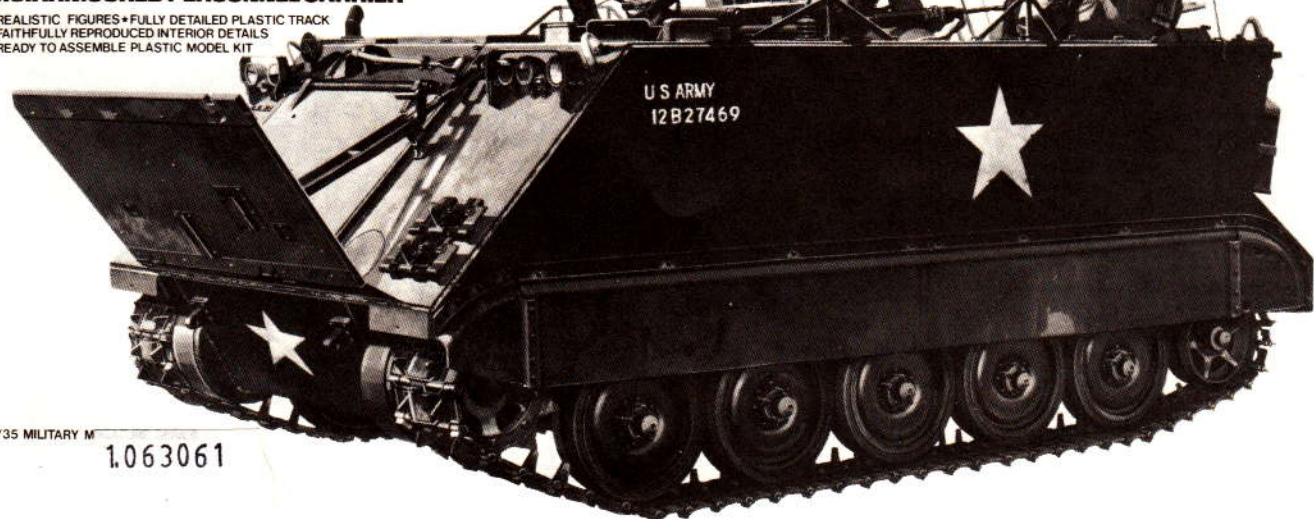


# M113

## U.S. ARMoured PERSONNEL CARRIER

• REALISTIC FIGURES • FULLY DETAILED PLASTIC TRACK  
 • FAITHFULLY REPRODUCED INTERIOR DETAILS  
 • READY TO ASSEMBLE PLASTIC MODEL KIT



1/35 MILITARY M

1.063061

On the foggy morning of 20th November 1917, some 500 British tanks broke through the German Hindenburg Line. At a provoking speed of only 3 km/h, they invaded German area about 5 km in depth and about 10 km in width. It seemed as if the attack would succeed, but the tanks could not advance any further. The British infantry and cavalry, which were supposed to follow the tanks to keep the occupied area and improve the fruits of battle, did not show themselves at all. Being divided into small groups, German machine-gun corps warded off attacks from the British tanks and directed a hot fire against the British infantry and cavalry which tried to follow their tanks. Thus the British tanks were isolated and the infantry and cavalry were forced to fight independently.

This battle furnished important lessons on tank tactics as in the following: The tank is an offensive weapon and must make speedy attacks at the spearhead of an advance. After the tank has broken through the enemy line, infantry must give chase to the enemy and improve the fruits of battle. The most important point is that infantry should be mechanized so that they are mobile enough to keep pace with the tank.

Paying attention to this point, the British developed, on the basis of Colonel Fuller's idea, the Infantry Carrier Mk XI, a rhombic tank carrying 50 men. It may safely be said that this was the first personnel carrier. It was the Germans, however, that used personnel carriers most effectively and put the idea of mechanized corps into practice in World War II. The Germans used half-track personnel carriers including the Sd.kfz 251 series in large quantities, which were able to take part in the speedy attacks called blitzkrieg tactics jointly with tanks. The Germans exploded accepted theories on tactics and achieved brilliant war results. On the other hand, the Americans used a large number of M3 half-track personnel carriers. Thus World War II was a war of mobility. Personnel carriers were among the military vehicles indispensable to nations then at war.

After the war, the mechanization of ground troops was further promoted. Many nations vied with

each other in developing personnel carriers on the basis of experience they accumulated during the war. The mobility of personnel carriers was enhanced through the employment of caterpillar tracks and amphibious running gear. Armour plate and other equipment to protect men from bullets and shell splinters were reinforced. Nuclear dispersal seemed inevitable. Ground troops concentrated at a point would be annihilated by a single nuclear attack. Now ground troops had to disperse broadly and at the same time maintain close communication between themselves, but dispersed and isolated infantry was vulnerable to fire attack. Thus the need of protecting infantry also necessitated personnel carriers.

Learning lessons from the Korean War, the U.S. Army demanded in 1956 that a new personnel carrier should be developed in place of the M59 Amphibious Personnel Carrier which had been used so far by armoured divisions and mechanized infantry divisions as part of their main strength. The Army required that the new personnel carrier should be air transportable, light and easy to use. To meet the Army requirements, armour plate of aluminum alloy was to be employed for the new vehicle. In 1957, the U.S. Army Material Command ordered Ford Machinery Corporation to develop armour plate of aluminum alloy that had necessary characteristics. In cooperation with Kaiser Aluminum & Chemical Corporation, the F.M.C. successfully developed aluminum alloy which sufficiently withstood bullets and shell splinters. In 1959, three pilot models (T113) of the armoured personnel carrier were completed, and a remodelled version named T113E1 was constructed. After being put to practical tests, the new vehicle was officially accepted as the M113 Armoured Personnel Carrier. In mid 1960, the first vehicles left the production line and were delivered to front line troops. More than thirty thousand M113s have been produced by now and are used by not only the United States but also many other free nations. The M113 has now gained a world-wide reputation as a masterpiece vehicle.

In 1962, the West German Army placed an order for 1,132 units with the F.M.C. and the Swiss Army

gave them an order for 800 units under the name of SPZ63APC. In 1963, the Canadian Army held up the production plan for their Bobcat APC and adopted the M113 APC. Italy has made a joint production agreement with the United States and is producing the M113 at OTO Melara's SPA Plant in La Spezia. The M113 is employed by the Armies of the following nations: USA, Canada, Switzerland, Italy, the Netherlands, Denmark, Spain, Greece, Turkey, Iran, Pakistan, Thailand, West Germany, South Vietnam, South Korea, Norway and Jordan. Thus the M113 is one of the vehicles most widely used in non-Communist countries of the world and is showing activity as transport for infantrymen of free nations.

Among the important features of the M113 are smallness (about 4.9 m in overall length, about 2.7 m in width and about 2.2 m in height), lightness (about 10 t in equipped weight) and therefore easiness to use. The M113 is designed as a light armoured personnel carrier for transporting 13 fully armed riflemen including the driver but also serves as a cargo boat, ambulance, weapon carrier, command car and reconnaissance car. The front part of the body consists of the driving compartment on the left and the engine compartment on the right. The central and rear part of the body is the passenger compartment with 12 seats for one commander and 11 riflemen. At the top of the central part is the commander's cupola equipped with a mount for a cal. 0.50 (12.7 mm) Browning machine gun. At the back of the commander's cupola is a rectangular hatch. At the tail is a large lamp for facilitating passengers' getting on and off, which is controlled by a switch in the driving compartment.

The M113 is amphibian and travels on water by rotating its tracks. Having no rudder, it controls direction on water by changing the speed of either track in the same way as steering on land. A dash plate is mounted on the front and, when the vehicle is travelling on water, is raised to keep out the sea and spray.

