

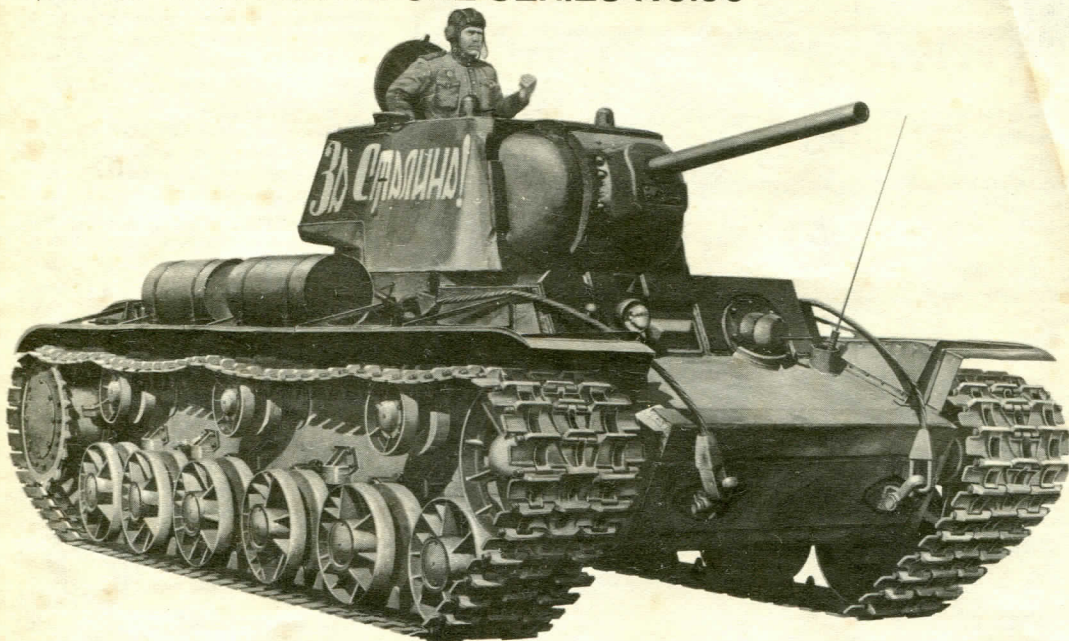
# KV-1 Russian Heavy Tank

## KV-1 TYPE C



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

1/35 MILITARY MINIATURE SERIES NO.66



The KV (KB in Russian) was a heavy tank in World War II that the Russians were proud of. It was named after Marshal Kliment Y. Voroshilov who was an old close friend and comrade of Stalin's.

In 1930's, the Russians emerged from the stage of using and imitating tanks of other countries and began to develop tanks based on their own conception. The Russians broadly classified tanks into two: high-speed medium tanks and heavy tanks. The high-speed medium tanks were designed to have powerful armament and effective armour so that they could support infantry as a matter of course and be used as independent units. The Soviet Union demanded that the medium tanks should have superior mobility in particular. They later developed into the BT and the T34. On the other hand, the heavy tanks were charged with duties of supporting medium tanks and crushing enemy's main fire-power when attacking enemy positions. The heavy tanks, therefore, were required to have great fire-power and strong armour at some cost of speed. They originated in the T100 and the SMK (CMK), grew into the KV and the Stalin and have become the main-strength tanks.

In 1936, a heavy tank design team was formed with Engineer Z. Kotin as a leader at the Kirov tank factory of Leningrad. The team aimed at manufacture of tough thick steel plate for tanks, study of ideal tank body and turret construction, and generous use of welding in place of riveting to reduce tank weight. In the spring of 1937, the first test tank T-46-5 was completed. It weighed 28 tons and was armed with a 45 mm main gun. The armour was 60 mm in thickness to be proof against 37 mm anti-tank projectiles. Although the production was only a few, it was such an epochal tank that hinted the direction of later Russian tanks. It was the first tank manufactured on the basis of Russian own design as well. The design team subsequently started designing the heavy tanks SMK (CMK) and T-100 which had two turrets on the body, but about the time when the team completed the design of the T-100, the brains of the Russian Army became aware that in view of lessons learned

