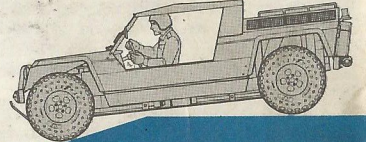
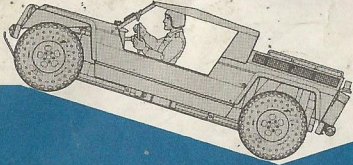
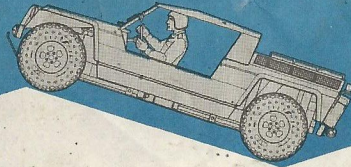
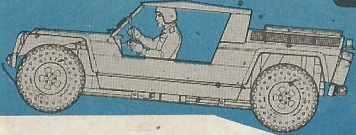


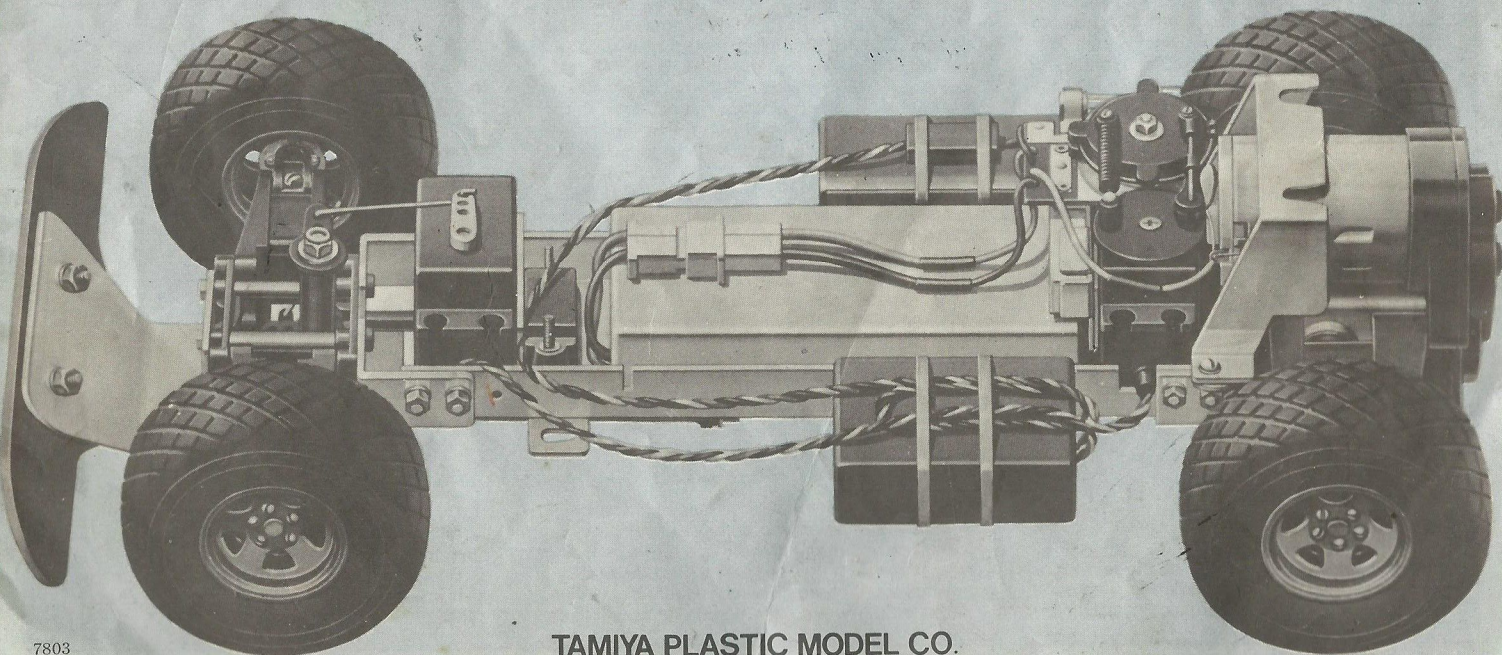
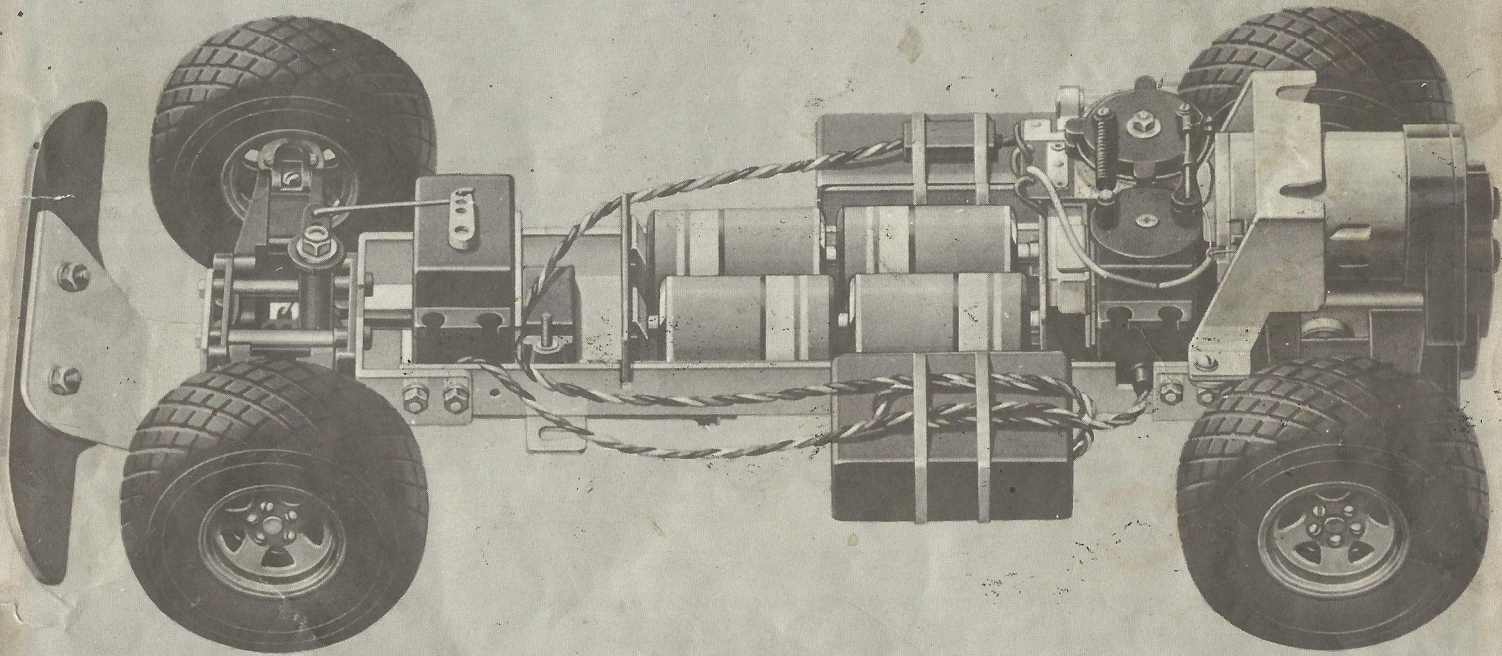
XR311

COMBAT SUPPORT VEHICLE

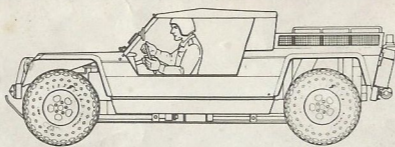
KIT NO. RA-1204



1/12th SCALE MODEL CAR SUITABLE FOR RADIO CONTROL

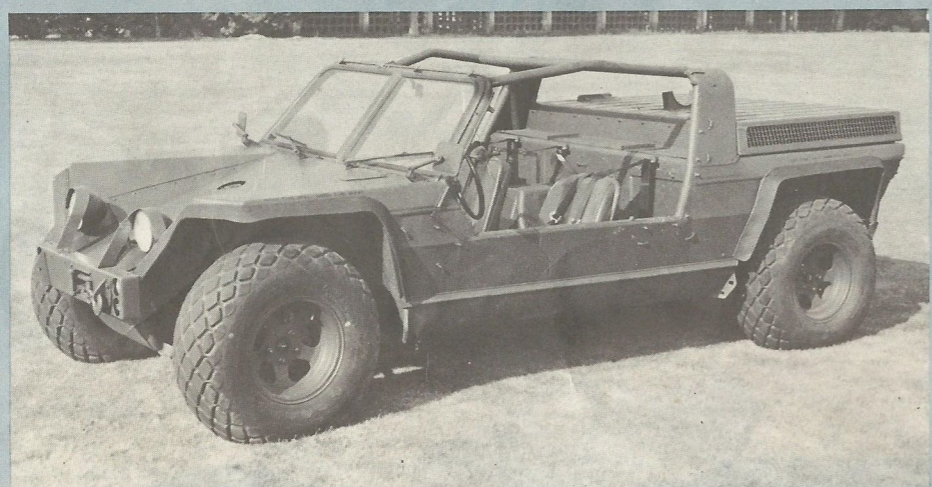


By courtesy of FMC Corporation



Early in 1970, curious vehicles were running about the Fort Knox tank-proving ground near Louisville, Kentucky. Painted in military olive drab, these were to all appearances dune buggies. They were crossing sand and marshy places where no vehicles but the tank could pass. It was as if the U.S. Army were preparing for an off-road race!! Officially called "XR311" ("X" standing for "Experimental"), but known as "Military Dune Buggy". The U.S. Army is testing this vehicle as a possible replacement for the ubiquitous Jeep. FMC of California, is a manufacturer with long experience in the design and production of amphibious tracked vehicles such as the M113. Lack of speed has been a disadvantage of the Jeep, but the XR311 offers a solution to this problem. With a weight of 2,086 kg and carrying capacity of 907 kg, it is able to attain a speed of 130 km/h on the road. Powered by a Chrysler V8 215hp gasoline rear mounted engine. It has three-speed automatic transmission and 4-wheel drive. Range is 480 km. It can climb a steep slope of 60 degrees, wade water 76 cm deep with standard equipment, and go over a vertical obstacle of 50 cm. The XR311 also performs various missions such as reconnaissance, escort, transport of weapons, command, ambulance duties and police action. Due to its low silhouette, low engine noise, etc. the XR311 is rated high by the U.S. Army. Ten experimental vehicles were delivered to the U.S. Army in 1970. These were subjected to tests for a long time: reconnaissance tests at Fort Knox, anti-tank tests at Fort Benning and military police tests at Fort Gordon. After that, impressive reports were submitted. The XR311 is a military vehicle of the new generation which is about to be officially adopted and put to production.

