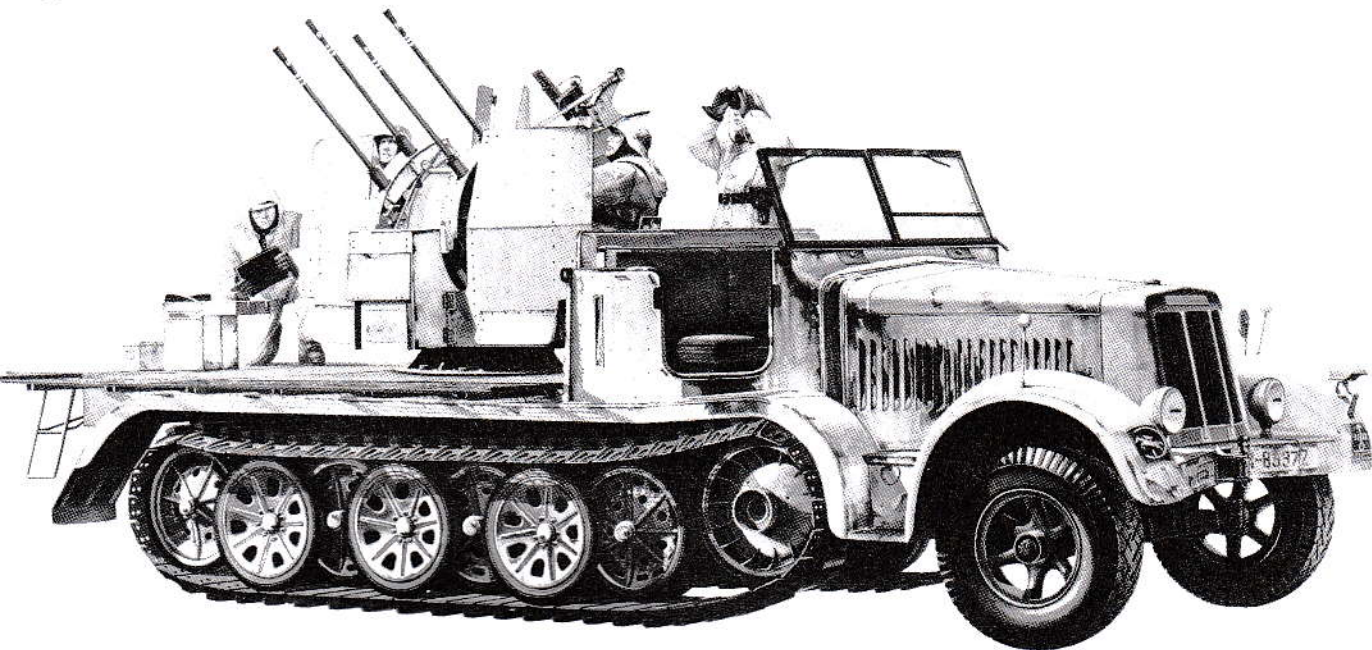




GERMAN 8ton SEMI TRACK

20mm FLAKVIERLING

Sd.kfz 7/1 1/35 MILITARY MINIATURE SERIES



The 8 ton semi-track Sdkfz 7/1

Towards the end of World War I, the tank was extensively looked upon as a new weapon which would decide the fate of ground warfare. The new weapon, of unfamiliar shape, not only astonished soldiers on the battlefield but also deeply impressed the civilian population the world over. It seems that very few people had remembered the track-driven tractor which had been towing a heavy gun as a "mechanical horse" or as a "scene-shifter" behind the muddy battlefields. Those who were in the know were aware that the Holt caterpillar tractor was the origin of the half track and had been the mother of the tank which helped to lead the Allies to victory. After the end of World War I, the Holt half-track tractor which had been invented originally for agricultural use, continued to be studied in many countries for military purposes. Half tracks were a happy invention, combining the advantages of full tracks such as the tank and tractor and those of wheeled vehicles such as the car. Full tracks were superior in cross-country ability and tractive force, but inferior in running speed on roads, and in steering. On the other hand, wheeled vehicles made satisfactory speeds on road but often had difficulty in running cross country. Half tracks had the advantages of both types of vehicles and few of their disadvantages. However, the half track's main disadvantage was that they were complicated in construction and difficult to maintain.

Recognising the excellent tractive force and cross-country ability of half tracks, the German Army Ordnance Bureau decided in 1932 to develop six military half tracks, from a 1-ton to a large 18-ton tractor. Different car makers were ordered to develop one of these. Krauss-Maffei in Munich took charge of an 8-ton half track. Because this firm had given attention and study to half tracks since 1928, they completed a prototype, named Kmm7 as early as 1933. It soon developed into the Kmm8 and Kmm9, and in 1936 the Kmm10 was put into production. It was not until the Kmm10 was born that the 8-ton half track was officially de-

signed "Medium 8-ton Tractor (Sd.Kfz.7)". The last production model, Kmm11 was completed in 1938 and put into production immediately.

German half tracks were used in large quantities by the Wehrmacht and all were excellent vehicles built by the cream of German vehicle engineers, and their engineers' thoughtful consideration was given to their construction and parts. The 8-ton half track stood out amongst the others and was a masterpiece medium tractor which was used for various purposes.

In half tracks of the German Army, unlike those of the U.S. Army etc., most of the moving parts were composed of tracks, and therefore their mechanism was complicated and required a great deal of maintenance. For instance, the differential brake—a device for slowing the rotation of the inside track so that the vehicle could make a quick turn—was designed to interlock with the steering mechanism. The suspension, complicated but practical in construction, was a happy combination of torsion bars and leaf springs, to which large double bogies peculiar to German vehicles were fixed. Thus the fruition of the engineers' excellent efforts was seen in every point of the German half tracks, particularly so in the 8-ton half track.

The production of the 8-ton half track totalled about 1,200 in number by the end of World War II. Many of them were used as a tractor for the 150 mm heavy field gun or 88 mm anti-aircraft gun. During the middle and last stages of the War some of these medium half tracks were equipped with various weapons.

One of them was the 8-ton half track with 20mm four-barrelled AA machine gun (Sd.Kfz 7 1). The 20 mm four-barrelled gun mounted on the vehicle was an excellent AA machine gun completed in 1940. Two 20 mm AA machine guns, model 38, were arranged in two rows. The gunner seat behind the gun and, whilst looking through the self-adjusting sight, adjusted the direction of the gun by means of a manual handle. The gun was of the magazine-feed type and equipped with two loader seats, one on each side. It was designed to be swivelled through 360°, elevated by

100° and depressed by 10°. The maximum rate of fire was 800 rounds per minute. The maximum effective range was 3,700 metres (height) and 4,800 metres (ground distance).

