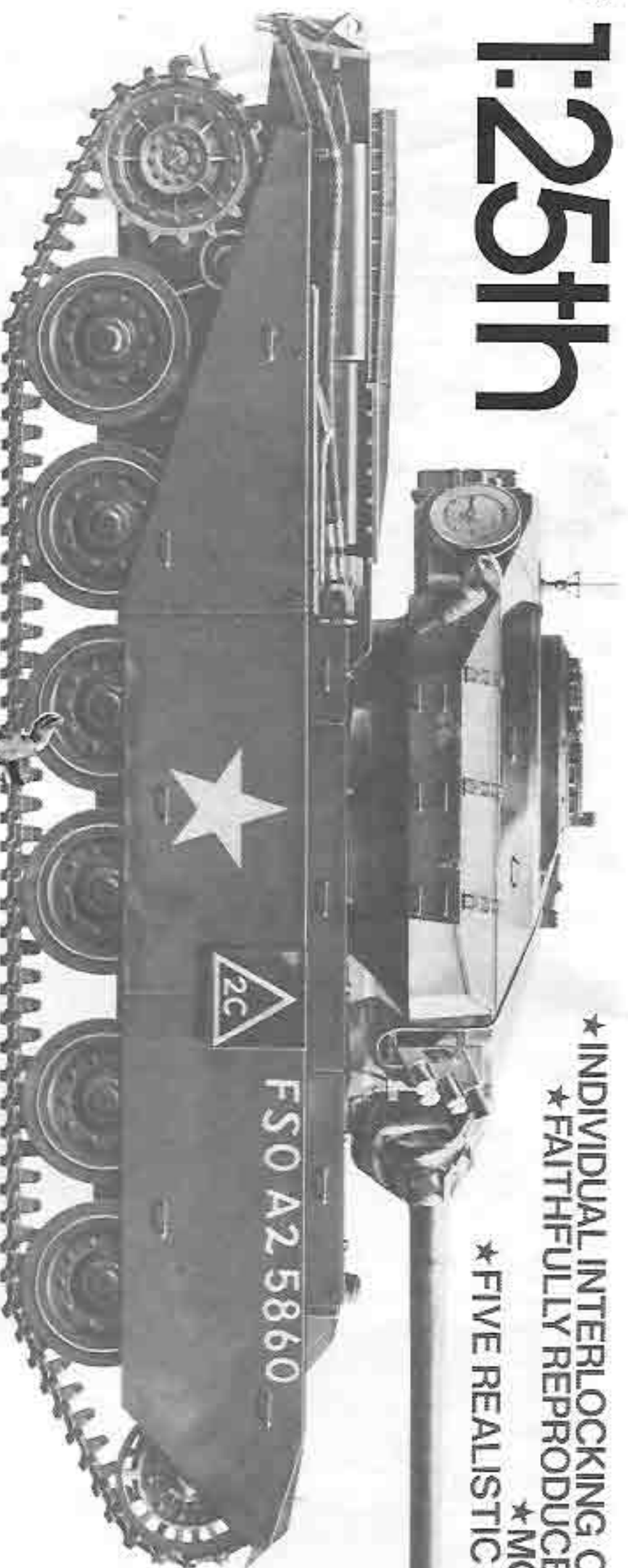


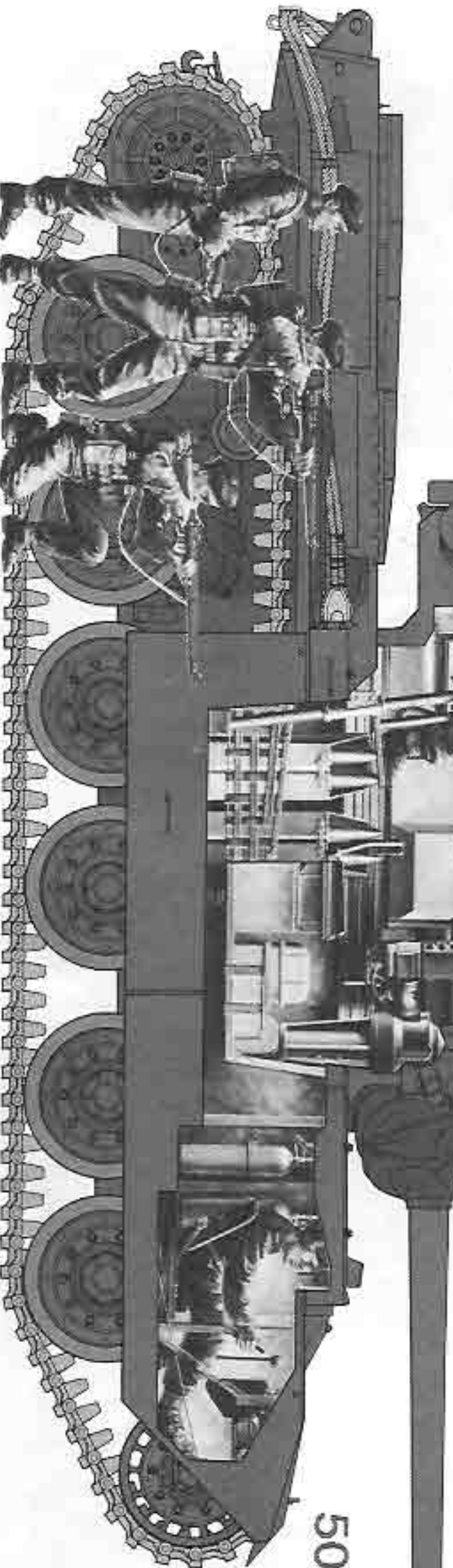
1:25th



- ★ INDIVIDUAL INTERLOCKING CATERPILLAR TRACKS
- ★ FAITHFULLY REPRODUCED INTERIOR DETAILS
- ★ MOVABLE SUSPENSION
- ★ FIVE REALISTIC TANK CREW FIGURES

BRITISH ARMY
1/25 SCALE SERIES NO.14

CENTURION



BRITISH ARMY
50ton MEDIUM TANK
CENTURION MK III



TAMIYA

CENTURION MK III

DEVELOPMENT

Experience in Western Desert fighting in 1941-1942 had a profound effect on subsequent British tank policy. At this time the desert fighting shattered the traditional idea of tank warfare being tank versus tank. It brought to light the fact that tanks were just as likely to have to support infantry, to attack anti-tank guns with high explosive fire, as well as to engage other tanks.

The American M3 Medium Tank, which was issued to the British in the desert in 1942, effectively fulfilled the need for an armoured fighting vehicle which could fire either armour piercing (A.P.) or high explosive (H.E.) shot as required.

Mainly because of the experience gained from desert war tank combats, the War Office completely revised its policy for future tank development, and in September, 1942, called for an "all purpose" or "universal" chassis, which could be developed to fulfil the various roles previously carried out by several unrelated chassis designs. This initiated the thinking which led to the Centurion Tank.

Meanwhile, the old weight and dimensional limitations to conform with British Railroad Gauge Specifications, had been lifted by the War Office, under pressure from the Department of Tank Design and therefore initial design studies on this new basis were able to be undertaken.

At this period, however, the Government had banned development work of projects which could not be in service by 1944, (this was to concentrate work on perfecting existing designs) and authority to proceed was not given until July, 1943.

A.E.C. (which stands for Associated Equipment Company, now part of British Leyland Motor Corporation) were appointed Production "Parents", and the new vehicle, designated A41, was to be produced in the first instance for the "Heavy Cruiser" role. It was required to mount the largest calibre tank gun (17-pdr.), to have a sloped, instead of a vertical glacis plate, improving frontal protection, and be sufficiently armoured to withstand the German 88 mm gun. Road speed was less important than cross-country performance which had to match up to that of the Comet at least.

A mock up of the design was ready by May, 1944. The vehicle was a departure from the usual British Heavy Cruiser Tank in the that

the Christie suspension had been dispensed with. This was because increasing weight had now exhausted the effectiveness of this type of suspension. Instead, a modified Horstmann Bogie suspension was used for its six pairs of medium sized road wheels. The running gear also contained a large front idler, linked to the track tensioning system. Rear track sprocket and four full and two half-return rollers supported the top run of the track, the half-rollers being nearest to the drive sprocket and idler. The full suspension could rarely be seen as the vehicle used spaced armour in the form of skirting plates, which descended from the catwalk and partially covered all but the rearmost roadwheel. These plates provided the hull with protection against the hollow charge anti-tank missiles normally issued to infantry. The hull gunner's position was omitted to increase ammunition stowage, and the hull was boat shaped to improve resistance to mine explosion. Motive power was provided by a Rolls Royce Meteor Mark IV, water-cooled, 12-cyl. petrol-driven engine, producing 650 b.h.p. The Merritt-Brown gearbox had five forward and two reverse gears, gear change being effected manually. An auxiliary generator in the form of a small Morris engine could be used when the main engine was not in use. This small, 8 h.p. unit was used to charge the batteries and work the fans.

Twenty experimental models were ordered with 17-pdr. guns (though the last five were to have 77 mm guns), with various combinations of the Polsten Cannon and Besa Machine gun as secondary armament.

Vehicles 1-10 had Polsterns and rear turret escape doors. 11-15 had BESA Machine guns instead of Polsterns 16-18 had an additional Besa Machine gun in a "ball mount" instead of the rear turret escape door. 19-20 had provision for mounting of a Besa machine gun in the hull front, reverting to the escape doors at the rear of the turret. The last five tanks had "Powerflow" gearboxes and were designated A41S.

THE CENTURION IN SERVICE

Before the A41 Centurion I was actually ready a second improved model was already planned. This was the A41A (Centurion II) which had a cast turret in place of the A41's fabricated turret. The design changes for the Centurion were approved in January, 1945. The Mark II had a vision copola, a co-axial Besa machine gun, improved sighting arrangements and gyro



stabilisation in both azimuth and elevation. A rear escape door was built into the back of the turret and there was a Zick bomb thrower in the turret roof to the left of the gun. It was decided that a hundred A41s (Centurion I) and a hundred A41As (Centurion II) were to be built. The Centurion Is were used mainly as training vehicles (some were still in service as training vehicles well into the 1960s and beyond.) The Centurion II was the initial service type, being built in the 1948-49 period.

By the time the later vehicles were built, the 20-pdr. gun had been developed. This was an enlarged and more powerful version of the famous 17-pdr. Therefore the later Centurion IIs were fitted with the 20-pdr. gun.

With the fitting of this new, more powerful gun, the opportunity was taken to make detail changes to the fire control arrangements and this new model was known under the Designation Centurion III. This version entered production in 1949-50, and most of the Centurion IIs were converted to Mark IIIs. The Centurion III was the first version to see combat service, in January 1951, in the Korean War.

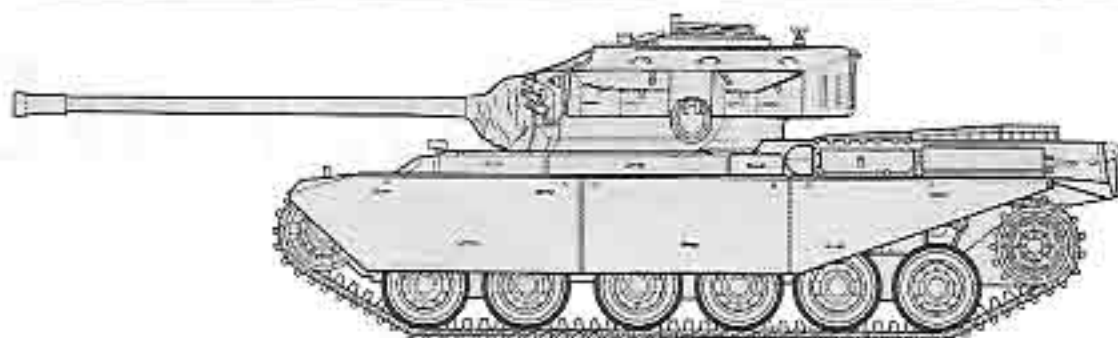
The Centurion at this time earned itself a fine reputation by hitting power, reliability, ruggedness and great toughness, and even today, more than twenty years after its combat debut, its fighting qualities still make it one of the best tank designs in the world, despite the appearance of more recent types.

The close-support version of the Centurion III was envisaged in 1949. This vehicle was fitted with a 95 mm Howitzer in place of the 20-pdr. The reason for this design was because of World War II experience, when British Tank Regiments always included a proportion of close-support tanks to provide covering H.E. fire for the normal tanks, and to fire smoke shells to cover withdrawals. The close-support version was to have been called the Centurion IV. However, it was never built.

The next service version was the Mark V. (These designations were changed to Arabic numbers, i.e. Centurion Mark 5,) which was simply a revised development of the Mark 3. In this version the Besa 303 co-axial machine gun was replaced by a Browning .30 inch gun in order to standardise on N.A.T.O. calibre ammunition. In addition, the suspension system was given an extra guide roller at the rear end of the top run of the track, and changes were also made to the turret. Chief among these were the elimination of the bomb thrower in the turret roof and the escape hatch at the rear, resulting in the turret roof having a more simplified shape. The Mark 5 entered production in 1952, and once it went into service nearly all the existing Mark 3s were modified to bring them to Mark 5 standards.



Through the courtesy of:
ROYAL ARMOURD CORPS TANK MUSEUM
RICHARD KOHNSTAM LTD.



The Tamiya model actually represents one of these modified Mark 3s. This is much in evidence because of the blanking-off plate over the former bomb thrower installation over the turret roof. The one technical disadvantage with the early Marks of Centurion was the limited radius of action due to its very small fuel capacity. It had two internal fuel tanks which allowed an action radius of a little over thirty miles (50 kms). In order to increase this, the Mark 3 was originally fitted with an external, steel fuel tank in the shape of a cylinder, which was mounted transversely across the rear of the hull and which was unarmoured. This, however, proved vulnerable to gunfire—which in retrospect seems obvious. So, in the Mark 5 version, provision was made for the vehicle to tow a 200-gallon armoured fuel tank, mounted on a single-wheel trailer chassis. The fuel from this trailer was used up first, after which it was jettisoned for later recovery by Unit Transport. This greatly increased the range. However, the fuel problem was finally overcome in later versions by building on an extra armoured fuel tank across the rear of the hull, which effectively increased the hull length by a few inches.

An improved model of the 20-pdr. gun was also developed. This had an eccentric turn extractor sleeve halfway along the barrel. In fact, both types of gun can be seen on the Centurion 5, as the barrels were interchangeable.

The Centurion Marks 3 and 5 were the most numerous production versions built in the early 1950s when, as a result of the Korean War, British rearmament was at its height. In the 1950s the Centurion gradually replaced all the World War II Tanks (Churchill, Cromwell, Comet) which had equipped the British Armoured Regiments from 1945 onwards.

Because of the adoption of the Centurion as the main battle tank, the British embarked on a programme of special-purpose vehicles, based on the Centurion, to replace the older types of these. (For example, the Bridge Layer AVRE, Recovery Vehicle, which supported the battle tanks). Most of these types in service after 1945 were World War II designs, based upon the Churchill, Sherman and Cromwell. Special-purpose vehicles based on the Centurion gave many obvious advantages, notably in standardisation of maintenance and training. All the special-purpose vehicles were based on the Mark 2 and Mark 5 chassis, and are as follows:—



Mark 3 in Korea

Centurion ARV Mark II (Armoured Recovery Vehicle). This had the turret replaced by a built-up superstructure. It had a motor-driven of 30-ton rating, a 10-ton jib and demountable A-Frame jib. An earth spade was fitted at the rear to give added purchase when winching. It was in service in 1956.

Centurion AVRE (Armoured Vehicle Royal Engineers). A combat engineering vehicle, fitted with a 165 mm demolition gun, replacing the 20-pdr. It also had a dozer-blade and fascine cradle. (A fascine is a bundle of timber carried on the tank which can be deposited in a trench to allow the tank to pass over). It also carried engineering and demolition equipment. It entered service to replace the Churchill AVRE in 1960.

Centurion CARV (Beach Armoured Recovery Vehicle). This is a special vehicle with high superstructure for beach wading. It is fitted with a heavy fender in order to push landing craft. It carries divers and is intended to assist and recover other vehicles during amphibious operations, replacing the Sherman BARV, "Sealion" in 1962-1963.

Centurion ARK (Armoured Ramp Carrier). This is a turretless vehicle with folding ramps

to span 75 ft. gaps. The vehicle drives into the obstacle (for example, a ditch) to be bridged. It then opens out the ramps. In service from 1962-1963, replacing the Churchill ARK.

Centurion Bridge Layer. A Turretless vehicle with a rigid, single-span, 52 ft Class 80 Bridge, which was launched and emplaced hydraulically. These vehicles equipped all Centurion Armoured Regiments and replaced the Churchill Bridge Layer from 1960, and were themselves superseded in 1971 by the Chieftain Bridge Layer.

Centurion D.D. (Duplex Drive). A vehicle for amphibious landings, incorporating propeller shafts driven by main drive via power-take-off, and floatation was achieved by rigid panels or collapsible screens.

Centurion Dozer. This was simply a dozer blade attachment for fitting to the standard tank. At least one per Squadron was used for clearing obstacles or building up emplacements, etc. Centurions also formed the basis of a number of experimental self-propelled guns, none of which were put into production. The most notable of these was the Conway Tank Destroyer, fitted with a big 12 mm gun in a large, box-like turret.

LATER DEVELOPMENT

The basic shape of the tank's hull has not been altered throughout all the various 13 Marks which have been brought into service.

The driver sits on the right of the vehicle's centre line, and has a split hatch, mounting two episcopes set in the "step" between the top of the glacis and the turret wall. Stowage boxes are supplied along the catwalk, which also supports the prominent exhaust silencer boxes. The engine doors are arranged in two halves, hinged at their meeting point.

A slight disadvantage is that certain sections of the forward engine decking cannot be raised unless the turret is traversed to a specific point. As well as the usual towing hooks, the rear of the hull usually has an infantry-tank telephone. The fact that so many modifications have been carried out, many of them retrospectively, to the original A41 (Centurion II) model, is a tribute to the flexibility of the original design. From the Mark 5 onwards the Centurion was continually being improved. The most notable change was the adoption of the more powerful 105 mm gun, to replace the 20 pdr. Many Mark 3 and Mark 6 tanks were rebuilt to the later standards. A summary of Centurion Marks is as follows:—



CENTURION MKIII

Mark 1.

Basic design, 1 x 17-pdr. (77 mm gun), 1 x 20-mm Polsten cannon, or 1 x 7.9 Besa mg co-axially mounted.

Mark 2.

Stabilisation applied to 17-pdr. Polsten gun dispensed with as co-ax. mg.

Mark 3.

Larger gun installed 20-pdr. (83.4 mm). This modification also carried out retrospectively to Centurion 2.

Mark 5.

Besa mg replaced by .50in. Browning mg.

Mark 7 and 8.

Extra integral fuel tank, side loading ammunition hatch and two-part cupola doors in Mark 8.

Mark 5/1, 7/1, 8/1.

These were basic vehicles, rebuilt with added armament and improvements.

Mark 5/2, 7/2, 8/2.

These were basic vehicles, re-armed with the new 105 mm gun.

Mark 6, 9 and 10.

Originally Marks 5, 7 and 8, re-armed with the 105 mm gun and with added armour.

Mark 6/1, 9/1, 10/1.

Vehicles fitted, additionally, with infra-red night-fighting equipment.

Mark 6/2, 9/2, 10/2.

Basic Marks, fitted with ranging machine guns.

Mark 11, 12, and 13.

Marks 6, 9, and 10, fully up-dated, with infra red equipment and ranging machine guns.

The turret of the Centurion has a most distinctive shape because of the stowage bins attached to its sides. Between the two left-hand bins is an ammunition loading hatch. The turret has a flat top which contains the Commander's cupola, loader's hatch and ventilator. The cupola contains the usual periscopes and also a x7 magnification periscopic sight and a set of x10 magnification periscopic binoculars.

The gunner also has a periscope, in addition to his sighting telescope. The turret's rear overhang contains the radio equipment.

Fitted to the later models is the L7A1 weapon, which is also used in the American M60 and the German "Leopard". This gun can be stabilised in traverse and elevation as required, as could the earlier 20-pdr. and 17-pdr. guns.

The Centurion is a comparatively slow tank by today's standards but speed is not all. Travelling across rough ground at speed is very uncomfortable for any tank crew. The gearbox requires very refined handling, and the clutch is heavy,

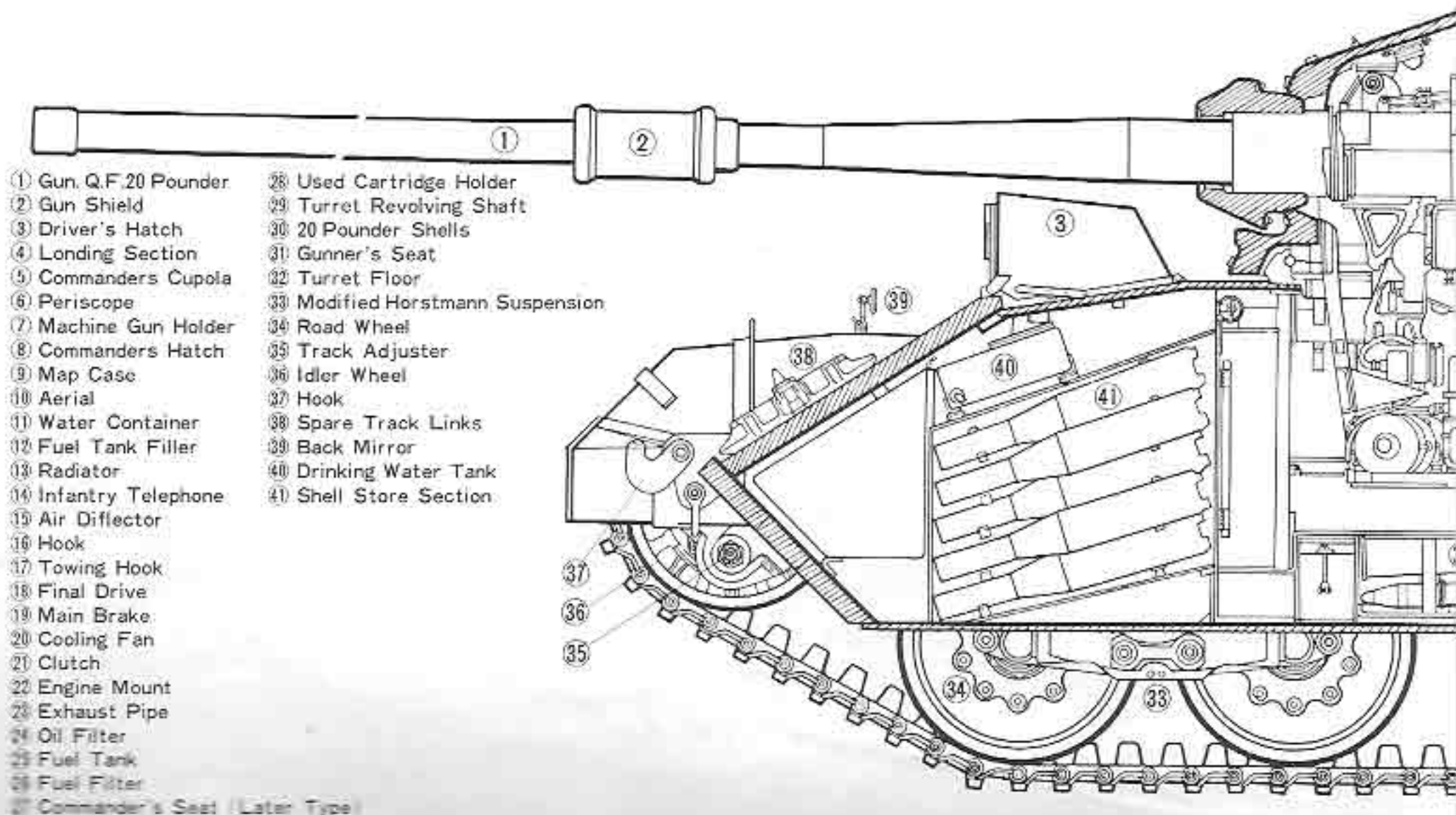
but results produced by a good driver are far better in comparison with automatic transmission. The first British Regiment to use the Centurion in action was the 8th Royal Irish Hussars in Korea in 1951. The 5th Inniskilling Dragoon Guards and the 1st Royal Tank Regiment also used the Centurion in Korea. In 1956 it was again in action, this time at the Suez landings, with the Royal Tank Regiment. Almost all British Armoured Regiments have been equipped with the Centurion 1 at some time over the past twenty years.

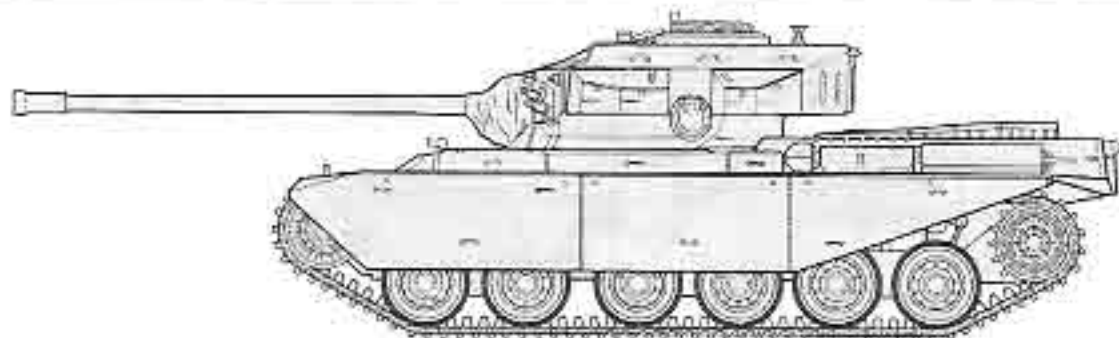
In British Tank Regiments (Battalions) the smallest unit is a Troop (usually three tanks,) with five Troops (15 tanks,) making a Squadron. During the 1960s the fifth Troop in a Squadron was made up by the Conqueror heavy tanks, to give added fire power. However, with the appearance of the later Marks of the Centurion, mounting the 105 mm gun, the need for the Conqueror was diminished, and it then went out of service. There were usually three or four Squadrons to a Regiment, depending upon type, making a total of 45 or 60 tanks.