Anfangs 1970 erschienen auf dem Tankerprobungs Gelände Fort Knox in der Nähe Louisville, Kent. ganz neuartige Fahrzeuge. In der militärischen Farbe Olive-drab ähnelten diese



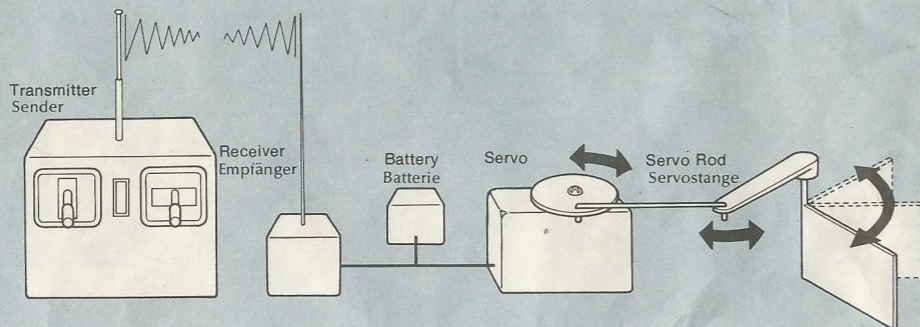
vieradrigen Fahrzeuge den Dune Buggies. Sie führen über Sand und durch Sumpf - genau dort, wo eigentlich nur Tanks fahren können. Es hatte den Anschein, als wenn die US Armee für Motocross Rennen trainieren wollte. Offizielle Bezeichnung war "XR 311". (Das "X" bedeutet - Versuchsfahrzeug.) Bekannt jedoch wurde das Fahrzeug als "Militärischer Dune Buggy". Die US Armeeprüfte diesen Buggy als eventuellen Nachfolger für den weltbekanntesten Jeep. FMC of California ist ein Hersteller von Schwimm- und Amphibienfahrzeugen mit langen Erfahrungen im Entwurf und Produktion - ähnlich dem M113 (auch ein Kit von Tamiya). Der Mangel an Geschwindigkeit ist der grösste Nachteil des Jeep und der XR 311 stellt die ideale Lösung dar: Bei einem Gesamtgewicht von 2086

Kilo können 907 Kilo zugeladen werden und 130 Km km/h auf der Strasse gefahren werden. Ein Chrysler V8 215 PS Benzin-Heckmotor bringt diese Leistung. 3-Gang Automatik mit 4-Radantrieb. Steigfähig bis 60Grad, durchfährt Wasser bis 75 cm Tiefe und überquert 50 cm hohe Hindernisse. Fahrbereich 480 Kilometer. Der XR 311 ist vorgesehen für den Transport von Waffen, Begleitfahrzeug, Sanitätsdienste, Kommandounternehmen und nachstehende Tests wurden bereits erfolgreich über lange Zeiträume ausgeführt: Erkundigungs- und Spähfahrten in Fort Knox, Panzerabwehr in Fort Benning und Military Police Einsätze in Fort Gordon. Mit der niedrigen Silhouette und dem leisen Motorgeräusch ist der XR 311 der "Jeep der neuen Generation".

Radio Control Mechanisms are not contained in this kit.

R/C Anlage im Kit nicht enthalten.

Wir sind nur Hersteller eines Bausatzes, in welchen eine Funkfernsteuerung (RC - Anlage) eingebaut werden kann. Die RC - Anlage ist nicht im Kit enthalten. Ihr Fachhändler wird Sie gerne beim Kauf einer RC - Anlage beraten. Bitte beachten Sie, dass wir keinerlei Haftung für Schäden übernehmen, die durch Inbetriebnahme des Fahrzeuges entstehen.



stick. When a stick is moved quickly, a servo will quickly move also. When the movement of the stick is stopped halfway, the movement of the servo will also stop halfway. When the stick is moved to the end of its travel, the servo will also move to the end of its travel. Since the movements of servos are transmitted to model units such as a rudder, it is possible to obtain the control effects quickly, slowly, halfway or to the full as one wishes by means of the transmitter stick. This is the reason why the Digital Proportional type is the most advanced radio control system of model operation.

The Digital Proportional types currently available range from 1-channel to 6-channel, for instance, can employ up to six servos, which effect simultaneous movement of 6 controls. A 2-channel one employs two servos and a 3-channel system uses three servos. Thus the number of channel shows the number of different operations which can be conducted at the same time. Frequency bands of radio waves used for radio control vary according to countries.

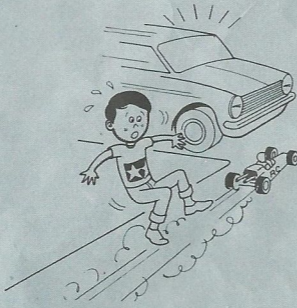
★ The trim lever is for the adjustment of servos.

2 Radio Control Safety and Operational Behaviour

Radio-controlled models of planes, cars, ships, etc., powered by an engine have a very high performance and many of them can attain speeds of over 100 km/h. If they should hit a person at such a high speed, it could be a serious matter involving personal injury. Also, the engine noise will cause

annoyance to others. Some rules have been framed by organising bodies, and behaviour standards have been established between enthusiasts. Be sure to uphold these rules, and not to endanger or annoy others. In flying, sailing or running radio-controlled planes, boats or cars or control-line planes, observe the following instructions and be careful not to cause annoyance to others.

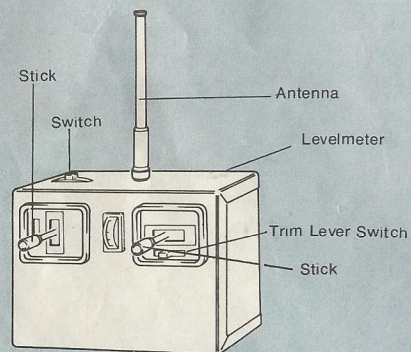
* High-tension cable-observe regulations and keep well away from dangerous hightension cable.



1. Do not start engines during early or late hours
2. Make sure that your plane, ship or car is in perfect condition for safe operation.
3. Be sure to fix a muffler (silencer) which effectively reduces noise in the exhaust pipe of the engine.

1 Radio Control Units

Radio Control is a means of operating a mechanism remotely without wires. The transmitter sends signals which are decoded by the receiver, which then conveys the output to servos. The servos then translate the signals into mechanical movements to control the car either by switching on an electrical circuit or by direct action. Various radio control systems have been in use. But the Digital Proportional Type Radio Control System is most popular in this field because it allows gradual control.



(1) Operation of the Digital Proportional type

It is a characteristic feature of the Digital Proportional type that the control function is in direct proportion to the movements of a transmitter

4. When trying a first model with an engine, follow the guidance of an experienced modeller and have someone to assist you. Do not fly, sail or run it by yourself.
5. Do not fly a model plane over houses, buildings or persons.
6. Do not fly a model plane near any hightension cable.
7. When a number of persons are to fly, sail or operate more than one model at the same time, they must recognise the authority of a frequency controller and follow his instructions.

(1) Radio Interference

Since the fixed frequencies used for radio control are limited in number, radio waves from your transmitter may be received by the receiver of another model and disturb its control (radio interference). Conversely, your control may also be disturbed by radio waves of other transmitters. If such interference occurs, your expensive model may be broken by a crash or collision. If it gets out of your control and hits a person, it could bring serious consequences.

A. Avoid Radio Interference

Before starting radio control, first make sure that there is no other person operating a radio control unit nearby. When there is such a person, compare the type and frequency band of your radio control unit with his. Avoid the possibility of interference, if any, by, for instance, using radio control alternately. As an aid to interference avoidance, a coloured ribbon is used to identify frequency. The Single Pushbutton type can cause interference with the Digital Proportional type. It is best to operate either all Single Pushbutton or all Digital Proportional models when using radio control. Interference will occur between radio control units of the same frequency.

Be sure that the frequency colour ribbon is prominent on the transmitter aerial as a warning to others that your frequency is in use. The Digital Proportional type has one of the fixed frequency bands. Interference occurs between units with the same frequency band. There is very little possibility of interference between units different in frequency band. The Digital Proportional type of any frequency band can cause interference with the Single Pushbutton type when they have the same frequency.

Radio waves of transceivers or radio-control led toys may be a cause of interference. The control of your model may be disturbed by unknown radio waves. When the control of your model malfunctions because of interference, immediately stop the operation of your model. This is the only way to avoid accidents.

In pylon races with high-speed planes, and wherever simultaneous racing is required, alternate frequency bands are used to eliminate the possibility of interference. There is a device called a monitor which is used for indicating the presence of radio interference. If a servo makes an abnormal movement when the receiver is on and the transmitter is off, your radio control unit may be suffering interference. When no monitor is available, this is a crude but easy way of detecting the presence of radio interference.

B. Interference Avoidance - Standard Operational Behaviour

As is obvious from the above paragraphs, extracted from the Rules of radio control fans must observe rules to ensure safety. Since all models of tanks, cars, ships and planes are controlled by means of basically similar radio waves, there is always some possibility of interference. If radio waves from your transmitter should cause interference and disturb the control of other models, all efforts for safety will have been in vain. Avoid interference; this is the most basic and important requirement of radio control.

3 Construction of XR311

(1) Radio Control Mechanism
Tamiya XR311 is designed to use a 2 channel 2 servo digital proportional type of radio control.

(2) Power Source

This model may be powered by one of the following.

- 1) A 5-cell nickel cadmium battery
- 2) 4 C(UM2) cells
- 3) 4 C(UM2) size nickel cadmium batteries

1: The Tamiya XR311 is designed to carry a 5-cell nickel cadmium battery. This battery contains five batteries each having the same capacity as C(UM2) size nickel cadmium battery. It is a rechargeable battery with a capacity of 6 volts and 1,200 milliamperes.

2,3: The Tamiya XR311 kit also contains a C(UM2) cell box as a standard specification. It is possible to use four C(UM2) cells (in this case, set the gear to slow) or four C(UM2) size nickel cadmium batteries.

(3) Tools

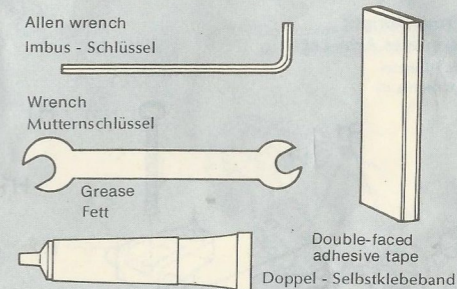
An allen wrench, double faced adhesive tape and grease are contained in the kit. Pliers, long nose radio type pliers, screwdrivers, side cutters, a file, adhesive tape, a gimlet, an oil can, rapid cure adhesive, metal cement and box spanners for 3mm and 4mm nuts will aid construction. Before use, be sure to oil the gear box and shaft of the car to ensure high performance and long life. Tyres should be cemented to wheels using rapid cure adhesive to prevent tyre shedding. But the cement and adhesive must be handled with care.

(3) Werkzeug

Die Kettenverbindungen sollten mit Schnellkleber abgesichert werden. Schnellkleber aber äusserst vorsichtig verwenden - nicht in Augen bringen!!