Since the four-barrelled AA machine gun was called "2 cm Flakvierling 38" (20 mm Four-Barrelled AA gun 38), the 8-ton half track armed with it was officially designated "8-ton Tractor with 2 cm Flakvierling 38 (Sd.Kfz 7/1).

In the first few months of 1945, German Luftwaffe were accompanied by an anti-aircraft battalion whenever they were moved from one place to another. The battalion consisted of one 37mm AA gun battery (nine guns) and two 20 mm AA gun batteries (six guns each). These batteries laid down a thick anti-aircraft barrage against enemy planes approaching the airfield at low altitude. Pierre Crosstelman, a French volunteer who joined the Royal Air Force and became the French Ace of Aces, said about the AA Battalion in his reminiscences, "Big Circus", as follows: "Whenever we approached a German airfield, they immediately laid down a curtain of tracer shells which we could not break through. We had very little chance of escaping at a low altitude through a curtain of shots and shells shot up by 33 guns at the rate of 250 rounds per second. It made everybody's blood run cold. Since the experience over the Rheine airfield, nobody had tried to confront anti-aircraft artillery around German airfields. I myself was possessed by an inferiority complex against German anti-aircraft guns. Our pilots were completely demoralized."

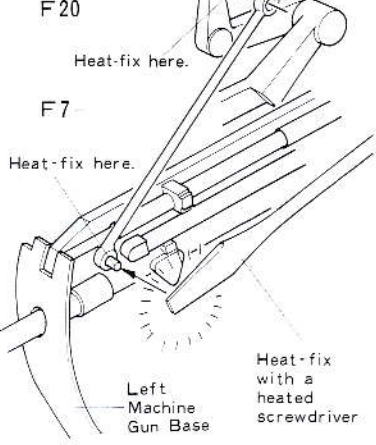
Pierre Crosstelman later attacked a German airfield with his nine Tempest fighters, of which six were brought down.

Thus the half track, with 20 mm four-barrelled AA gun, became the most formidable opponent of Allied fighters which tried to attack the Germans at low altitude.

This powerful weapon was used in quantities also by the Army and Schutzstaffel Units, and Allied troops were harassed by it in ground combat as well.

5 (Fixing of Machine Gun Bases)

Machine gun bases can be moved up and down. Cement them to E13 which has been put between E27 and E28 at step 1. F7 and F20 are also movable. Fix F7, by heating them, to F20 and left machine gun base so that they interlock with the base.



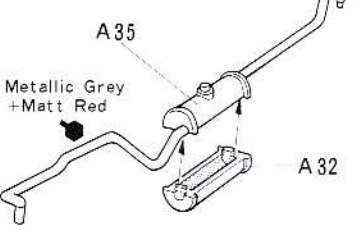
6 (Fixing of Bullet-Proof Plates)

Loader's seat (F2, F16 and F17) and step (E16) should be fixed on both sides.

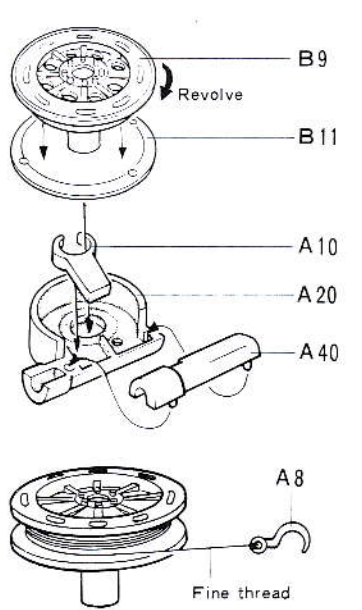
7 (Installation of Sprocket Wheels)

Drive sprocket wheels can rotate. Push them in from outside. Do not use cement.

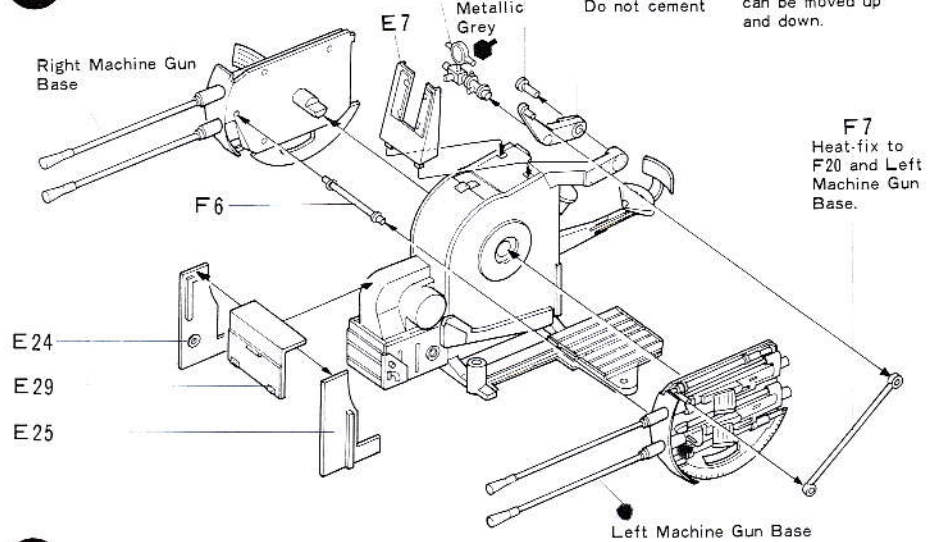
(Construction of Muffler)