from the Spanish Civil War large tanks could not be battleships on land and especially those with double turrets were not suited to modern battles full of variety. In February of 1939, the team of Kotin, therefore, set to the design of the KV heavy tank which might be called the pioneer of modern tanks. In September of that year when the Germans were carrying on with a glittering success the Polish Campaign the prototype of a new tank with a single turret was completed. It was 43.5 tons in overall weight and employed the same torsion bar suspension as did the T-100. Six road wheels were used as compared with eight for the T-100 and tracks were of the same cast steel as that of the T-100. The new tank was also similar to the T-100 in body shape and the driver's seat was located in the center of the body. Thus the traditional framework of Russian heavy tanks was completed by this new tank. It had heavy armour which was 75 mm thick in the front and 60 mm thick on the sides. A 76.2 mm gun (30.5 calibres long) of model 1938 which was used for the T-100 was mounted on a new turret remodelled from the rear turret of the T-100. Three 7.62 mm tank machine guns were mounted: one interlocking with the main gun of the turret, a second in the rear of the turret and a third in the front of the body. The new tank was powered by a water-cooled, 12-cylinder B-2K diesel engine with output of 550 hp. This was the same engine as mounted on the T-34 medium tank which began to be mass-produced. The maximum speed of the new tank was as low as 35 km/h, which naturally could not bear comparison with 53 km/h of the T-34. After putting the new tank to severe tests of the Army for about a month, the Russians officially decided on 19th December, 1939 that it should be mass-produced and named "Kliment Voroshilov 1". The first mass production vehicle of the KV-1 was completed in February 1940 at the Kirov tank factory and the KV-1 came to be produced in succession thereafter. The KV-2 armed with a 152 mm howitzer was also produced at the factory. In the spring of 1941, the KV-1 replaced its main gun with a more powerful 76.2 mm gun of 41.6 length


calibre and employed 100 mm armour in the front. Steel casting was also employed for the manufacture of its turret, and therefore the weight of the KV-1 increased to 47.5 tons. The KV-1 had variations such as the KV-1A, the KV-1B and the KV-1C. The production of the KV was 245 in 1940 and in 1941 reached 393 by the outbreak of the German-Soviet War. 508 KV tanks delivered to Russian troops fought severely with German tank forces. In the summer of 1942, the Russians sent the remodelled KV-1S (KV-1C in Russian) to the front. This heavy tank officially called type S was designed with emphasis laid on mobility at some cost of conventional heavy armour. The weight was reduced to 42.5 tons and the maximum speed was increased to 42 km/h, which was also due to the improvement of the engine cooling device. The turret was redesigned to be streamlined in the front for higher effectiveness in protecting against projectiles.

In the summer of 1943, the KV85, the final version of the KV series, appeared. It was a remodelled type of the KV-1S and carried an 85 mm gun (49 calibres long) as its main armament.

At the beginning of the German-Soviet War, the Russians were organizing the T-34 and the KV-1 as the new main-strength tanks of their tank forces. Under these worst circumstances, both the T-34 and the KV-1 had literally desperate struggles with German tanks. Particularly the heavy armour of the KV tanks excited feelings of wonder in German officers and men. The Germans were terrified at the KV tanks which rushed at them repelling all projectiles of the Panzer Kampfwagen III and IV and called the KV "Monster". Even the projectiles of the 88 mm anti-tank gun credited with high performance could not easily penetrate the armour of the KV tanks. The KV, which kept growing through fights, was succeeded by the Stalin and ended its days. The basic conception of the KV was inherited by modern tanks of the Soviet Union and other countries.



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

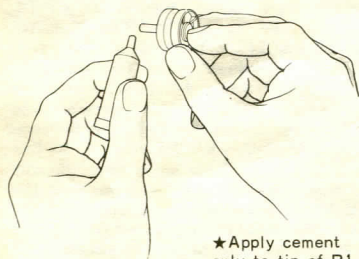
 This mark shows the colour this part should be painted.

### 1 Construction of Wheels

Each Wheel has a Poly Cap. Never put cement on Poly Caps.