THE CENTURION OVERSEAS.

Until the Chieftain was introduced, Centurion was reputed to be the best Medium Tank in the world. It quickly became the best seller in the Arms Market, and Centurions were sold

Interior of Centurion Mk5





to all the following Powers: Australia, Canada, Denmark, Egypt, Holland, India, Iraq, Israel, Kuwait, Lebanon, Libya, New Zealand, South Africa, Sweden and Switzerland.

The combat record of the Centurion is unequalled by any other vehicle in service. In Korea, it showed itself to be superior to the U.S. M46, and it was more than a match for the T34/85s and the SUs used by the Communists. During the recent war between India and Pakistan over Kashmir, Indian Centurions repeatedly penetrated Pakistani M47s and M48s.

In the Israeli 6-Day War, Centurions destroyed T34s and other Russian tanks at surprisingly long range.

The Australian Army is using the Vehicle in Vietnam.

The replacement of Centurion by the Chieftain in the British Army does not mean that Centurion is not still a very formidable fighting weapon. It is simply because in the Chieftain, Britain has produced an even better design, resulting in a vehicle which is unsurpassed by any other Nation.

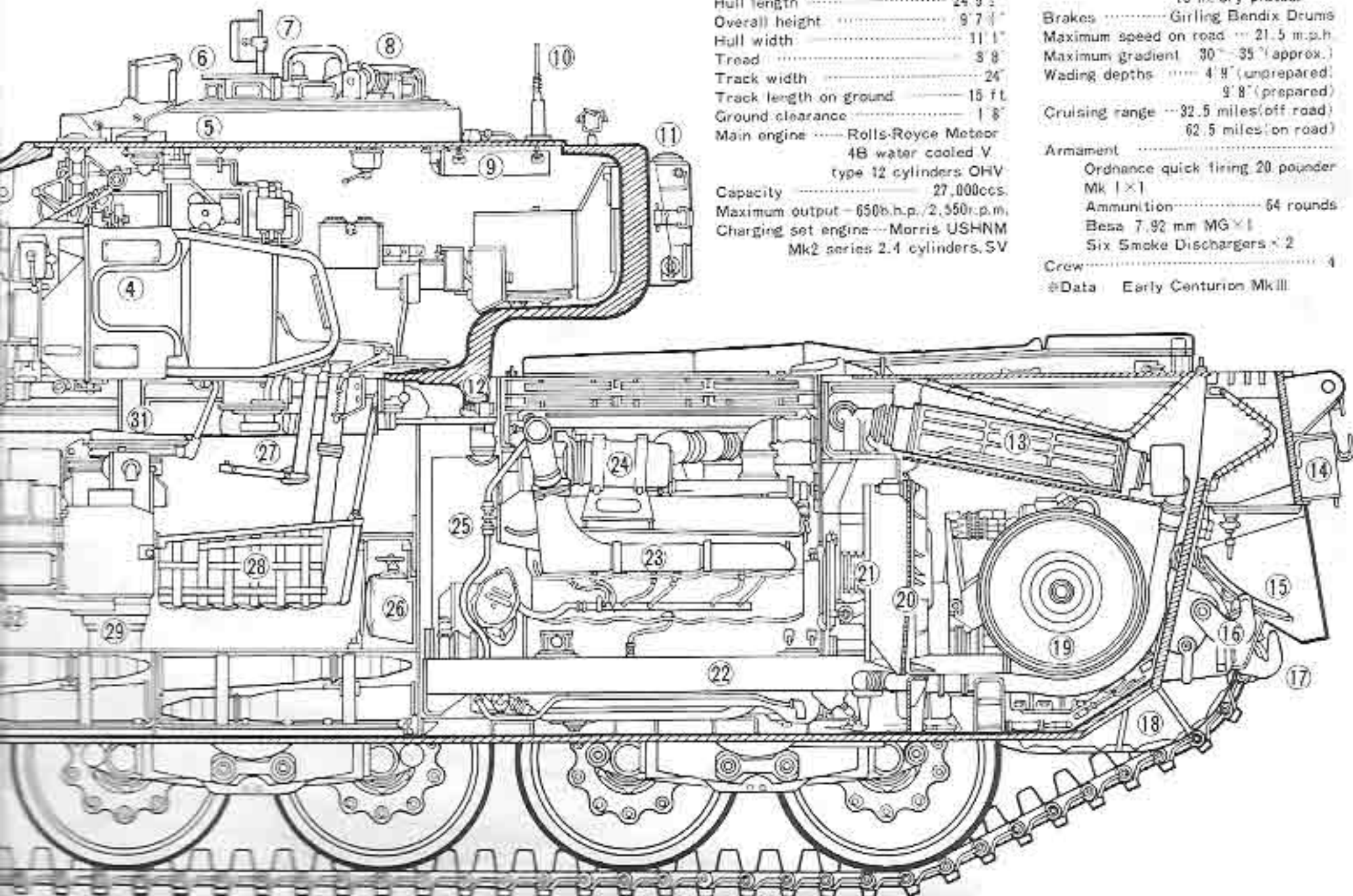


(Main Details of the Centurion Mk III)

Overall length	32' 3"
Hull length	24' 9"
Overall height	9' 7"
Hull width	11' 1"
Tread	3' 8"
Track width	24"
Track length on ground	15 ft
Ground clearance	1' 3"
Main engine	Rolls-Royce Meteor 48 water cooled V type 12 cylinders OHV
Capacity	27,000ccs.
Maximum output	650 h.p./2,550 r.p.m.
Charging set engine	Morris USHM Mk2 series 2.4 cylinders SV

Gear-Box	Five forward, two reverse
Clutch	Borg and Beck, triple 16 in. dry plates.
Brakes	Girling Bendix Drums
Maximum speed on road	21.5 m.p.h.
Maximum gradient	30°-35° (approx.)
Wading depths	4' 8" (unprepared) 9' 8" (prepared)
Cruising range	32.5 miles (off road) 62.5 miles (on road)
Armament	Ordnance quick firing 20 pounder Mk 1 x 1 Ammunition 64 rounds Besa 7.92 mm MG x 1 Six Smoke Dischargers x 2
Crew	4

©Data Early Centurion Mk III

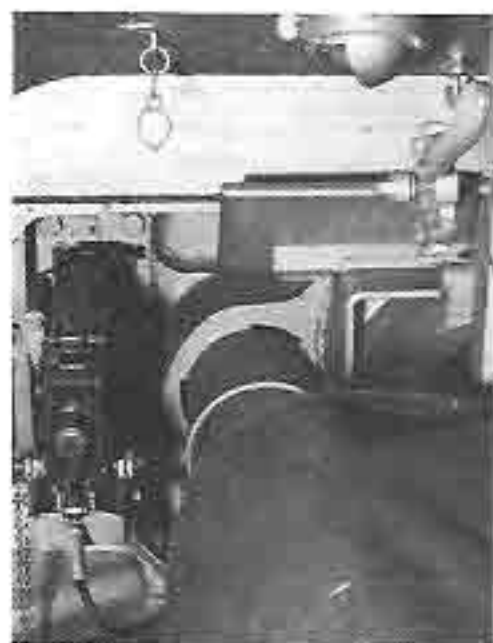




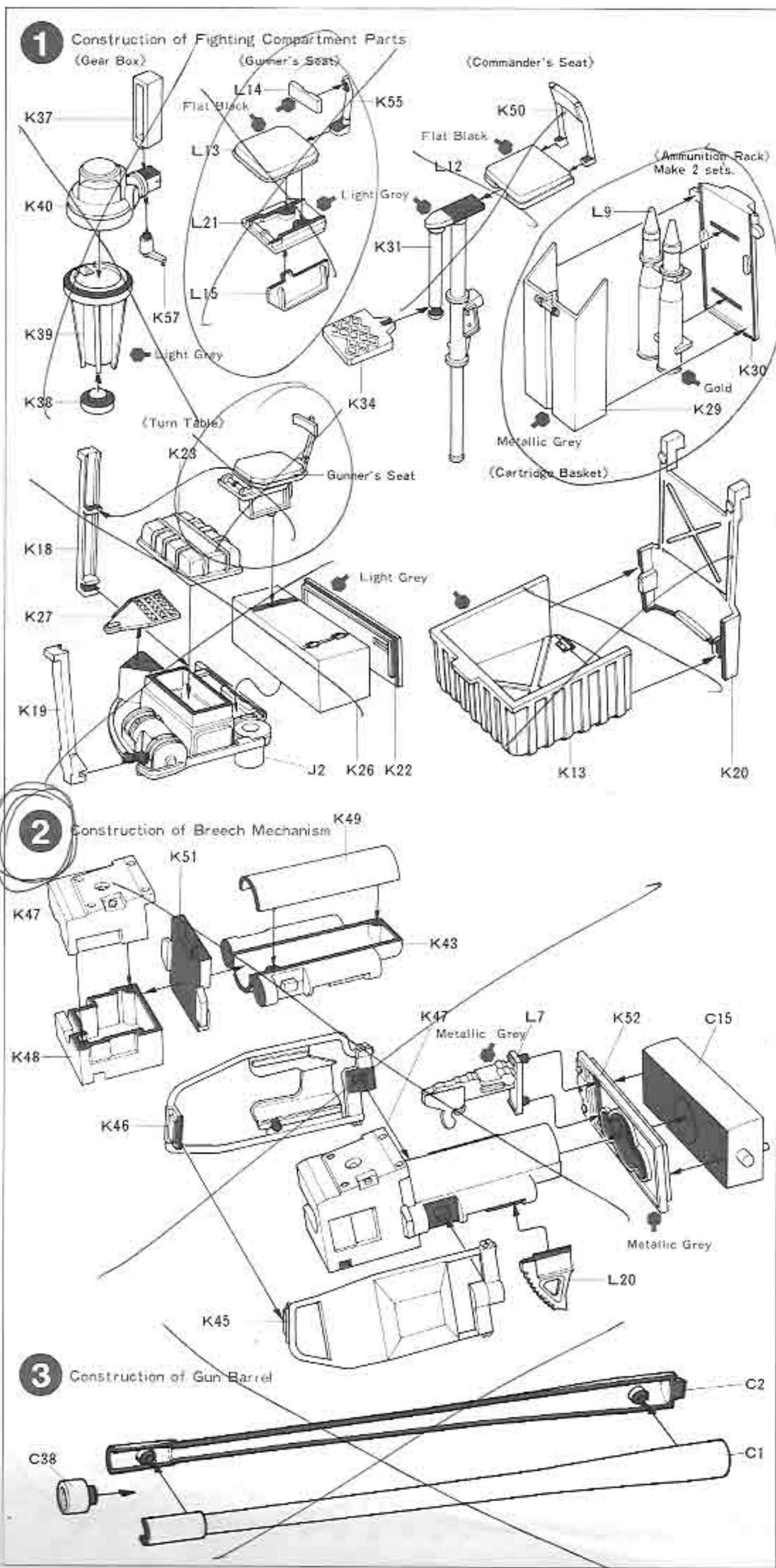
★Study the instructions and photographs before commencing assembly
 ★You will need a sharp knife, a screwdriver, a pair of tweezers, a file, and a pair of pliers.
 ★Do not break parts away from sprue, but cut off carefully with a pair of pliers.
 ★Before finally cementing each part together, be sure that parts fit correctly together. And that you are of the next sequence to be followed.
 ★Use glue sparingly. Use only enough to make a good bond. Apply cement to both parts to be joined. Only green shaded parts should be glued.
 ★Painting Your Model
 As well as improving the reality of your completed model, painting will give you greater satisfaction to make your own model. Moreover, paint coat ensures a good application of decals.
 ★For your painting scheme, refer to instructions on pages 14, 16, and 17.

① (Construction of Fighting Compartment Parts)
 This stage shows construction of small parts. Make sure of their numbers and positions

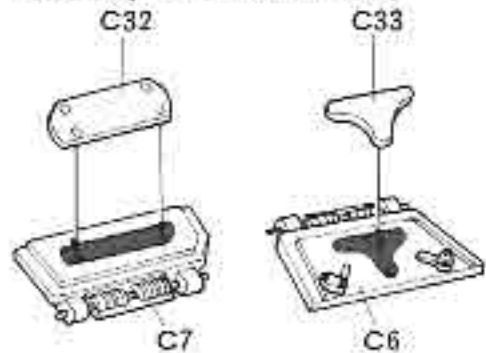
② (Construction of Breech Mechanism)



③ (Construction of Gun Barrel)
 Cement Gun Barrel Halves together. After the cement has dried, scrape off surplus cement on Gun Barrel with a knife.



3 (Assembly of Cupola and Upper Part of Turret)
(Assembly of Loader's Hatch)



Hatches C6, C7, and C8 are moveable, open and closed. Make sure that no cement is placed between hinges and Hatches.

(Picture of Cupola section in the actual tank)

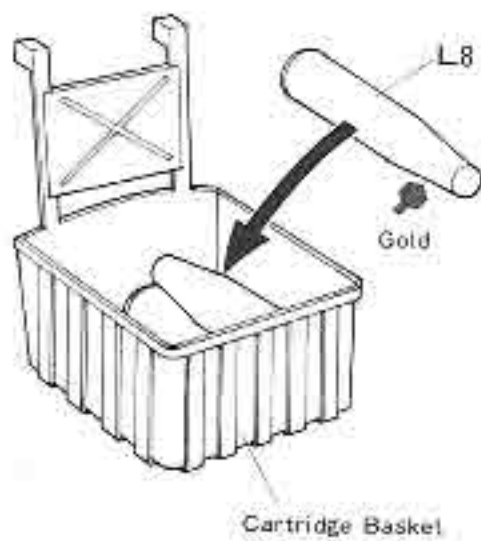


4 (Construction of Fighting Compartment)

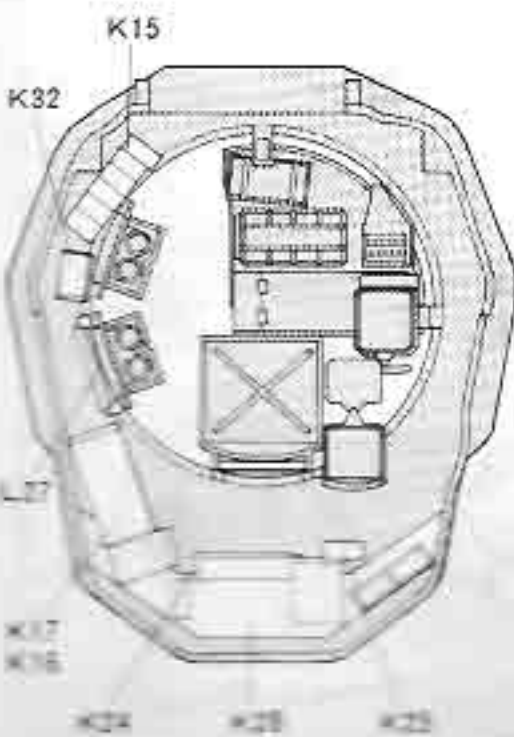
Cementing area of these parts are rather narrow. Apply enough cement to fix them firmly. Fasten F9 and F10 together with cellotape till the cement dries up.

(How to Use Cartridges)

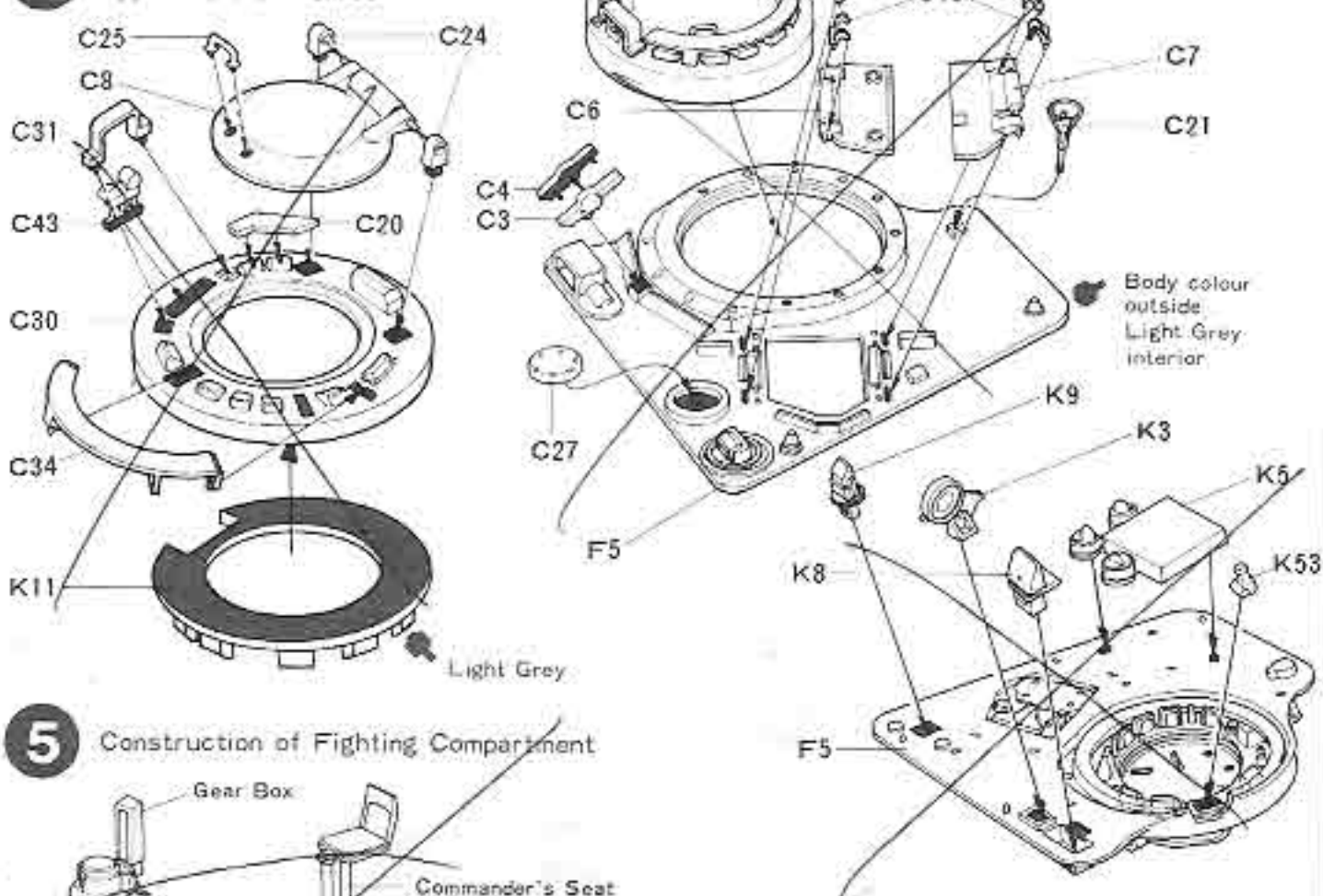
Cartridges L8 are accessory parts. Place them in Cartridge Basket or on the floor of Fighting Compartment.



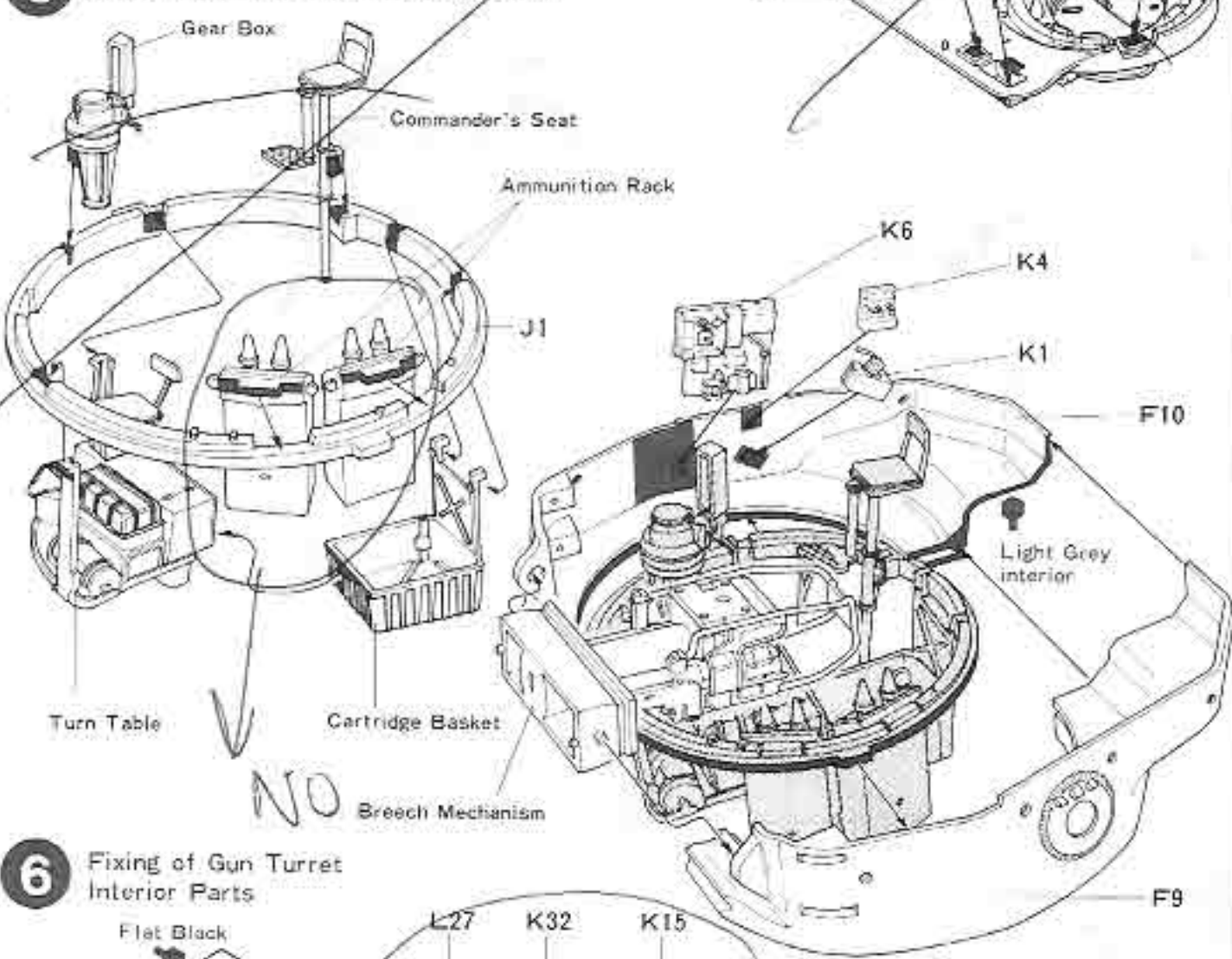
5 (Fixing of Gun Turret Interior Parts)
Make sure of fixing position, referring to the figure below.



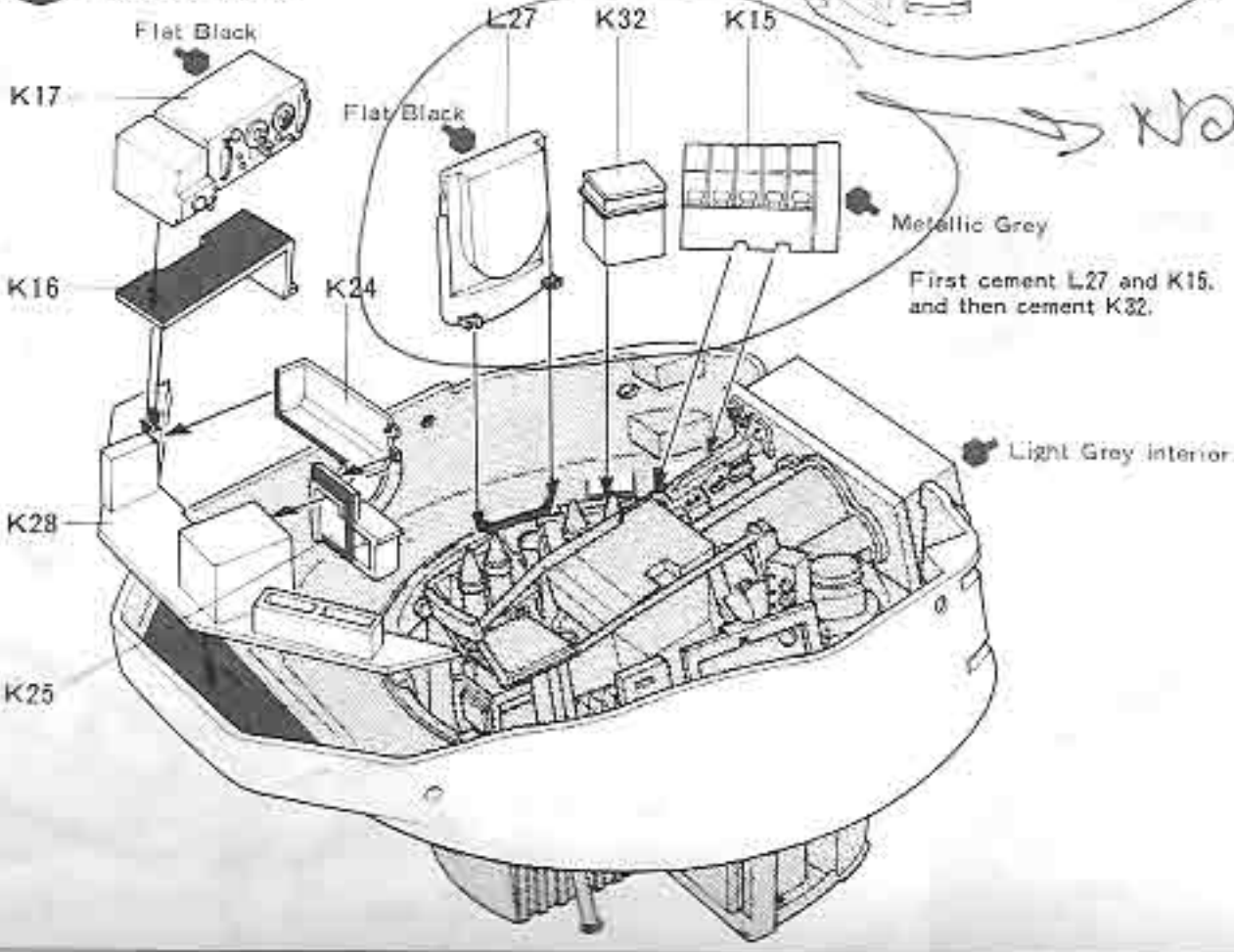
4 Assembly of Cupola and Upper Part of Turret



5 Construction of Fighting Compartment



6 Fixing of Gun Turret Interior Parts



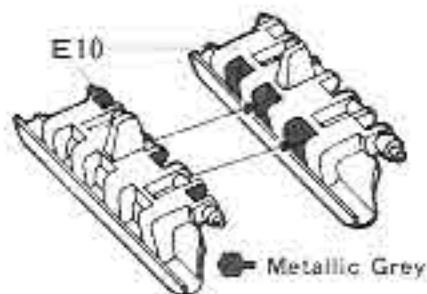
⑥ (Construction of Gun Turret)
Fix F1 with cement as Breech Mechanism lifted up.