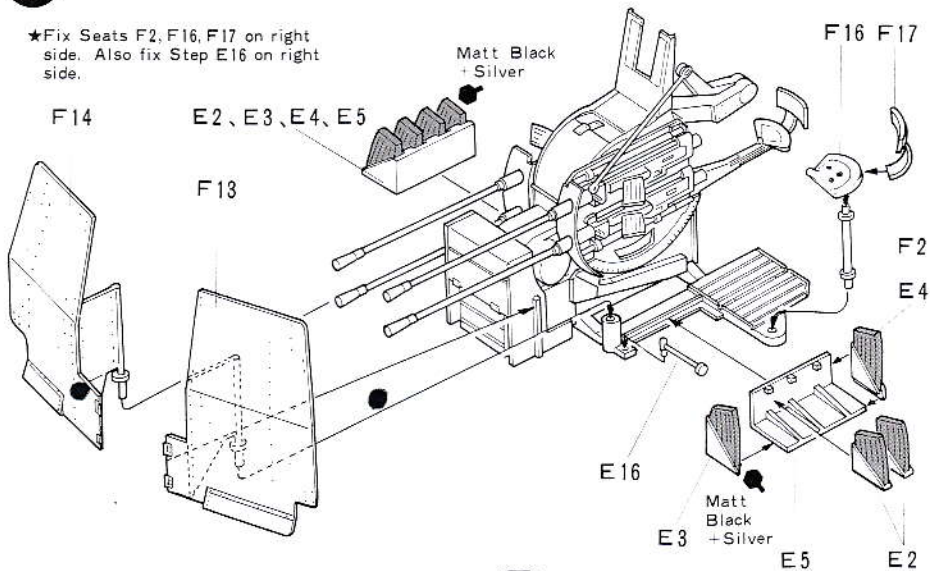
(Construction of Winch Wheel)



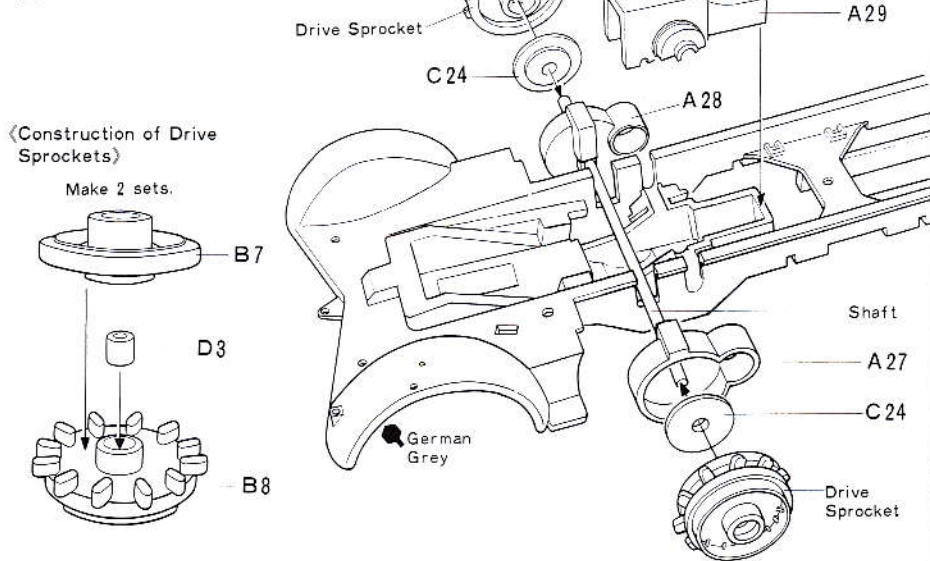
5 Fixing of Machine Gun Bases



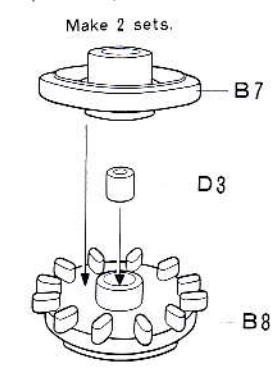
6 Fixing of Bullet-Proof Plates



7 Installation of Sprocket Wheels



(Construction of Drive Sprockets)



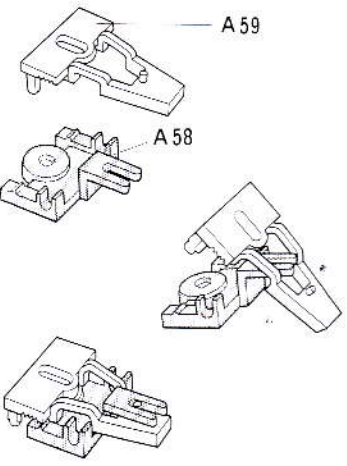
8 <Construction of Chassis>

First, fix muffler which has been constructed at the preceding page. Then, fix other parts.

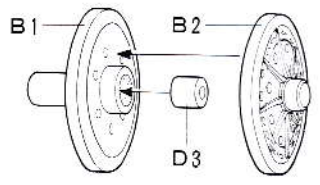
9 <Installation of Rear Wheels>

Rear shaft bearings (A60 and A61) should not be cemented.

<Construction of Rear Shaft Bearing>



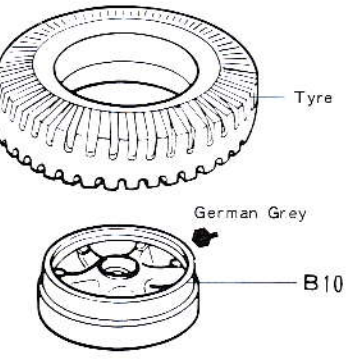
<Construction of Rear Wheels>



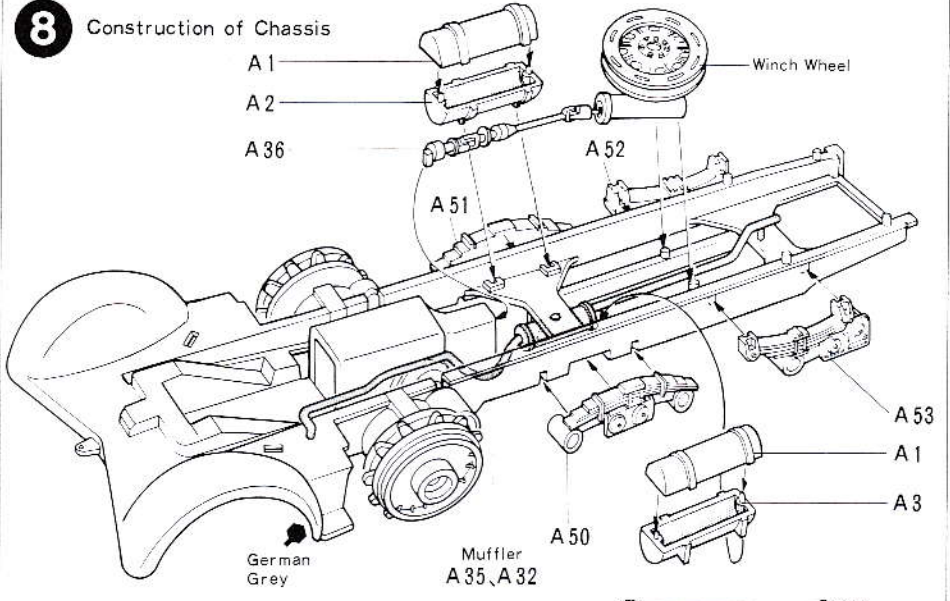
10 <Construction of Front Suspension>

Front suspension has a number of movable parts. Construct it as shown in the figures.