While the pilot model employed a Chrysler 361B 4-cycle V 8-cylinder gasoline engine offering 205 hp, the early production model used a Chrysler A-710 4-cycle V 8-cylinder gasoline engine of 215 hp and

MM M113装甲兵員輸送車(英)

**A PARTS**

- |                          |                         |
|--------------------------|-------------------------|
| 1. Support               | 2. Tail Light           |
| 3. Machine Gun           | 4. Sprocket Wheel Shaft |
| 5. Final Drive           | 6. Fender (B)           |
| 7. Fender (A)            | 8. MG Mount             |
| 9. Magazine Case Support | 10. Rear Handrail       |
| 11. Magazine Case        | 12. Muffler             |
| 13. Road Wheels (A)      | 14. Road Wheels (B)     |
| 15. Gear Case (A)        | 16. Gear Case (B)       |
| 17. Water Tank           | 18. Idler Wheels (C)    |
| 19. Idler Wheels (A)     | 20. Idler Wheels (B)    |
| 21. Sprocket Wheels (A)  |                         |
| 22. Sprocket Wheels (B)  |                         |

**B PARTS**

- |                                  |                              |
|----------------------------------|------------------------------|
| 1. Skirt (A)                     | 2. Breakwater Plate          |
| 3. Ramp                          | 4. Suspender Hooks           |
| 5. Engine Compartment Cover      |                              |
| 6. Light Cover (A)               | 7. Light Cover (B)           |
| 8. Tool                          | 9. Axe                       |
| 10. Tool                         | 11. Light (B)                |
| 12. Light (A)                    | 13. Driver's Hatch           |
| 14. Hammer                       | 15. Hooks                    |
| 16. Hinges For Ramp              | 17. Front Panel              |
| 18. Commander's Hatch            | 19. Hatch Supports           |
| 20. Cupola                       | 21. Engine Compartment Hatch |
| 22. Ventilator                   | 23. Auxiliary Track Links    |
| 24. Wire Rope                    | 25. Hatch Bumper             |
| 26. Ramp Door Handle             |                              |
| 27. Breakwater Plate Support (B) |                              |
| 28. Breakwater Plate Support (A) |                              |
| 29. Shovel                       | 30. Handrail (B)             |
| 31. Handrail (C)                 | 32. Handrail (A)             |
| 33. Towing Hook                  | 34. Horn                     |
| 35. Skirt (B)                    |                              |

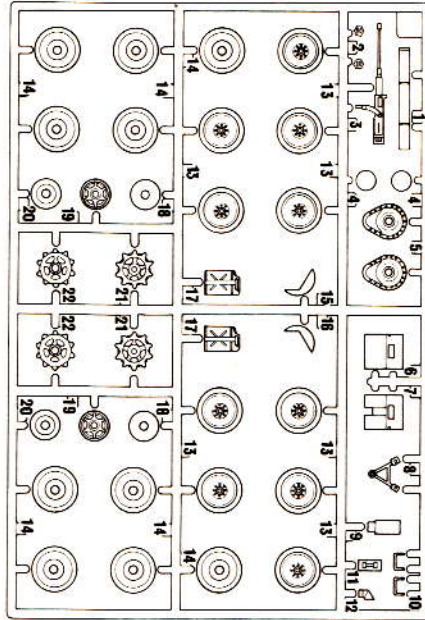
**C PARTS**

- |                            |                |
|----------------------------|----------------|
| 1. Upper Hull Plate        | 2. Cargo Hatch |
| 3. Cargo Hatch Stopper (A) |                |
| 4. Cargo Hatch Stopper (B) |                |

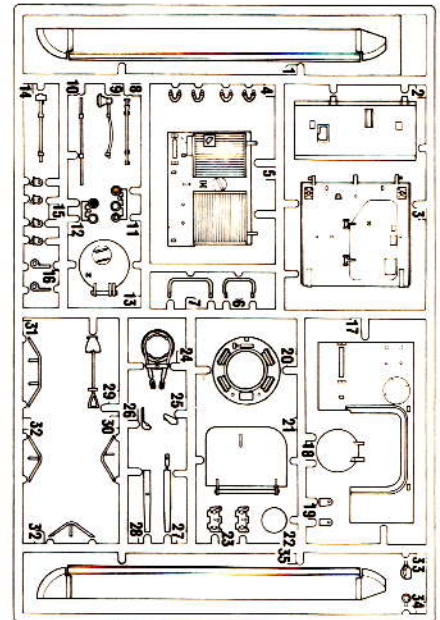
**D PARTS**

- |                                |                             |
|--------------------------------|-----------------------------|
| 1. Handrail                    | 2. Ramp Open Lever          |
| 3. Meter Panel                 | 4. Floorboard               |
| 5. Passenger's Seat Back Rest  |                             |
| 6. Steps                       | 7. Driver's Seat Rack       |
| 8. Seat Post                   | 9. Light Control Panel      |
| 10. Meter Mount                | 11. Steering Lever          |
| 12. Air Cleaner (A)            | 13. Air Cleaner (B)         |
| 14. Radiator Base              | 15. Battery Box             |
| 16. Fan                        | 17. Fuel Tank               |
| 18. Seat Mount (B)             | 19. Seat Mount (A)          |
| 20. Heater                     | 21. Radiator                |
| 22. Steps Foot                 | 23. Driver's Seat Back Rest |
| 24. Fire Wall (C)              |                             |
| 25. Commander's Seat Back Rest |                             |
| 26. Driver's Seat              | 27. Passenger's Seat        |
| 28. Commander's Seat           | 29. Engine Body (Left)      |
| 30. Engine Body (Right)        | 31. Engine Top              |
| 32. Transmission               | 33. Differential Lower Half |
| 34. Differential Upper Half    | 35. Carburettor             |
| 36. Cam Cover                  | 37. Fire Extinguisher       |
| 38. Fire Wall (A)              |                             |
| 39. Crew Seat Back Rest (A)    |                             |
| 40. Crew Seat Back Rest (B)    |                             |
| 41. Engine Front Part          | 42. Gear Case               |
| 43. Fire Wall (B)              | 44. Exhaust Pipe (B)        |
| 45. Generator                  | 46. Seat Stand (A)          |
| 47. Seat Stand (B)             | 48. Seat (A)                |
| 49. Seat (B)                   | 50. Joint (C)               |
| 51. Joint (A)                  | 52. Joint (B)               |
| 53. Water Pipe                 | 54. Exhaust Pipe (A)        |

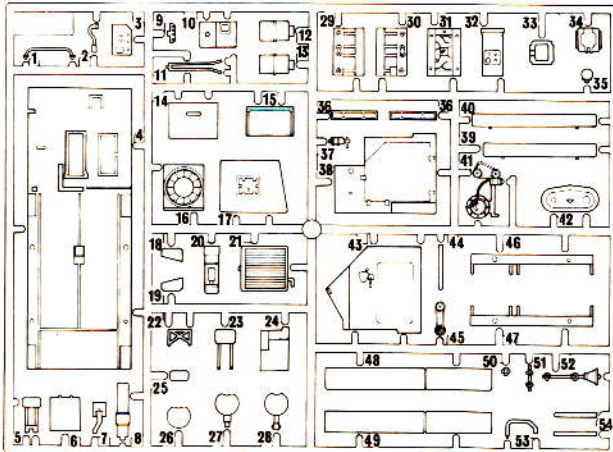
**A**



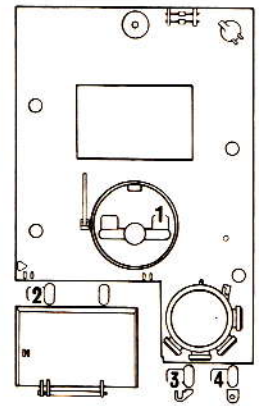
**B**



**D**



**C**



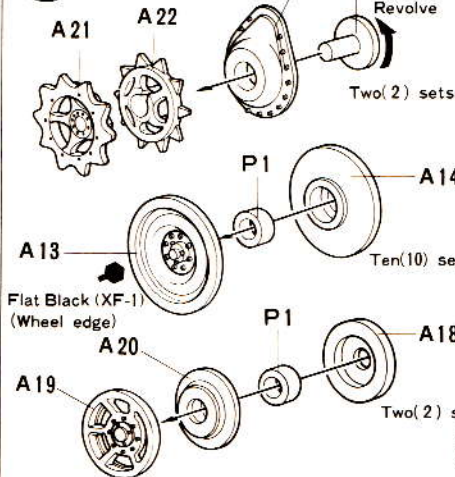
P2 is unnecessary.