### 2 Fixing of Lower Hull Parts

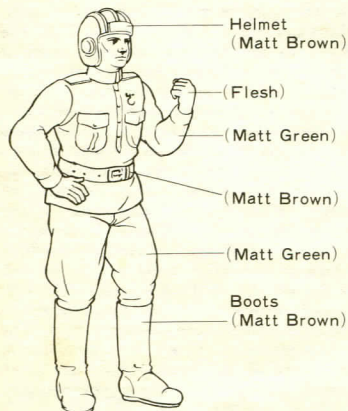
Each Drive Sprocket and Idler Wheel should be just fitted in place. Do not cement them. For B1 and B23, see the figure below.



★ Apply cement only to tip of B1.

### Construction and Fixing of Figure

The model figure should be either fixed in the Lower Hull or Turret, or stood outside the model tank. If you hope to fix it in the Lower Hull or Turret, mount only its upper half on the base.



★ When you fix Figure to Upper Hull, do not use Lower Half.

### 1 Construction of Wheels

Make 12 sets.

Make 2 sets.

Make 2 sets.

〈Road Wheel〉

〈Idler Wheel〉

〈Drive Sprocket〉

Make 2 sets.

### 2 Fixing of Lower Hull Parts

Fix Figure to either Upper Hull or Turret if you desire.

★ Do not cement C19 but just insert.

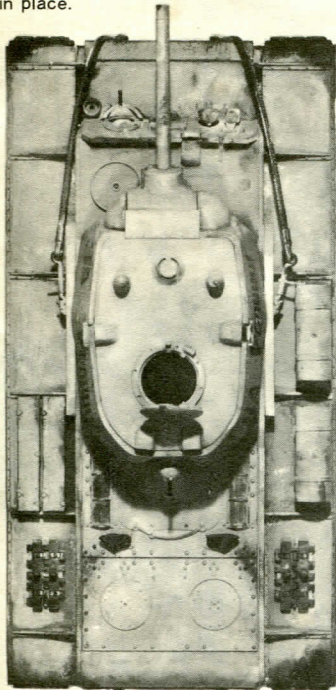
  

### 3 Fixing of Road Wheel

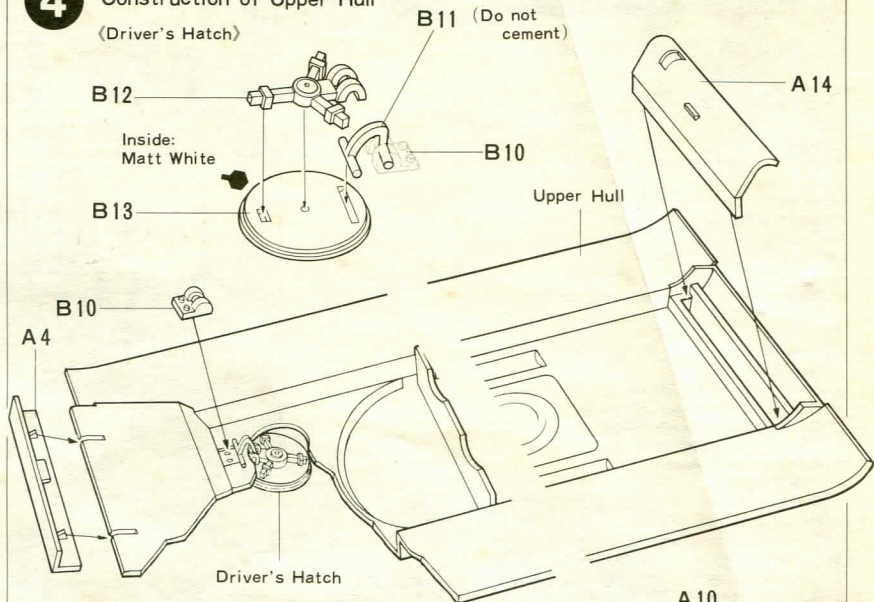
Press Road Wheel onto Shafts.  
★ Fix C19 when you fit Wire Ropes.