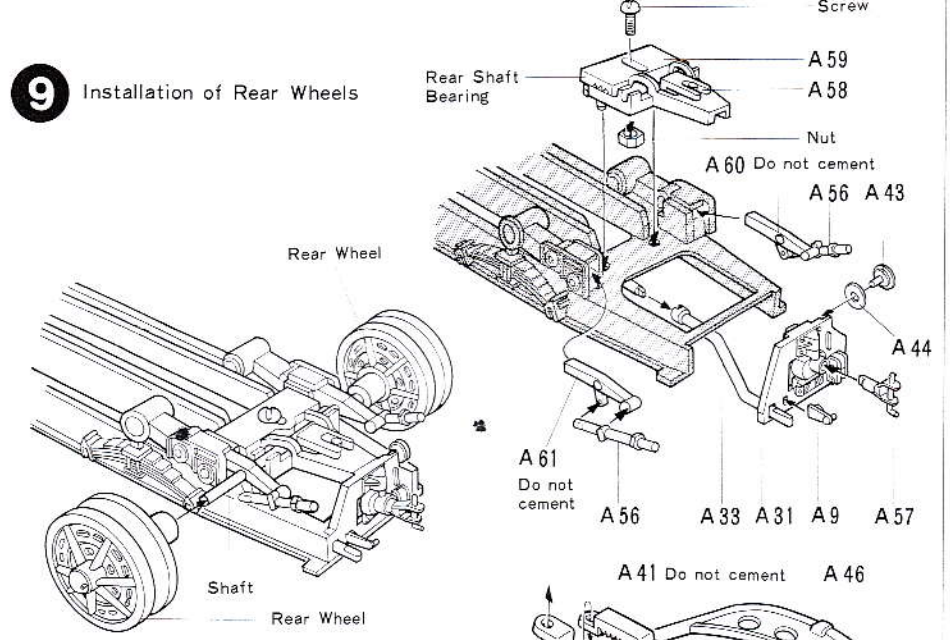
<Construction of Front Wheels>



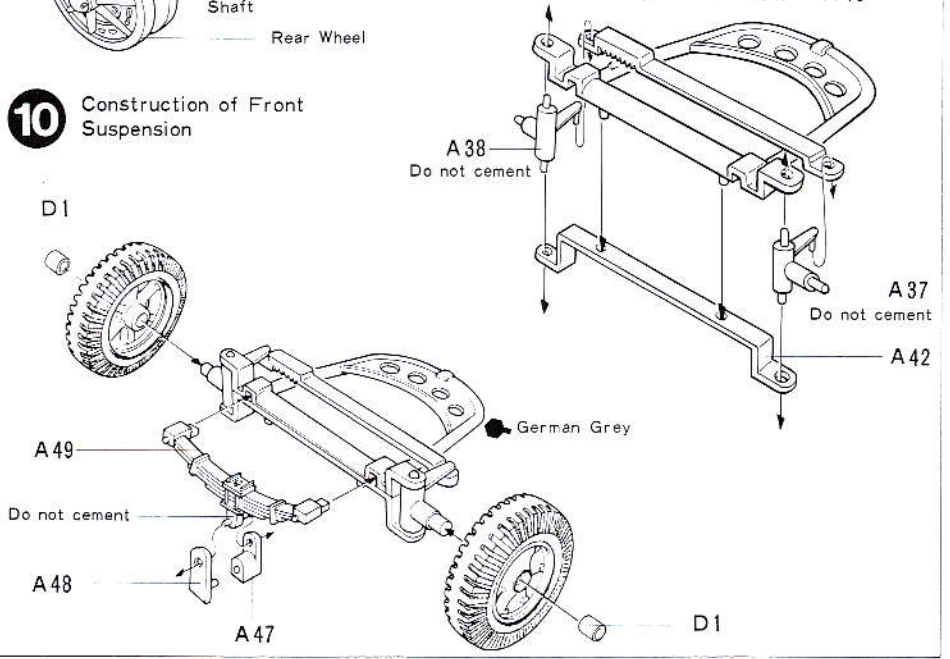
8 Construction of Chassis



9 Installation of Rear Wheels



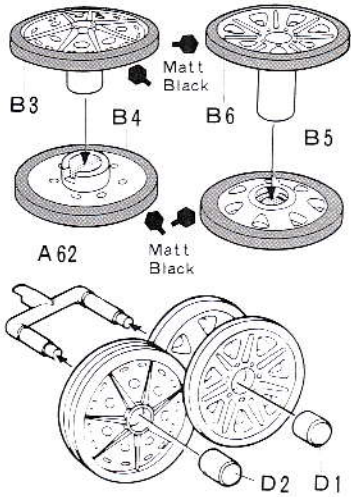
10 Construction of Front Suspension



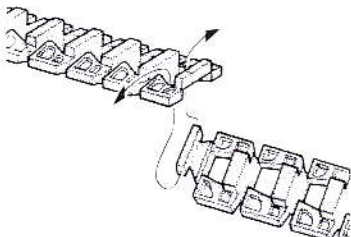
11 Installation of Road Wheels

Cement road wheels as shown in the figure.