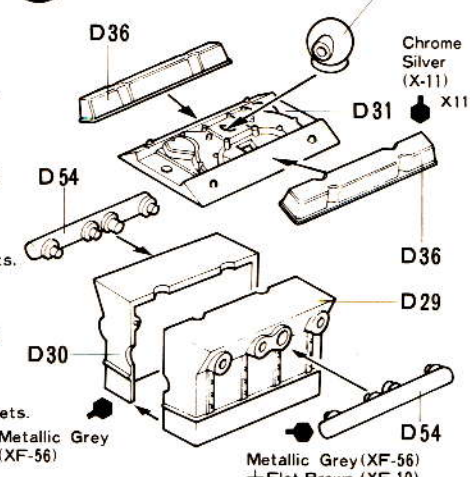
- ★ Study the instructions and photographs before commencing assembly.
- ★ You will need a sharp knife, a screwdriver, a file, a pair of tweezers, and a pair of pliers.
- ★ Do not break parts away from sprue, but cut off carefully with a pair of pliers.
- ★ Use glue sparingly. Use only enough to make a good bond.

This mark shows the recommended colour scheme.

**1 Construction of Wheel**



**2 Construction of Engine**



### (PAINTING)

You may find it easier to use spray gun when you paint the wide areas. Make sure that you masked off the areas where you want to remain unpainted. Use a brush to paint narrow parts. For your painting scheme, refer to colour names on construction figures and instructions on page 7.

### 1 (Construction of Wheels)

(The plan is shown on page 2.) Assemble two(2) sets of Sprocket Wheels, ten(10) sets of Road Wheels, and two(2) sets of Idler Wheels. Do not get cement onto part A5.

### 2 (Construction of Engine)

(See the plan on page 2.) Assemble the parts which should be painted in the same shade first of all. After the cement has dried, paint and fix each assembly in position.

Colour Guide: Carburettor D35... CHROME SILVER (X-11)

### 3 (Fixing Engine)

Paint Floorboard and allow to dry. Cement Engine and Seats in position.

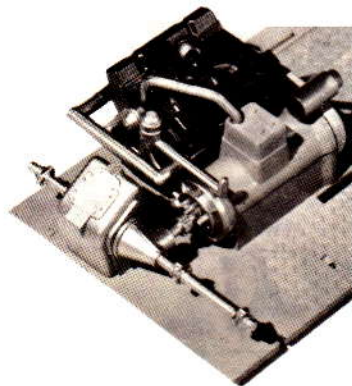
Colour Guide: Floorboard... SKY (XF-21)

Generator D45... BLACK (X-1)

Each belt part... FLAT BLACK (XF-1)

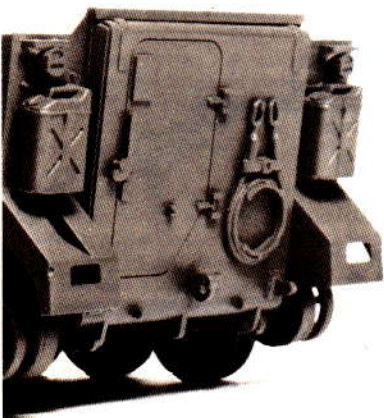
### 4 (Fixing Transmission)

Cement Transmission and Driver's Seat to Floorboard. Select either upper or lower position of Driver's Seat and cement. If you mount Driver's Figure in this kit, cement to upper hole.

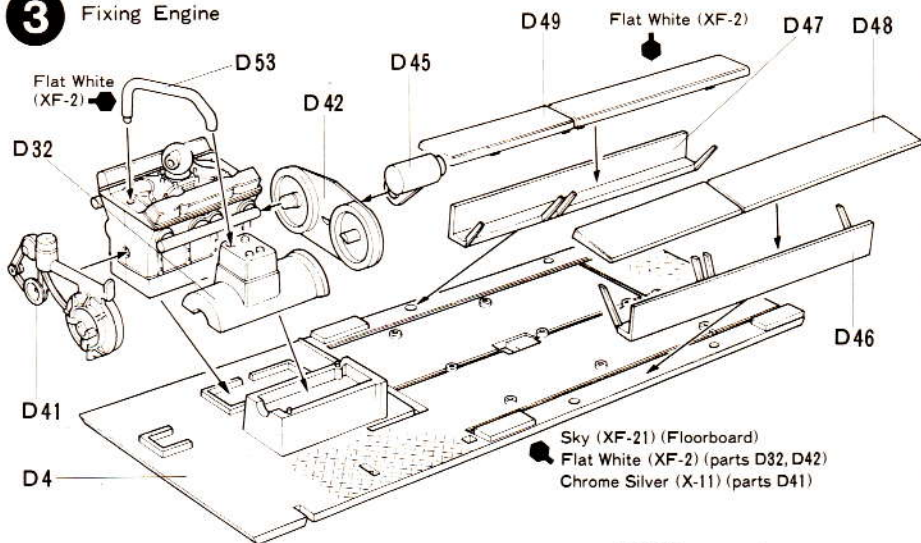


### 5 (Fixing Rear Panel)

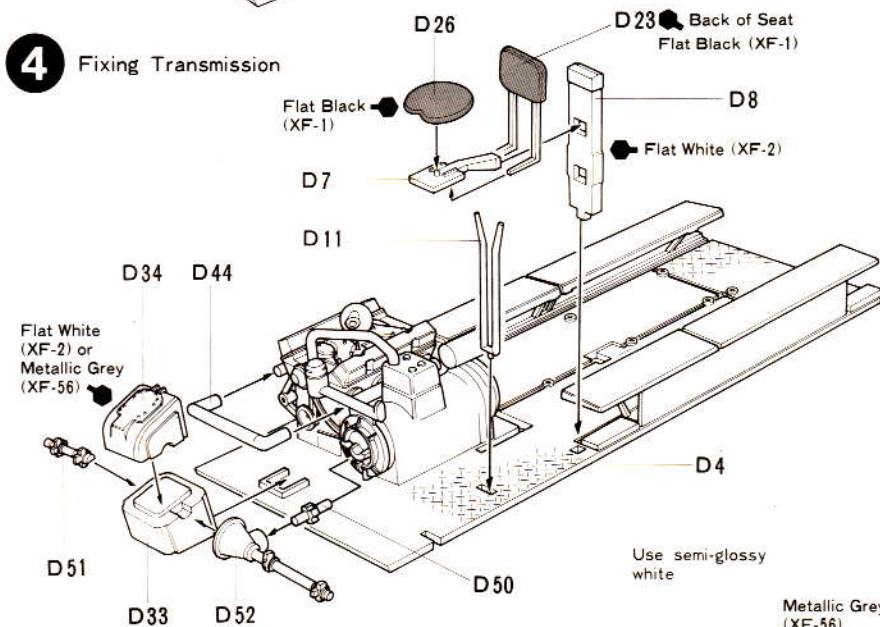
Insert Support A1 to the position indicated by an arrow and cement. Ramp B3 is moveable. Fasten this with Sello-tape till the cement on Hinges B16 has dried.