#### 4 Construction of Upper Hull

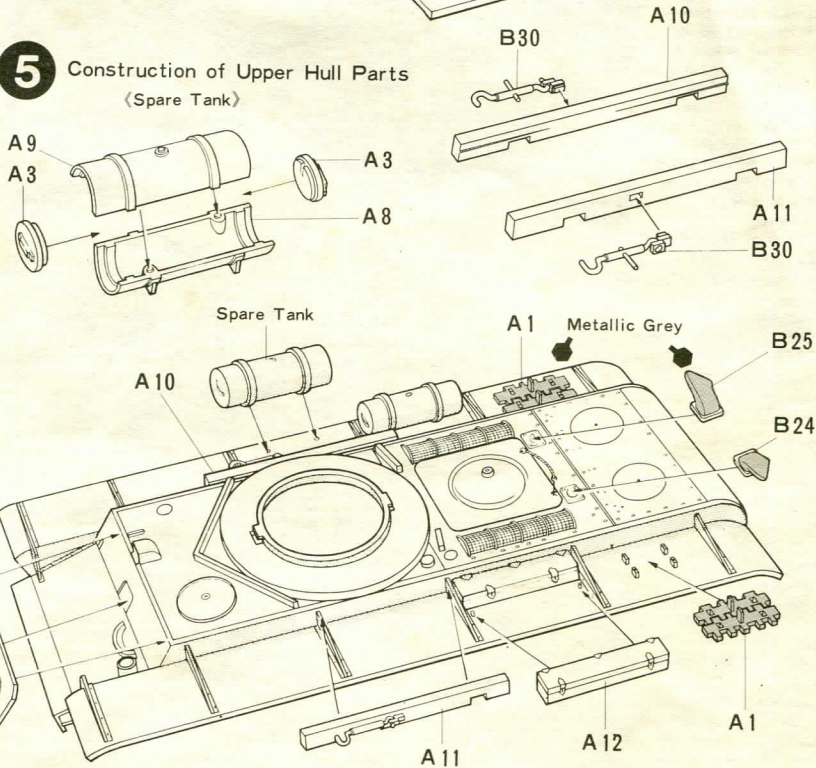
Driver's Hatch can be opened and closed. B11 must not be cemented. This should be fixed to the Upper Hull by means of B12 and B10. A4 and A14, which hold the Upper Hull and Lower Hull together, should be firmly cemented in place.



#### 4 Construction of Upper Hull (Driver's Hatch)



#### 5 Construction of Upper Hull Parts (Spare Tank)



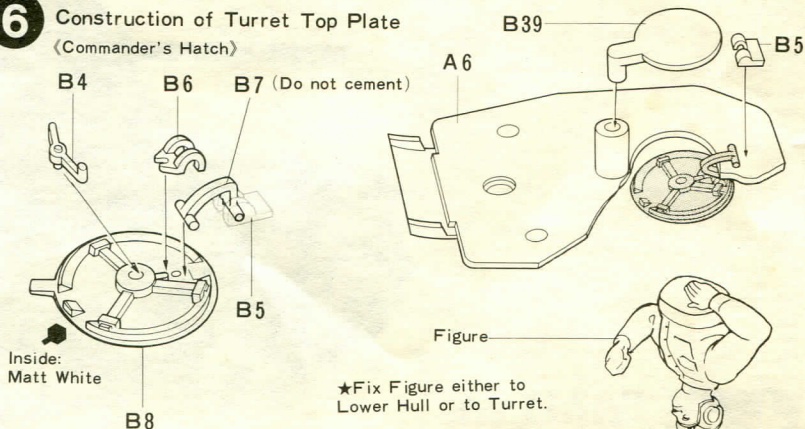
#### 5 Construction of Upper Hull Parts

Construct and fix various parts as shown.

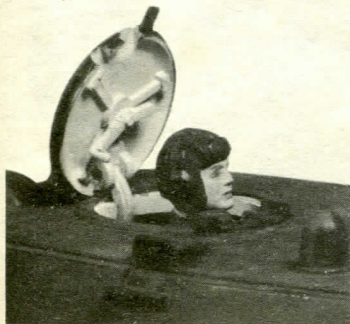
#### 6 Construction of Turret Top Plate

Commander's Hatch Hinges B7 must not be cemented. This should be fixed to the Turret Top Plate by means of B6 and B5.

#### 6 Construction of Turret Top Plate (Commander's Hatch)

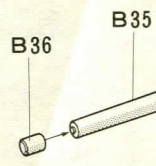


★Fix Figure either to Lower Hull or to Turret.