⑦ (Fixing of Gun Turret Left Side Parts)

★Cement C5 to Gun Turret, either in open or closed condition.
★Smoke Dischargers (Smoke Generation Dischargers) mounted on the tank create smoke screen in battle. This projector can throw smoke generations as far as 60 meters.

(Construction of Spare Track Links)
★Make one set of three Spare Track Links E10. Cement this set in flat condition shown in the figure below.



Cement them even.



E10
(Photo of Actual Smoke Dischargers)

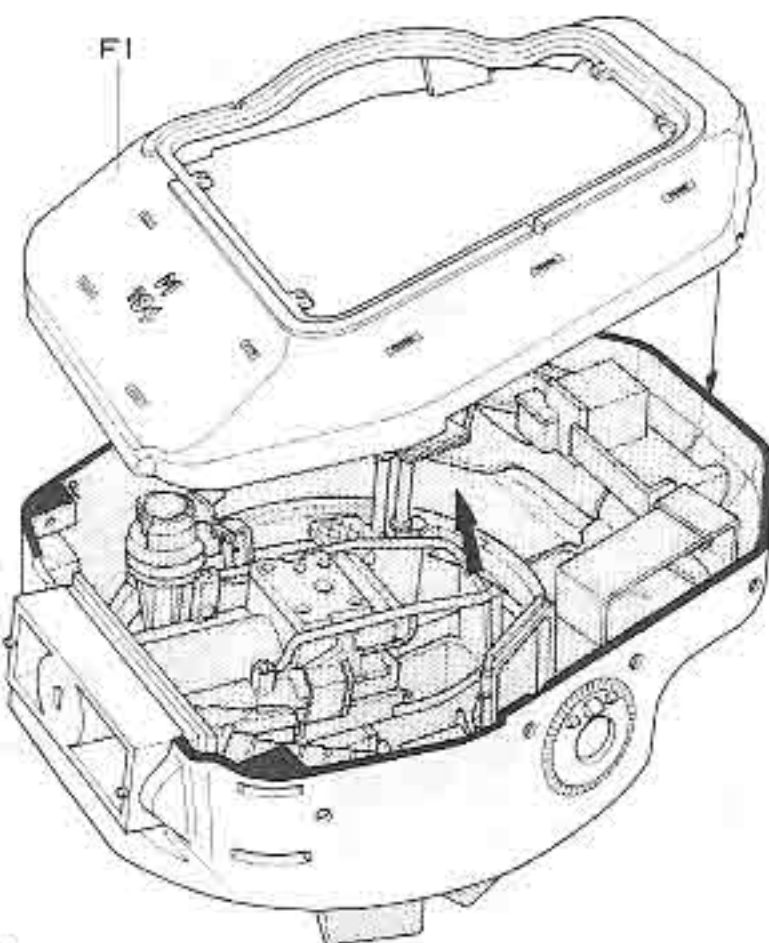
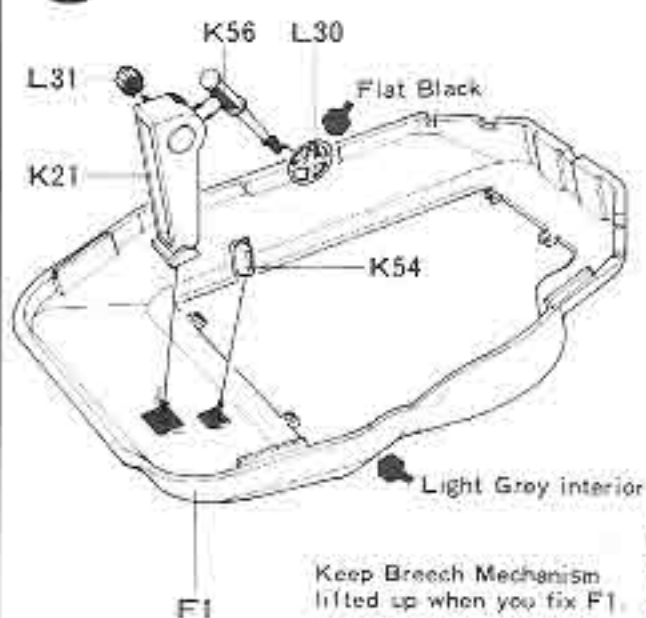


⑧ (Fixing of Gun Turret Right Side Parts)

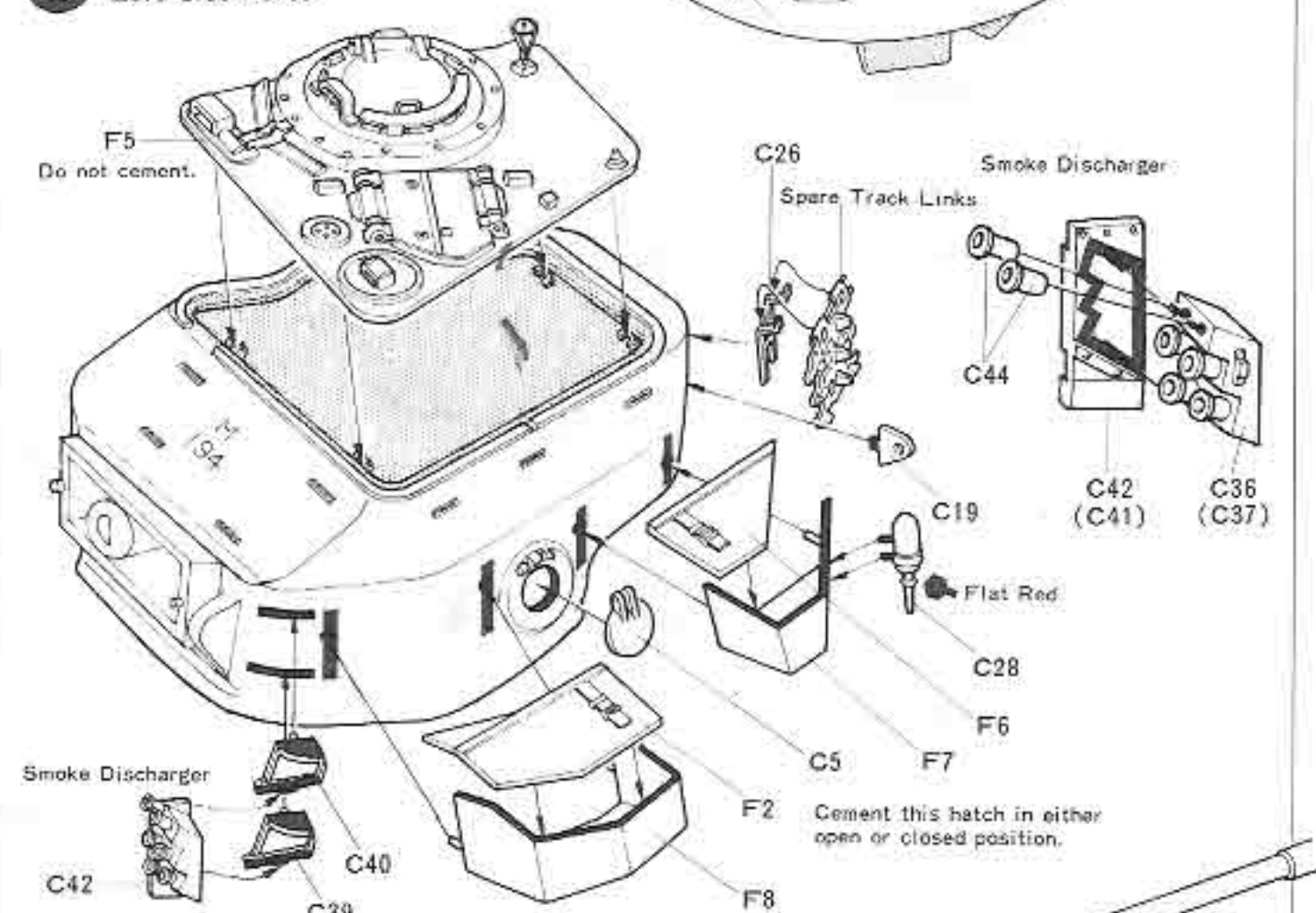
★This kit contains both Settled and Moveable Gun Shield. Fix either one you prefer.



7 Construction of Gun Turret

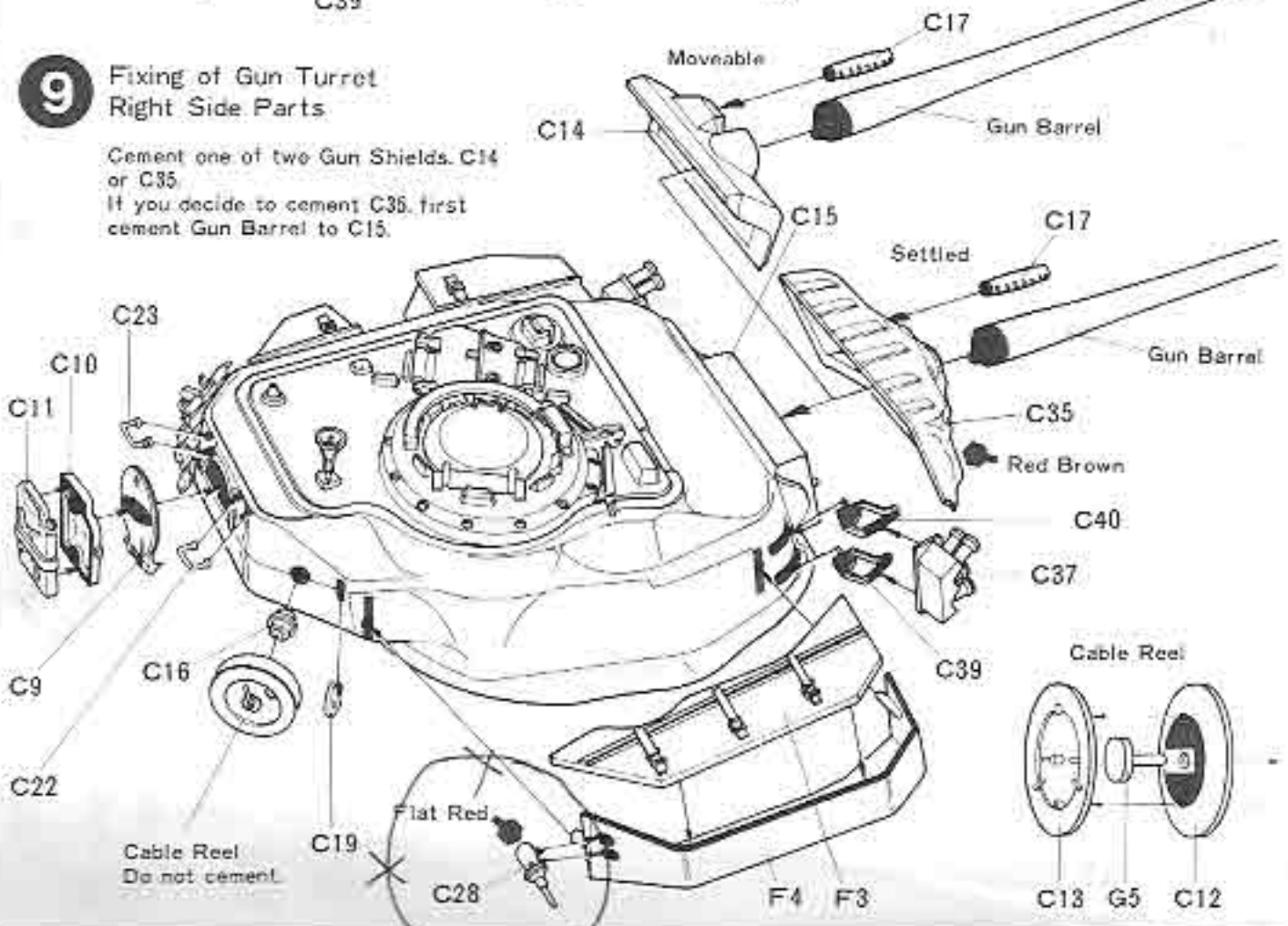


8 Fixing of Gun Turret Left Side Parts



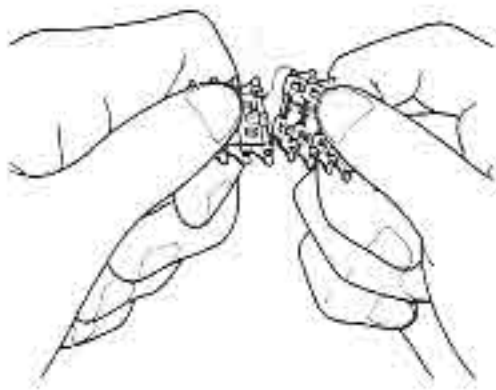
9 Fixing of Gun Turret Right Side Parts

Cement one of two Gun Shields, C14 or C35.
If you decide to cement C35, first cement Gun Barrel to C15.

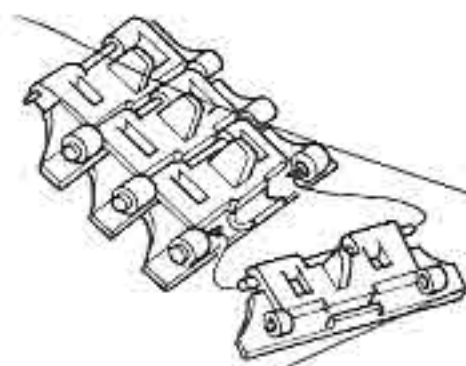


⑩ (Construction of Tracks)

Each track link is made of a special kind of plastic. Assemble tracks while carefully watching their "clawed" (back) side. One track consists of 96 links.

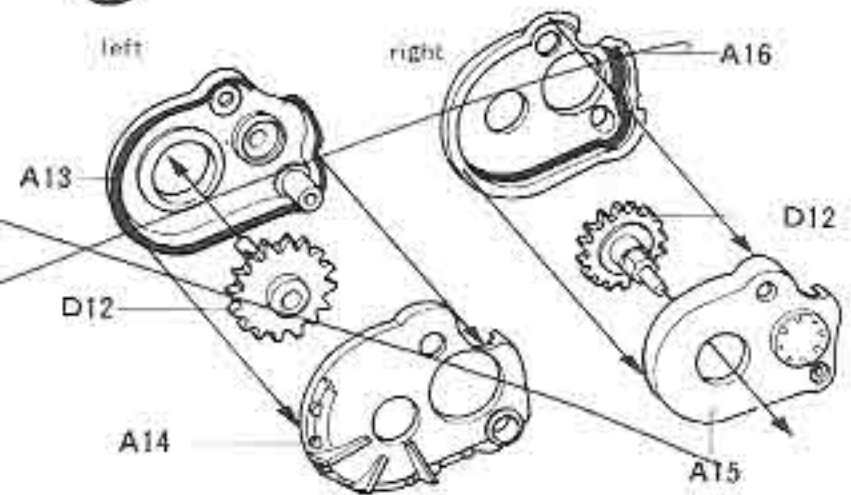


10 Construction of Tracks



Each track consists of 96 links.

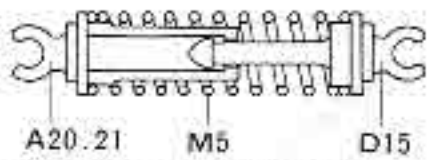
11 Construction of Final Drives



⑪ (Construction of Suspension)

(Construction of Shock Absorbers)

★Cement A20 and A21 together firmly. After for a while to dry, fix M5 first and then D15. Make sure of inserting D15 enough to prevent it come out.



⑫ (Construction of Wheels)

★Construct Drive Sprockets and Idler Wheels, fitting pins and holes on each part.

⑬ (Construction of Rear Panel)

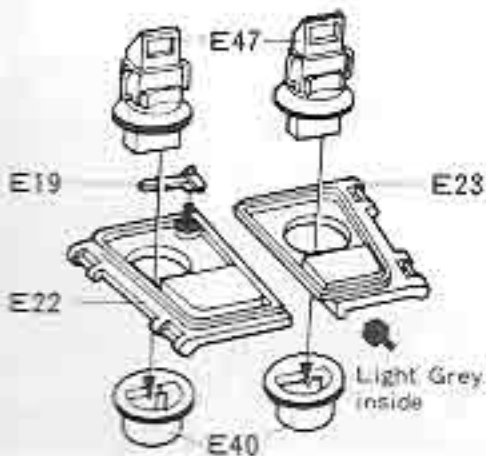
★Fix Rope G7 without cement.

(Photo of Completed Model)



⑭ (Construction of Driver's Hatch)

★Hatches E22 and E23 can be moveable, open and closed. Cement E18 carefully to make Hatches moveable.



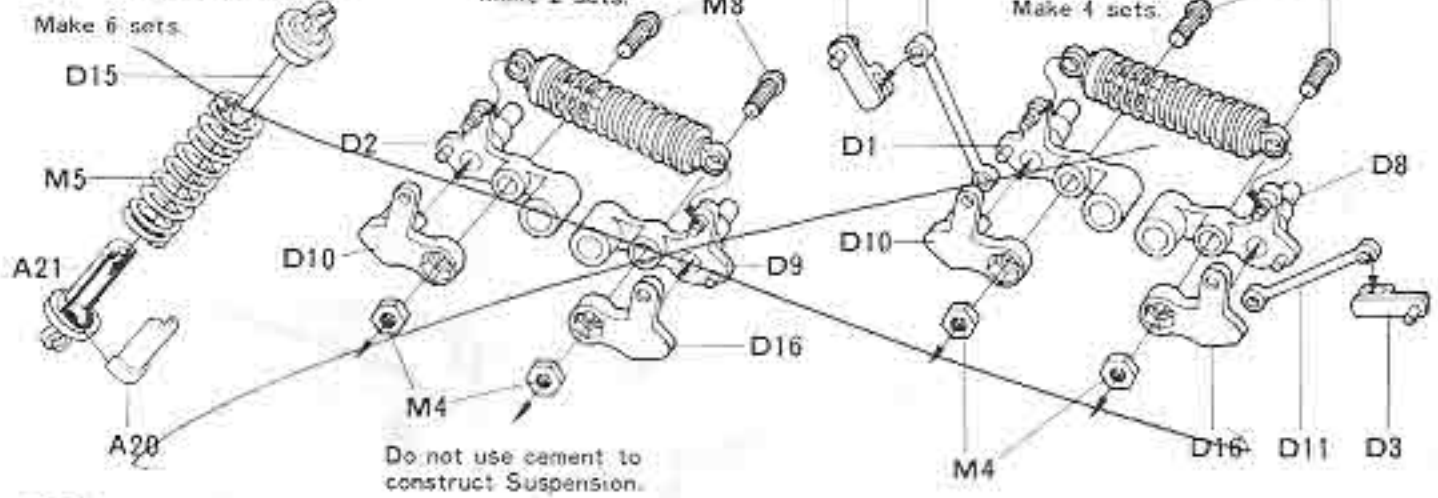
★Make sure of the direction of Periscopes, front and rear.

⑮ (Construction of Skirts)

★Cement A19 to Skirts using sufficient cement.

12 Construction of Suspension

(Shock Absorber)



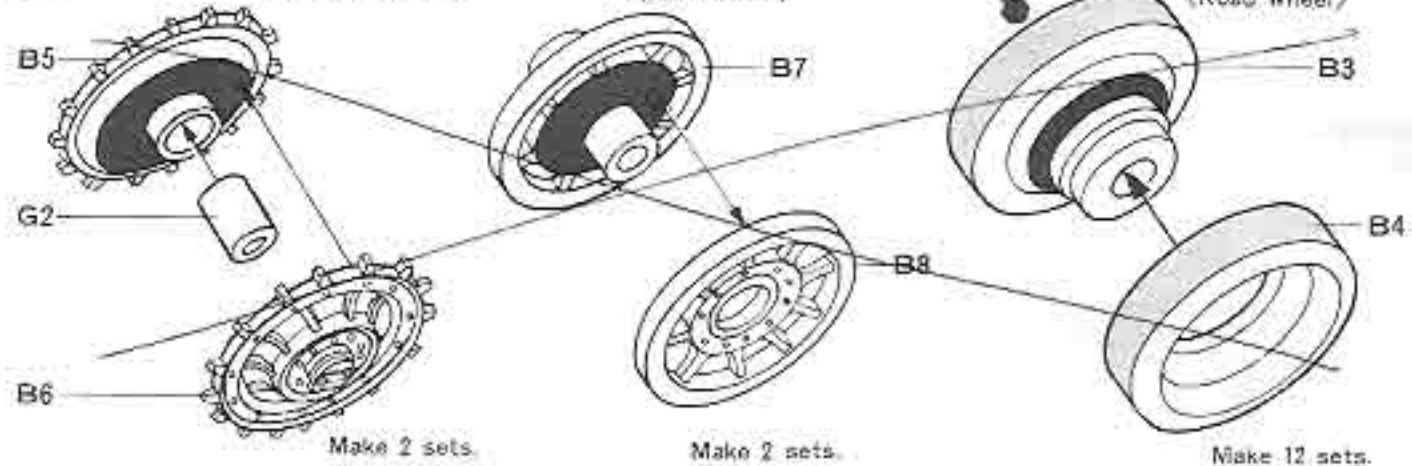
13 Construction of Wheels

(Drive Sprocket)

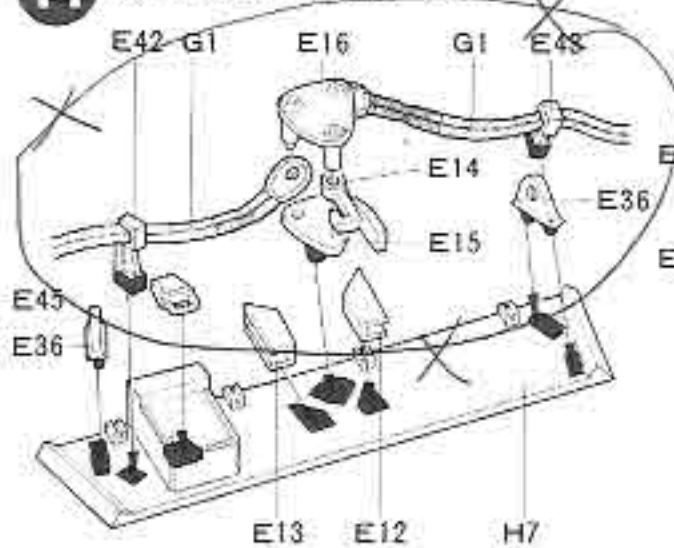
(Idler Wheel)

Flat Black

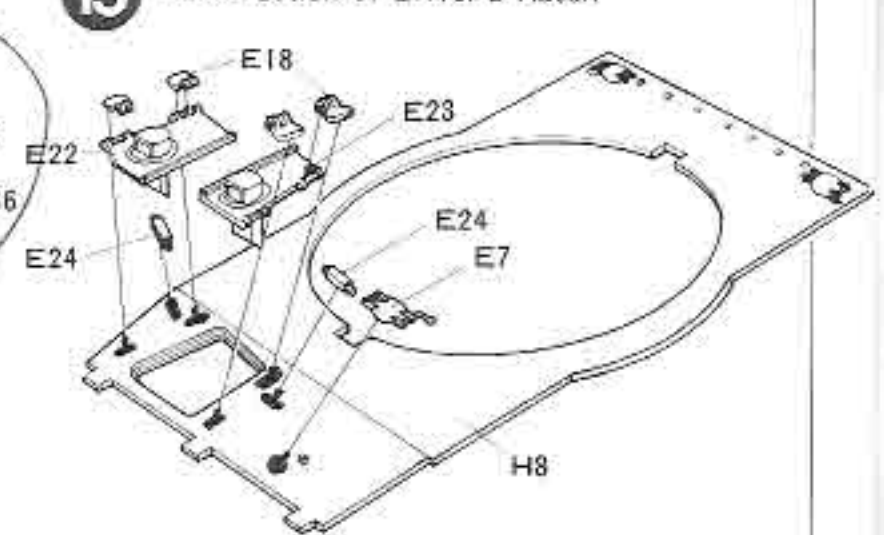
(Road Wheel)



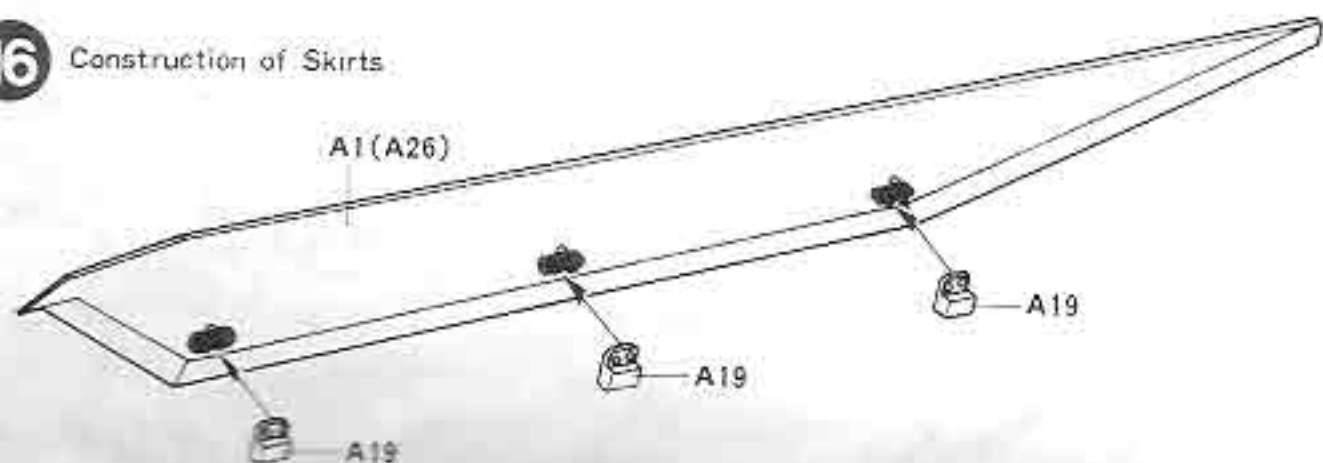
14 Construction of Rear Panel



15 Construction of Driver's Hatch

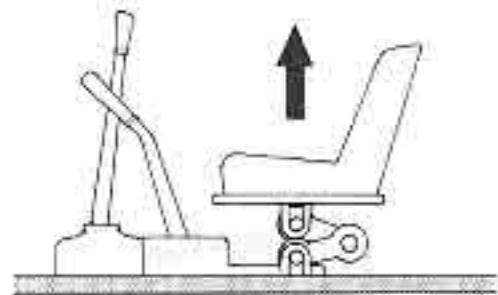


16 Construction of Skirts

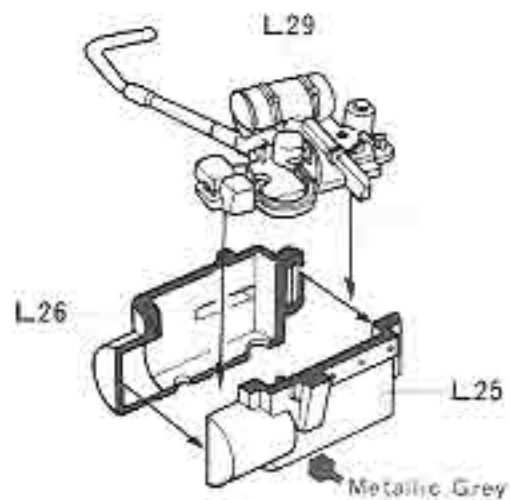


16 (Construction of Hull Inside Parts)

★Construct Driver's Seat to be folded as in the figure below. When you like the Driver to appear through the Driver's Hatch, pull the seat up toward an arrow.