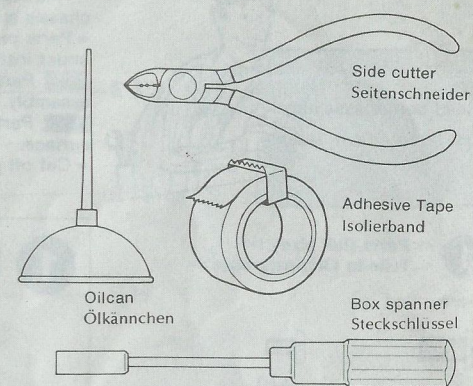
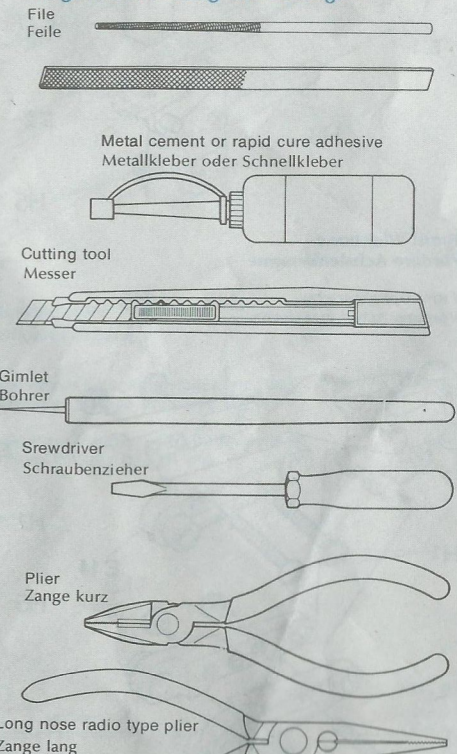
<<Tools in kit>>

<<Werkzeug im Kasten>>



<<Following tools will aid construction>>

<<Folgendes Werkzeug wird benötigt>>



Some screws and nuts are coloured blue in assembly drawings. They should be attached in place and then fixed with metal cement, etc. so that they do not come loose during running.

Einige Schrauben und Muttern sind in der Anleitung - blau -. Diese blauen Schrauben und Muttern nach Einbauen mit Metallkleber absichern sonst lockern sie sich während der Fahrt.

(4) Painting

The painting is the most important finishing process. Refer to the painting instruction on page No. 18 to obtain a good finish.

(4) Bemalung

Wir bitten für die Plastikbemalung keine Farben auf Nitrobasis zu verwenden. Schäden, die durch falsche Farben verursacht werden, können nicht ersetzt werden. Fragen Sie den Fachhändler nach Kunstharzfarben bzw. Spray's.

<<Specification>>

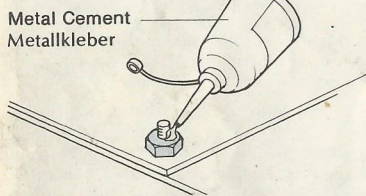
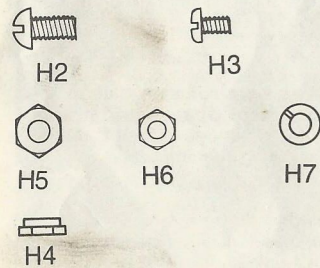
* Dimensions	Overall length 400mm Overall width 168mm Overall height 139mm
* Weight	Approx. 1.8Kg (including batteries, servos and receivers), but weight varies according to the radio control unit mounted.
* Suitable radio control unit	2 channel 2 servo digital proportional type
* Power source	4 C(UM2) cells, 4(UM2) size nickel cadmium batteries or a 5-cell nickel cadmium battery.
* Power plant	Mabuchi RS540 motor 6V, 1.7A, 10700rpm
* Component	Body-high impact polystyrene, Chassis-duralumin, Gear Box-closed type - three speed
* Suspension	Double wishbone type, 4 wheel independent. Adjustable spring tension torsion bar.
* Wheel	ABS plastic
* Tyre	Semi-pneumatic balloon tyre
* Performance	Maximum speed: about 16Km/h with a 5-cell nickel cadmium battery.
* Duration	Approx. 40 minutes: low speed (used a 5-cell nickel cadmium battery)



Read before assembly
Erst lesen - dann bauen

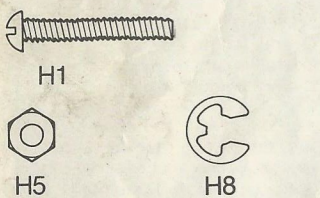
1 <<Parts (full size)>>
<<Teile in Originalgröße>>

(Screw Bag ①)

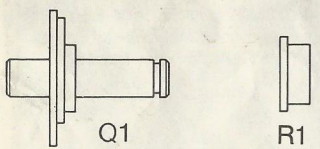


2 <<Parts (full size)>>
<<Teile in Originalgröße>>

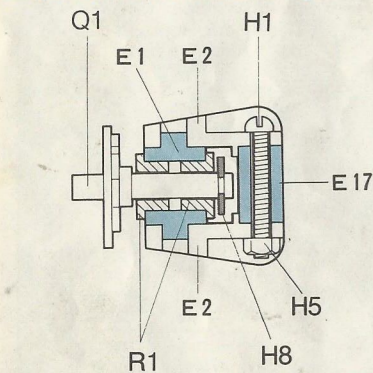
(Screw Bag ①)



(Blister Pack)

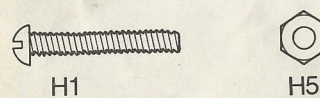


<<Cross Section of Front Upright>>
<<Querschnitt vorderes Achs-Lager>>



3 <<Parts (full size)>>
<<Teile in Originalgröße>>

(Screw Bag ①)



* This manual is divided into two: Step 1 to 25 for the chassis and step 26 to 35 for the body.

* Parts must be assembled properly and carefully under instructions given below.

■ Parts to be greased. Be sure to grease before assembly.

■ Parts to be cemented. Apply cement to both surface.

* Cut off page 19/20 for convenient use.

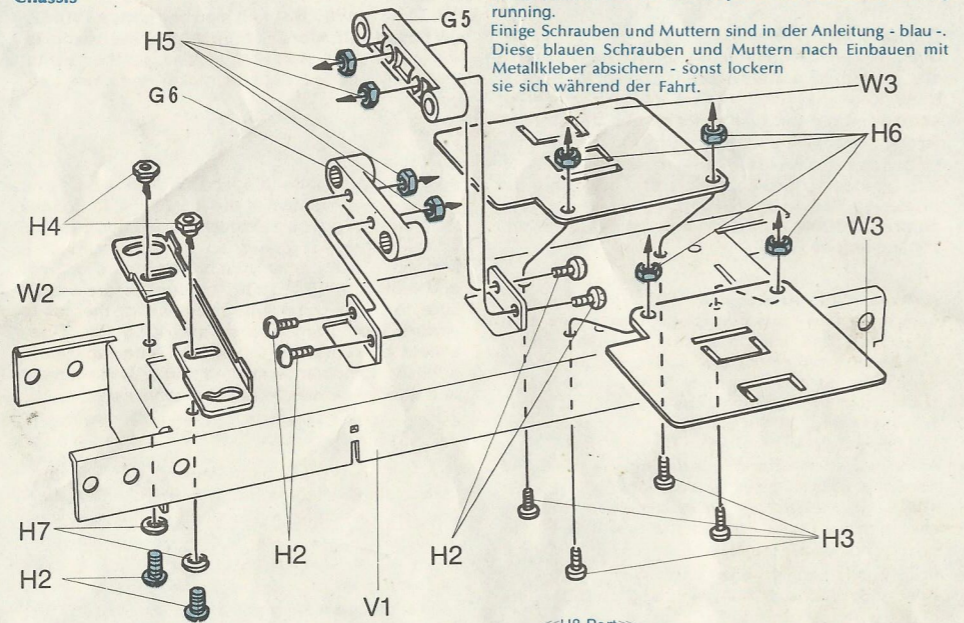
* Auf Step 1 - 25 finden Sie die Anleitung für das Chassis und auf Step 26 - 35 für die Karosserie. Die Teile genau der Anleitung nach sorgfältig zusammenbauen.

■ grau: Teile die vor Einbau gefettet werden müssen.

■ dunkelblau: Klebestellen (Klebstoff auf beiden Seiten anbringen).

* Seite 19/20 abschneiden - leichtere Erkennung der einzelnen Bauteile.

1 Chassis
Chassis

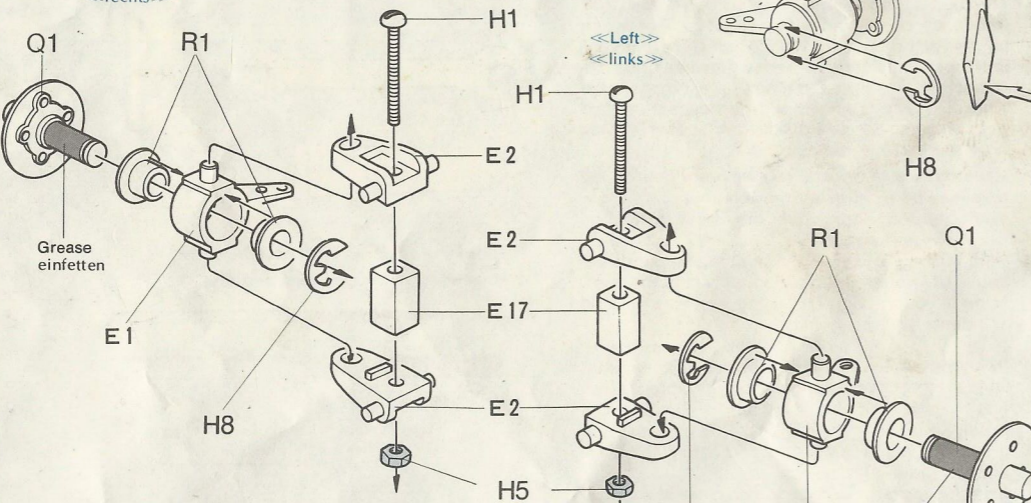


Some screws and nuts are coloured blue in assembly drawings. They should be attached in place and then fixed with metal cement etc. so that they do not come loose during running.
Einige Schrauben und Muttern sind in der Anleitung - blau -. Diese blauen Schrauben und Muttern nach Einbauen mit Metallkleber absichern - sonst lockern sie sich während der Fahrt.

