARMY SELF-PROPELLED AA GUN M42 'FLAK WAGON'</p>