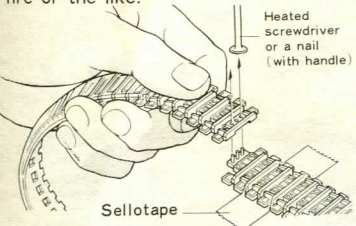
## 7 (Construction of Turret)

Barrel assembly is designed to move up and down. This should be put between Turret Sides A15 and A16.

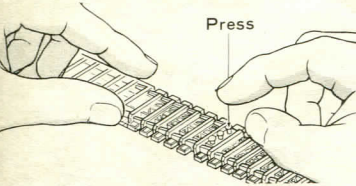


### (Construction of Tracks)

★① Firstly, fasten one end of track onto a desk with tape and insert pins into respective holes. Then, lightly warm the pinheads with either a nail head or the end of a screwdriver that has been previously heated by candle fire or the like.

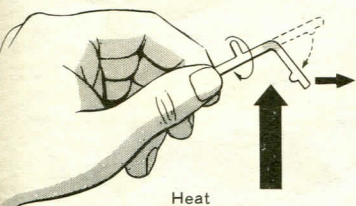


★② Flatten the pinheads immediately with your finger to connect track.



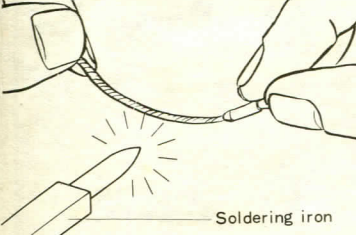
★In case track break or is unfastened due to ineffective flattening, re-fix it with sewing using a black thread or with a stapler as shown in the figure.

### (How to Make Antenna)



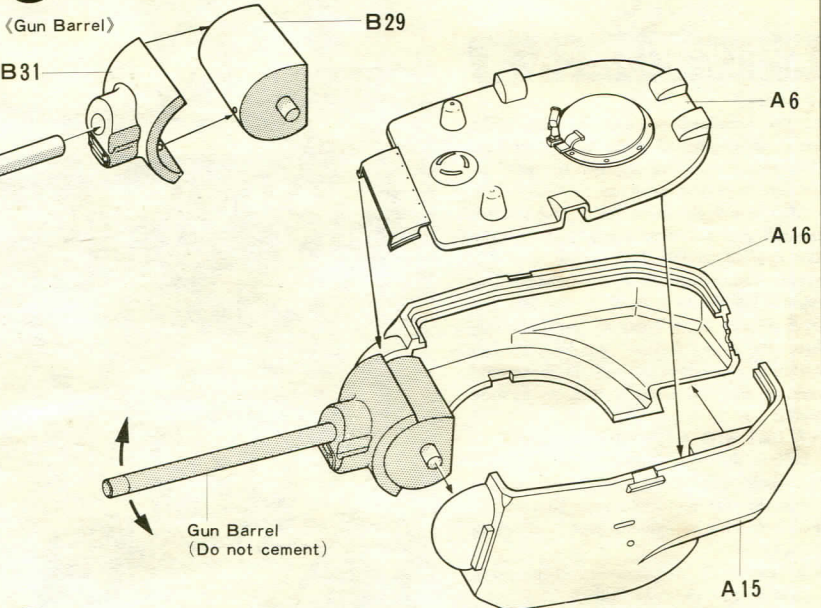
When the runner hangs down, as shown in the figure, take it away from the heating device. Then, slowly stretch it both ways until it becomes long and slender. Keep it still for about 15 seconds to cool. Lastly, cut it to a piece of 7 cm.

### (Fixing Wire Ropes)



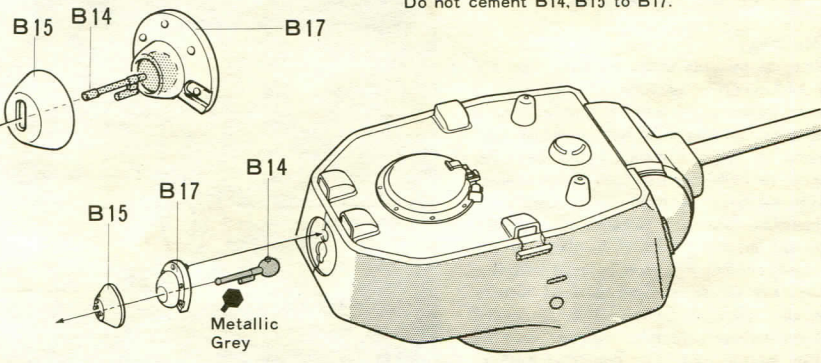
★When fixing Ropes, bend them by the soldering iron or the like.  
★In so doing, take good care of the fire.