<<H8 Part>>
<<Sprengring H8 in Pfeilrichtung einschieben>>

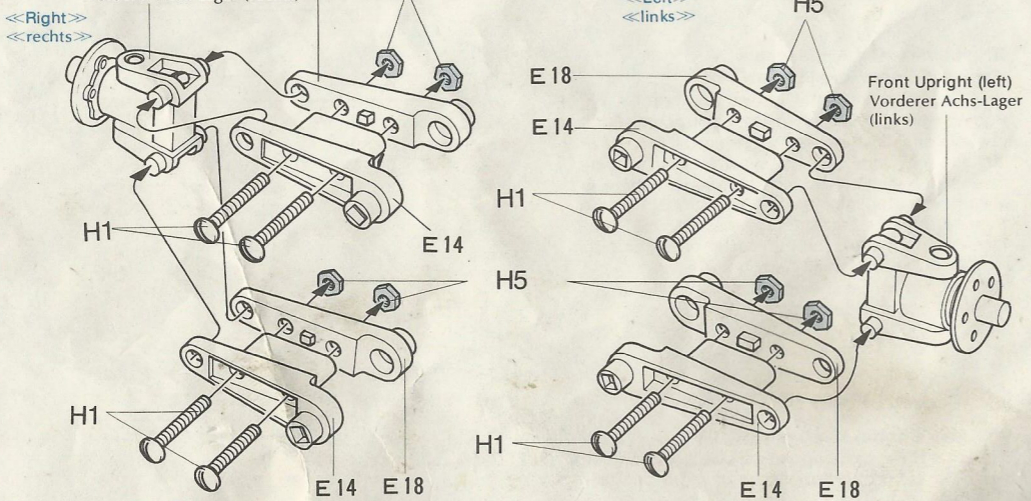
2 Front Upright
Vorderes Achs-Lager

<<Right>>
<<rechts>>



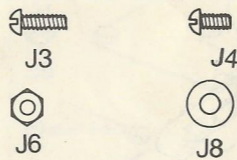
3 Front Wishbone
Vordere Achslenkerarme

<<Right>>
<<rechts>>



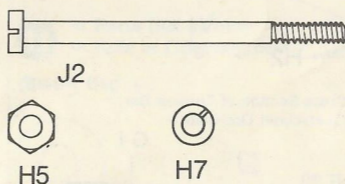
4 <<Parts (full size)>>
<<Teile in Originalgröße>>

(Screw Bag ②)

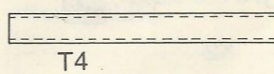


5 <<Parts (full size)>>
<<Teile in Originalgröße>>

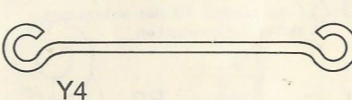
(Screw Bag ②)



(Blister Pack)



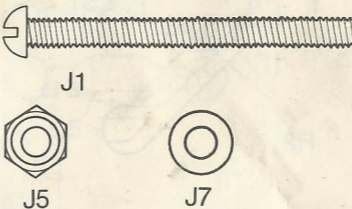
(Rod Bag)



<<Y4 Part>>
<<Steuerstange Y4>>

6 <<Parts (full size)>>
<<Teile in Originalgröße>>

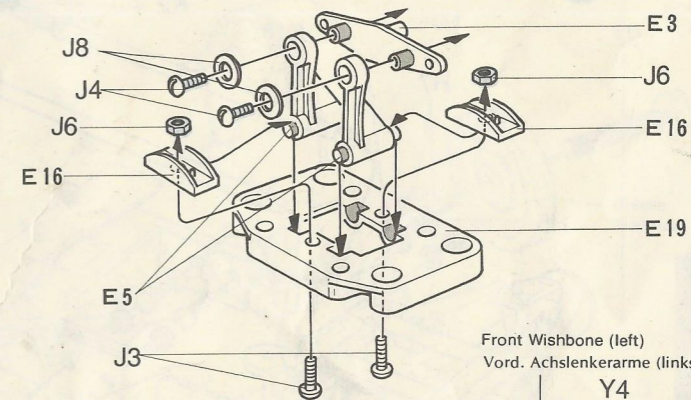
(Screw Bag ②)



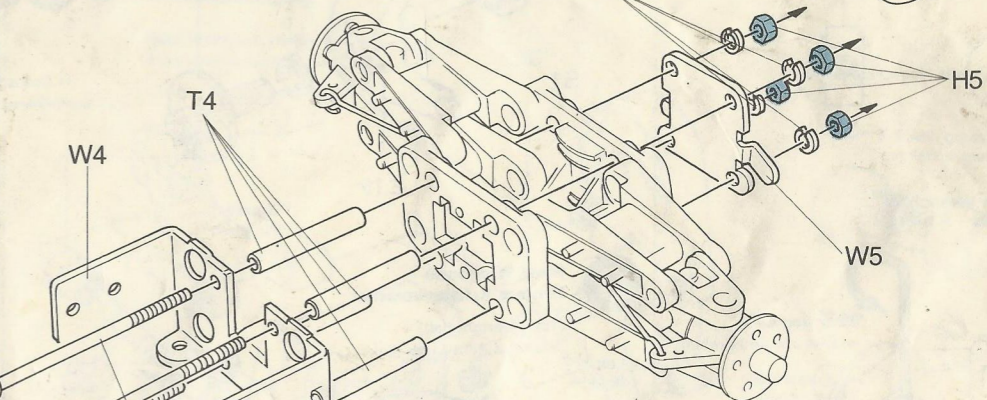
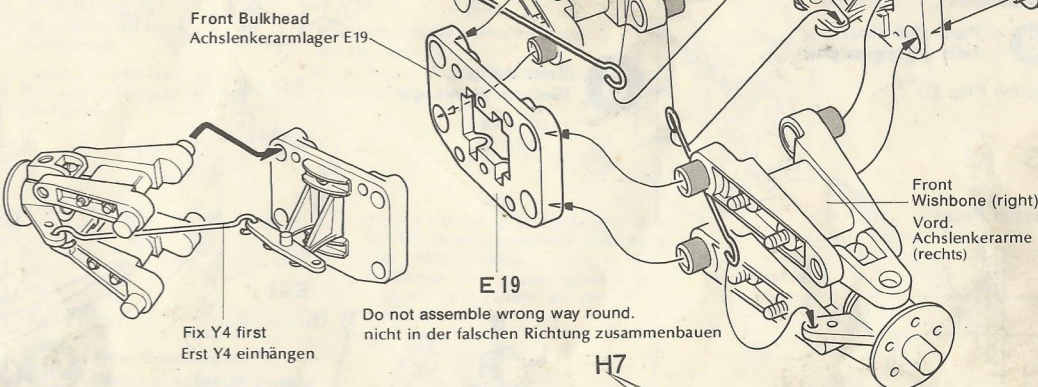
(Blister Pack)



4 Front Bulkhead
Achsenkerarmlager

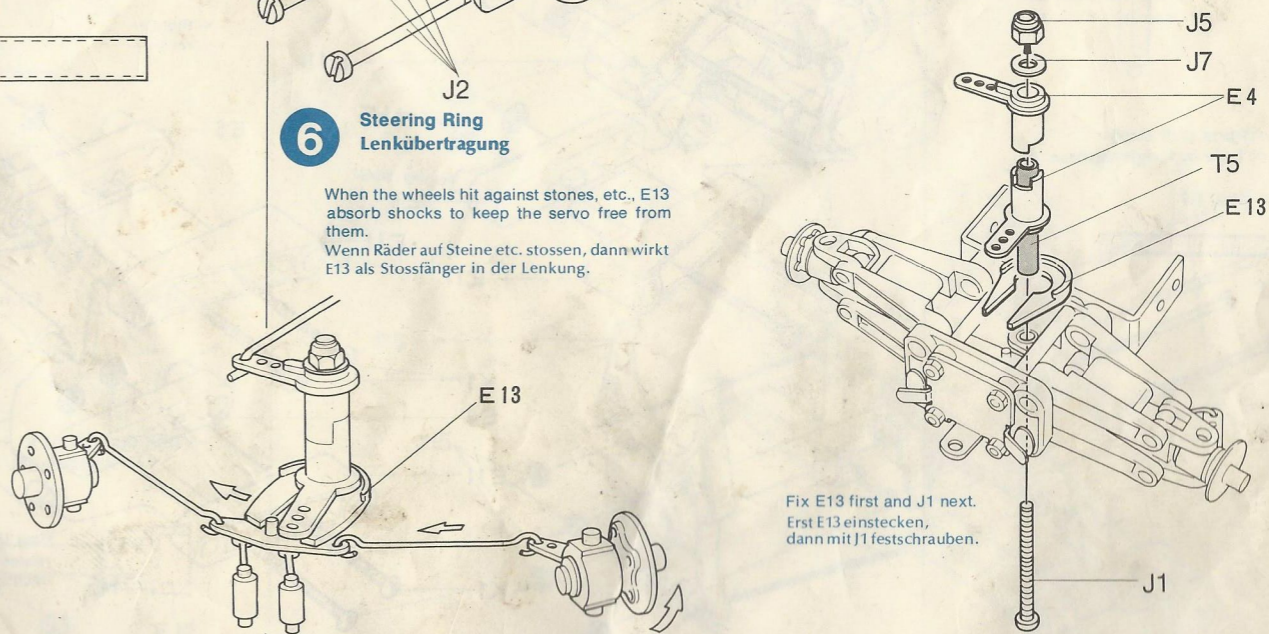


5 Front Suspension
Vord. Achslenkerarme



6 Steering Ring
Lenkübertragung

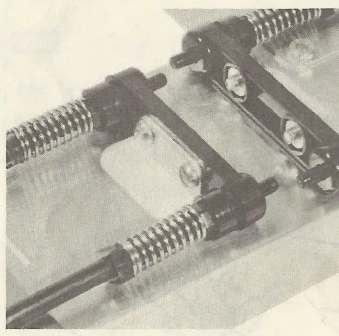
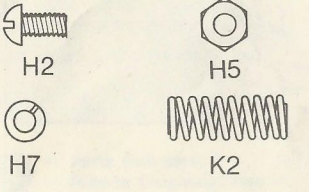
When the wheels hit against stones, etc., E13 absorb shocks to keep the servo free from them.
Wenn Räder auf Steine etc. stossen, dann wirkt E13 als Stossfänger in der Lenkung.



Fix E13 first and J1 next.
Erst E13 einstecken, dann mit J1 festschrauben.