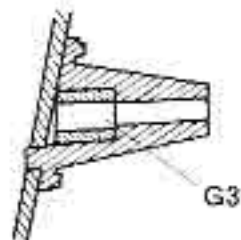
(Construction of Sub Engine)



17 (Fixing of Final Drives)

★Fix Final Drives firmly using Screws. Insert Headers M2 to Gear of Final Drive and to holes in Lower Hull.
★Insert Poly Caps G3 into holes of Support Roller Brackets A4, A6, and A9. Then cement Brackets to Lower Hull.

(Sectional Diagram for Fixing A4, A6, A9)

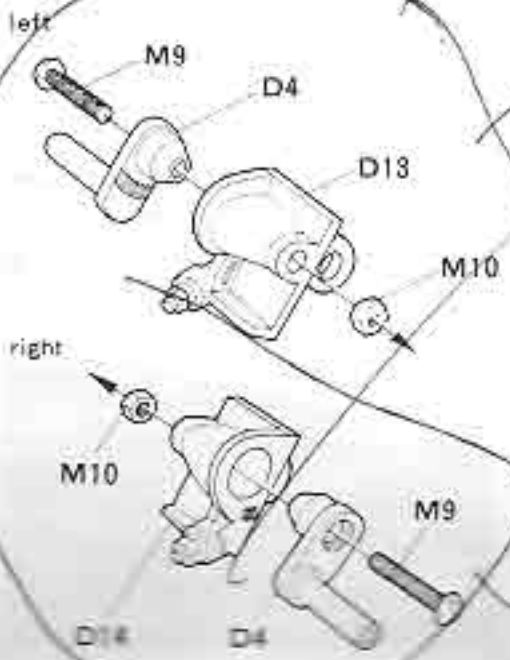


18 (Fixing of Suspension)

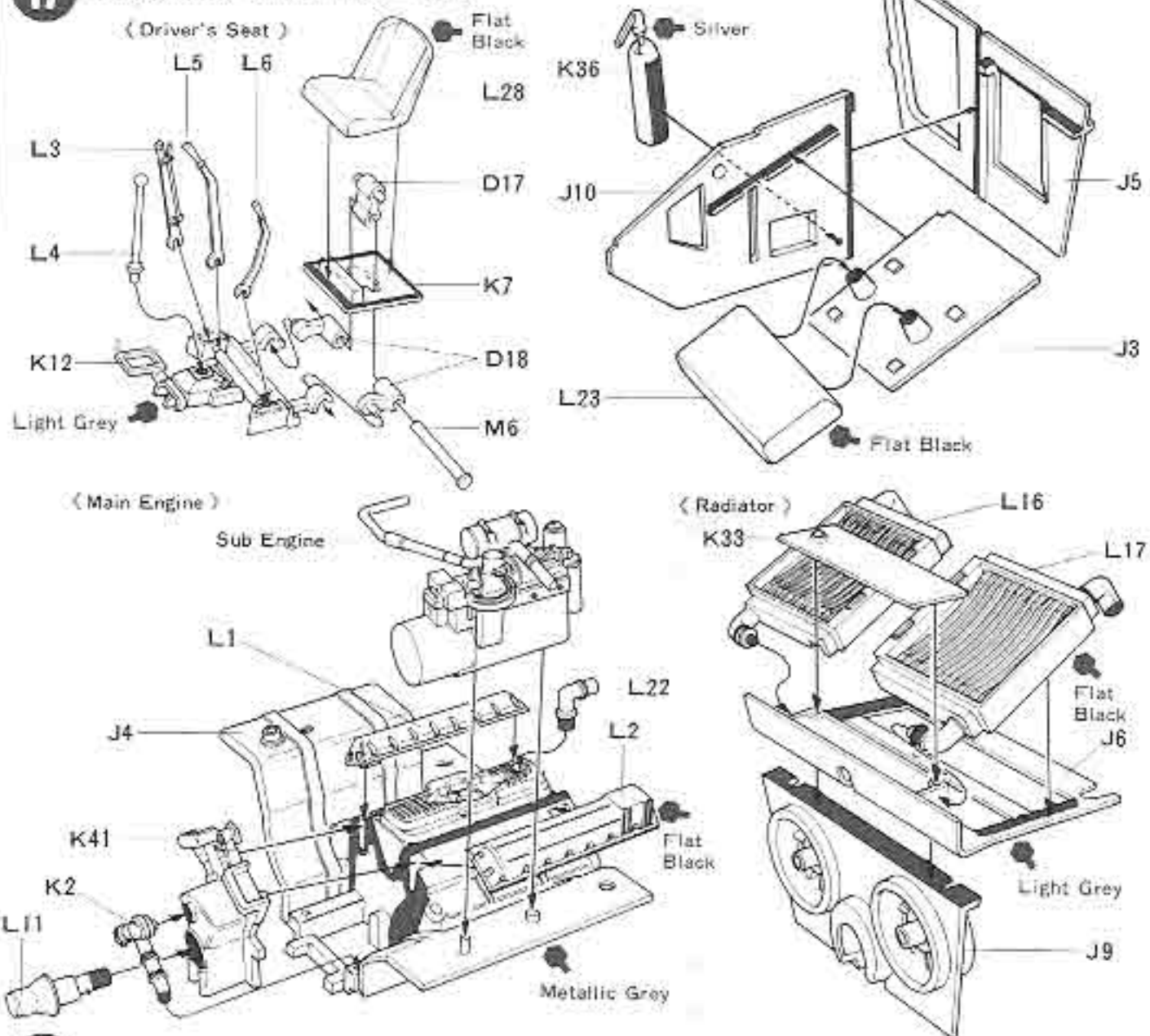
★There are two types of Suspension. Make sure of parts shape, and fix them correctly.
★Cement carefully to make Suspension moveable.
★Fix Hinges A3 to Skirts with sufficient cement.

ARMAR

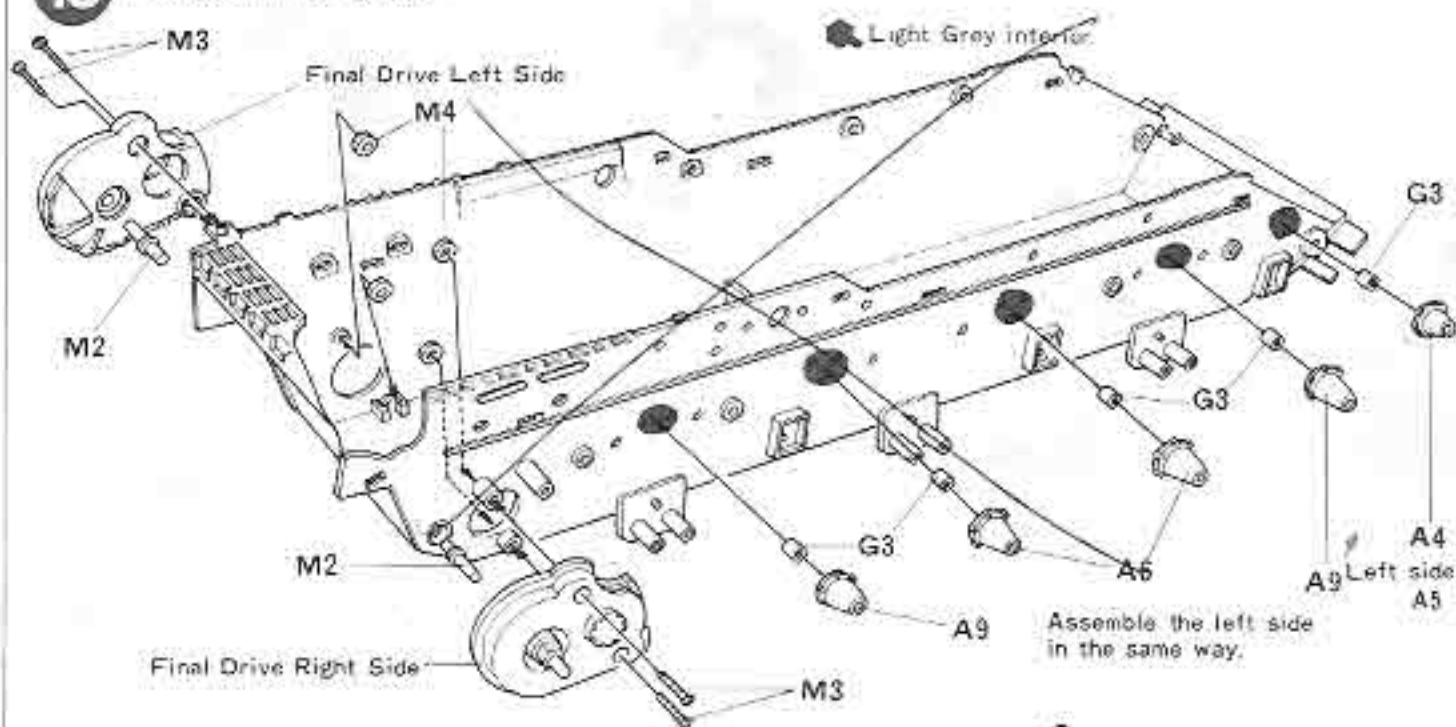
(Assembly of Idler Wheel Shaft)



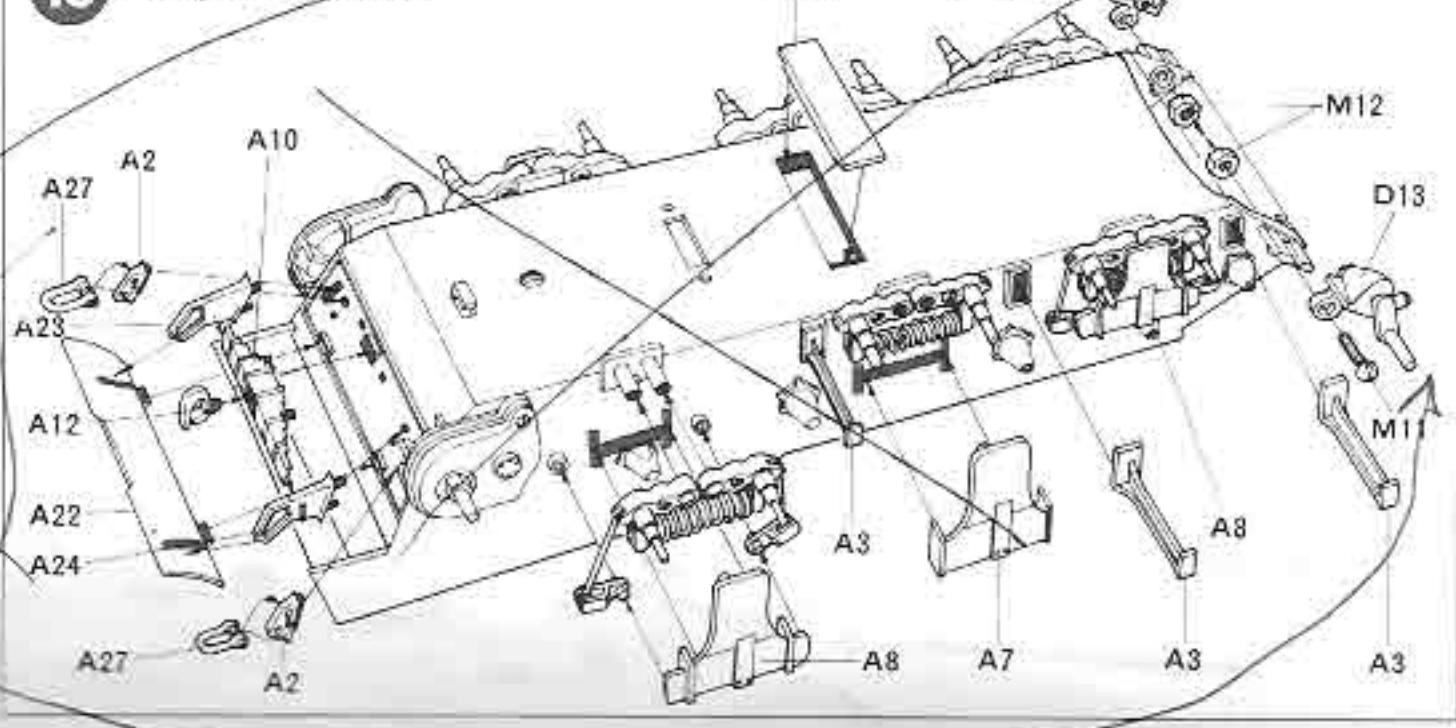
17 Construction of Hull Inside Parts



18 Fixing of Final Drives



19 Fixing of Suspension



⑩ (Installation of Wheels)

(Photo of the running section of the real tank)



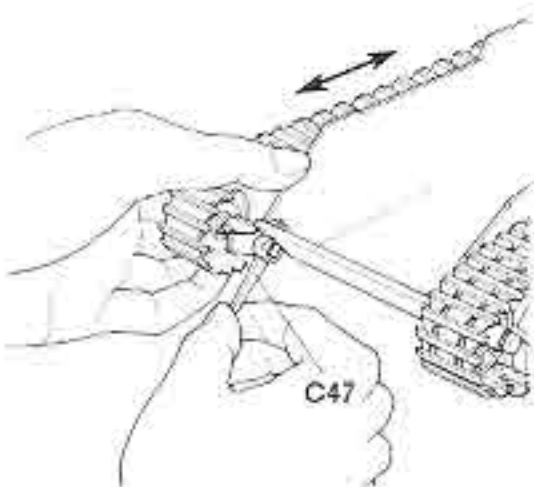
(Photo of Actual Idler Wheel)



⑪ (Fixing of Tracks)

(Adjusting Tracks)

★Mount completed Tracks on Wheels. Adjust the slack of Tracks using Wrench C47 to loosen the nuts. Do not keep Tracks fully tight, but let them slack down a little.



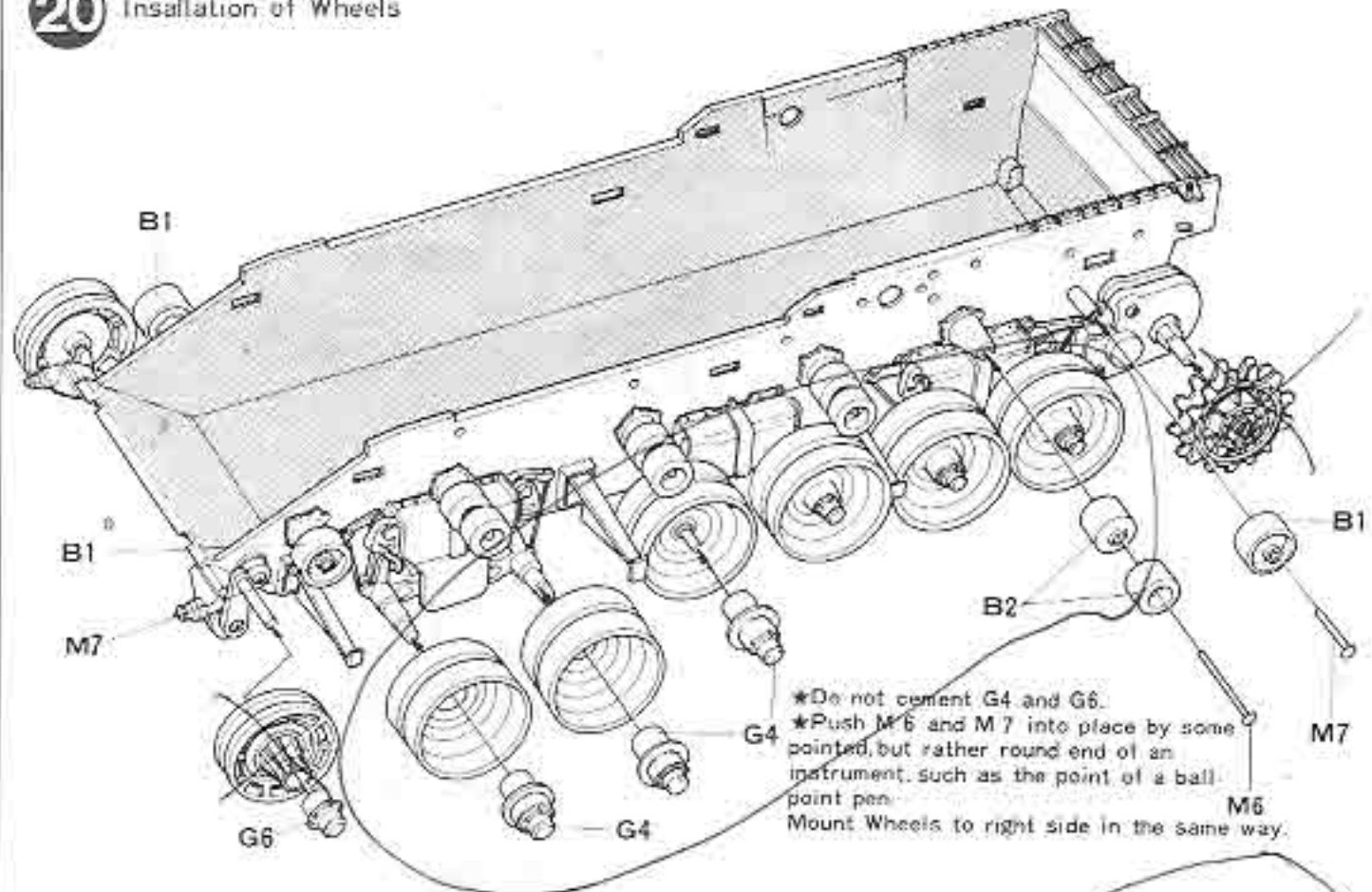
(Fixing of Fenders)

★Fix Fenders to Lower Hull using cement, Screws, and Nuts.

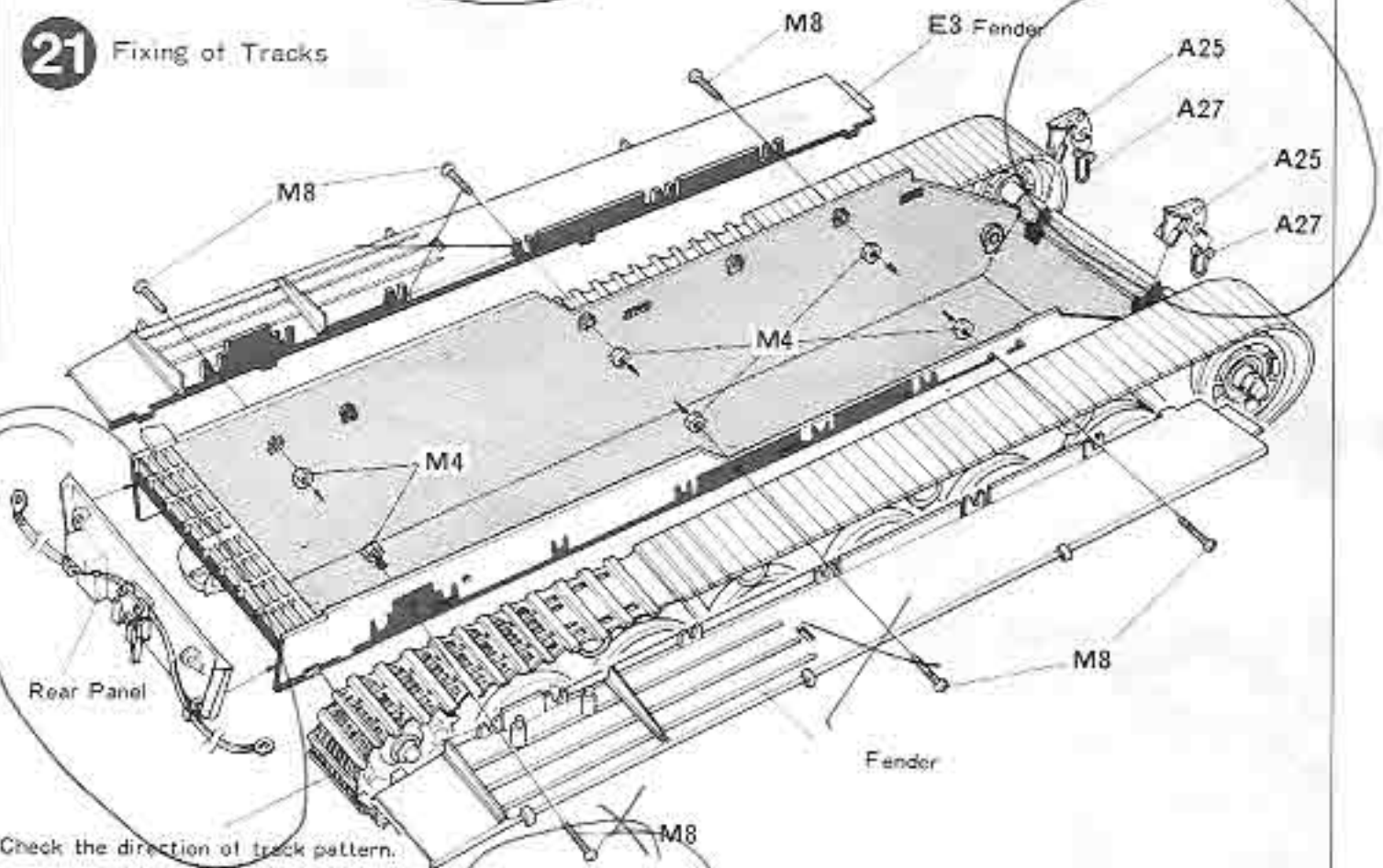
⑫ (Construction of Driver's Room)
Fix Driver's Room to a rib of Lower Hull.