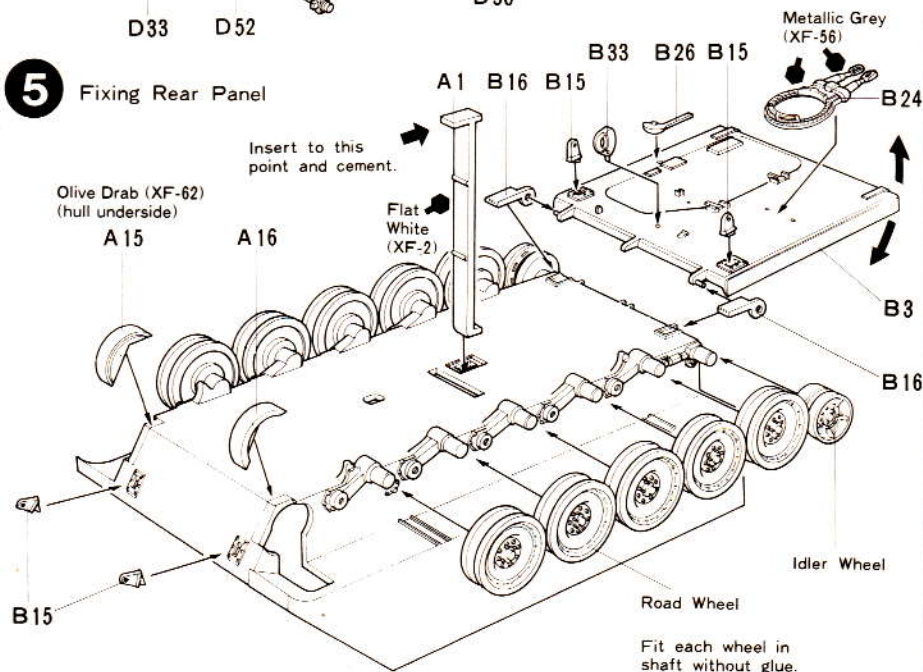
### 3 Fixing Engine



### 4 Fixing Transmission

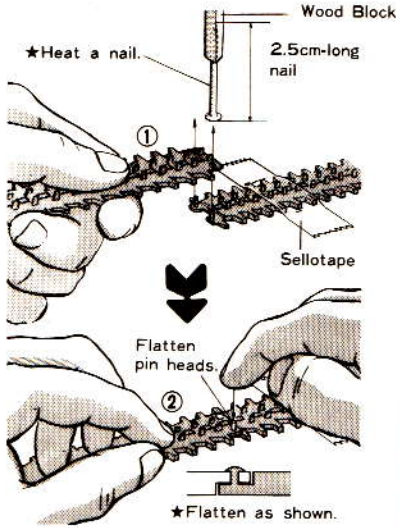


### 5 Fixing Rear Panel



**6** (Construction of Hull Inside)  
 After the paint has dried, apply decal F to the inside wall.  
 Colour Guide: Meter Panel... WHITE (X-2)  
 Meter.....BLACK (XF-1)

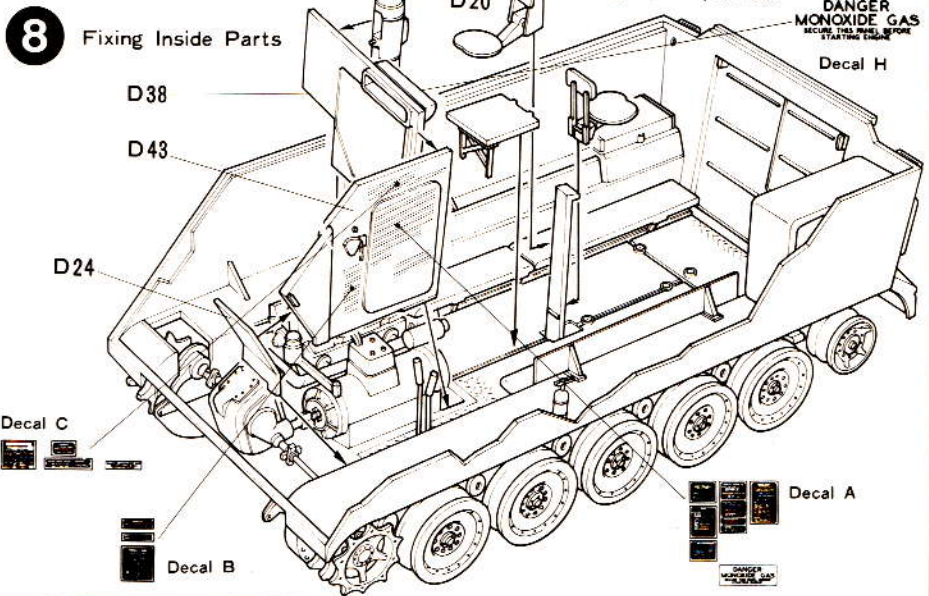
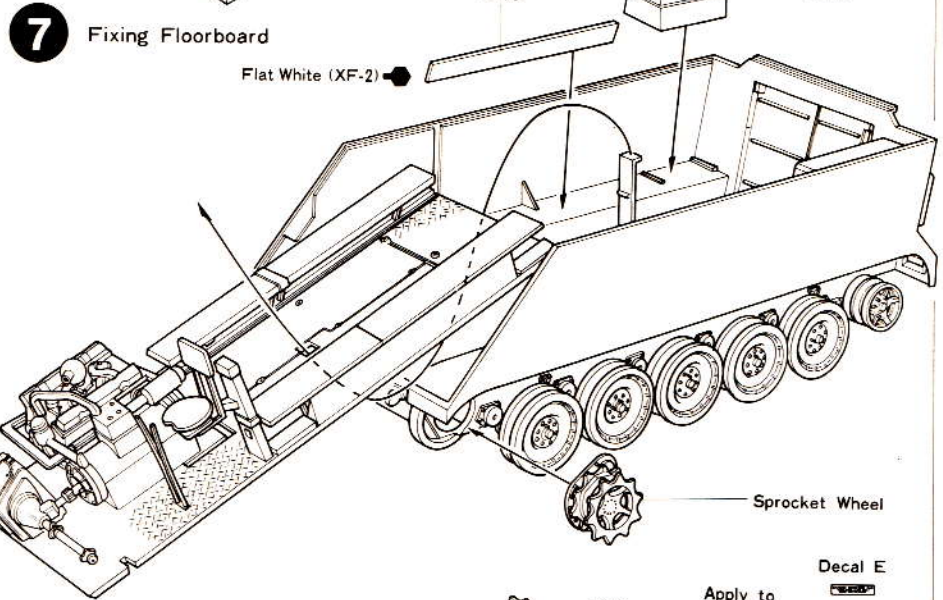
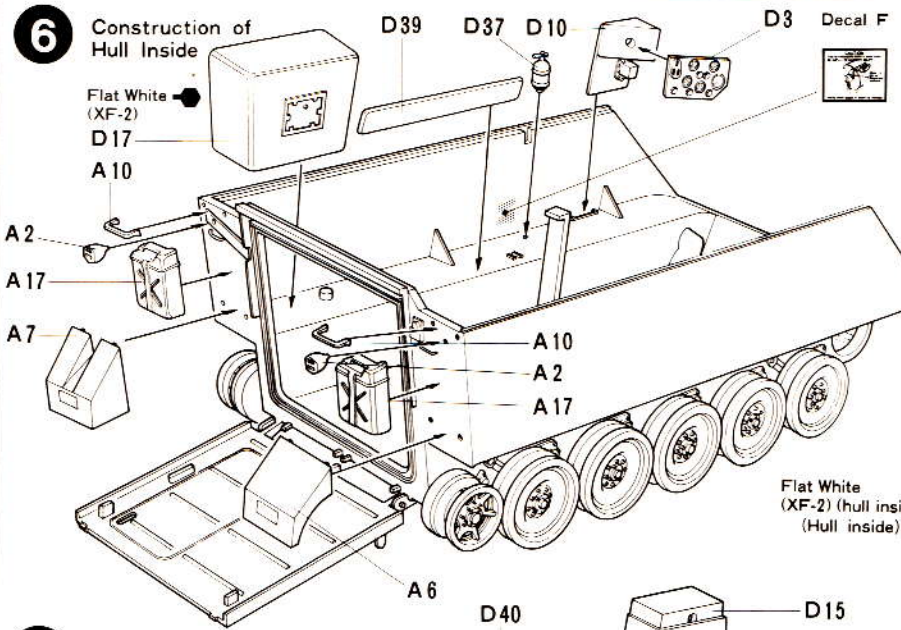
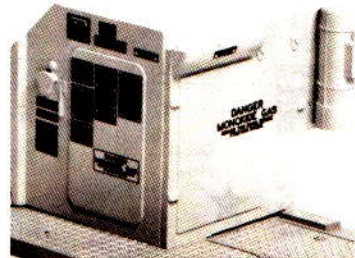
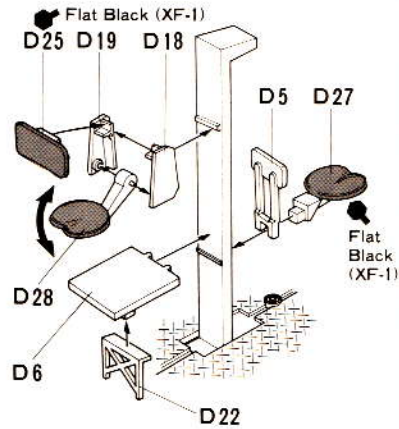
(How to make Tracks)