Construction of Road Wheels

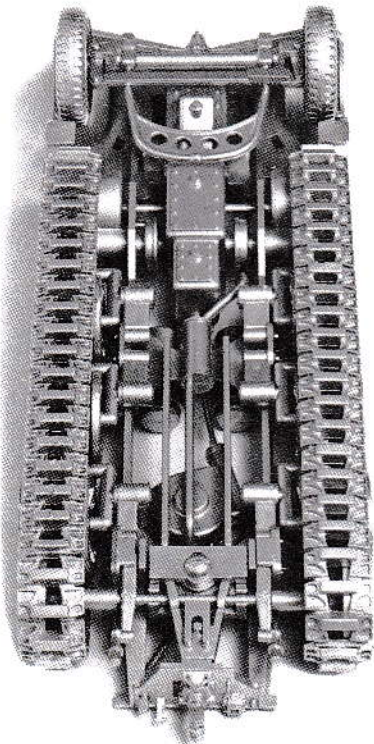


Connecting Tracks



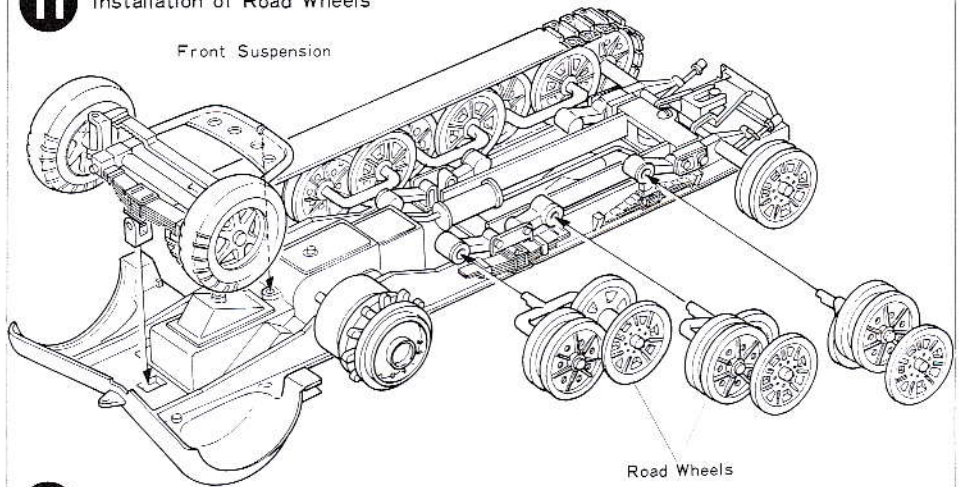
12 Construction of Driver's Seat

Rear seat differs according as the vehicle is fighting or running. In fighting, the rear seat is folded up so that the machine gun can be swivelled.

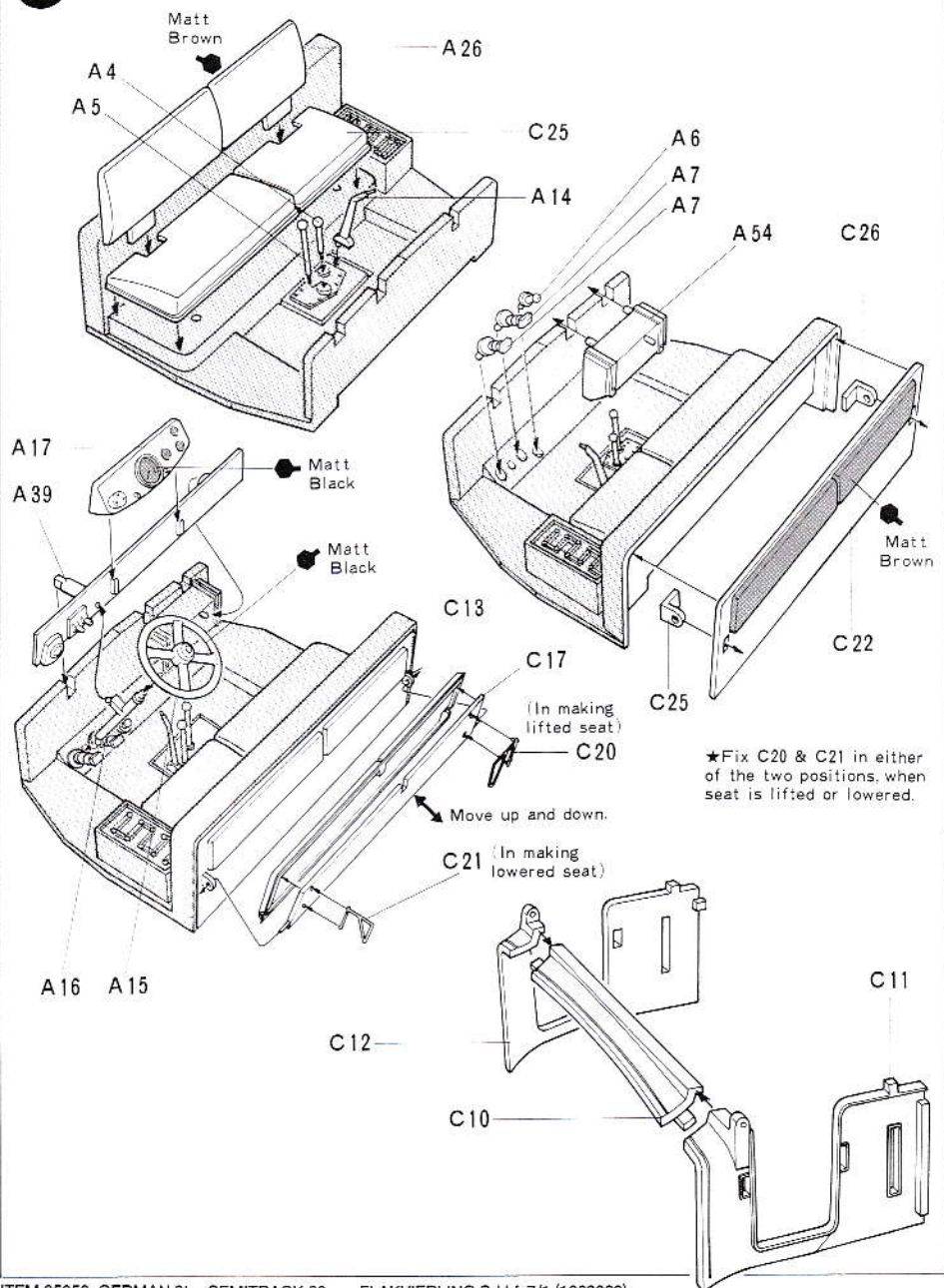


11 Installation of Road Wheels

Front Suspension



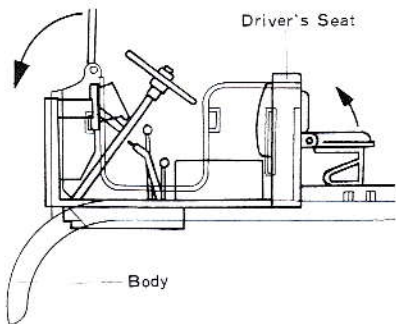
12 Construction of Driver's Seat



13 <Fixing of Driver's Seat>

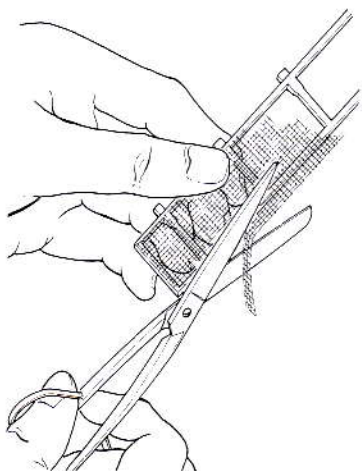
C6 is movable and should be just put in. (Do not use cement.)