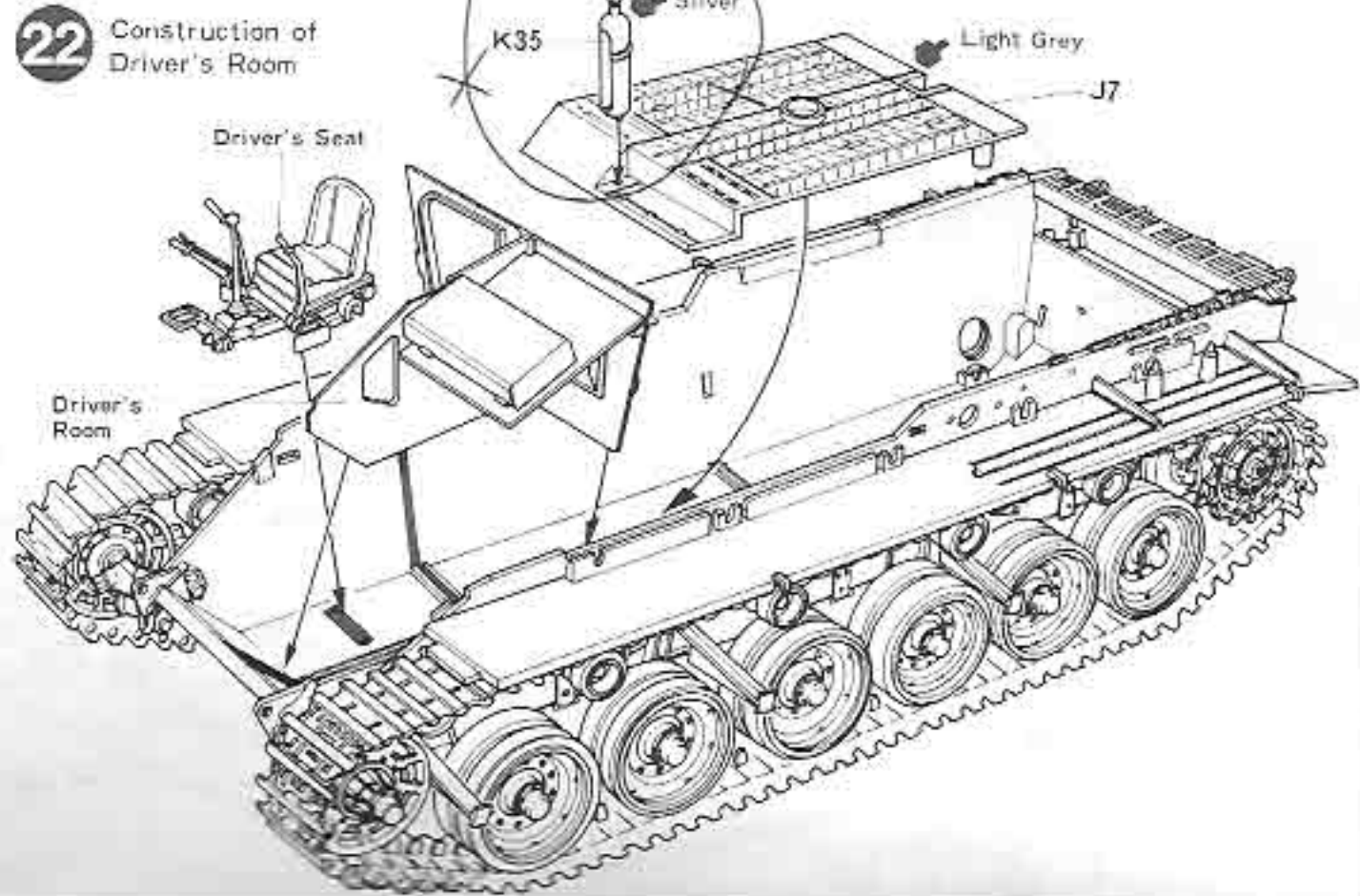
20 Installation of Wheels

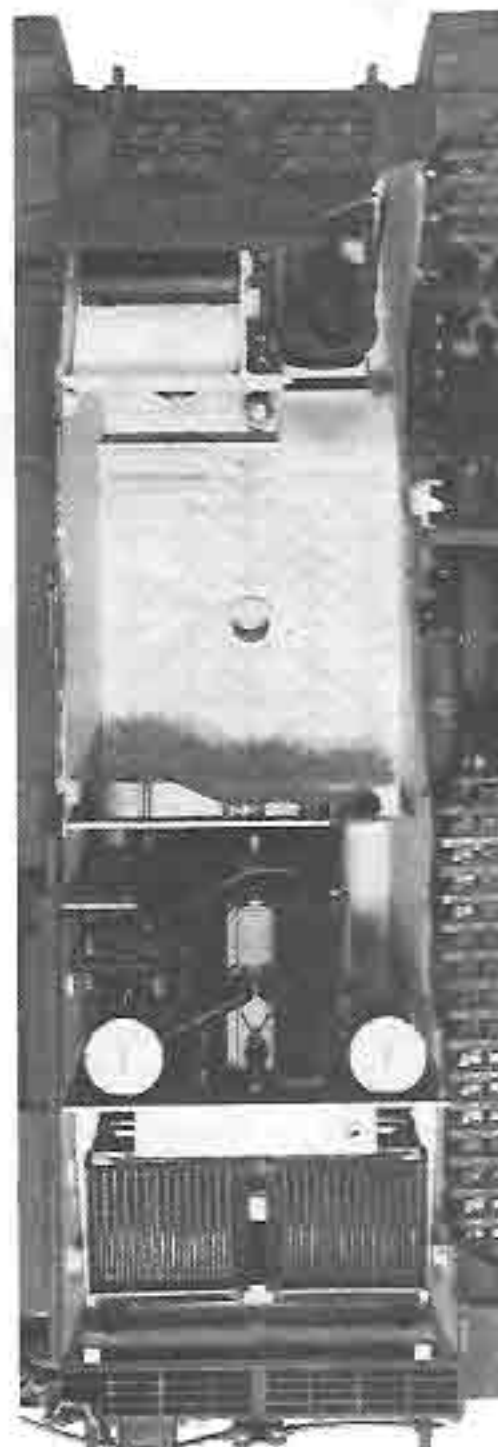


21 Fixing of Tracks



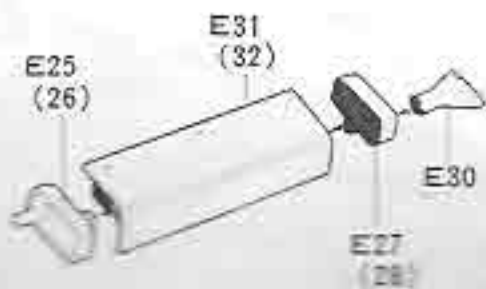
22 Construction of Driver's Room



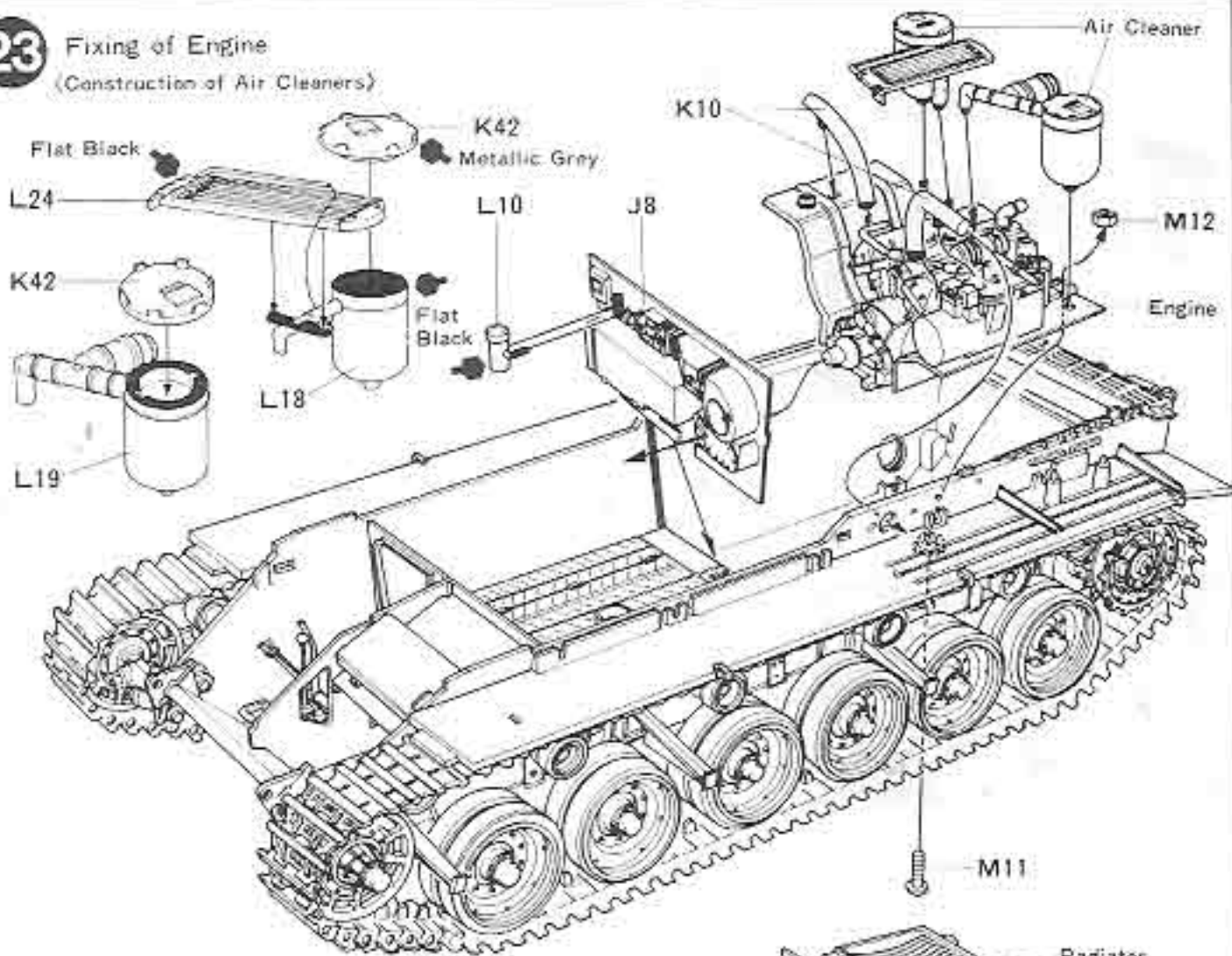


⊗ (Fixing of Front Armour Plate)
Cement H5 to Lower Hull, and Fenders. Hold H5 and Fenders together with a clip.

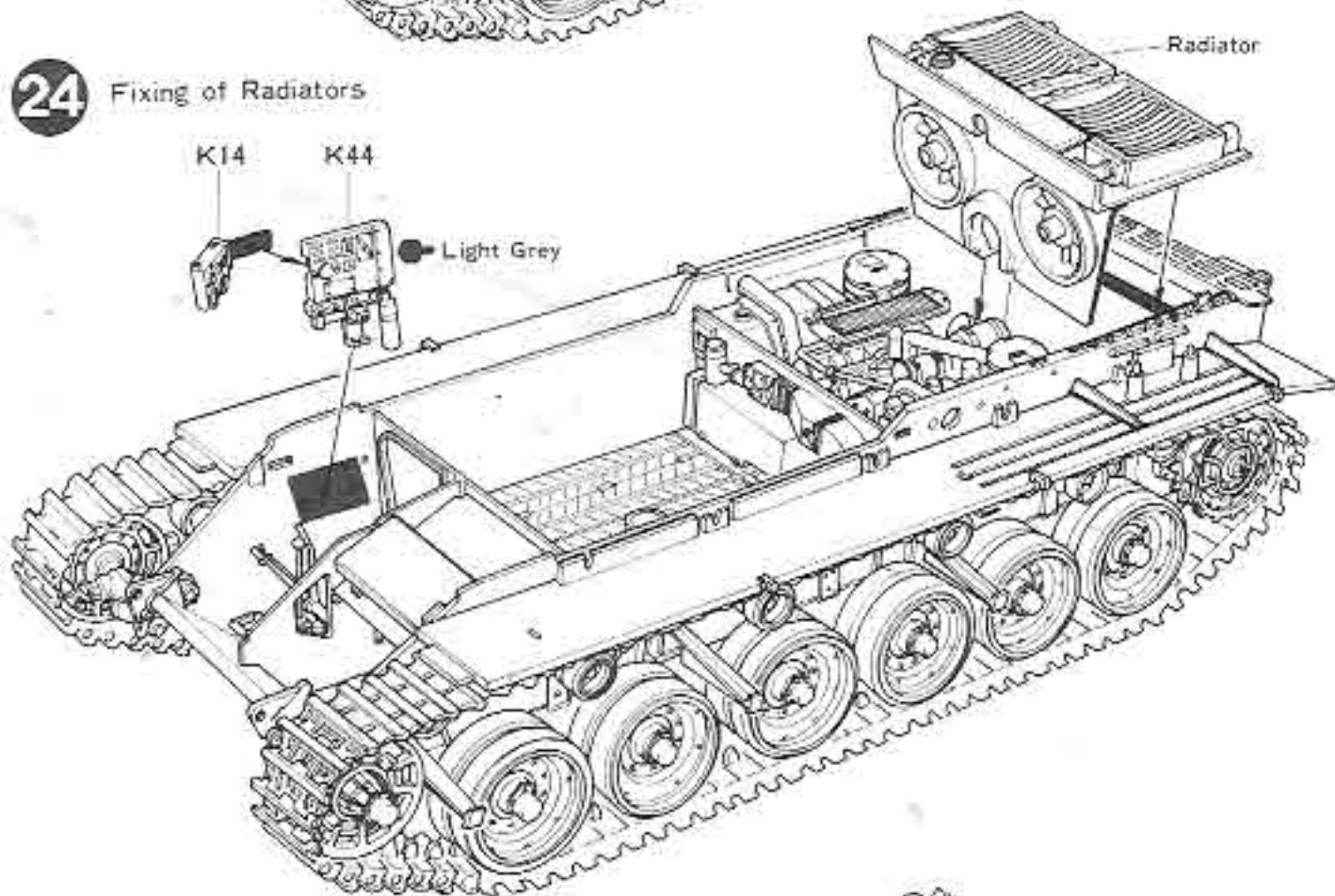
(Assembly of Exhaust Parts)



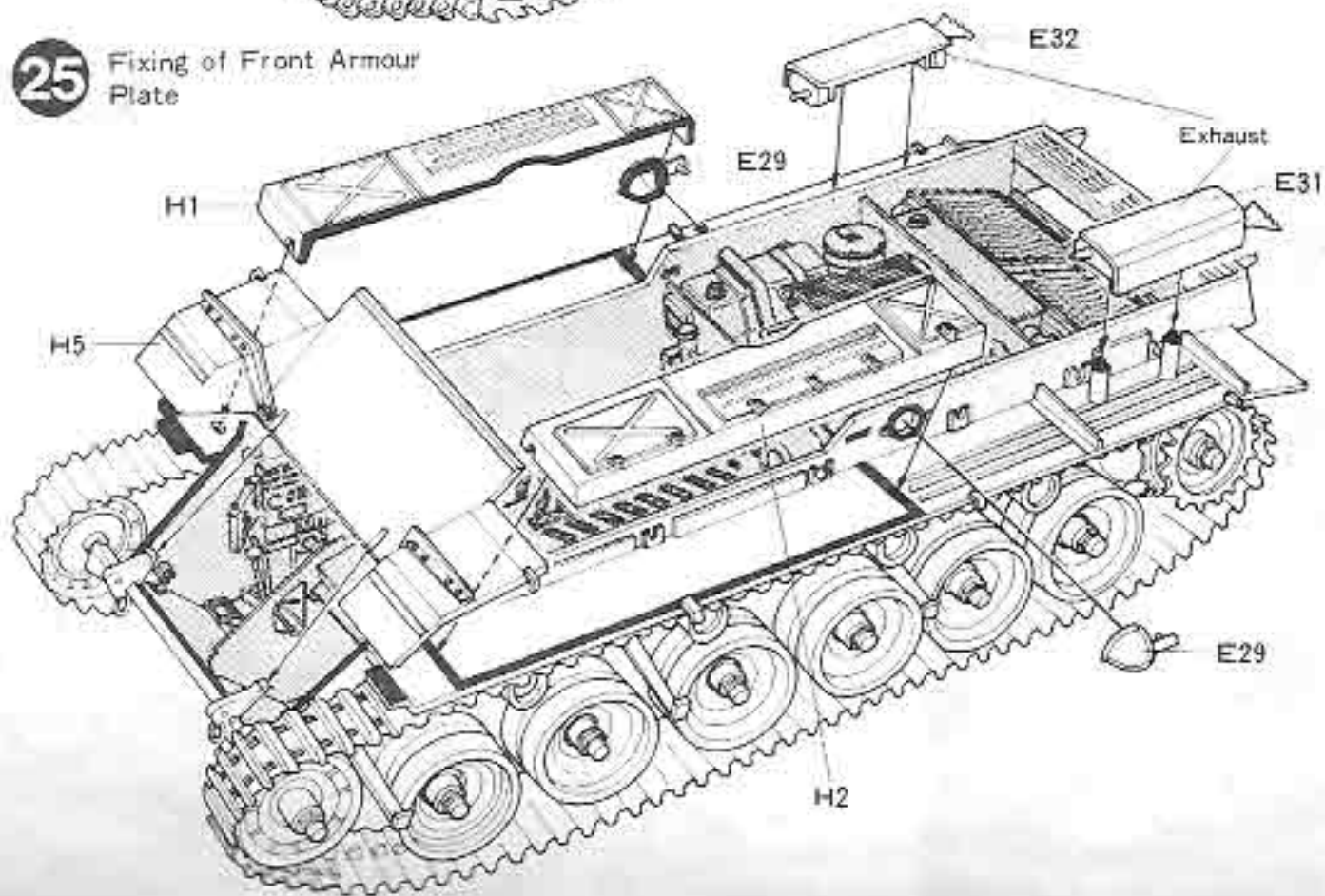
23 Fixing of Engine
(Construction of Air Cleaners)



24 Fixing of Radiators

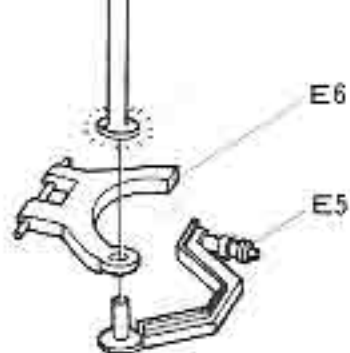


25 Fixing of Front Armour Plate



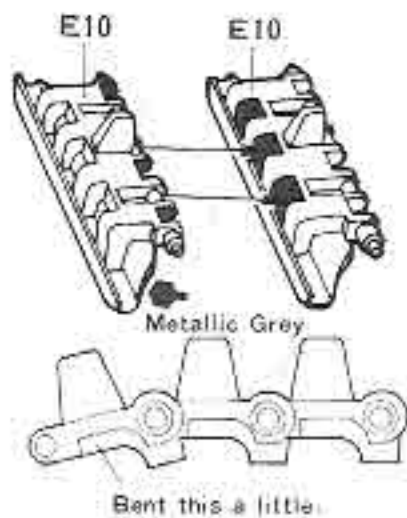
⑥ (Fixing of Fighting Compartment Cover)

(Assembly of Gun Travel Lock)
 ★ Assemble E5 and E6 as shown in the chart, and fix the assembled thing by heat such as by burning etc. and place E5 in a moveable position.



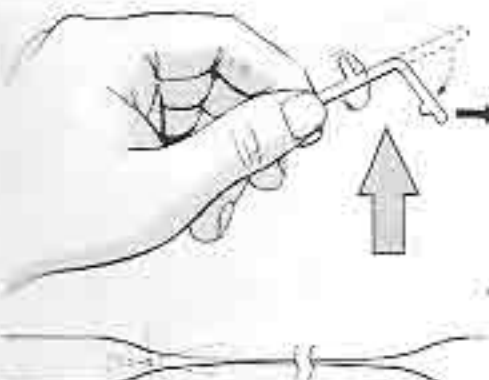
⑦ (Fixing of Engine Cover)

(Assembly of Spare Track Parts A)
 ★ Make two sets of an assembly of three Spare Track parts (E10). As shown in the chart below, adhere them by twisting one of them somewhat.



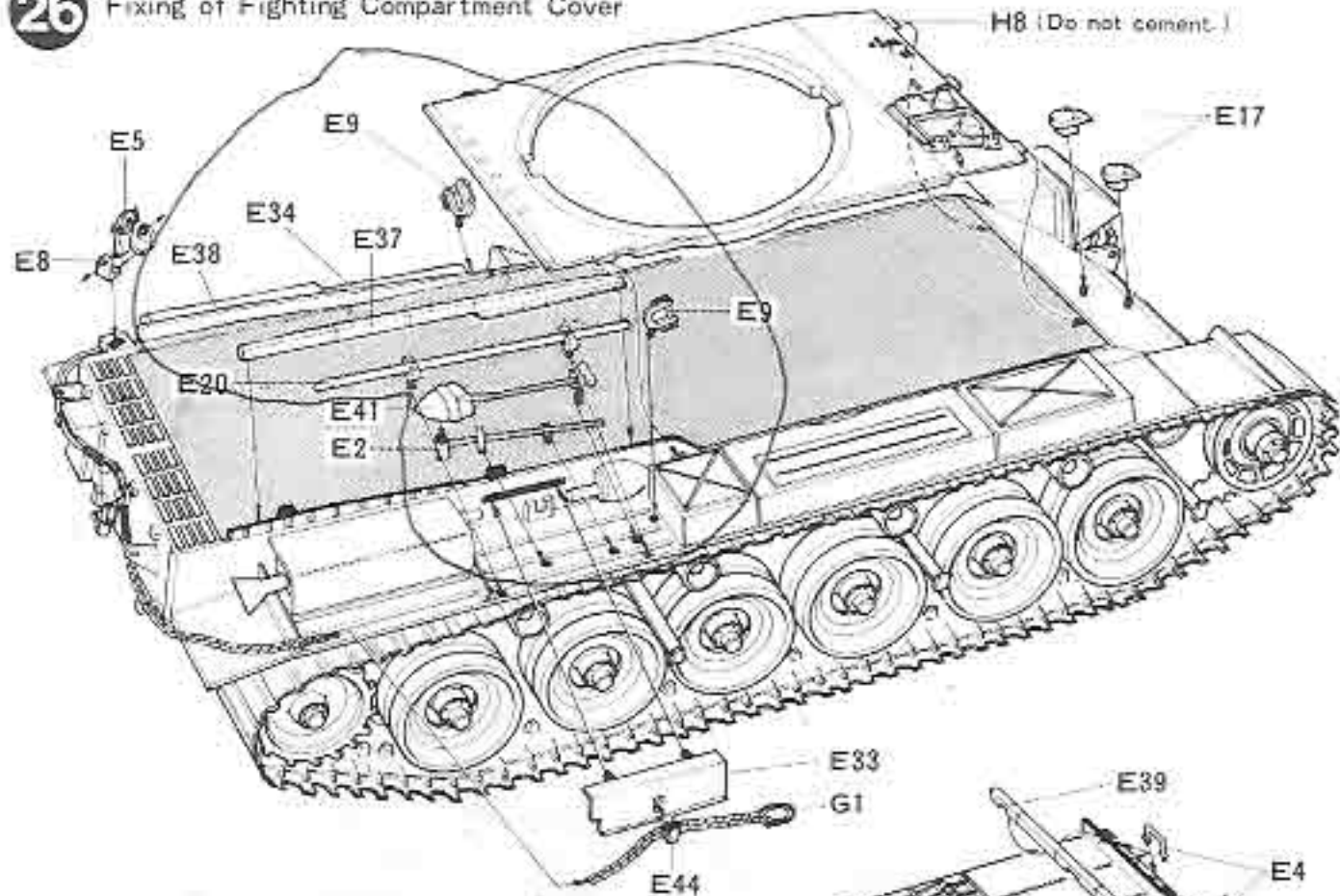
★ Some Centurions used by Israeli Army fix Tool Box in the above position.

⑧ (Completion)
 (How to Make Antenna)

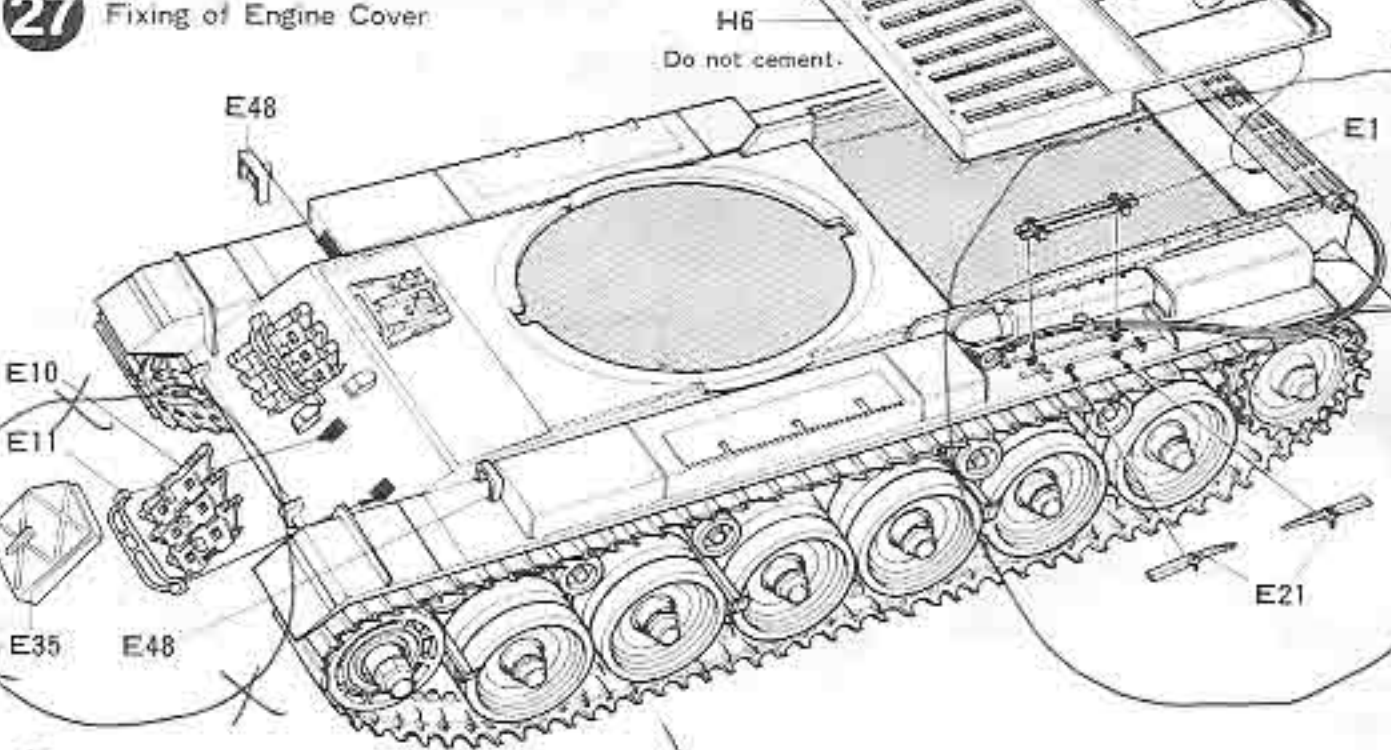


When the runner hangs down, as shown in the figure, take it away from the heating device. Then, slowly stretch it both ways until it becomes long and slender. Keep it still for about 15 seconds to cool. Lastly, cut it to a piece of 18cm.
 ★ Caution
 Be careful of a fire handling in making antenna.