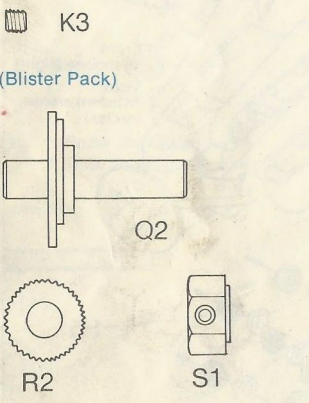
7 <<Parts (full size)>>
<<Teile in Originalgröße>>

(Screw Bag 3)

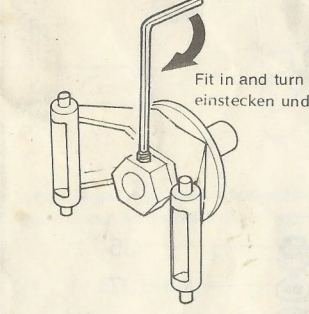


8 <<Parts (full size)>>
<<Teile in Originalgröße>>

(Screw Bag 3)

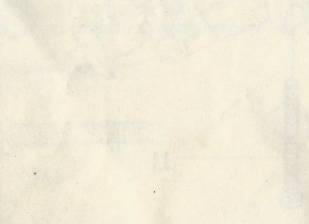
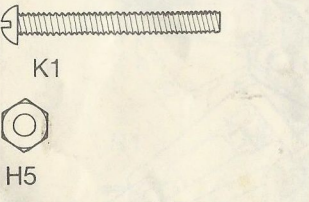


<<Allen Wrench>>
<<Imbus - Schlüssel>>

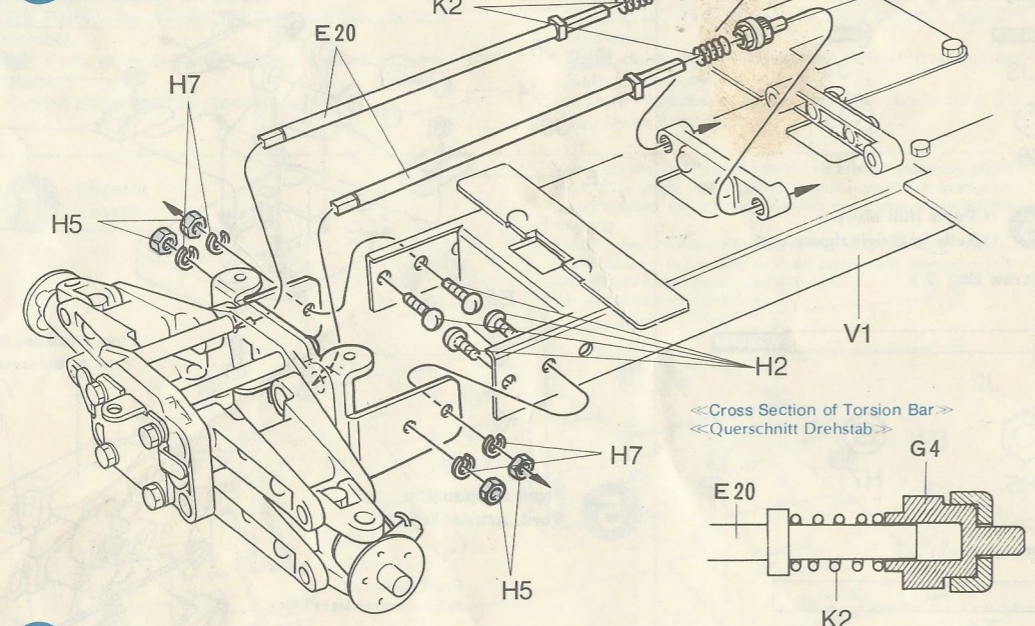


9 <<Parts (full size)>>
<<Teile in Originalgröße>>

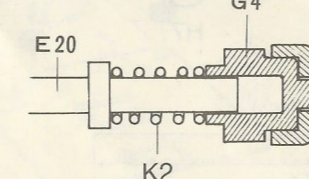
(Screw Bag 3)



7 Fixing of Front Suspension
Einbau der Vorderachse

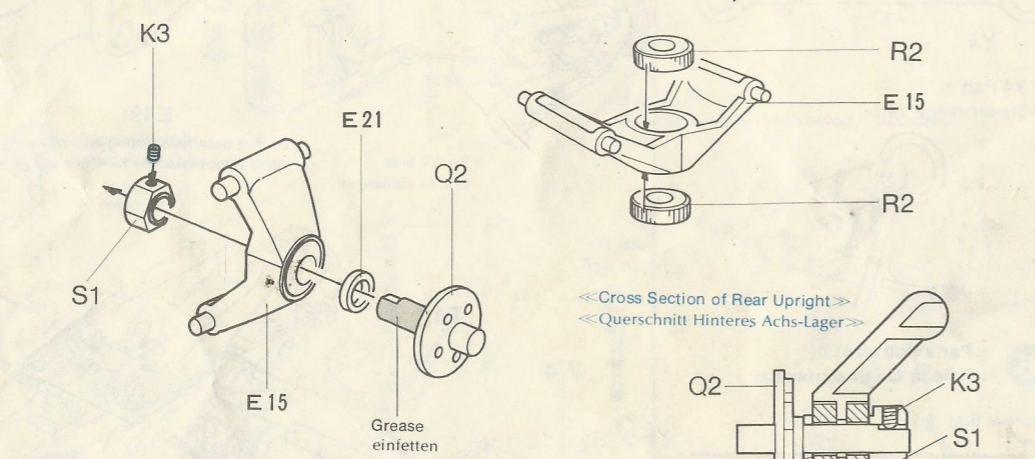


<<Cross Section of Torsion Bar>>
<<Querschnitt Drehstab>>

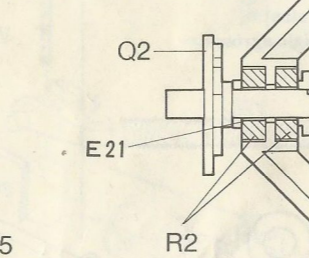


8 Rear Upright
Hinteres Achs-Lager

Make 2 sets
2Satz

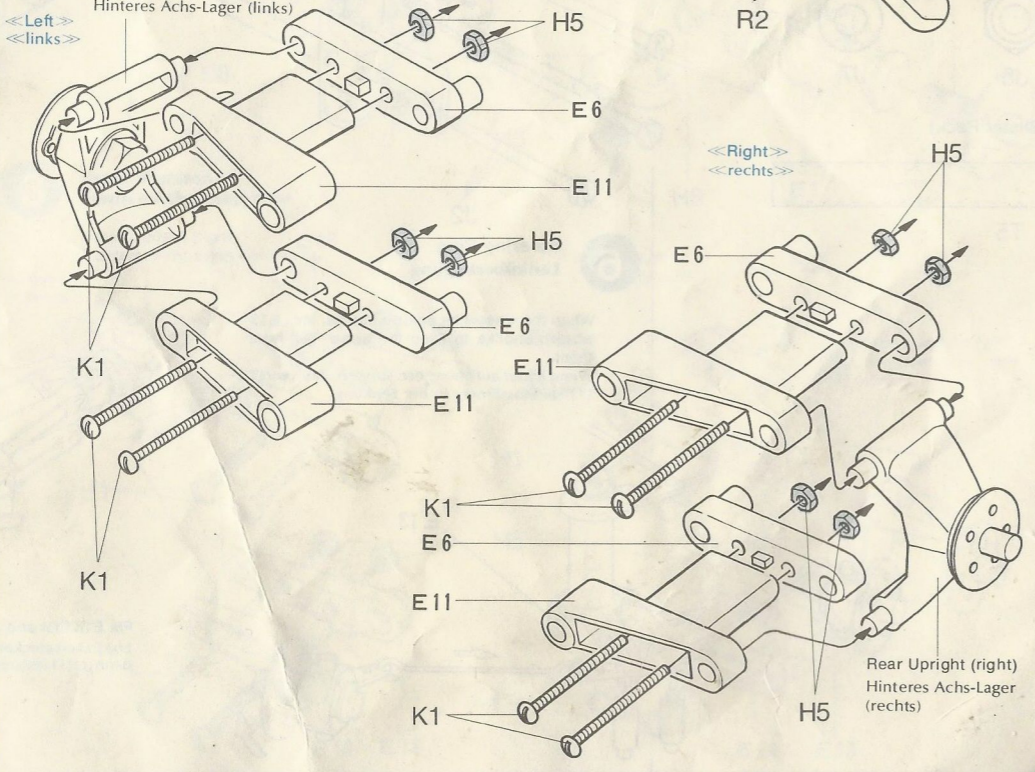


<<Cross Section of Rear Upright>>
<<Querschnitt Hinteres Achs-Lager>>



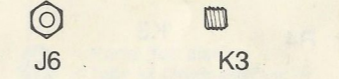
9 Rear Wishbone
Hintere Achslenkerarme

Rear Upright (left)
Hinteres Achs-Lager (links)
Left links
Rear Upright (right)
Hinteres Achs-Lager (rechts)
Right links

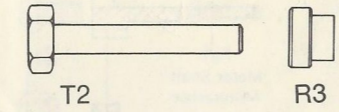


10 <<Parts (full size)>>
<<Teile in Originalgröße>>

(Screw Bag 4)

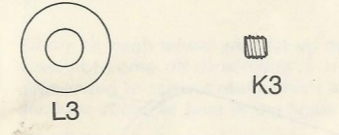


(Blister Pack)

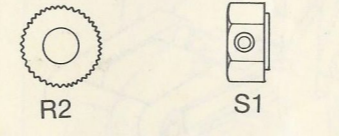
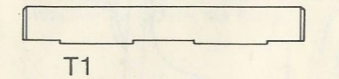


11 <<Parts (full size)>>
<<Teile in Originalgröße>>

(Screw Bag 4)

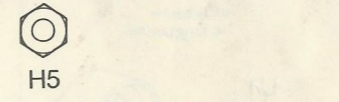
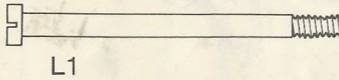


(Blister Pack)

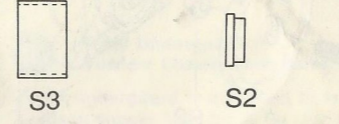
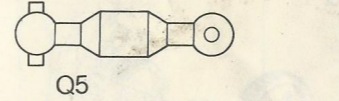


12 <<Parts (full size)>>
<<Teile in Originalgröße>>

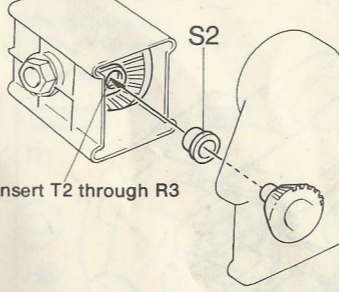
(Screw Bag 4)



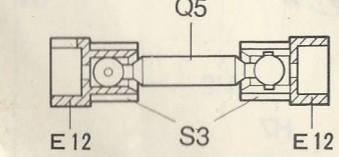
(Blister Pack)



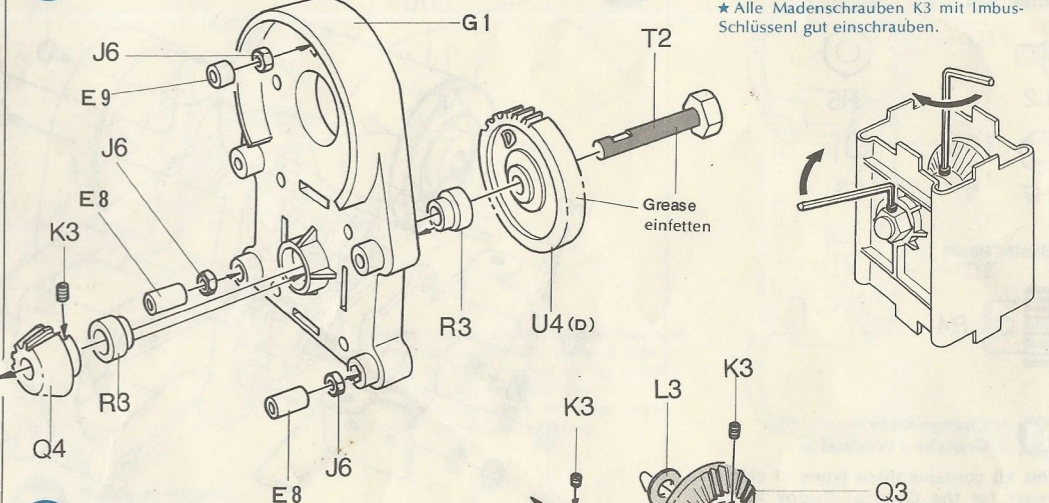
<<Gear Case>>
<<Getriebe Gehäuse>>



<<Cross Section of Universal Shaft>>
<<Querschnitt Antriebsachse>>



10 Gear Mount
GetriebeLager



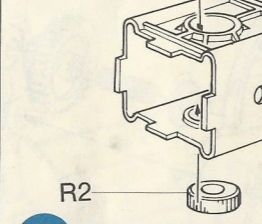
11 Gear Case
Getriebe Gehäuse

Drive R2 into Q6 by a helve of screwdriver.