<Fixing of Driver's Seat>



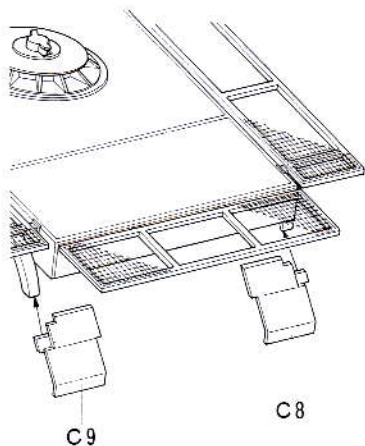
14 <Construction of Gates>

Construct rear gate and right & left side gates. Cement a net to each gate and cut off its edges jutted out. Ladder fixed to the rear gate differs according as the vehicle is fighting or running. In fighting, fix C15 and C19. In running, fix C3.

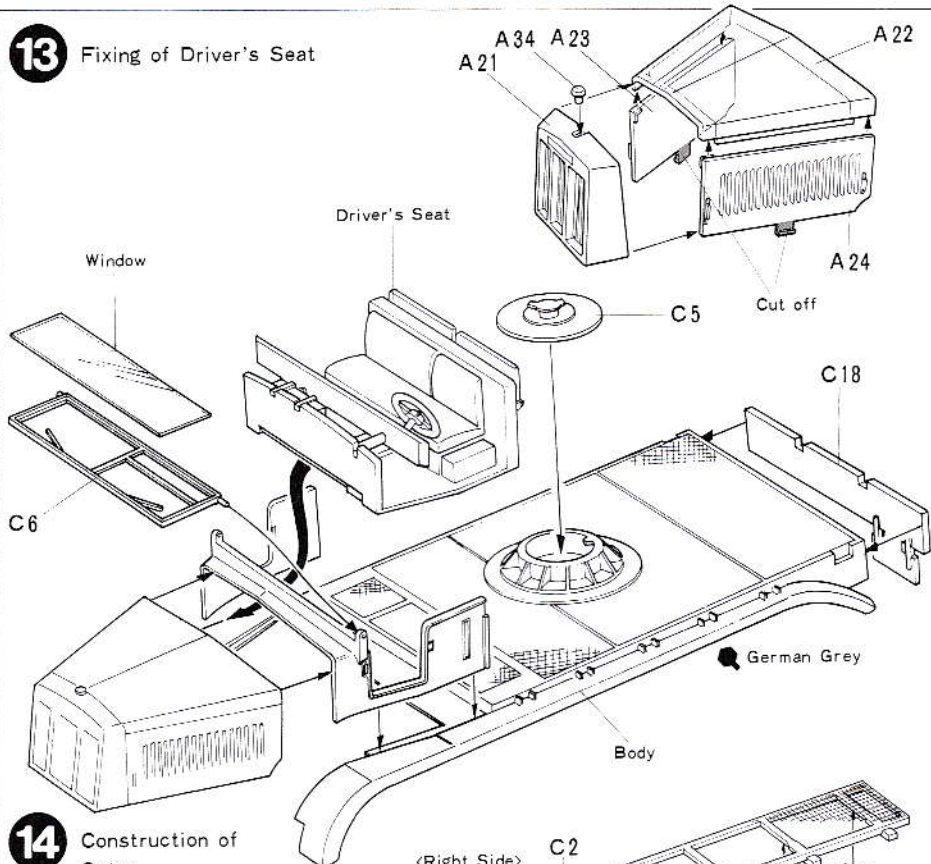


15 <Fixing of Gates>

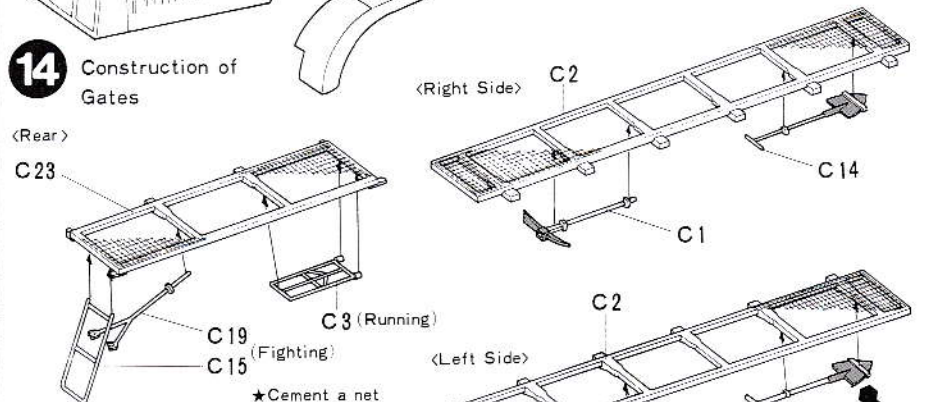
Each gate is fixed differently according as the vehicle is fighting or running. In running, each gate should be erected. Hood C7 for driver's seat may be fixed as you like.