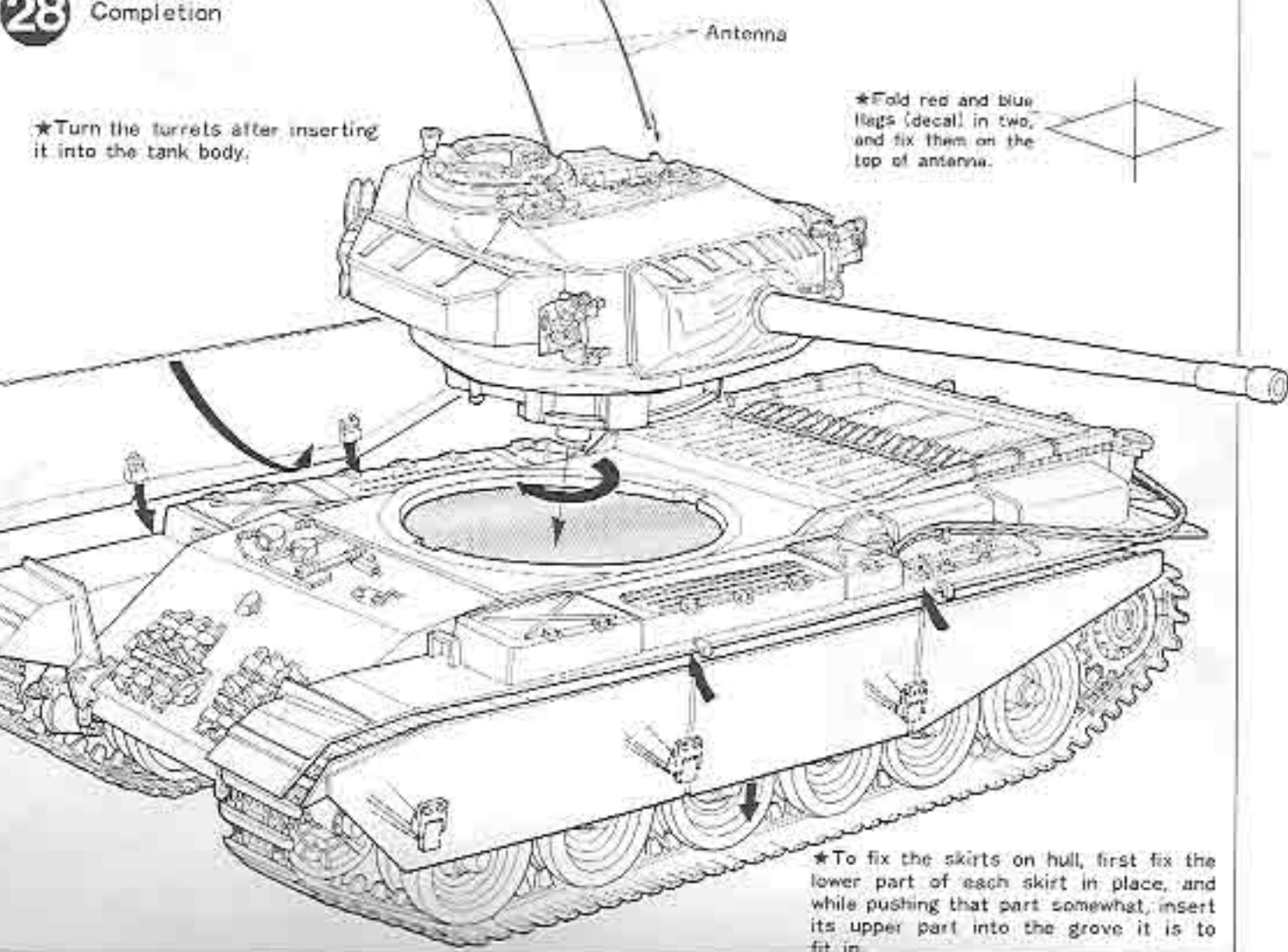
26 Fixing of Fighting Compartment Cover



27 Fixing of Engine Cover



28 Completion

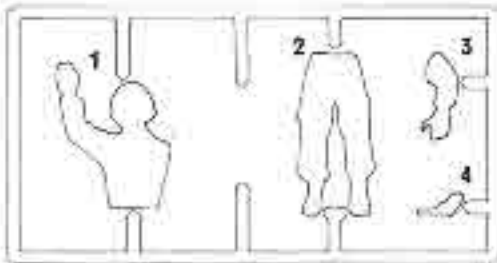


★ Turn the turrets after inserting it into the tank body.

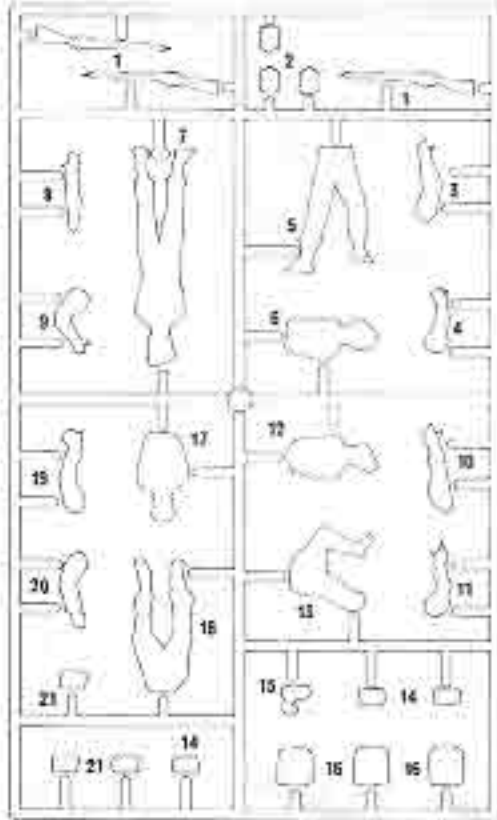
★ Fold red and blue flags (decal) in two, and fix them on the top of antenna.

★ To fix the skirts on hull, first fix the lower part of each skirt in place, and while pushing that part somewhat, insert its upper part into the groove it is to fit in.

N PARTS



O PARTS



(Painting Figures)

★British tank crewmen wear Khaki Green uniforms. And foot soldiers put on British Khaki combat uniforms.

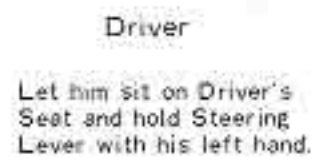
Khaki Green:
Olive Drab + Flat Green (1:2)
British Khaki:
Red Brown + Olive Drab + Flat White (4:2:1)

(Chart of Colours to Paint Figures)

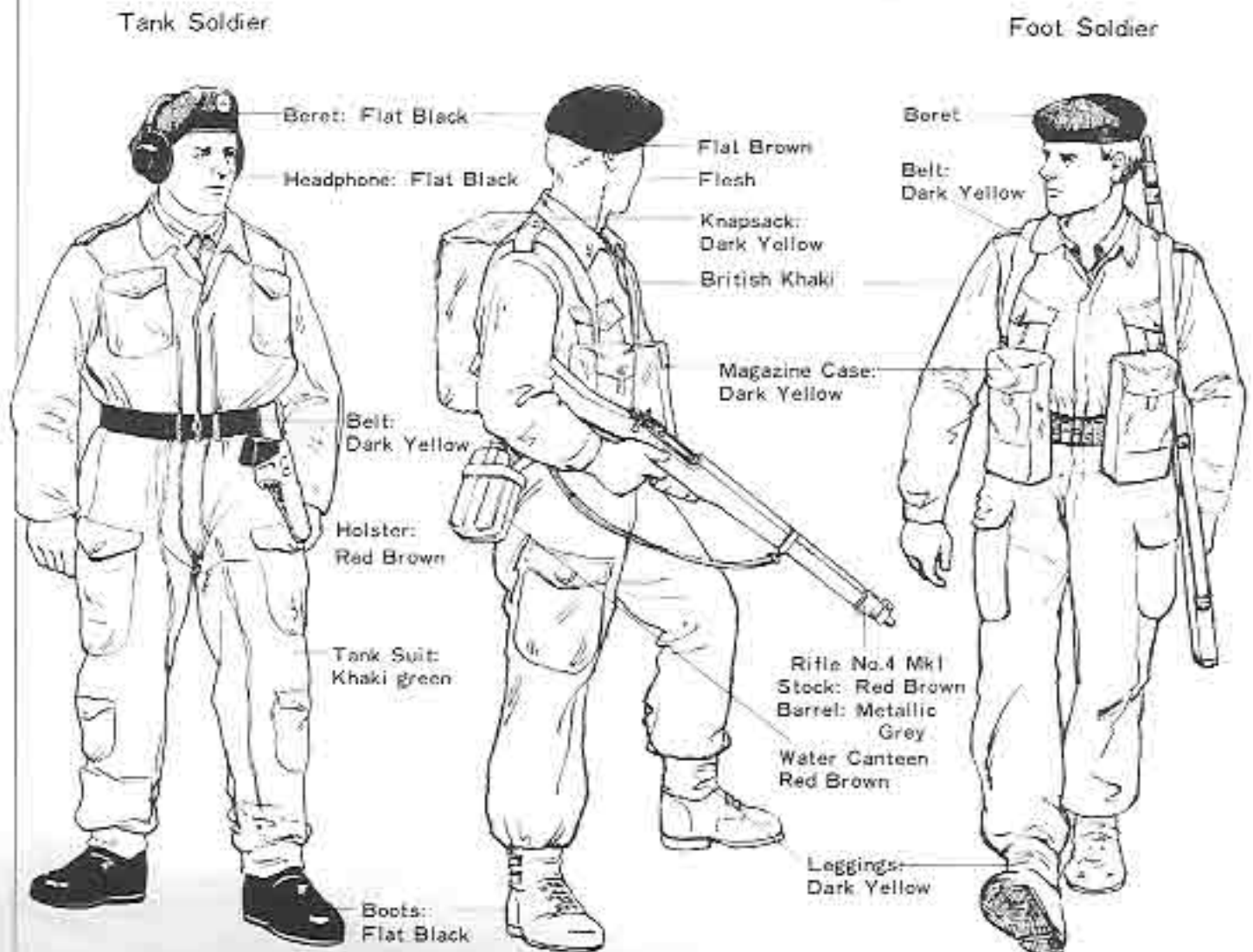
- Flat Black
- Flat White
- Flat Green
- Flat Brown*
- Metallic Grey
- Dark Yellow
- Olive Drab*
- Red Brown
- Flesh*



29 Construction of Figures

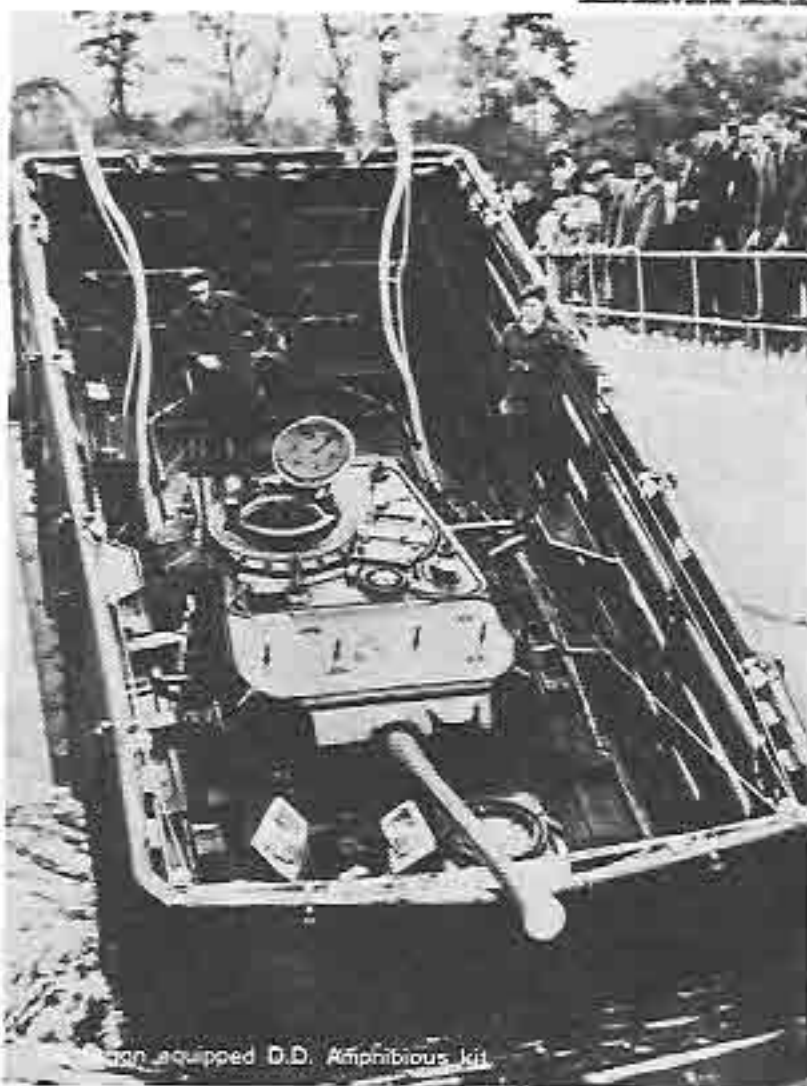


PAINTING





Centurion in Landing Docks



Centurion equipped D.D. Amphibious kit



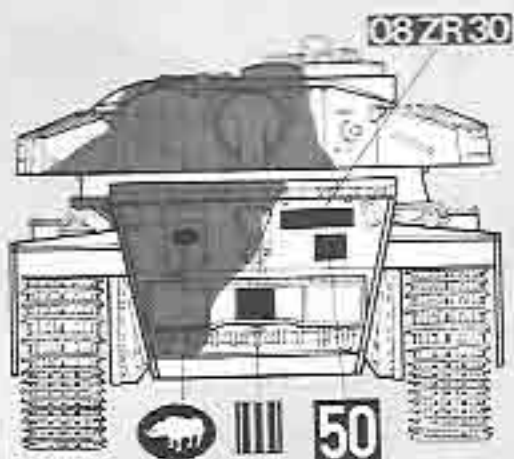
Centurion on Beach



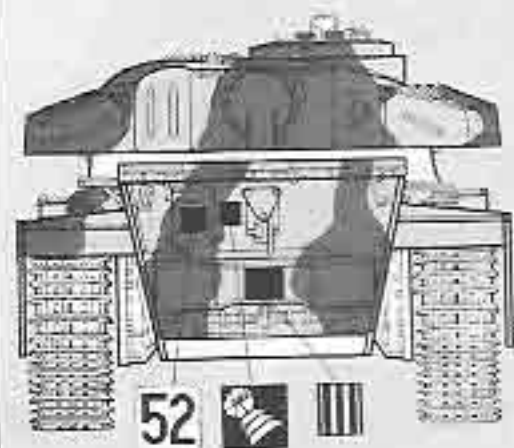
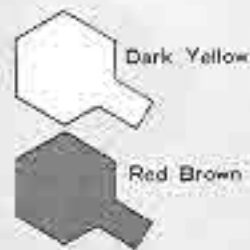
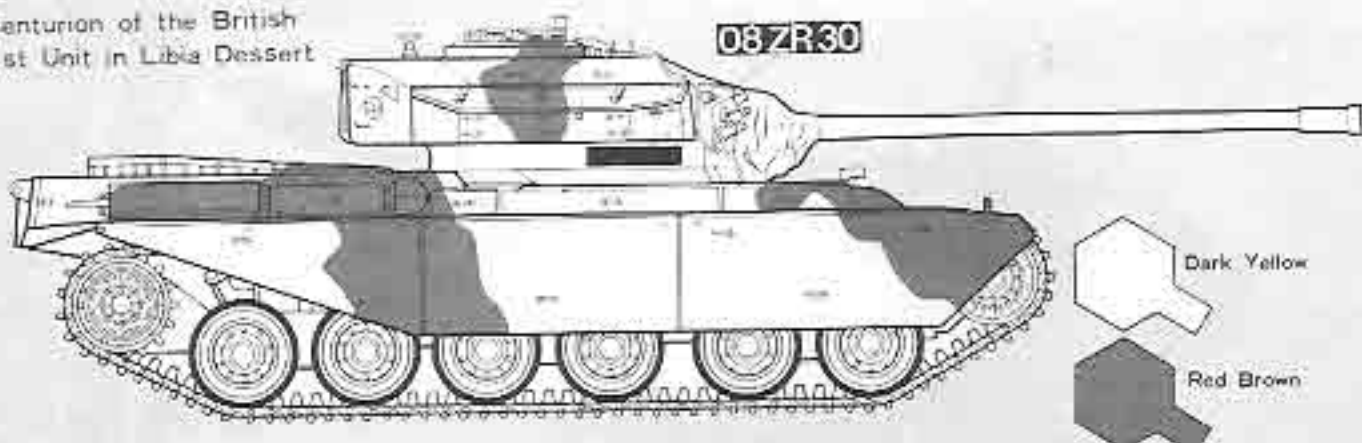
Centurion



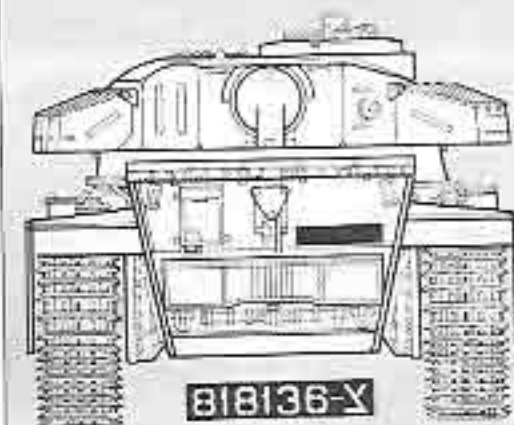
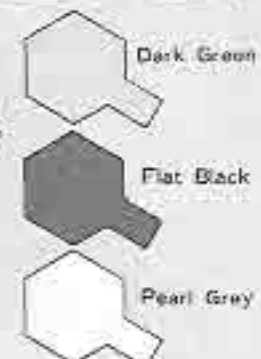
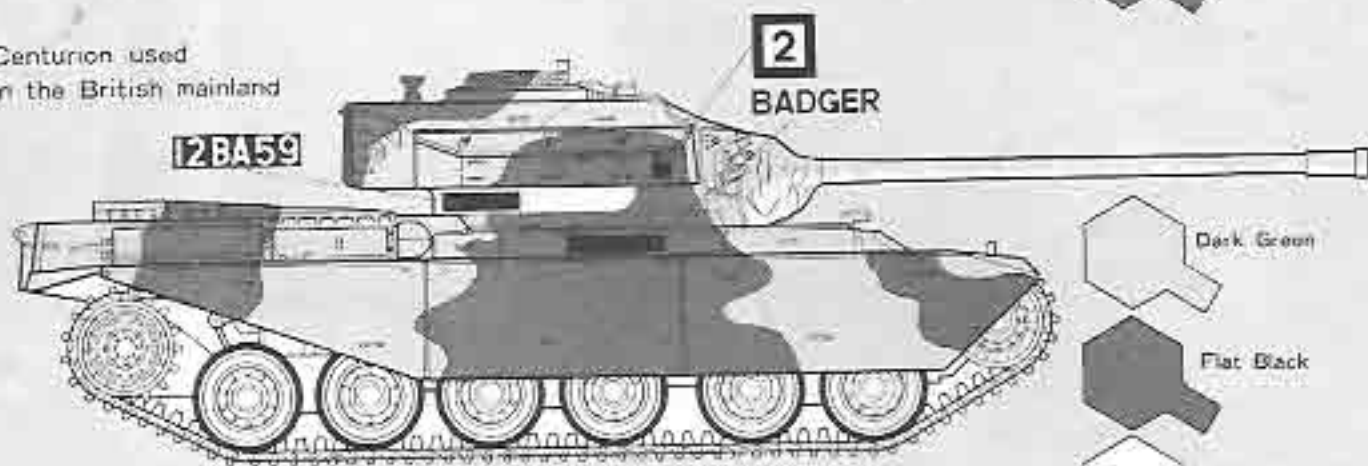
Centurion in Action



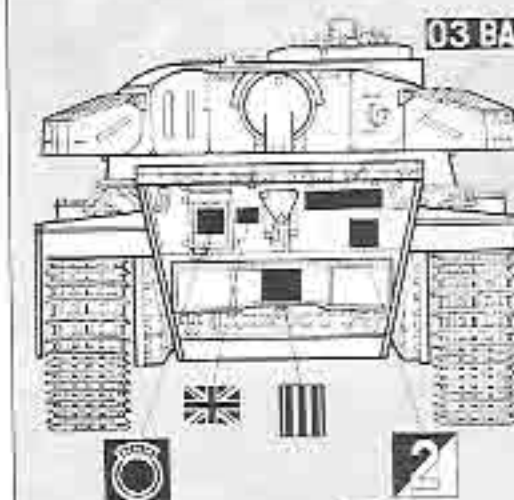
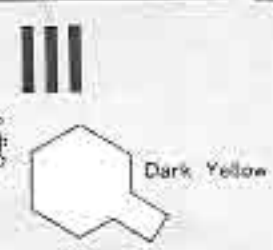
Centurion of the British 1st Unit in Libya Desert



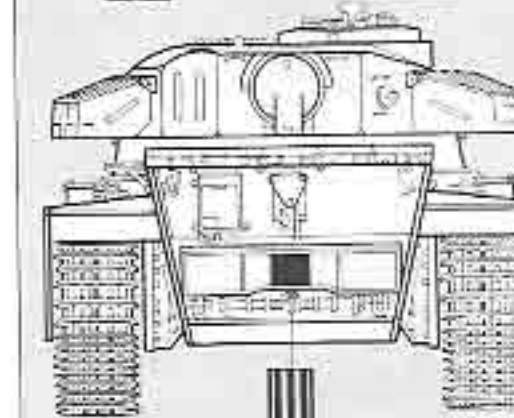
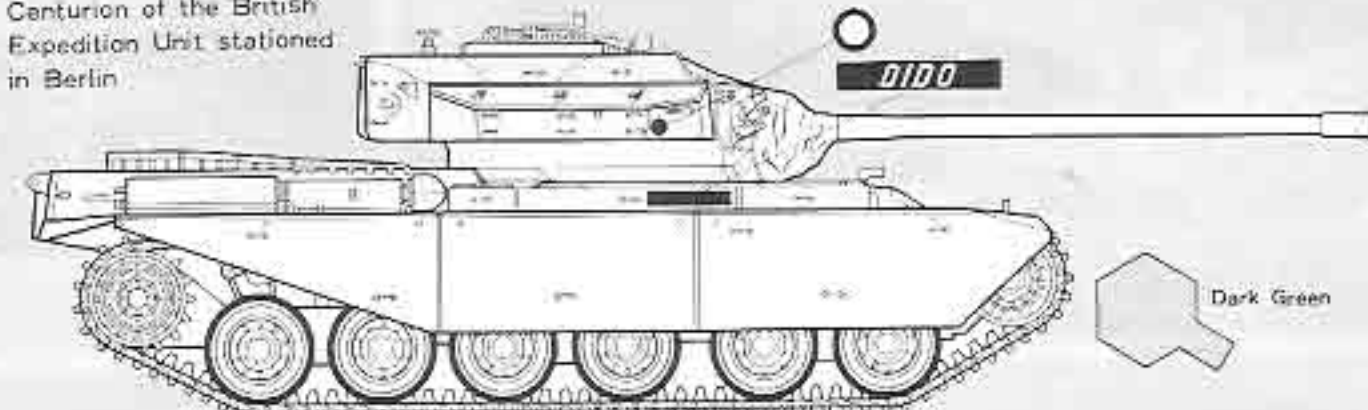
Centurion used in the British mainland