Push Q3 in the direction of the arrow and fit it with K3.

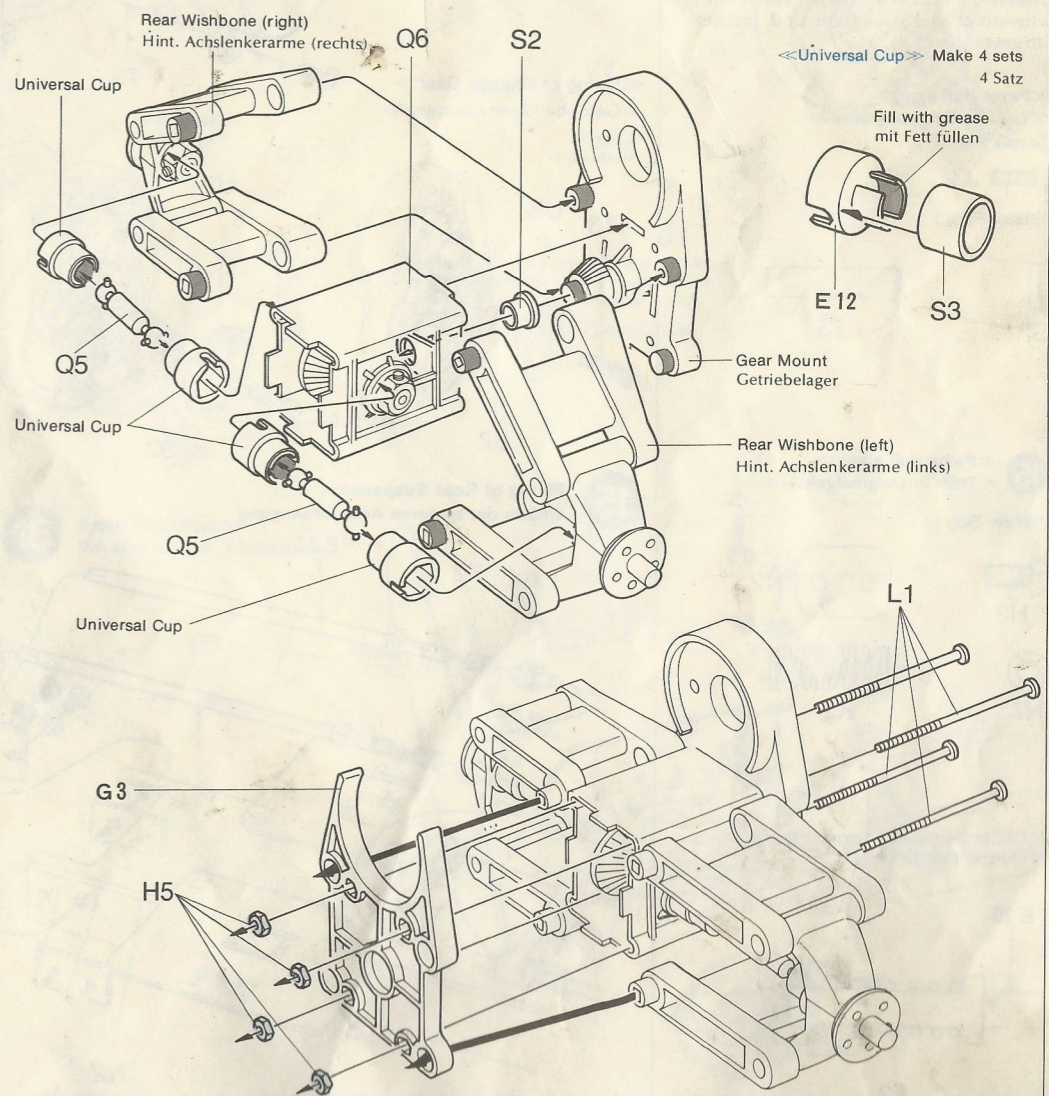
Lagerbüchse R2 mit Schraubenziehergriff eindrücken

Q3 in Pfeilrichtung einschieben und mit K3 festschrauben.



The hole below is for tightening up K3 further. It should be covered with the poly cap during running.
Das untere Loch ist zum Nachschrauben von K3. Zum Fahren mit Polycap verschließen.

12 Rear Suspension
Hintere Achsaufhängung



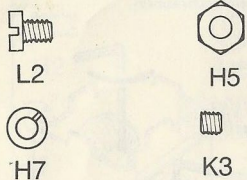
* Tighten up each K3 with allen wrench so that it firmly holds the shaft notch.
* Alle Madenschrauben K3 mit Imbus-Schlüssen gut einschrauben.

<<Universal Cup>> Make 4 sets
4 Satz

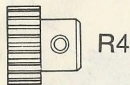
Fill with grease
mit Fett füllen

13 <<Parts (full size)>>
<<Teile in Originalgröße>>

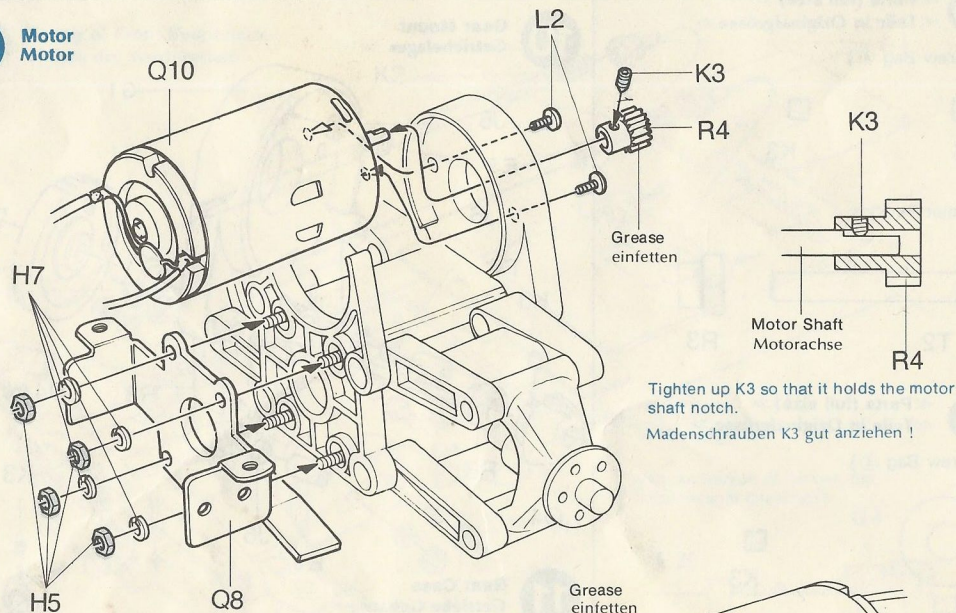
(Screw Bag 4)



(Blister Pack)



13 Motor Motor



Tighten up K3 so that it holds the motor shaft notch.
Madenschrauben K3 gut anziehen!

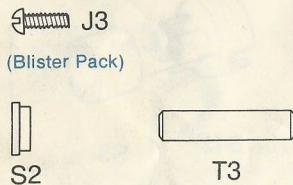
14 <<Change Gear>>
<<Getriebe - Wechsel>>

This kit contains three types of change gears for the Combat Buggy XR311. Choose one of them according to the motor power source and how to run the model. "Fast" change gear U3 is for racing on flat surfaces. "Medium" change gear U2 is for running on rough surfaces. "Slow" change gear U1 is for practice. When the motor power source is C(UM2) cells, be sure to use the "Slow" change gear. If the "Fast" or "Medium" change gear is used in this case, the speed will be too low and the dry cells will be exhausted too soon.

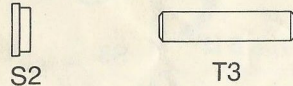
Drei verschiedene Übersetzungen sind in diesem Kit enthalten, je nachdem welche Stromversorgung gewählt wird:
U3 - schnell - für Rennen auf gerader Fläche.
U2 - mittel - für Fahren auf nicht glatter Fläche.
U1 - langsam - zur Übung (Fahrschule)
UM2 Batterien nur für U3 - langsam - Übersetzung verwenden, sonst Geschwindigkeit zu langsam und rascher Stromverbrauch.