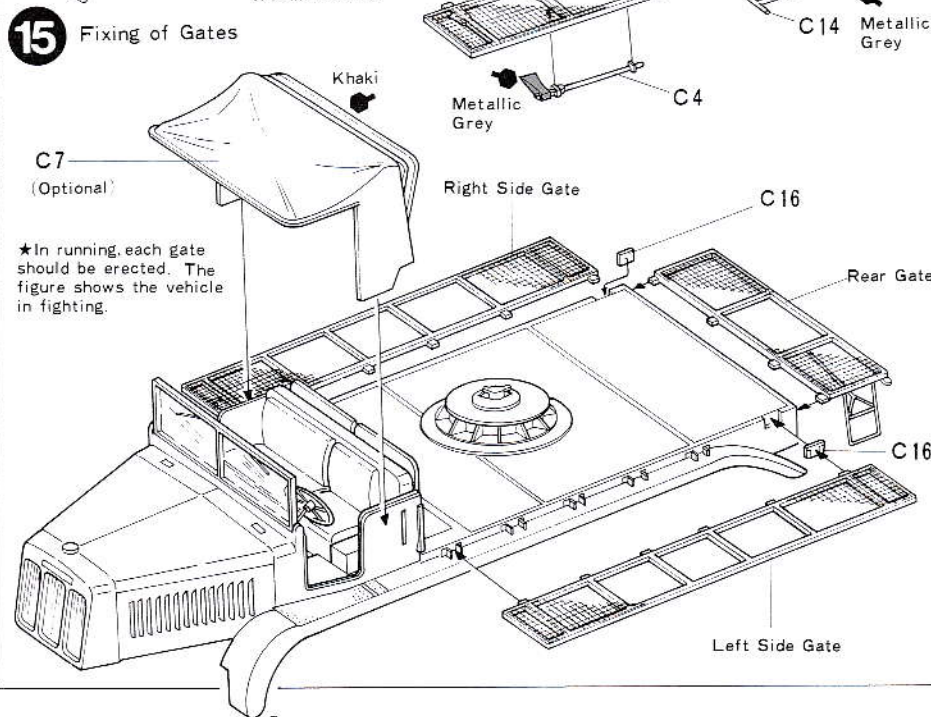
13 Fixing of Driver's Seat



14 Construction of Gates



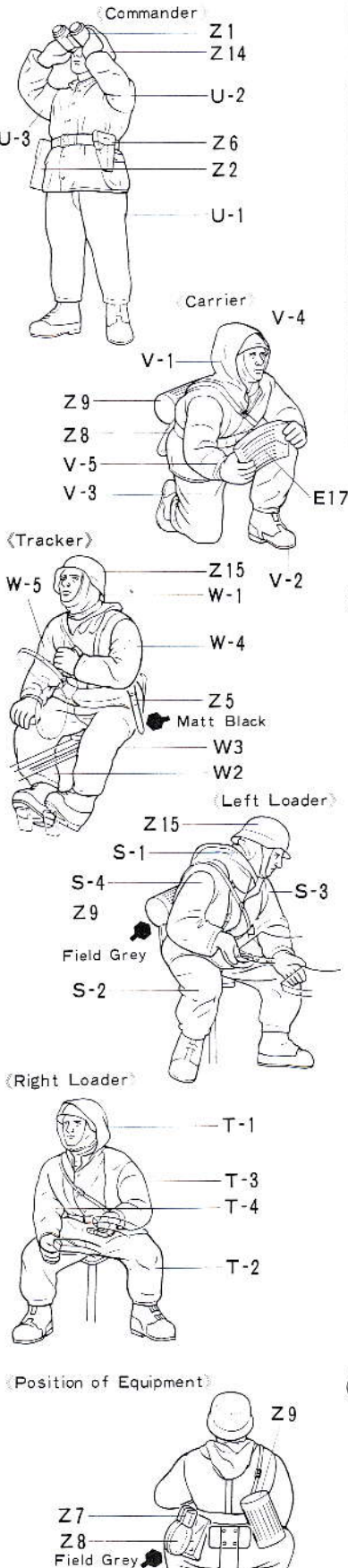
15 Fixing of Gates



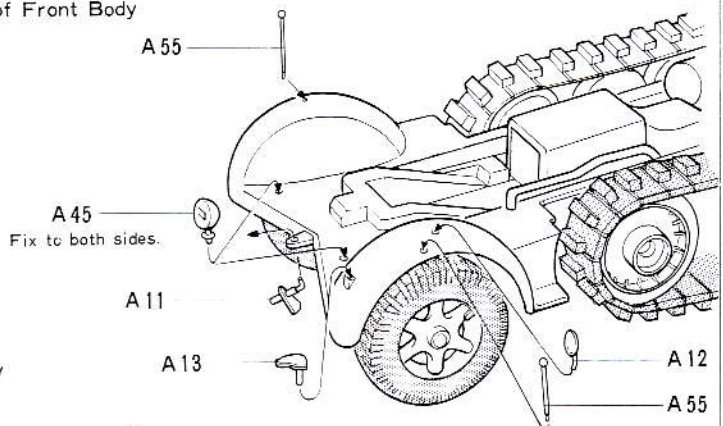
★ In running, each gate should be erected. The figure shows the vehicle in fighting.

16 Construction of Front Body

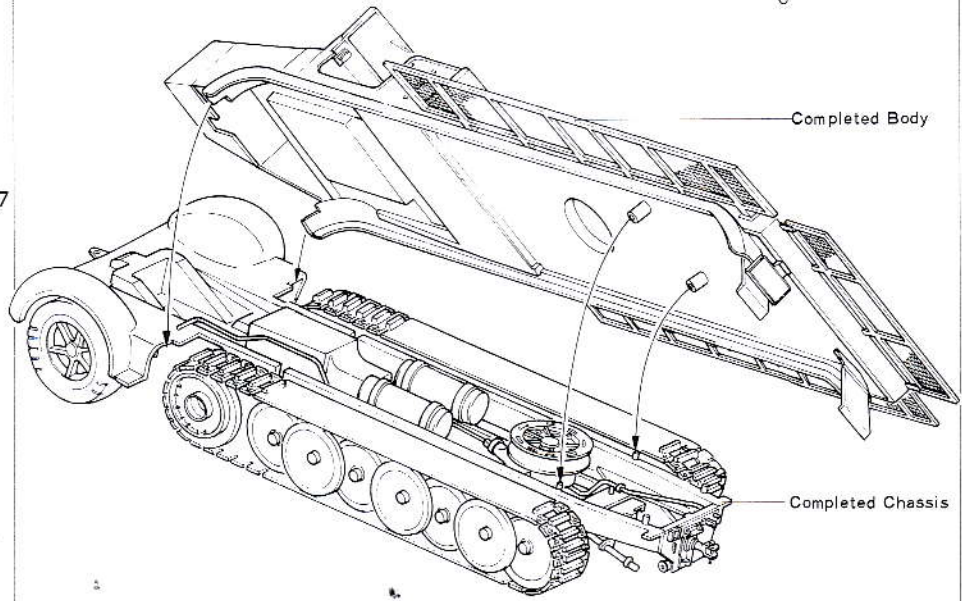
Front body parts are small and liable to snap. Fix them very carefully.