★Repair or strengthen the joint with using thread or stapler as shown right.

**7** (Fixing Floorboard)  
 Pass Support A1 through hole of Floorboard and fix it with using cement. Glue Sprocket Wheels to shafts from Transmission, D51 and D52.

**8** (Fixing Inside Parts)  
 Paint Fire Wall D38 & D43 in gloss white and after dried, apply decals as shown. And cement to Floorboard. Construct Seat which is attached to Support as shown below. As part D28 is moveable, do not apply cement here.  
 Colour Guide: Fire Wall... WHITE (X-2)

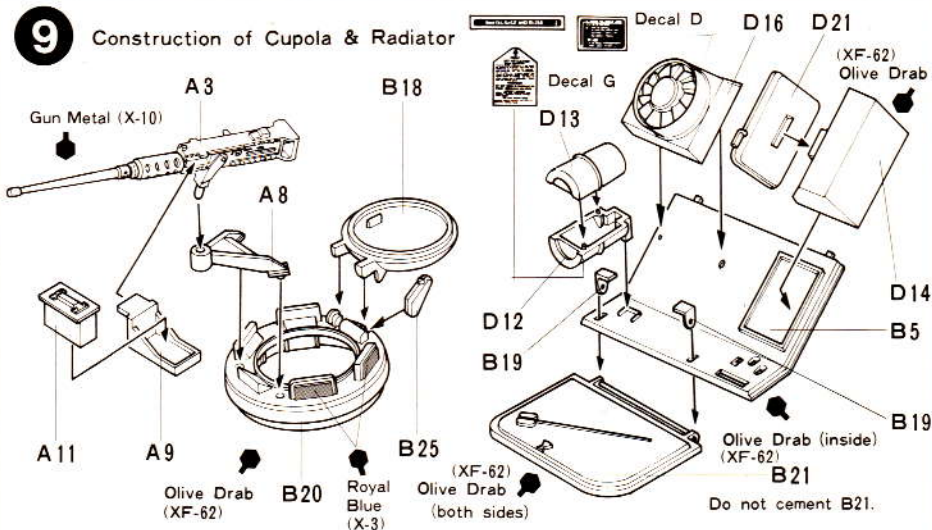


**9** <Construction of Cupola & Radiator>  
Construct Machine Gun before fixing to MG Mount A8. Do not cement A3 to A8.

Colour Guide: Fan D16, Air Cleaner D12 & D13... FLAT WHITE (XF-2)

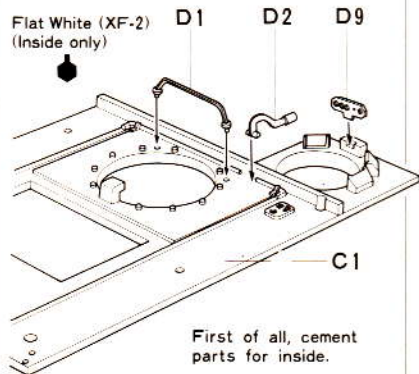


**9** Construction of Cupola & Radiator

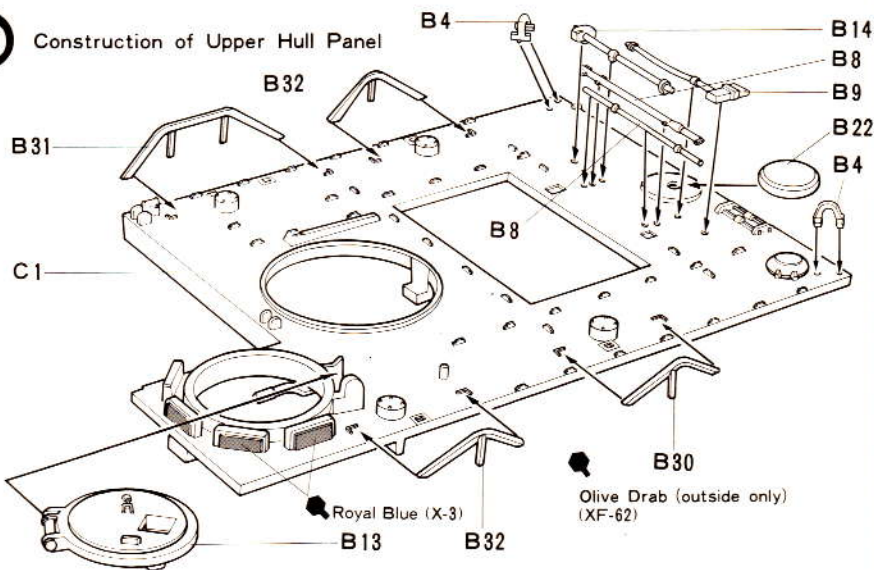


**10** <Construction of Upper Hull Panel>

First cement the hull inside parts. Colour Guide: Both sides of parts like Hatches which can be open and closed... OLIVE DRAB (XF-62)