## 7 Construction of Turret

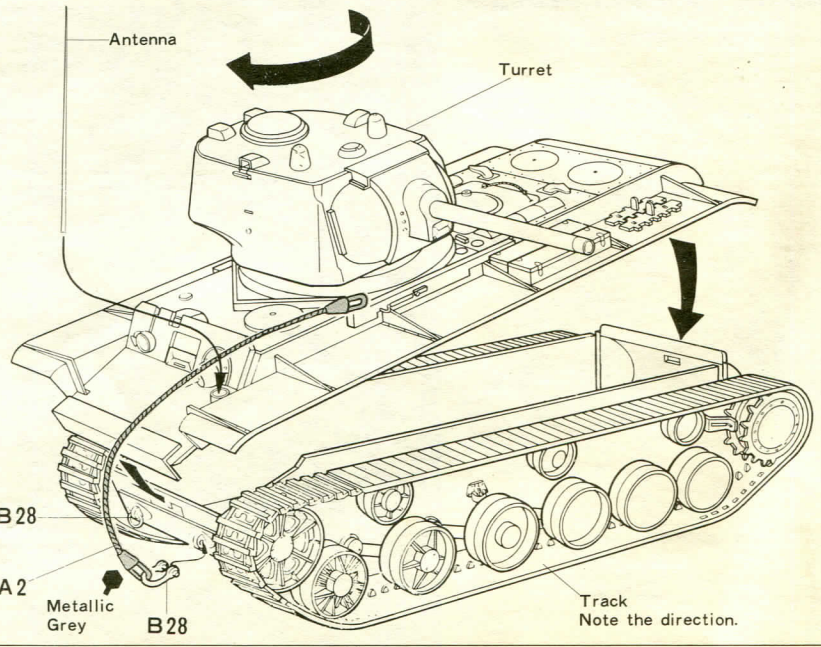


## 8 Fixing of Turret Parts

★Cement B14 and B15. Do not cement B14, B15 to B17.



## 9 Completion of KV-1



# PAINTING



# APPLYING DECALS

## <Painting>

As the standard painting, Russian tanks were spray-painted dark green overall. Camouflage painting applied to the SU-100 etc. was not seen on the KV-1. In winter, however, some KV-1 tanks were camouflaged with white paint, lime or the like applied to the dark green base. In winter camouflage, it is recommended to apply Flat White in such a way that the Dark Green base remains partially visible. By good "dirting" painting, you can faithfully reproduce any one of these real tank in the following states with your model:

- A tank with hollowed-out surfaces by bullets during combat,
- A tank with dirtied surfaces due to run through a desert or a bog,
- A tank with its exhaust pipes collecting soots,
- A tank with its sprocket-wheel teeth shining due to wear and
- A tank with its tools like an ax and a shovel painted anew in expectation of operation.

Do your best and get a fun.