16 Construction of Front Body

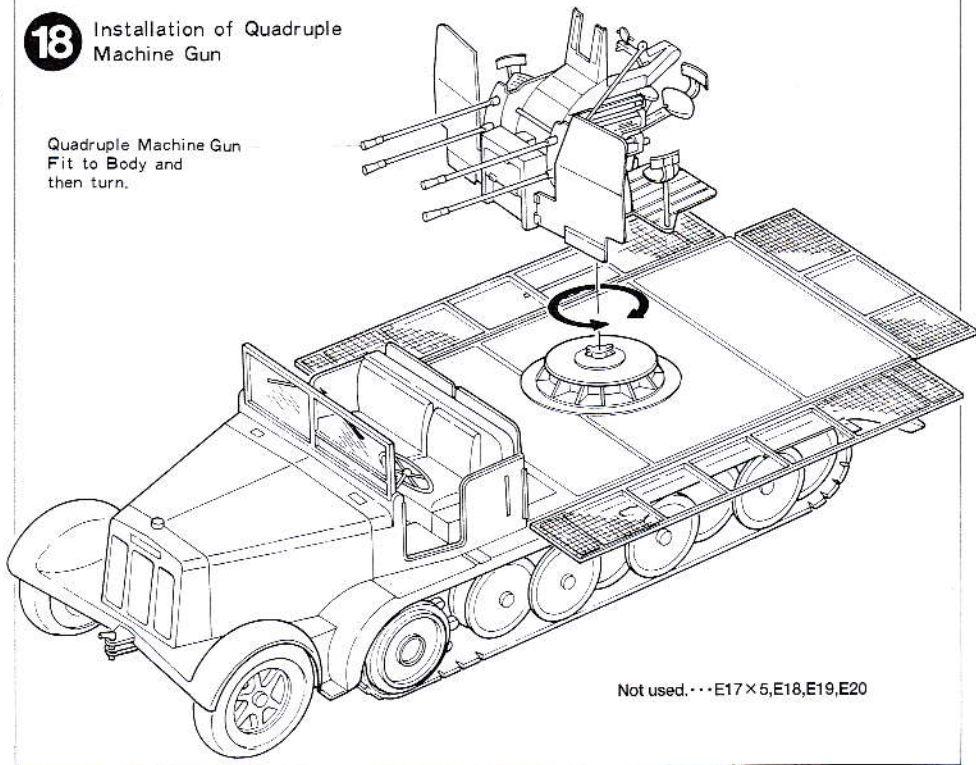


17 Fixing of Body



18 Installation of Quadruple Machine Gun

Quadruple Machine Gun
Fit to Body and then turn.



PAINTING

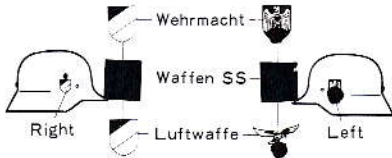


APPLYING DECALS

Painting of 8-ton Half Track with AA Gun

8-ton half tracks with AA gun were generally painted in German Grey overall. Most of them did not wear camouflage, but in winter some of them were camouflaged with water paint of flat white laid on the German Grey ground.

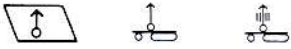
Markings Applied to Helmet



Division Marks

Wehrmacht	WH	Waffen SS	SS
	24th Tank Division		1st SS Tank Division
	Grossdeutschland Tank Grenadier Div.		2nd SS Tank Division
	Luftwaffe		3rd SS Tank Division
	Hermann Goring Panzer Division		

Tactical Marks

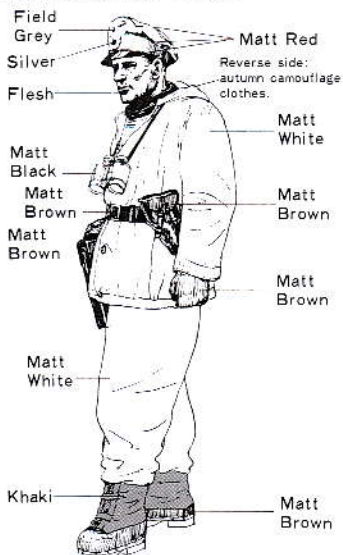


These three marks represent the 8-ton half track with four-barrelled AA gun.

Painting of Model figures

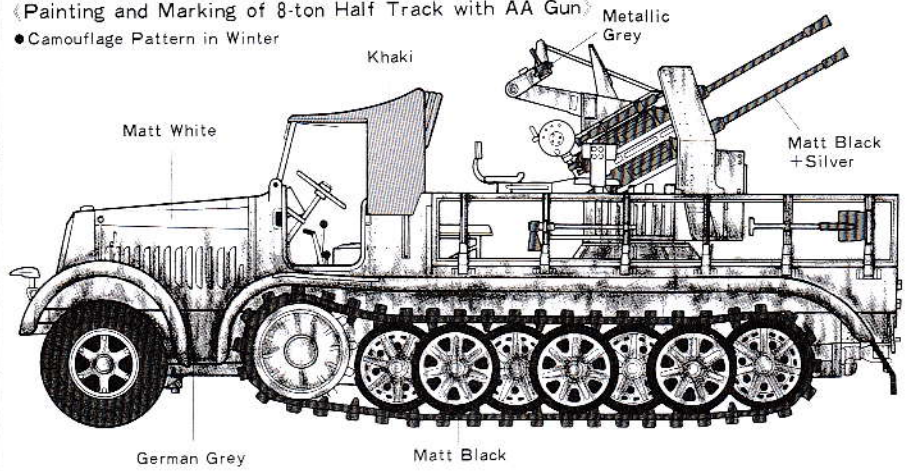
All the model figures contained in the kit are basically designed to wear winter clothing. The reverse side of the winter camouflage suit was intended for use in autumn and dyed in three colours, i.e. dark yellow, dark green and reddish brown.

Winter Camouflage Clothes



Painting and Marking of 8-ton Half Track with AA Gun

Camouflage Pattern in Winter

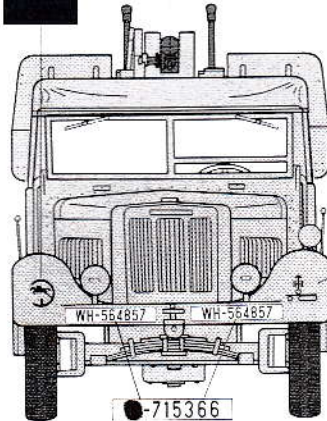


★ In applying decals, see the left table and select one kind of set of decals, Wehrmacht, Waffen SS, or Luftwaffe.

Division Mark

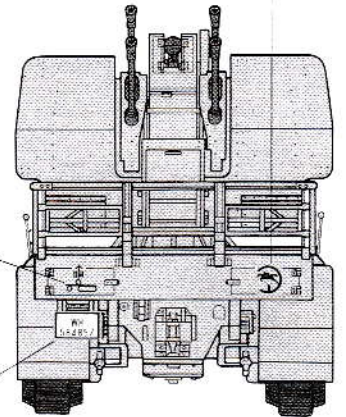


Metallic Grey



Registration Number

Division Mark



Registration Number

Position of Figures

★ Location of accessory parts are free.