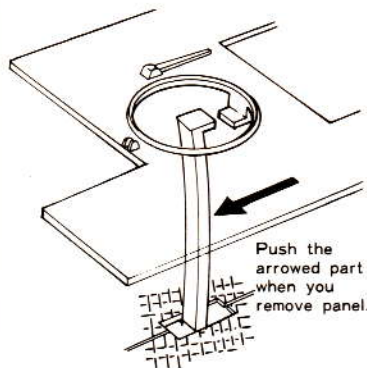


**10** Construction of Upper Hull Panel

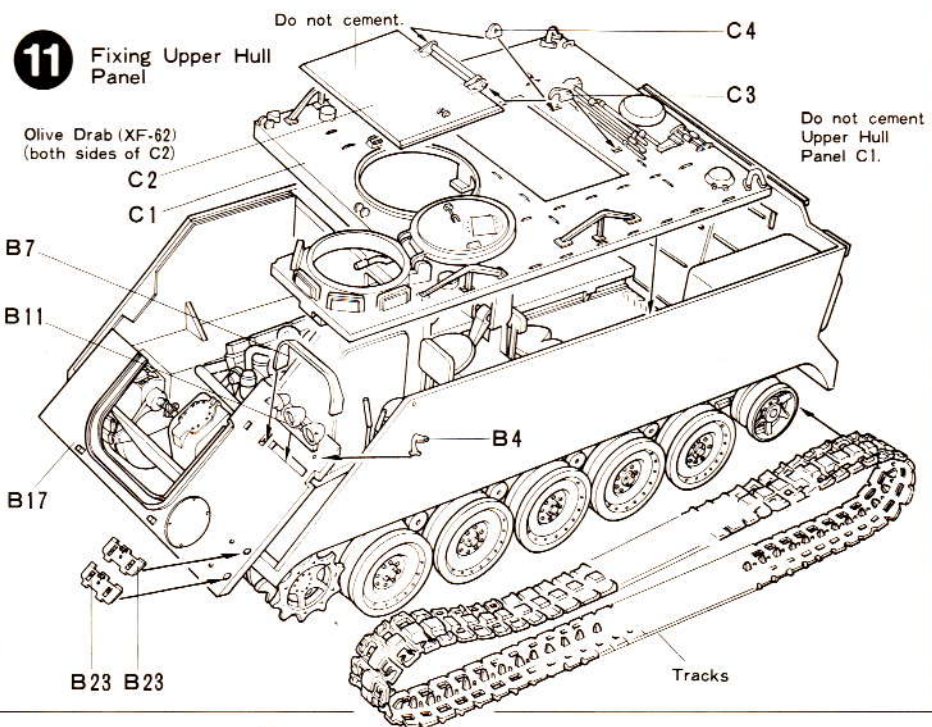


**11** <Fixing Upper Hull Panel>

First of all cement part B17 to Hull. Do not cement Upper Hull Panel, but hook on with Support A1.



**11** Fixing Upper Hull Panel

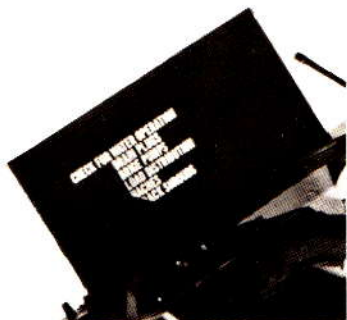


<Tips for Better Modeling>

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

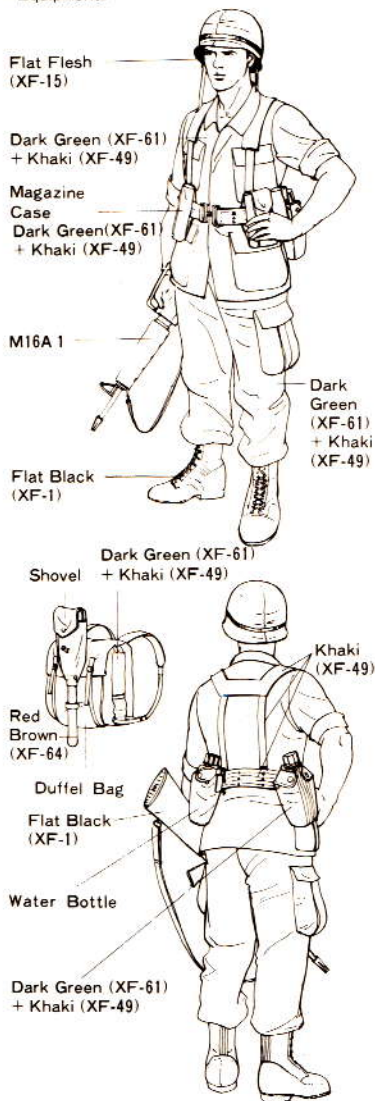
★ Use paints only for plastic. Avoid dust while doing your painting job.

**12** (Completion of Hull)  
Do not cement Cupola and Engine Room Cover. You can fix Breakwater Plate in either open or closed position. Select one you prefer and fix.

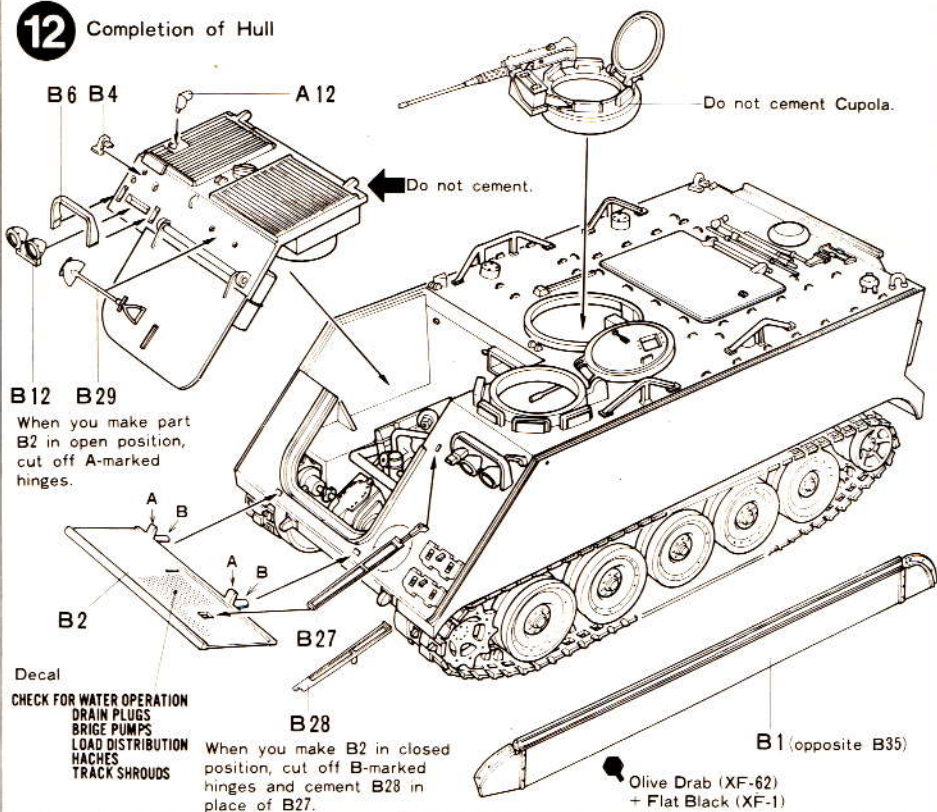


**13** (Construction of Figures)  
Commander and Driver do not have equipment. But Communicating Soldier and Infantrymen are equipped with two water bottles and a magazine case. You might as well place accessory parts such as Duffel Bag and Machine Guns to Hull inside.