## <Marking>

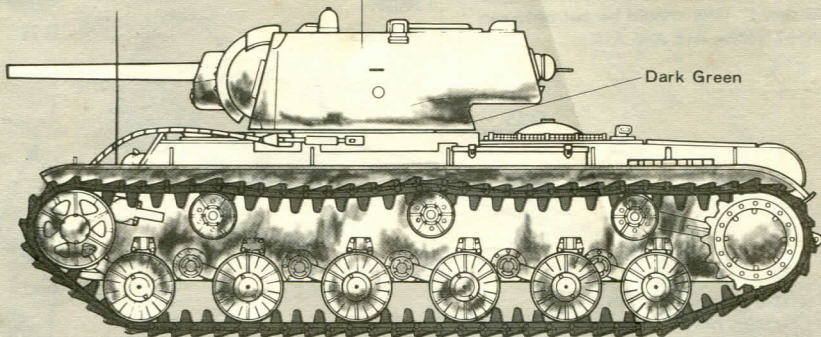
Many of Russian tanks including the KV-1 had excellent performance but did not wear geometrical unit marks that were seen on German vehicles. Units or platoons to which Russian Tanks belonged seem to have been identified by respective numbers written in triangles or diamonds. Possibly because of a dislike for the insipid marks of numbers or absolute confidence in their beloved vehicles, Russians wrote slogans in bold letters on the sides of the turret in disregard of camouflage principle. Slogans such as "For Stalin" and "For Immortal Fatherland" written not in a very good hand clearly showed the spirit of Russian Tank crew. These letters were painted white on dark green hulls or black on white hulls wearing winter camouflage.

## <Painting of KV-1>

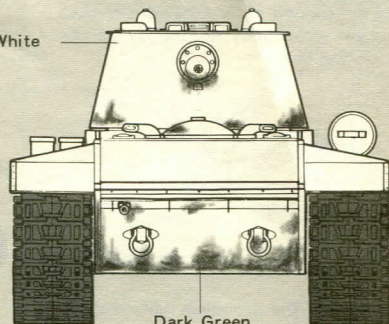
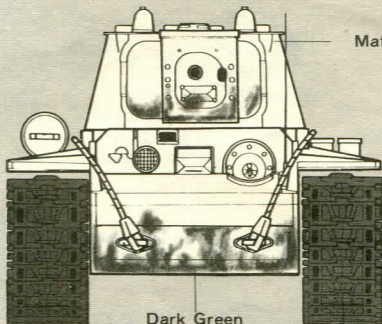
Winter Camouflage

Matt White

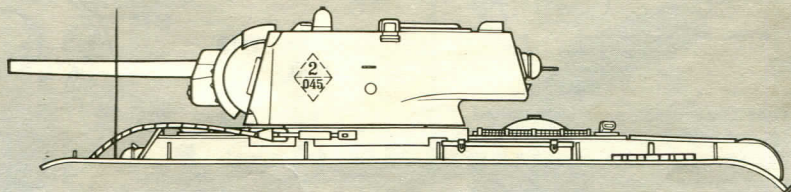
Dark Green



Matt White

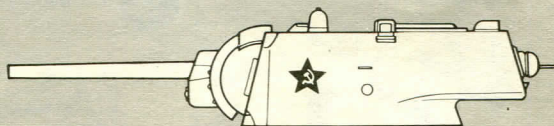


## <Location of Divisional Marks>



Medal for Distinguished Service in Battle.  
Awarded to units which rendered distinguished service on the battlefield.

Hull colour:  
Dark Green



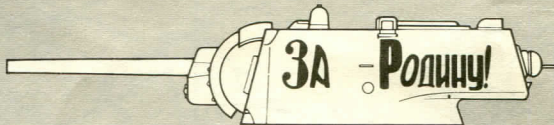
Medal of Lifeguard.  
Distinguished units were selected as the lifeguards.

Hull colour:  
Dark Green



For Fatherland

Hull colour:  
Matt White  
on Dark Green.



For Stalin

Hull colour:  
Dark Green



# PARTS

Make sure that parts are complete.

## A Parts

- |                               |                       |
|-------------------------------|-----------------------|
| 1. Spare Tracks               | 2. Wire Ropes         |
| 3. Tank Cover                 | 4. Bomb-proof Plate A |
| 5. Rear Panel                 | 6. Turret A           |
| 7. Bomb-proof Plate B         | 8. Tank A             |
| 9. Tank B                     |                       |
| 10. Bomb-proof Plate C, Right |                       |
| 11. Bomb-proof Plate C, Left  |                       |
| 12. Tool Box                  | 13. Driver's Panel    |
| 14. Air Deflector Plate       |                       |
| 15. Turret B                  | 16. TurretC           |
| 17. Rear Shafts               | 18. Front Shafts      |