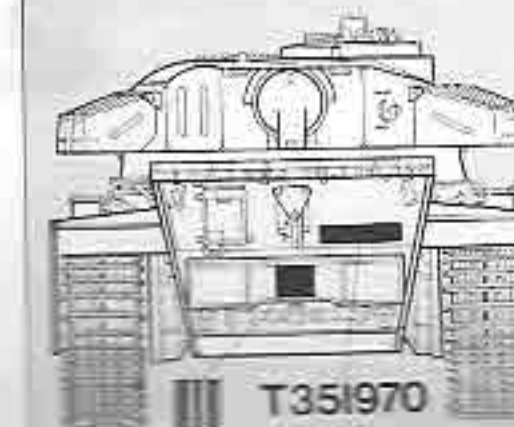
Centurion used by Israeli Army



Centurion of the British Expedition Unit stationed in Berlin

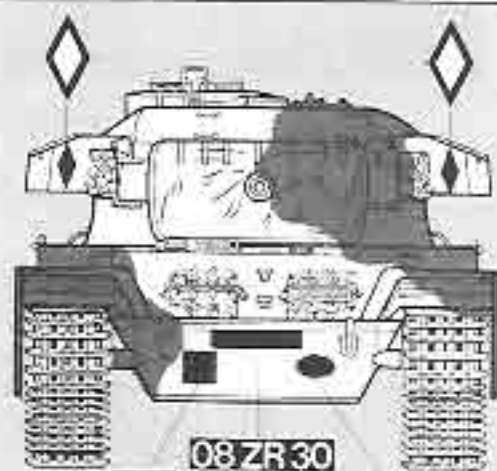


Centurion used by the Allied Forces in the Korean War

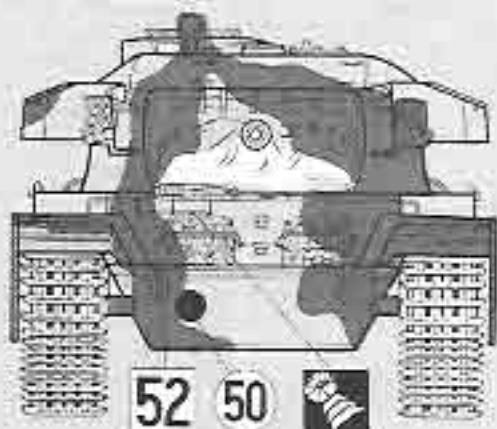


Centurion used in British mainland

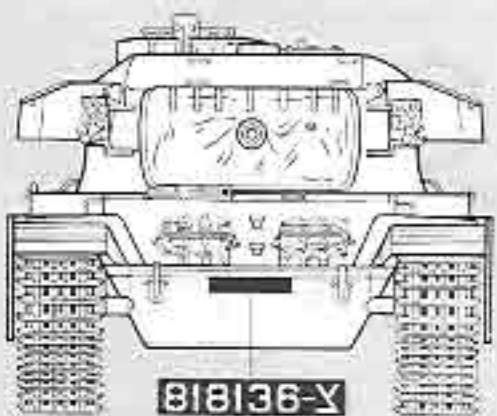




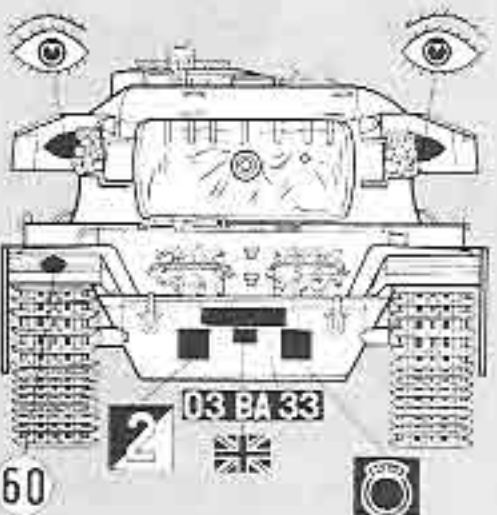
50



52 50

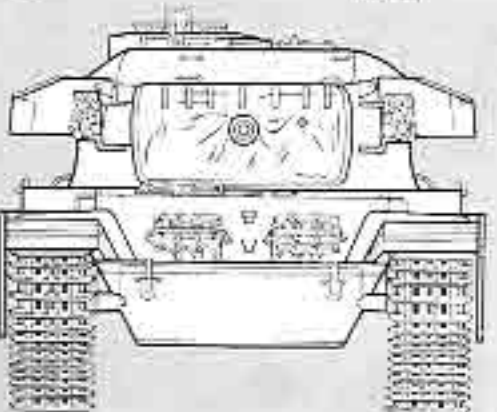


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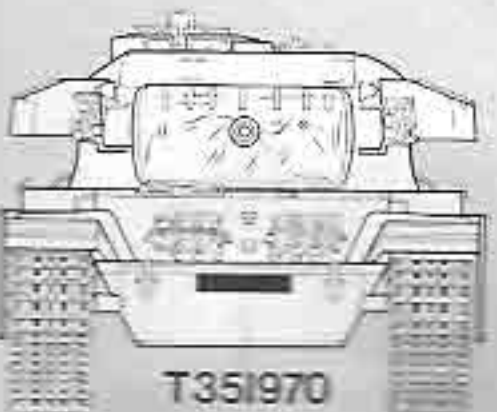
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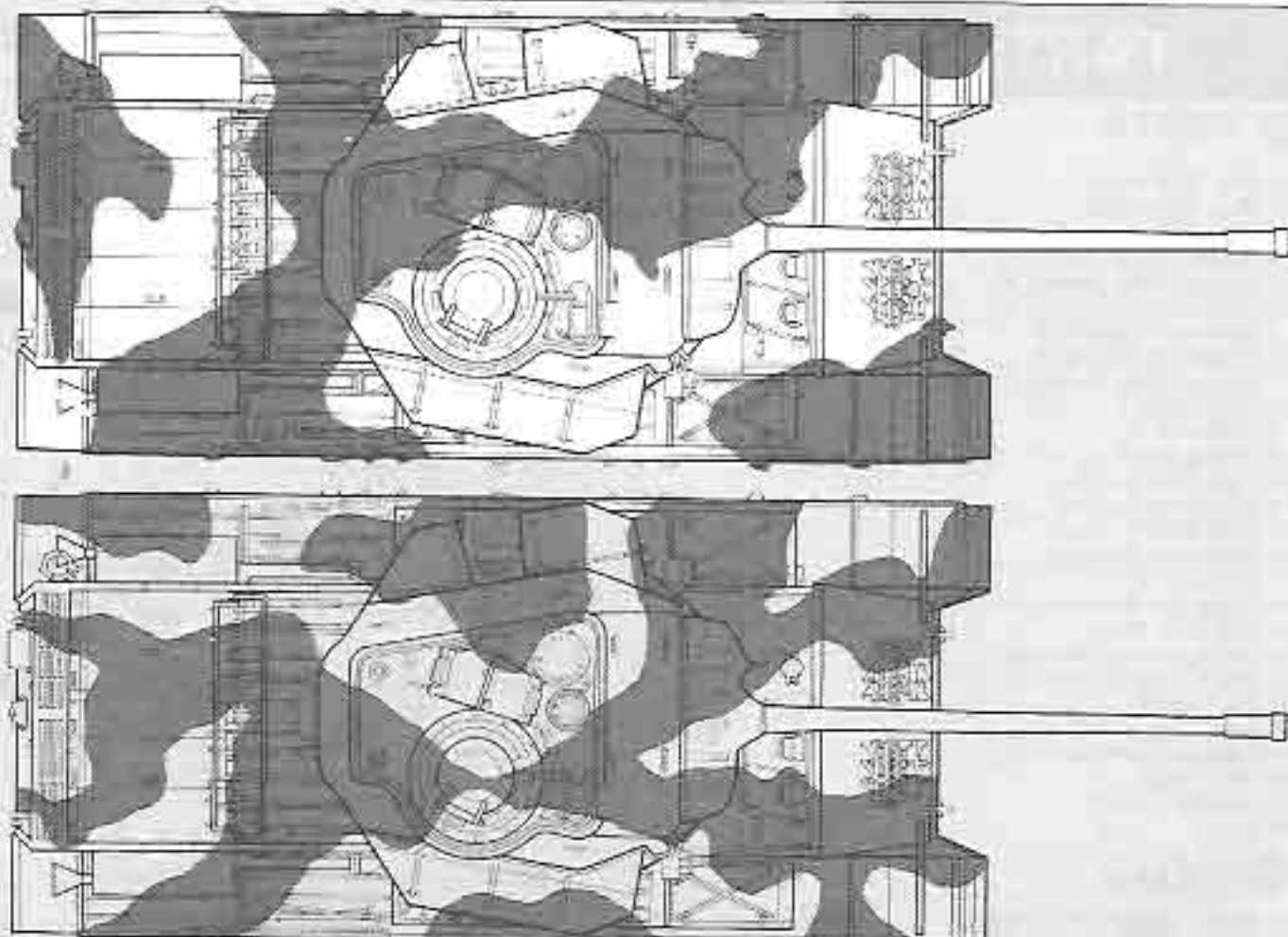


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2



T351970



PAINTING & APPLYING DECALS

Colors of British Fighting Tanks

The British Royal Army's fighting tanks have been mostly painted in just one color—dark green.

The famous Centurion tanks of the army also usually come in the same single color, but somewhat bluish dark yellow. In case of camouflage painting, the Centurion tanks have been most commonly painted in a combination of dark yellow and red brown.

The Centurion tanks' camouflage painting features large patches of each color and clear dividing lines between two different colors.

Such a way of camouflage painting seems to be traditional with the British army tank forces.

Shading off of one color into another to make dividing lines unclear or painting in leopard-skin style has been hard to find among British army tanks.

In some exceptional cases, three different colors have been used. They are dark green, flat black, and pearl grey. Of these, dark green and flat black have been used for camouflage painting. The way the two colors are used have been just as simple and clearly divided as the ordinary method of camouflage painting.

Pearl grey is a bright kind of grey. It is used for painting usually not too clearly seen parts of hull such as the lower portion of the tank's structure or the base of the gun turret.

The key point of such camouflage painting is, of course, how to make the tank body look as much like its surroundings as possible to fool the eyes of the enemy.

It follows that the colors and the ways of camouflage painting of the tank's body depend on the natural colors of a given locality where any tank is to operate.

Most of the tank inside is painted in single Light Grey colour. However, to the parts which need metallic touches are required, such as Engine, in Metallic Grey and Flat Black.

Chart of Colours to be Used

Flat Black	Dark Green
Flat White	Red Brown
Flat Green	Light Grey
Flat Red	Silver
Metallic Grey	Gold
Dark Yellow	Khaki

Painting of fine parts of tank

Painting instructions of fine parts is given in the diagrams of Parts list (P14; P15).



The identification mark of the 1st Division.



The identification mark of the 6th Division, which was active during World War II on the North African battle front.



The identification mark of any brigade assigned to West Berlin.



The identification mark of a squadron, indicating the company headquarters that is the immediate commanding authority for the tank.



Popularly called the "Chinese eye". The identification mark of the 11th Tank Regiment.



The identification mark of the United Nations armed forces in the Korean War.



Popularly called the "Bridge Class". The weight mark of a tank, showing the full weight of the tank brought on a bridge when crossing over it.



Three examples of nicknames given a tank as written together. There are various other nicknames such as "Maplehill", "London Statesman", and "Colombia".



A special mark put on the marker slots of the Centurion tanks used in Israel. The mark may be moved to point straight ahead, upward or downward to show which way the tank is going.

Additional Explanations

A British army tank may be usually identified as to what big group of forces it belongs to by one of three major markings. The three markings are 1) The division identification mark, 2) The independent (special) brigade identification mark (both as explained above,) and 3) The army corps identification mark (both as explained above.)

A British army tank also carries some bold letter number such as 52, which tells a battalion, a regiment or some other army unit the tank belongs to.

Besides, it has various other marks such as a company identification mark, a squadron identification mark, or a "Bridge Class" mark (as used by the NATO armed forces) as also explained above.



PARTS

A PARTS

1. Side Skirt (Right)
2. Rear Panel Hook
3. Side Skirt Halder Arm
4. Support Roller Bracket A
5. Support Roller Bracket B
6. Support Roller Bracket C
7. Suspension Housing A
8. Suspension Housing B
9. Support Roller Bracket D
10. Leaf Spring
11. Connector D
12. Towing Hook
13. Final Drive A (Left)
14. Final Drive B (Left)
15. Final Drive A (Right)
16. Final Drive B (Right)
17. Connector C
18. Lower Hull Parts
19. Side Skirt Parts
20. Shock Absorber Parts A
21. Shock Absorber Parts B
22. Air Deflector
23. Leaf Spring Holder (Right)
24. Leaf Spring Holder (Left)
25. Front Hook
26. Side Skirt (Left)
27. Hook

B PARTS

1. Support Roller A
2. Support Roller B
3. Road Wheel (Outside)
4. Road Wheel (Inside)
5. Drive Sprocket (Inside)
6. Drive Sprocket (Outside)
7. Idler Wheel (Outside)
8. Idler Wheel (Inside)

C PARTS

1. Gun Barrel A
2. Gun Barrel B
3. Cupola Parts A
4. Cupola Parts B
5. Shell Hatch
6. Leader's Hatch A
7. Leader's Hatch B
8. Commander's Hatch
9. Escape Hatch
10. Water Tank A
11. Water Tank B
12. Reel Cable (Inside)
13. Reel Cable (Outside)
14. Gun Shield
15. Gun Drum
16. Reel Cable Holder
17. Machine Gun
18. Loader's Hatch Hinge
19. Turret Hook
20. Cupola Rail A
21. Aerial Holder
22. Turret Handrail A
23. Turret Handrail B
24. Commander's Hatch Hinge
25. Commander's Hatch Hinge
26. Spare Track Holder
27. Ventilator
28. Fire Extinguisher
29. Cupola
30. Periscope Cover
31. Leader's Hatch Cushion
32. Leader's Hatch Cushion
33. Cupola Rail B
34. Gun Shield Cover
35. Smoke Discharger Box (Left)
36. Smoke Discharger Box (Right)
37. Muzzle of Gun
38. Smoke Discharger Arm (Upper)
39. Smoke Discharger Arm (Lower)
40. Smoke Discharger Panel (Right)
41. Smoke Discharger Panel (Left)
42. Periscope
43. Smoke Discharger

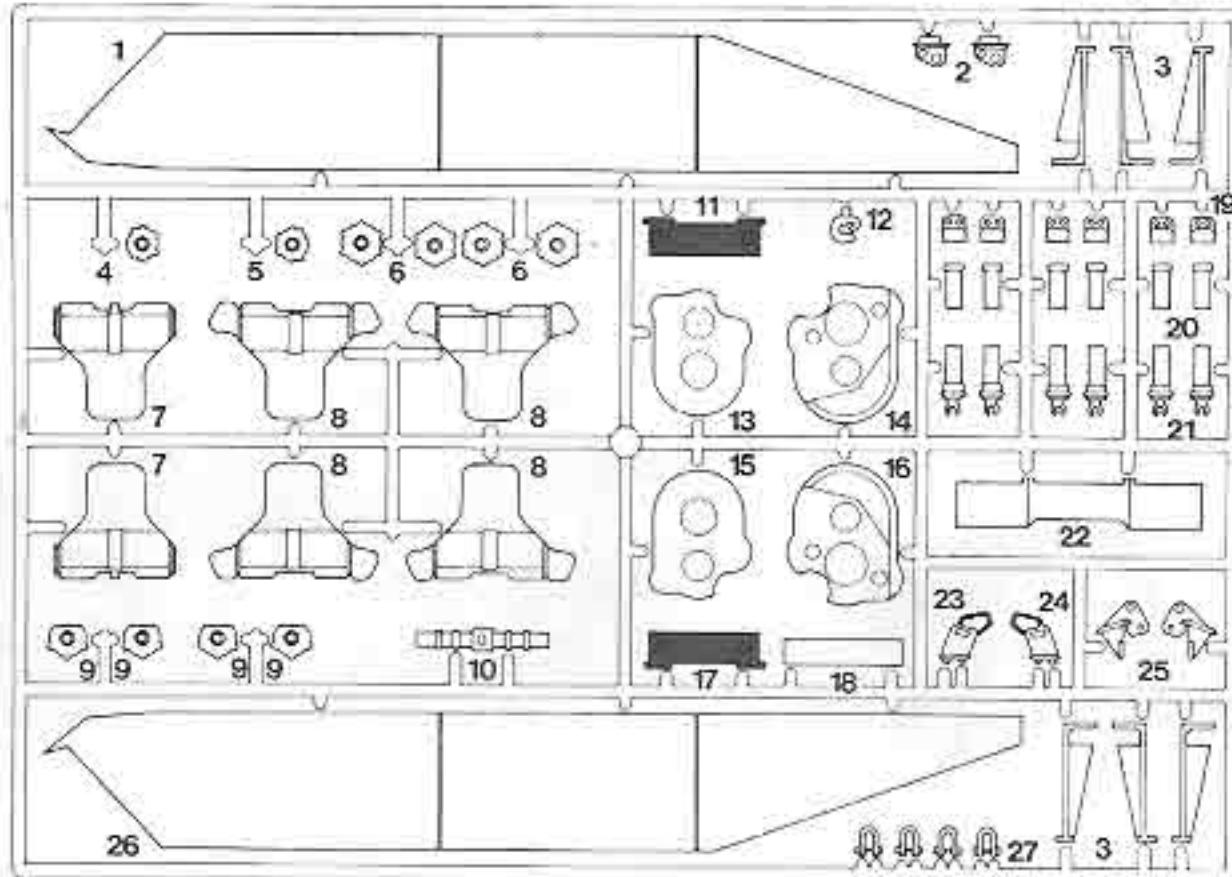
47. Spawner

D PARTS

1. Road Wheel Shaft A
2. Road Wheel Shaft B
3. Arm A
4. Idler Wheel Shaft
5. Connector A
6. Connector B
7. Gear A
8. Road Wheel Shaft C
9. Road Wheel Shaft D
10. Road Wheel Shaft E
11. Arm B
12. Gear B
13. Idler Wheel Shaft Cover (Left)
14. Idler Wheel Shaft Cover (Right)
15. Shock Absorber Parts
16. Road Wheel Shaft F
17. Link A
18. Link B

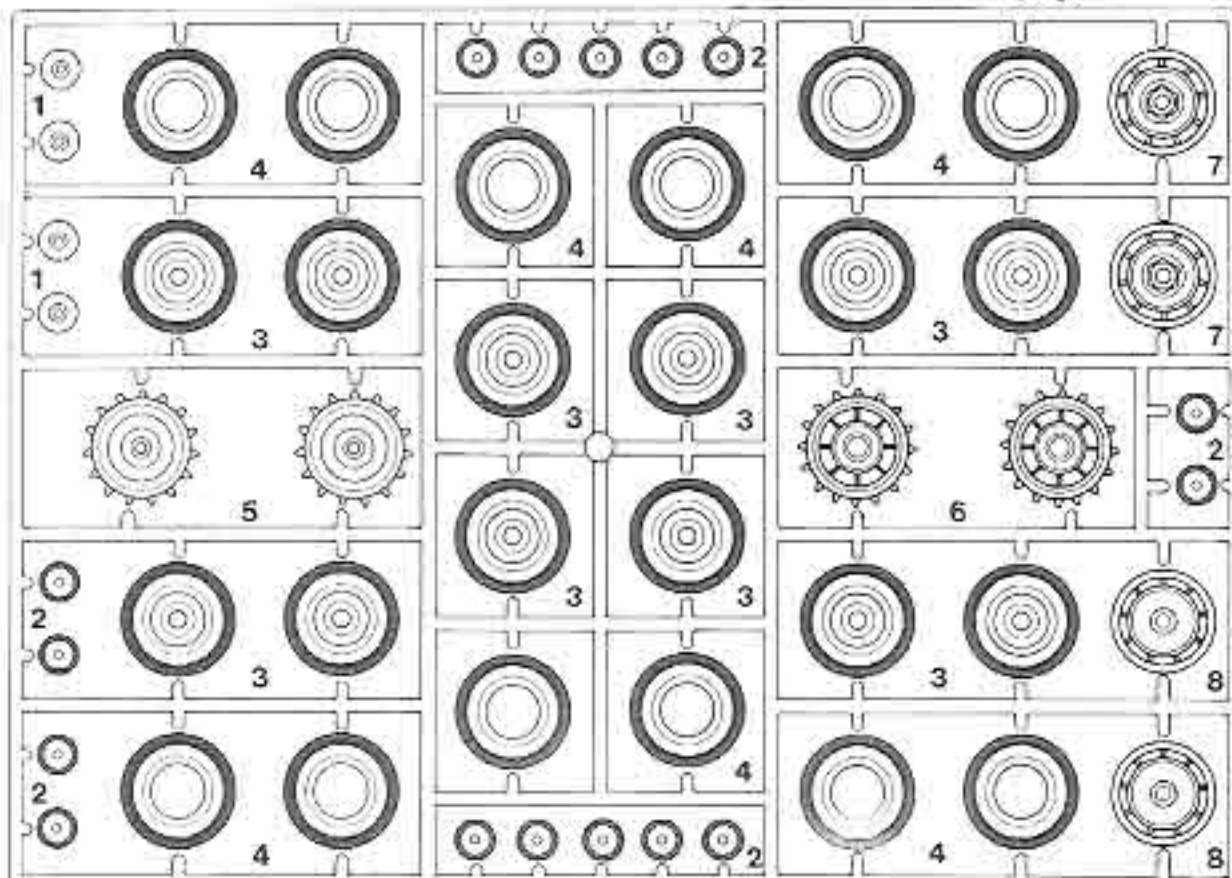
A PARTS

A11 and A17 are not needed.



B PARTS

Flat Black

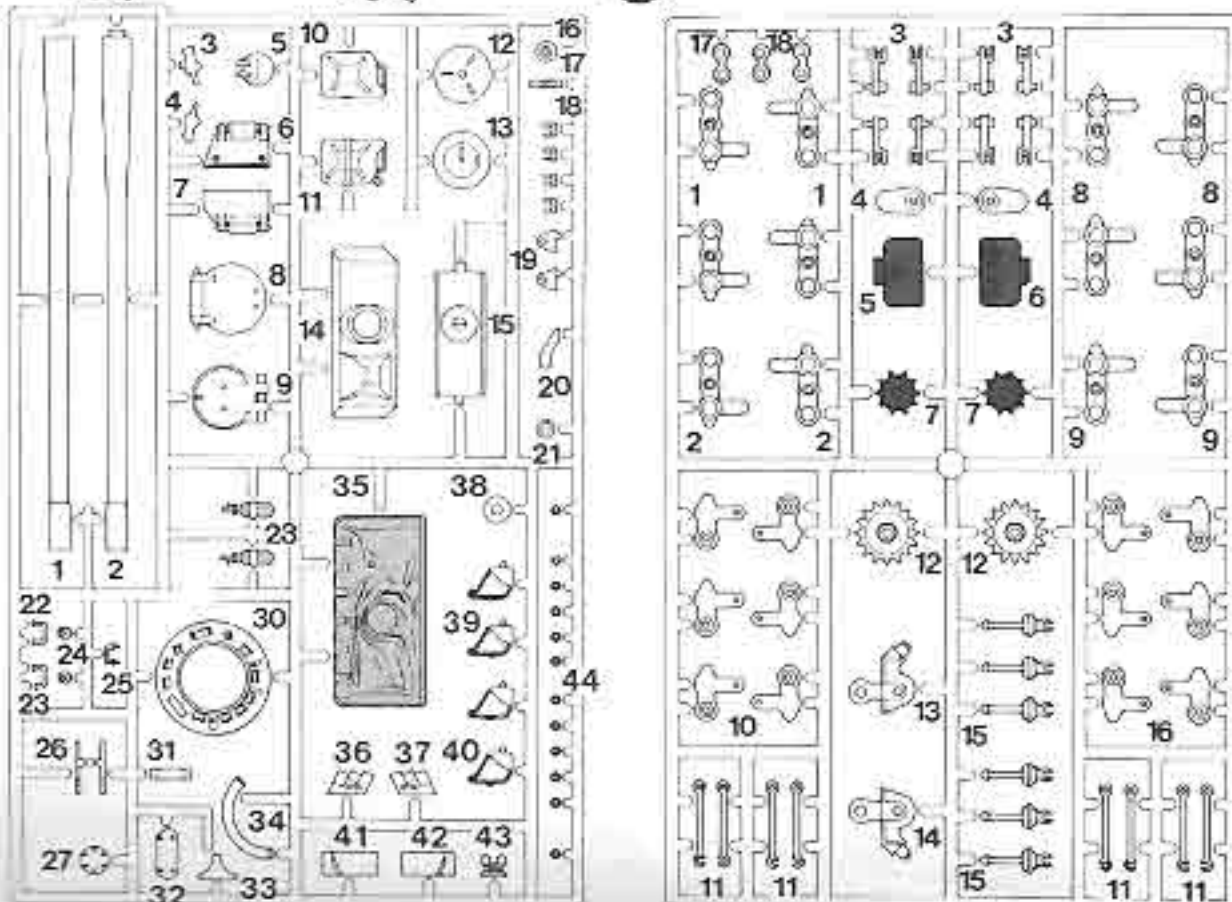


C PARTS

Flat Insignia Red Red Brown

D PARTS

D5, D6, and D7 are not needed.