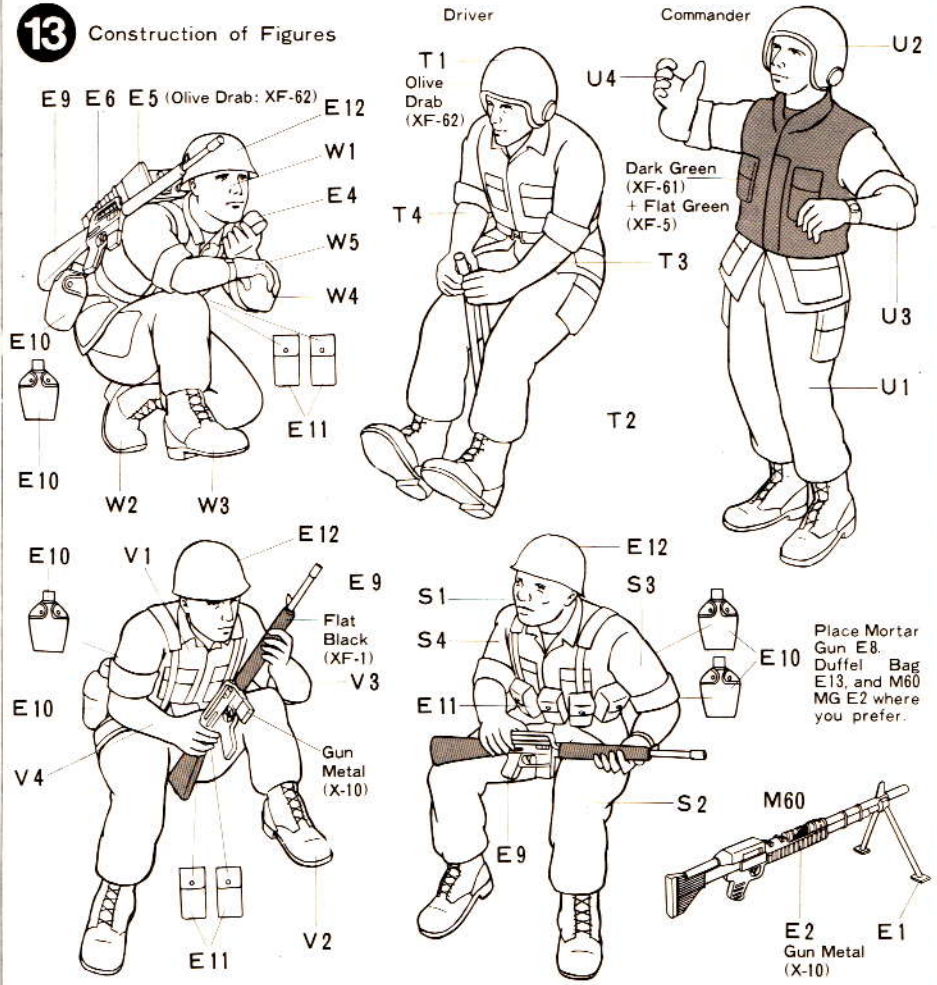
(U.S. Army Soldier's Standard Equipment)



**12** Completion of Hull



**13** Construction of Figures



# APPLYING DECALS



(Conversion of M113 Model)

Among many variants of M113 series, one which has gun-shields may be one of the easiest and most interesting type for conversion. This vehicle was attached with gun-shields to the cupola and to the M2 gun, and two M60 machine guns were fixed to the rear hatch through the battle experience in jungle. This kit contains two M60 machine guns. Try assembling this type with utilizing accessory parts and plastic card. Refer to the photos below.



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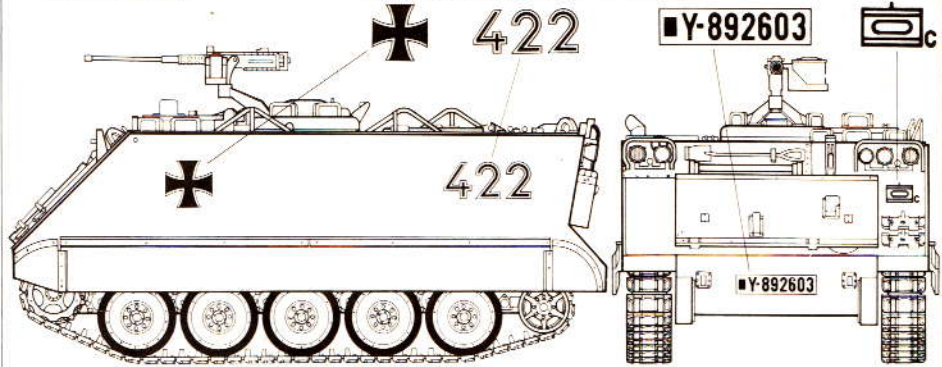


**TAMIYA**  
TAMIYA PLASTIC MODEL CO.  
628, OSHIKA, SHIZUOKA-CITY, JAPAN.

### Marking of M113 Which Belongs to West German Army

Hull—Olive Drab

Apply to same position of both sides.



No decal on upper and rear hull.

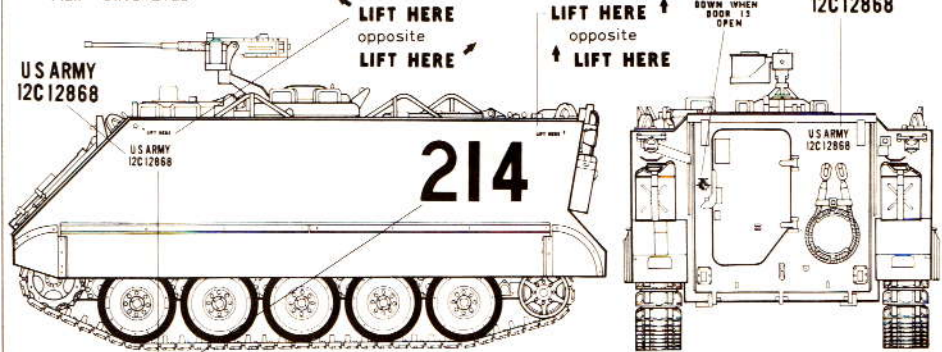
### Marking of M113 Used By U.S. Army ①

Hull—Olive Drab

US ARMY  
12C12868

LIFT HERE  
opposite  
LIFT HERE

LIFT HERE ↑  
opposite  
↑ LIFT HERE



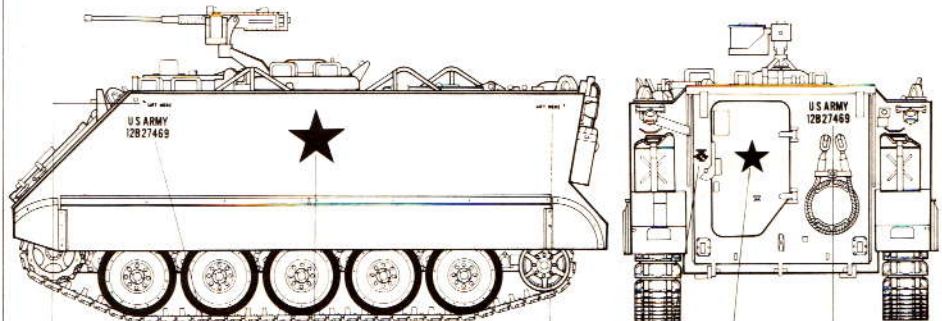
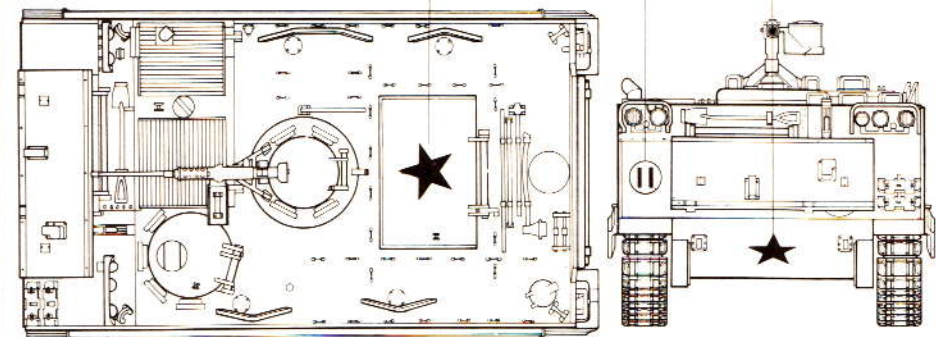
Apply to same position of both sides.