<<Parts (full size)>>
<<Teile in Originalgröße>>

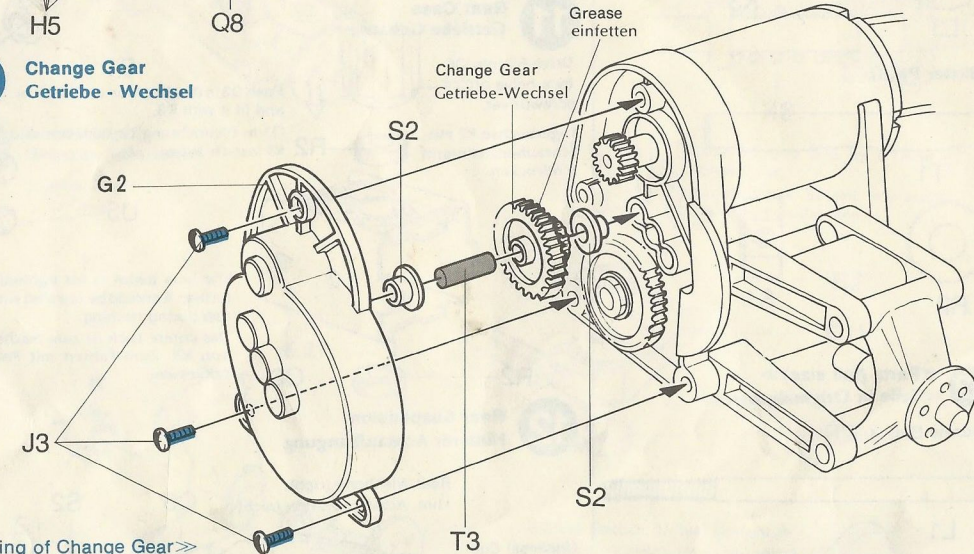
(Screw Bag 4)



(Blister Pack)

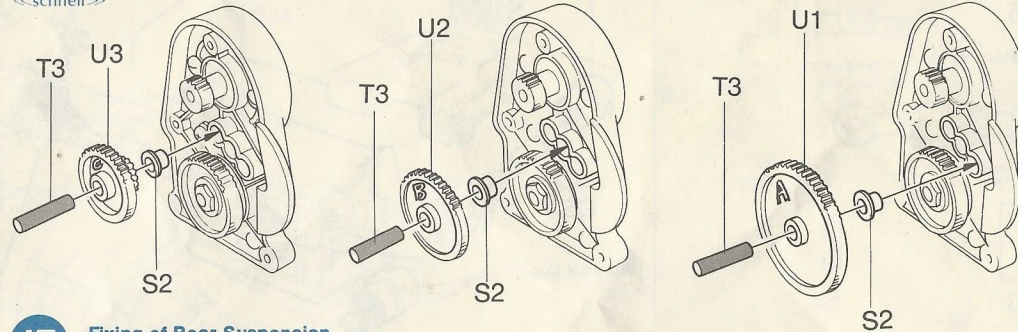


14 Change Gear Getriebe - Wechsel



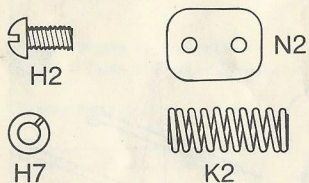
<<Fixing of Change Gear>>
<<Getriebe Übersetzungen>>

<<Fast>> <<schnell>>
<<Medium>> <<mittel>>
<<Slow>> <<langsam>>

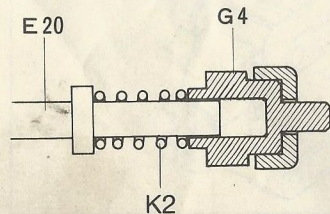


15 <<Parts (full size)>>
<<Teile in Originalgröße>>

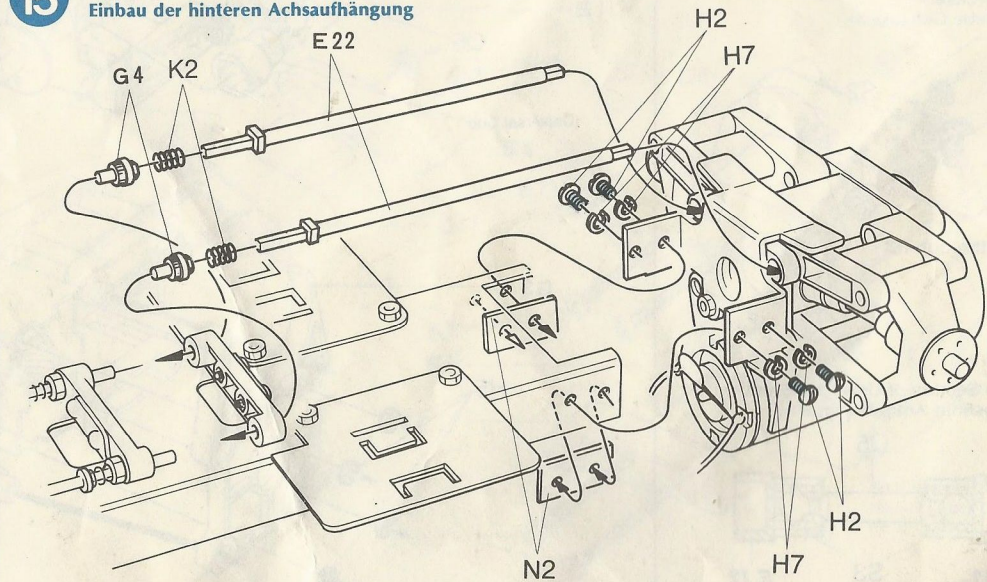
(Screw Bag 5)



<<Cross Section of Torsion Bar>>
<<Querschnitt Drehstab>>



15 Fixing of Rear Suspension Einbau der hinteren Achsaufhängung

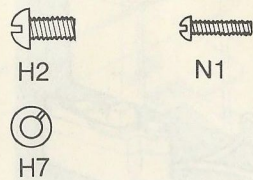


16 <<Wheels>>
<<Räder>>

D3 should be pushed into tyre.
Die Felgen D3 gut in die Reifen drücken.

17 <<Parts (full size)>>
<<Teile in Originalgröße>>

(Screw Bag 5)

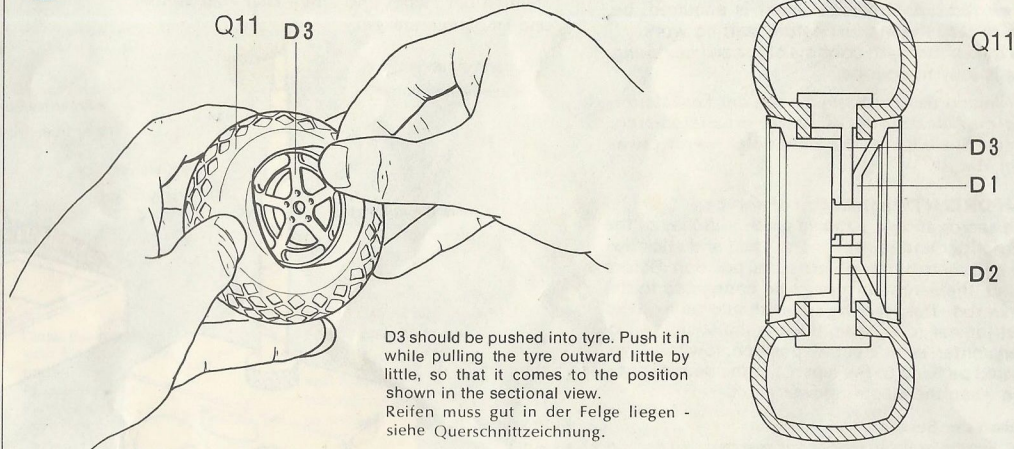


Firmly fix each wheel with N1 so that it does not come off in running. It is recommended to apply metal cement to the sections coloured blue in the figure.

Die Räder mit der Schraube N1 gut festschrauben - sonst evtl. Abgang während der Fahrt. Auf die blauen Stellen etwas Metallkleber sichert die Räder.

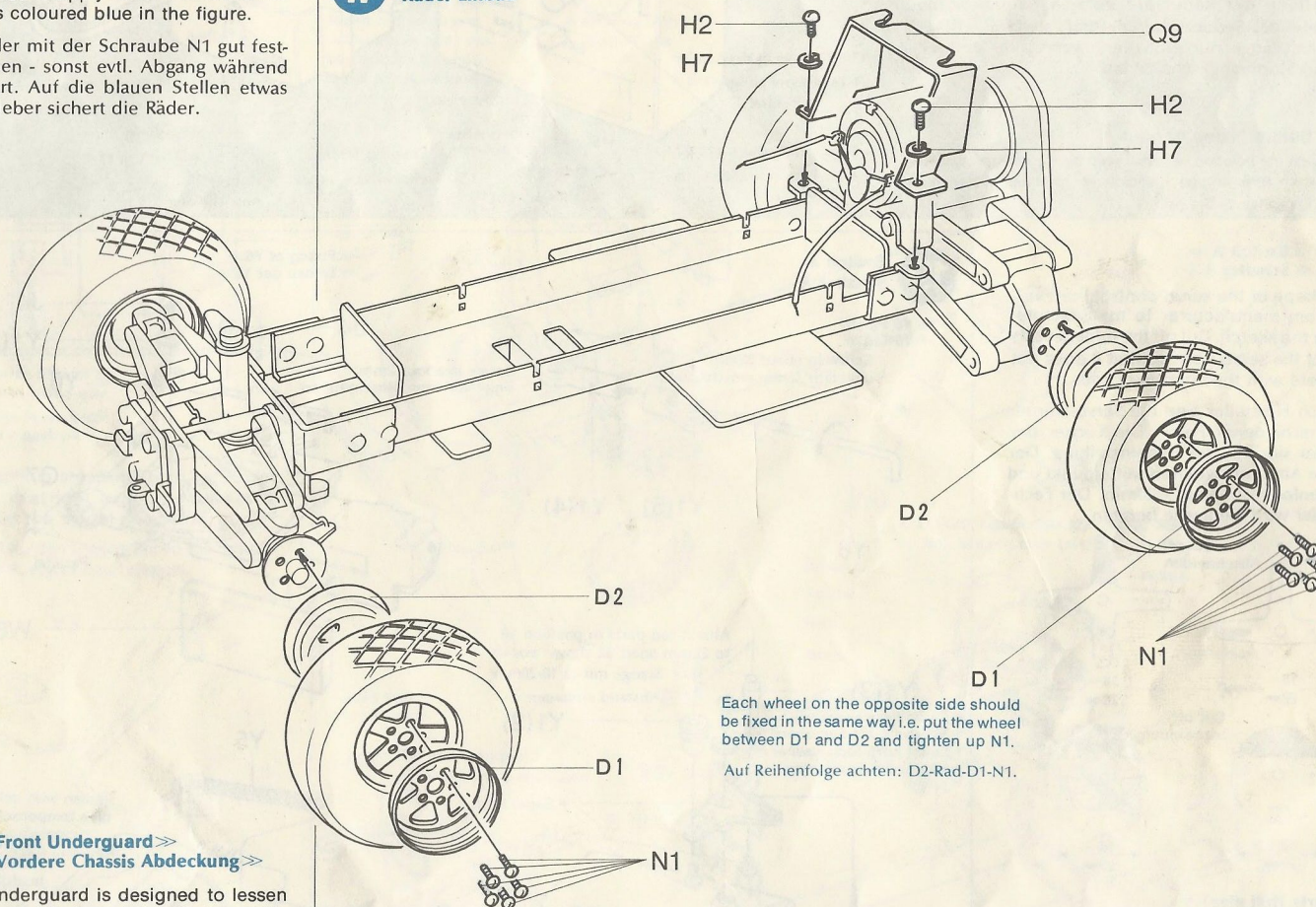
16 Wheels Räder

<<Cross Section of Wheel>>
<<Querschnitt Rad>>



D3 should be pushed into tyre. Push it in while pulling the tyre outward little by little, so that it comes to the position shown in the sectional view.
Reifen muss gut in der Felge liegen - siehe Querschnittzeichnung.