PARTS

E PARTS

1. Bar A
2. Hammer
3. Fender (Left)
4. Handrail
5. Gun Travelling Clutch A
6. Gun Travelling Clutch B
7. Fuel Filler Hatch
8. Gun Travelling Clutch Hinge
9. Wire Rope Stopper
10. Spare Track
11. Spare Track Holder
12. Wire Rope Holder Guid (Left)
13. Wire Rope Holder Guid (Right)
14. Wire Rope Holder A
15. Wire Rope Holder B
16. Wire Rope Holder C
17. Head Light
18. Driver's Hatch Hinge
19. Handle
20. Bar B
21. Dick
22. Driver's Hatch A
23. Driver's Hatch B
24. Stopper
25. Exhaust Pipe Parts A (Left)
26. Exhaust Pipe Parts A (Right)
27. Exhaust Pipe Parts B (Left)
28. Exhaust Pipe Parts B (Right)
29. Exhaust Pipe Parts C
30. Exhaust Pipe
31. Exhaust Pipe Parts D (Left)
32. Exhaust Pipe Parts D (Right)
33. Exhaust Pipe Parts E (Right)
34. Exhaust Pipe Parts E (Left)
35. Tool Box
36. Rear Panel Hook
37. Engine Cover Guide A
38. Engine Cover Guide B
39. Engine Cover Guide C
40. Periscope for Driver A
41. Shovel
42. Wire Rope Holder A
43. Wire Rope Holder B
44. Wire Rope Holder C
45. Rear Panel Handrail
46. Fender (Right)
47. Periscope for Driver B
48. Front Cover

F PARTS

1. Turret (Upper Surface) A
2. Tool Box Lid A
3. Tool Box Lid B
4. Tool Box B
5. Turret (Upper Surface) B
6. Tool Box Lid C
7. Tool Box C
8. Tool Box A
9. Turret (Left)
10. Turret (Right)

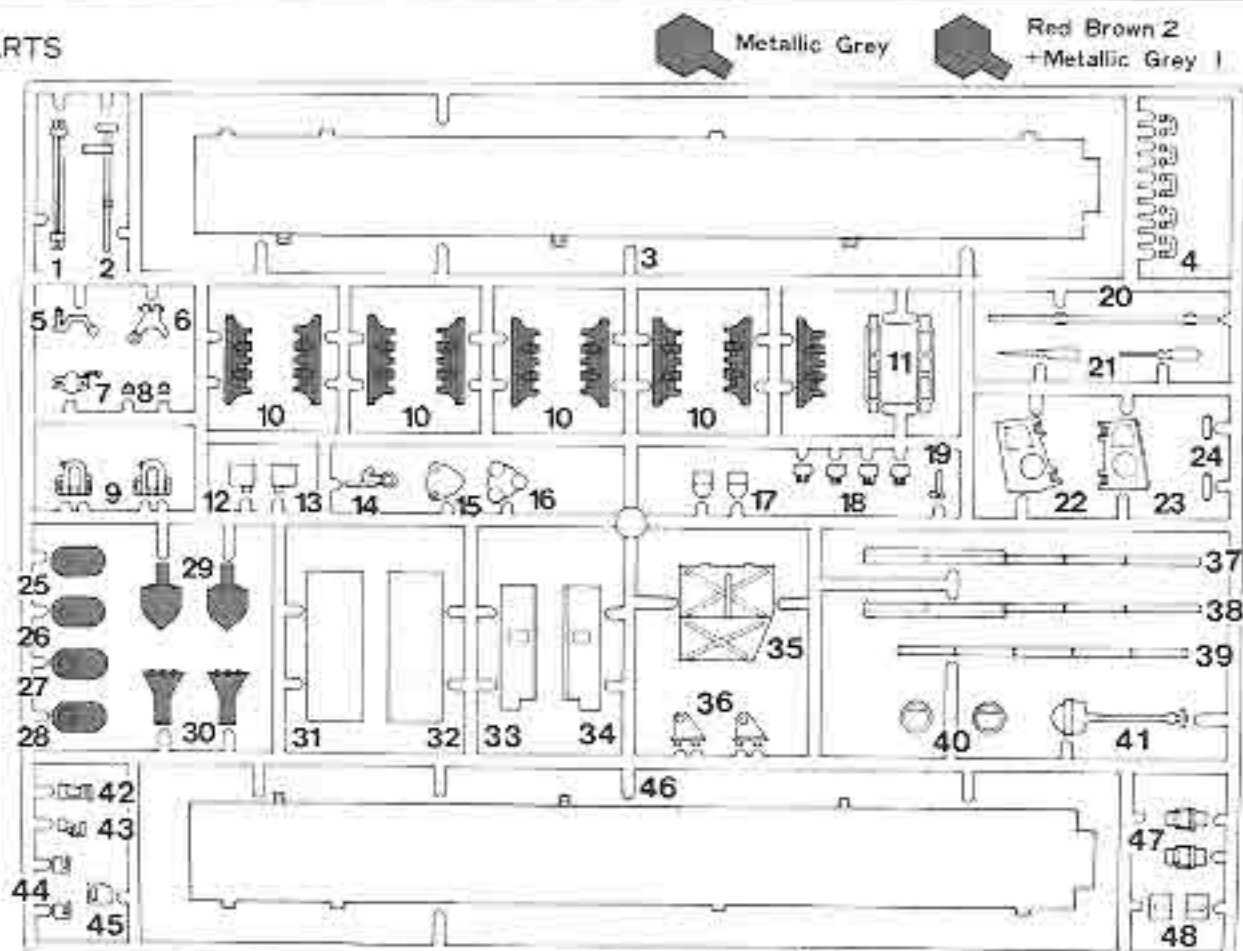
L PARTS

1. Cylinder Head Left Side
2. Cylinder Head Right Side
3. Hand Brake
4. Gear Lever
5. Left Steering Lever
6. Right Steering Lever
7. BESA 7.92mm MG Rear
8. Cartridges
9. 20 Pounder Ammunition
10. Air Cleaner Cover
11. Starter Motor
12. Commander's Seat
13. Gunner's Seat
14. Gunner's Seat Back Rest
15. Gunner's Seat Bottom Plate Base
16. Right Radiator
17. Left Radiator
18. Right Air Cleaner
19. Left Air Cleaner
20. Gun Traversing Gear
21. Gunner's Seat Bottom Plate
22. Cooling Water Pipe B
23. Drinking Water Tank
24. Oil Cooler
25. Left Starter Engine
26. Right Starter Engine
27. Operator's Seat
28. Driver's Seat
29. Starter Engine Upper Plate
30. Gun Lifting Handle
31. Gun Lifting Pinion Gear

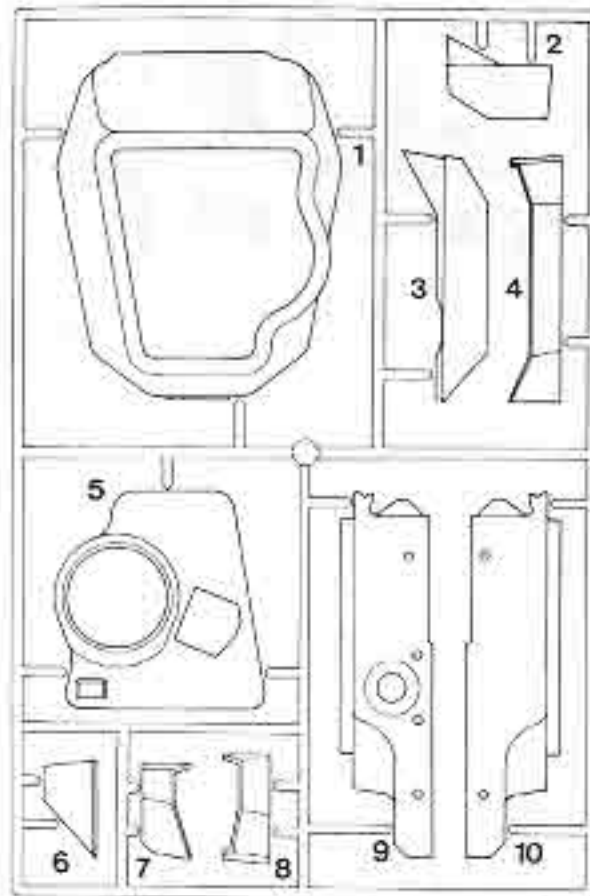
I PARTS

- | | |
|-----------------------|------------------------|
| 1. Tool Box (Right) | 6. Engine Cover |
| 2. Tool Box (Left) | 7. Rear Panel |
| 3. | 8. Fighting Room Cover |
| 4. | |
| 5. Front Armour Plate | |

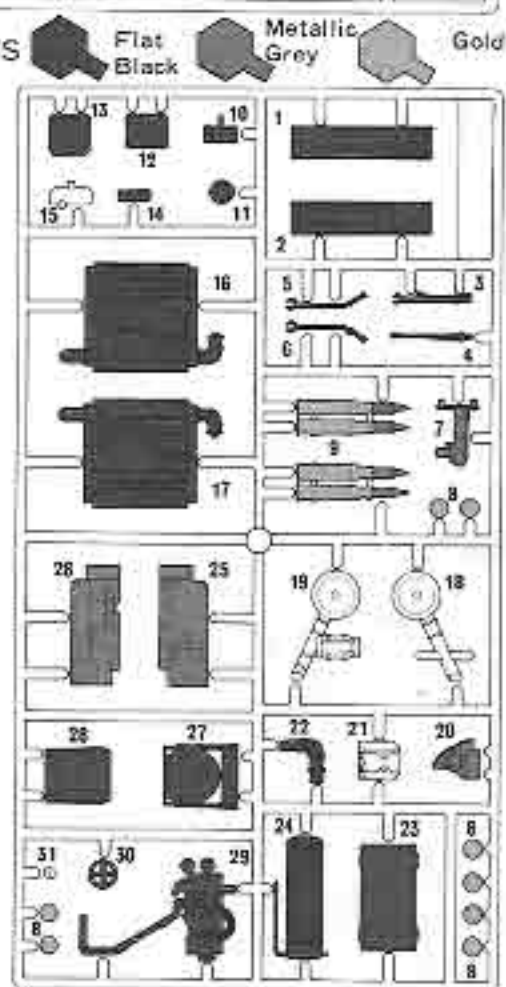
E PARTS



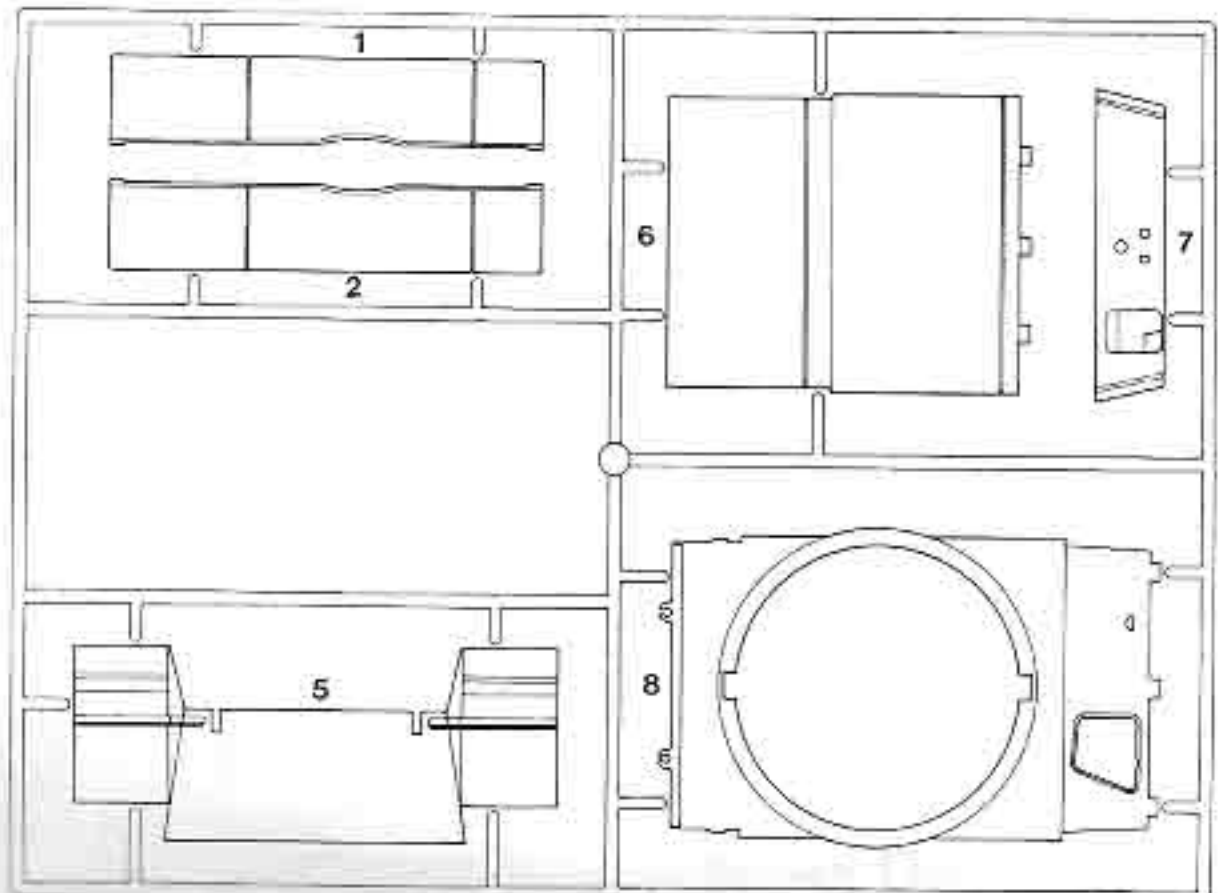
F PARTS



L PARTS



H PARTS



PARTS

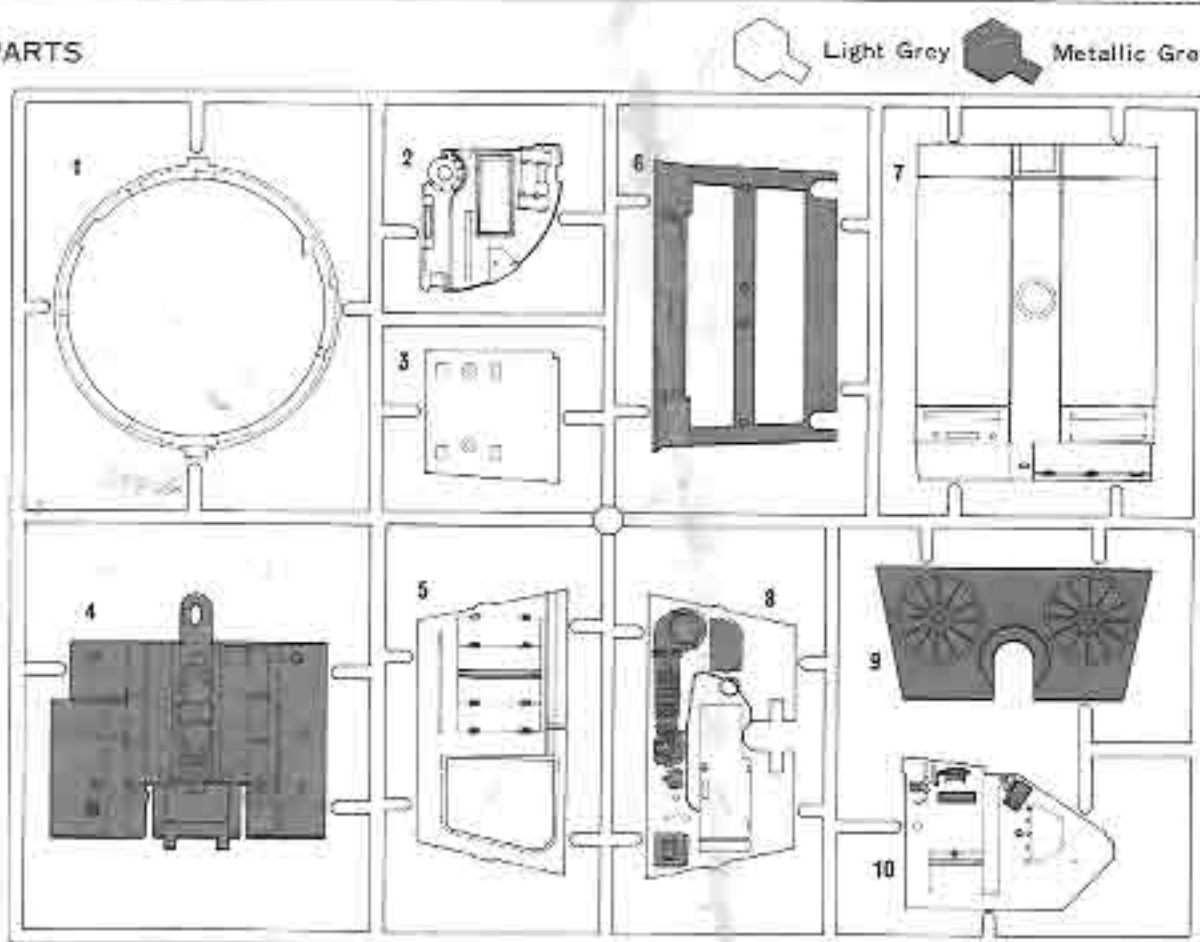
J PARTS

1. Gun Turret Ring
2. Turn Table
3. Drinking Water Tank Support Plate
4. Engine Parts
5. Fighting Compartment Front Plate
6. Radiator Support Plate
7. Fighting Compartment Floor Plate
8. Fighting Compartment Rear Plate
9. Fan Section Support Plate
10. Driver's Compartment Side Plate

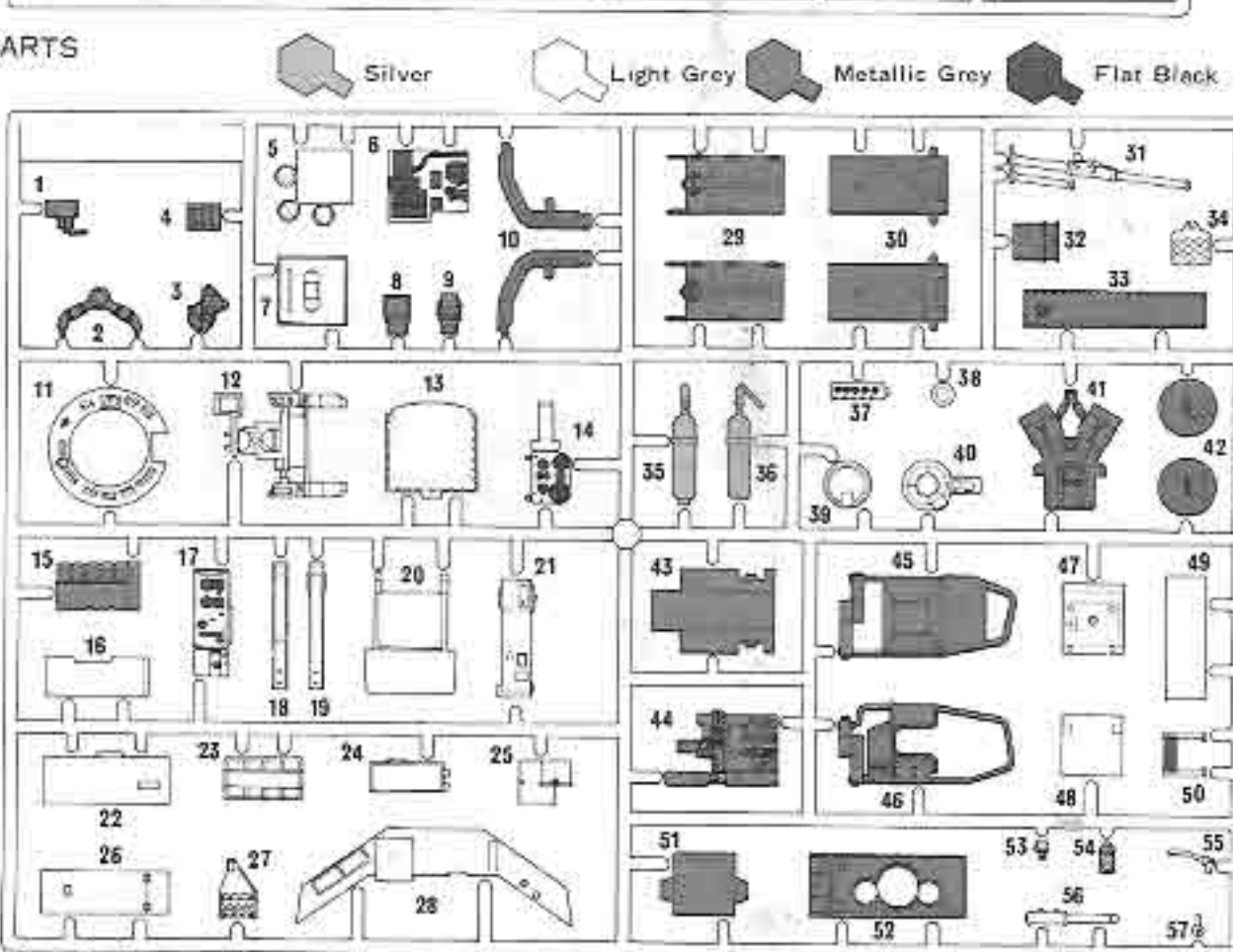
K PARTS

1. Gun Turret Inside Parts A
2. Cooling Water Pipe A
3. Gun Turret Inside Parts B
4. Gun Turret Inside Parts C
5. Map Case
6. Gun Turret Inside Parts D
7. Driver's Seat Bottom Plate
8. Periscope A
9. Periscope B
10. Exhaust Pipe
11. Cupola Underside Plate
12. Driver's Compartment Parts
13. Cartridge Cases
14. Driver's Meter Panel
15. MG Ammunition Box
16. Communication System Base
17. Radio Equipment
18. Turn Table Stay A
19. Turn Table Stay B
20. Cartridge Basket Rear Plate
21. Gun Elevating Gear Box
22. 20 Pounder Ammunition Rack Side Plate
23. Turn Table Fixing Parts
24. Gun Turret Inside A
25. Gun Turret Inside B
26. 20 Pounder Ammunition Rack A
27. Gunner's Step
28. Gun Turret Inside Box A
29. 20 Pounder Ammunition Case B
30. 20 Pounder Ammunition Case Back Plate
31. Commander's Seat Support Pole
32. Gun Turret Inside Box
33. Header Tank Cover
34. Commander Step
35. CO₂ Bonbe
36. CO₂ Bonbe
37. Gun Turret Inside Parts F
38. Turret Traversing Gear Box Bottom Plate
39. Turret Traversing Gear Box Underside
40. Turret Traversing Box Upside
41. Engine Parts Bottom Plate
42. Air Cleaner Cover
43. Gun Barrel Part Upside
44. Driver's Switch Board
45. Cartridge Case Deflectors Right Side
46. Cartridge Case Deflectors Left Side
47. Breech Mechanism Underside
48. Breech Mechanism Upside
49. Upper Gun Barrel Parts
50. Commander's Seat Back Rest
51. Breech Mechanism Front
52. Gun Drum Back Plate
53. Cupola Traversing Handle
54. Gun Turret Inside Parts G
55. Gunner's Seat Support Pole
56. Gun Lifting Handle Main Shaft
57. Gun Turret Traversing Handle

J PARTS



K PARTS



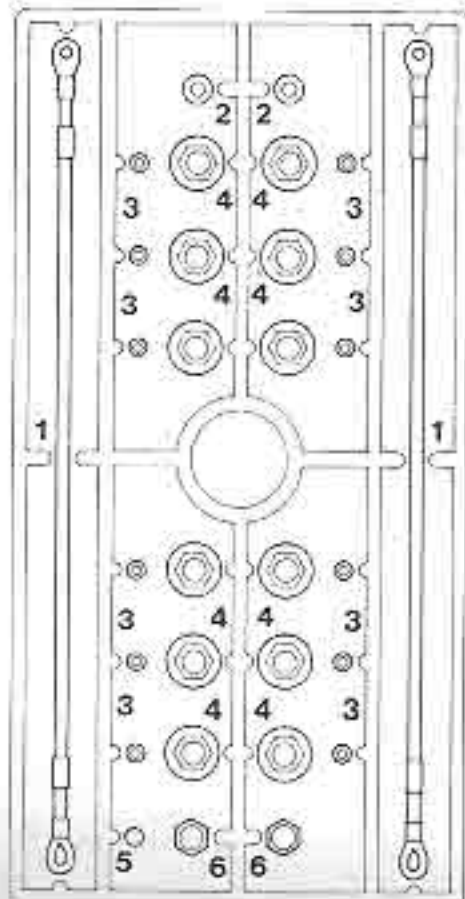
G PARTS

1. Wire Rope
2. Drive Sprocket Cap
3. Support Roller Cap
4. Road Wheel Cap
5. Reel Cable Shaft
6. Idler Wheel Cap

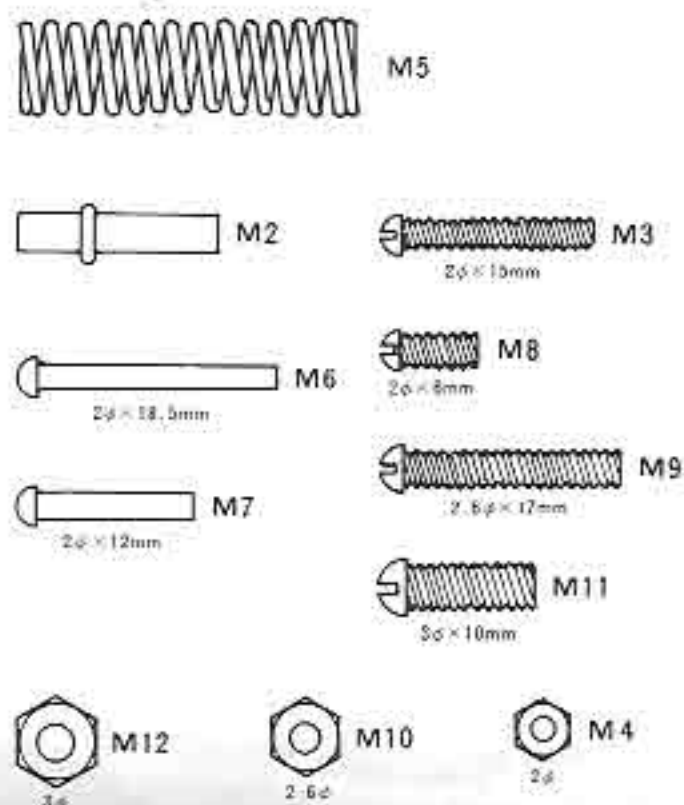
M PARTS

- | | |
|----------------------|----|
| 2. 10mm Headers | 2 |
| 3. 2.5x15mm Screws | 4 |
| 4. 2.5 Nuts | 22 |
| 5. Coil Springs | 6 |
| 6. 2.5x18.5mm Rivets | 9 |
| 7. 2.5x12mm Rivets | 4 |
| 8. 2.5x6mm Screws | 18 |
| 9. 2.6x17mm Screws | 2 |
| 10. 2.6 Nuts | 2 |
| 11. 3.5x10mm Screws | 3 |
| 12. 3 Nuts | 3 |

G PARTS



M PARTS



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