### Marking of M113 Used By U.S. Army ②

Hull—Olive Drab

Decal (large)

Decal (medium)



LIFT HERE  
Opposite  
LIFT HERE

US ARMY  
12B27469

Decal (large)

Also to opposite side.

LIFT HERE ↑  
opposite  
↑ LIFT HERE

WARNING  
KEEP  
HANDLE  
DOWN  
WHEN  
DOOR IS  
OPEN

Decal (small)

US ARMY  
12B27469

the mass production model used a Chrysler 75M 4-cycle OHV V 8-cylinder water-cooled gasoline engine of 215 hp. The tracks are driven by the front sprocket wheels. The transmission gives four forward and one reverse speeds. The maximum speed is about 64 km/h. A gasoline tank with a capacity of 303 litres is carried inside the hull and the cruising range is said to be 320 km. There are no upper idler wheels. The suspension is of the Christie type and employs torsion bar springs.

The standard armament is a cal. 0.50 (12.7 mm) Browning M2 heavy machine gun mounted on the commander's cupola. In view of battle experience in Vietnam, some vehicles carry two 7.62 mm light machine guns with auxiliary armour plate or two 57 mm M18 recoilless guns as offensive weapons in addition to the Browning heavy machine gun. A number of variations from the basic armoured personnel carrier have been manufactured and are used by armoured divisions and mechanized infantry divisions. They include the M106 self-propelled 107 mm mortar, M125 self-propelled 81

mm mortar, M132 self-propelled flame thrower, M557 armoured command car and a variety of missile vehicles. The M113 and the variations were used in quantities during the Vietnam War and showed their mobility to the full.

The complete world-wide air transport system of the U.S. Air Force attaches a deeper significance to the M113 which has such features as easiness to use due to lightness and smallness, satisfactory mobility with amphibious ability and air transportability. The M113 can carry infantry promptly at any time to any place except for the open sea to deliver a telling blow at the enemy. However, the masterpiece armoured personnel carrier is being outdated by tactical progress. Experience in the Vietnam War has shown that when the enemy appears soldiers carried by the M113 are forced get off and fight on the ground. This means that they are put in the same unprotected condition as before. This is the most serious disadvantage of the M113. Since the M113 has no loopholes, soldiers inside the vehicle can not take part in fighting. Because of this disadvantage,

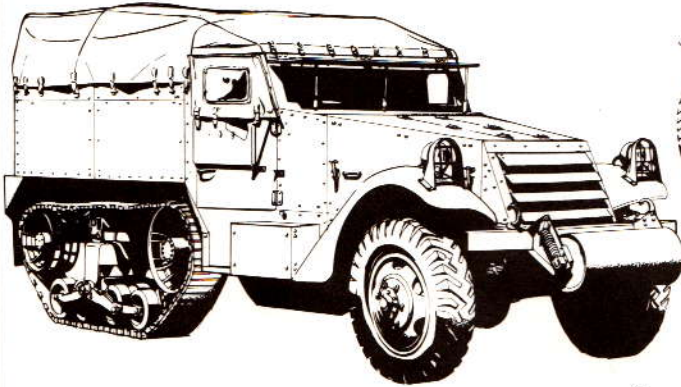
the M113 is often said to be nothing but a taxi only for carrying infantrymen toward the battlefield.

In view of this point, West Germany was quick to develop a new armoured personnel carrier named Marder. This new vehicle carries a 20 mm machine gun as its main armament and enables passengers to fire from inside the hull. Such a new military vehicle is called armoured infantry combat vehicle. It is said that the U.S. Army is developing a similar vehicle which would be referred to as "Moving Tochka or Moving Infantry Position".

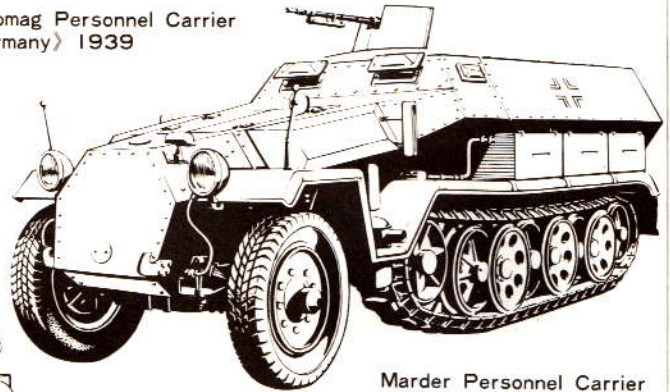
It is true that the M113 is becoming outdated, but we should not forget that more than thirty thousand units have been produced and are still in use. It may safely be said that the M113 well claims the name of masterpiece personnel carrier. Even though it is outdated by tactical progress, it will never lose its value as the great masterpiece of the day.

Change of U.S. and German Personnel Carriers

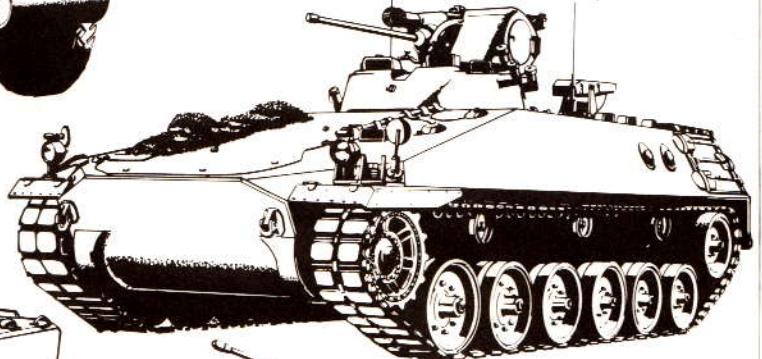
M3 Personnel Carrier (U.S.) 1939



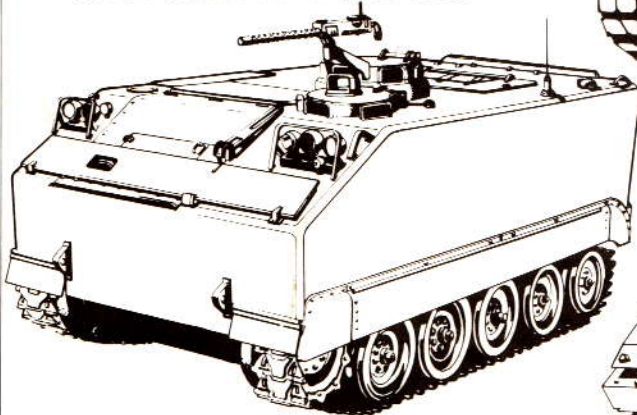
Hanomag Personnel Carrier (Germany) 1939



Marder Personnel Carrier (W. Germany) 1968



T113 Personnel Carrier (U.S.) 1959



M113 Late Type (U.S.)