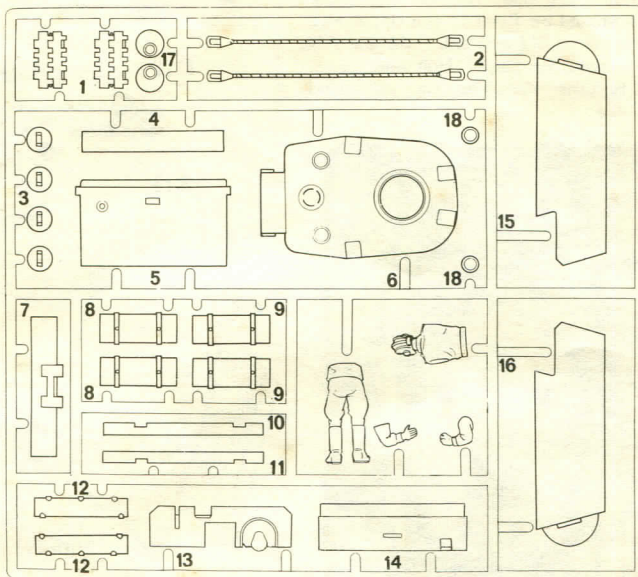
## B Parts

- |                              |                      |
|------------------------------|----------------------|
| 1. Idler Wheel               | 2. Sprocket Wheel A  |
| 3. Sprocket Wheel B          |                      |
| 4. Commander's Hatch Lever   |                      |
| 5. Commander's Hatch Hinge B |                      |
| 6. Commander's Hatch Hinge A |                      |
| 7. Commander's Hatch Arm     |                      |
| 8. Commander's Hatch         |                      |
| 9. Front Hatch               |                      |
| 10. Driver's Hatch Hinge B   |                      |
| 11. Driver's Hatch Arm       |                      |
| 12. Driver's Hatch Hinge A   |                      |
| 13. Driver's Hatch           | 14. Gun Barrel B     |
| 15. Gun Mounting C           | 16. Gun Mounting B   |
| 17. Gun Mounting A           | 18. Gun Barrel A     |
| 19. Road Wheel A             | 20. Road Wheel B     |
| 21. Front Wheel A            | 22. Front Wheel B    |
| 23. Idler Wheel Pin          |                      |
| 24. Exhaust Pipe, Left       |                      |
| 25. Exhaust Pipe, Right      |                      |
| 26. Mud Scraper Arm          |                      |
| 27. Hook Holder              | 28. Hook             |
| 29. Gun Shield Drum          |                      |
| 30. Wire Rope Hook           | 31. Gun Shield       |
| 32. Light B                  | 33. Lens             |
| 34. Horn                     | 35. Main-Gun Barrel  |
| 36. Tip of Main-Gun Barrel   |                      |
| 37. Unnecessary              |                      |
| 38. Driver's Seat            | 39. Commander's Seat |

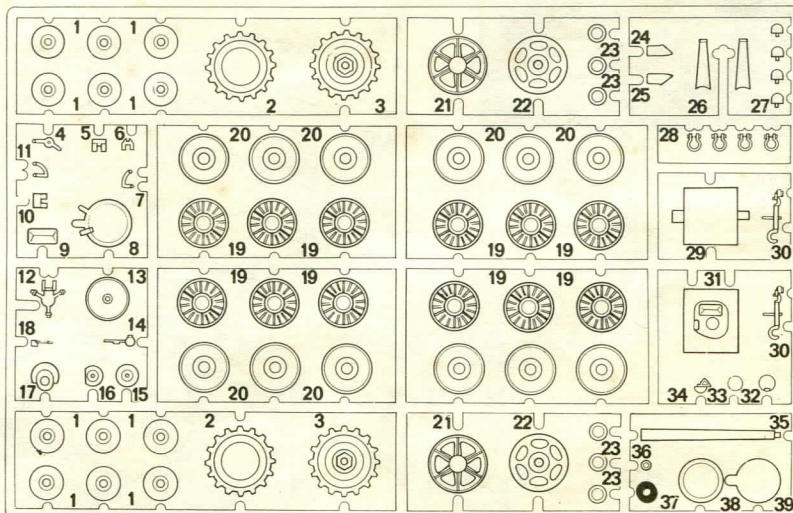
## Poly Caps

- (Short) Wheel Stoppers  
(Long) Unnecessary

## A PARTS



## B PARTS



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