17 Fixing of Wheels Räder Einbau



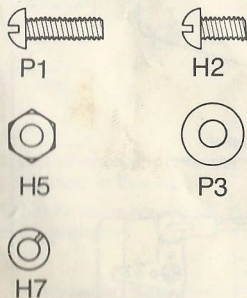
Each wheel on the opposite side should be fixed in the same way i.e. put the wheel between D1 and D2 and tighten up N1.
Auf Reihenfolge achten: D2-Rad-D1-N1.

18 <<Front Underguard>>
<<Vordere Chassis Abdeckung>>

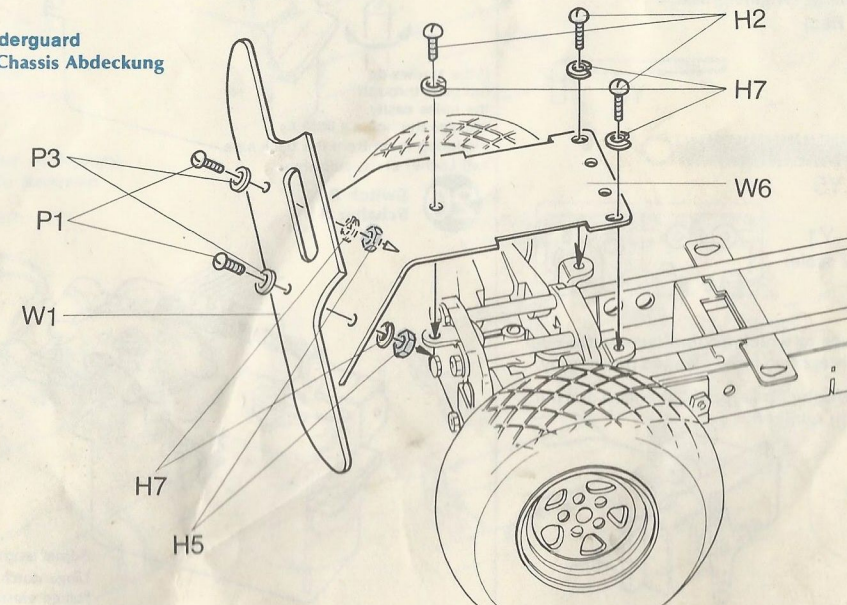
Front underguard is designed to lessen collision shocks from front. Be sure to fix it to protect the model.
Die vordere Chassisabdeckung schützt vor Beschädigungen.

<<Parts (full size)>>
<<Teile in Originalgröße>>

(Screw Bag 6)



18 Front Underguard Vordere Chassis Abdeckung



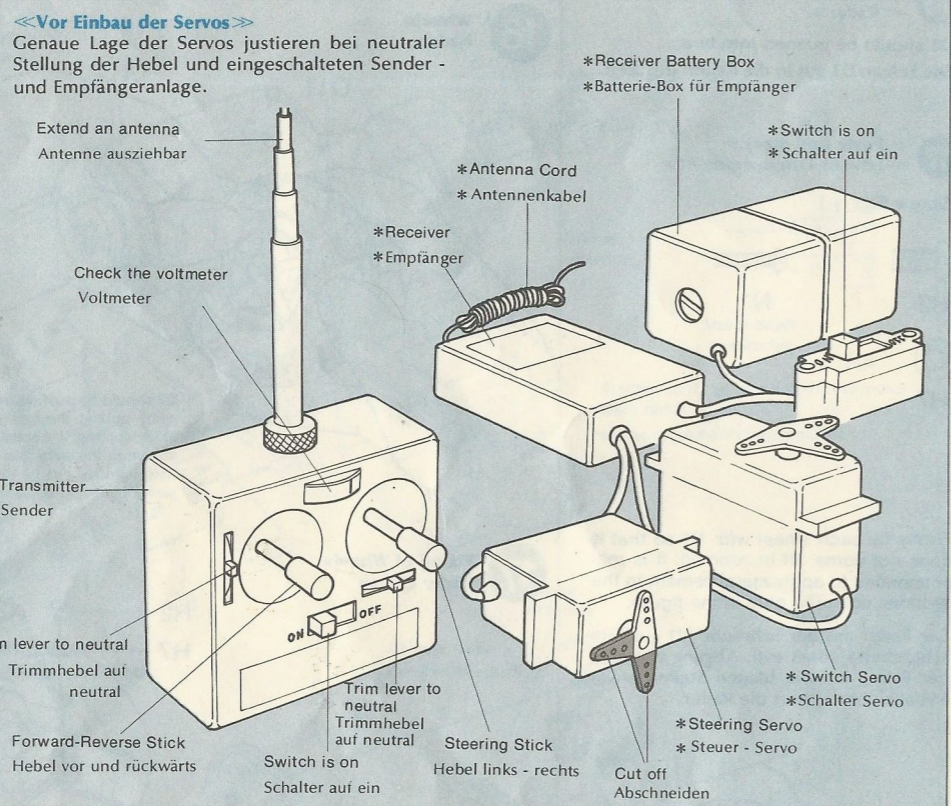
Servo And Transmitter Sender, Empfänger und Servos

If new radio control equipment is acquired, be sure to read the manual before starting work. The transmitter with controls of the self centering type is easy to operate.
Vor Beginn des Zusammenbaues der Funksteuer- teile, die Anleitung der RC Anlage genau studieren. Fragen Sie bitte den Fachhändler wenn etwas nicht klar ist.

"IMPORTANT" installation of servos
The servos should be fixed when switches of the transmitter and receivers are "on", and stick levers and servo horns are in neutral position. Before fixing, the servo horn must be connected to the servo rod. The steering servo should be fixed so that the car runs straight when the stick lever of transmitter is in neutral position. Switch lever should be fixed to the servo... in the neutral position when the electric power is off.

Einbau der Servos
Die Servos sollten eingebaut werden, wenn die Schalter von Empfänger und Sender auf "ein" stehen, die Hebel am Sender und die Servos auf "neutral" sind. Steuerservo einbauen bei Stellung der Räder auf gerader Fahrtrichtung, Hebel des Senders auf "neutral" stellen. Schaltstange nur einbauen, wenn auf "neutral" und Storm abgeschaltet ist.

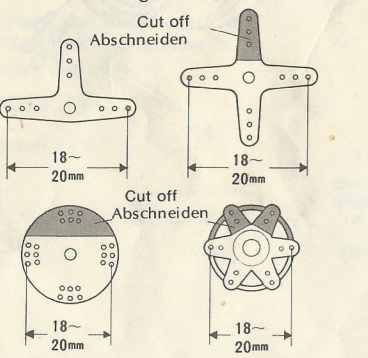
«Before Fixing Servo»
Adjust the position of servo keeping the neutral position of each lever and each stick when switches of transmitter and receivers are on.



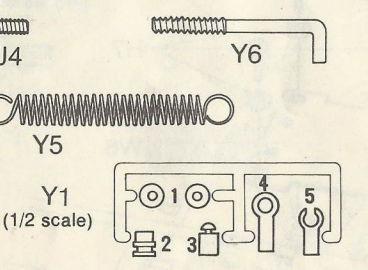
19 «Switch A» «Schalter A»

The shape of the servo control horn varies from manufacturer to manufacturer as per the sketch. Cut off the unnecessary part of the servo horn so that it does not interfere with the chassis or rods.

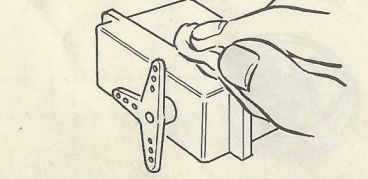
Je nach Hersteller sind die Servo-Hörner in verschiedener Form. Die Löcher der Hörner sind für die Feineinstellung. Der ideale Abstand zwischen Mittelpunkt und Aussenloch ist 18mm - 20mm. Der Fachhändler wird Sie gerne beraten.



«Parts (full size)»
«Teile in Originalgröße»
(Rod Bag)

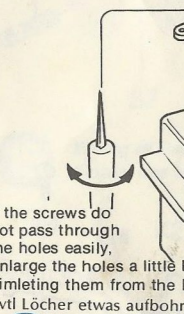
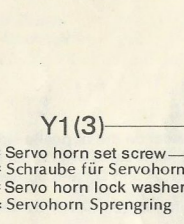
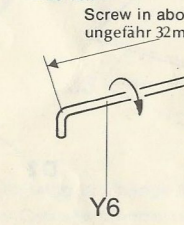


Surface to which double faced adhesive tape is applied must be cleaned thoroughly.
Klebefläche für Doppelklebeband erst mit Benzin reinigen.



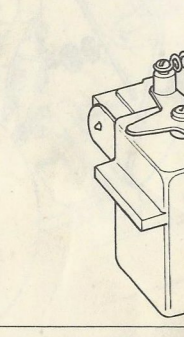
19 Switch A Schalter A

«Y6 Part»
«Y6 Teil»

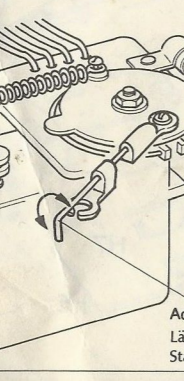
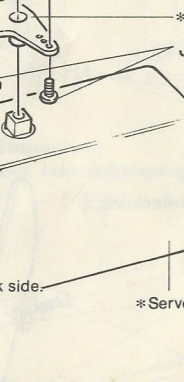
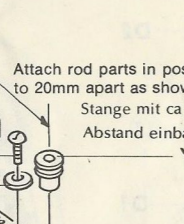
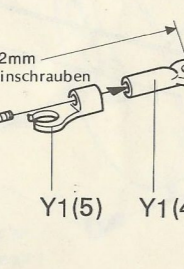


20 Switch B Schalter B

«Y6 Part»
«Y6 Teil»

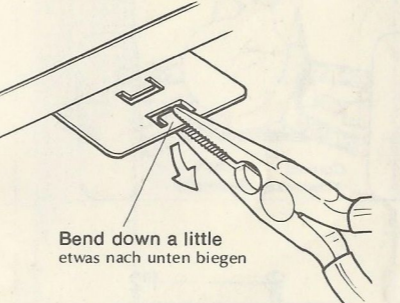


«Fixing of Y6» «Einbau der Y6»



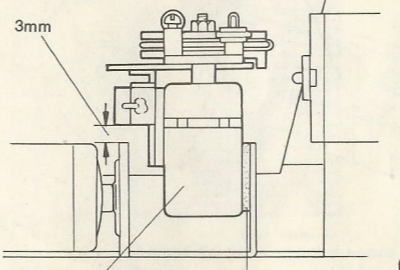
21 «Receiver and Receiver Battery Box» «Empfänger und Empfänger-Batt. Box»

There are to be fixed on W3 with rubber bands. Bend the part shown below so that the rubber band can be easily hooked.
Zum Befestigen werden Gummibänder verwendet. Die Zapfen evtl. etwas nachbiegen.

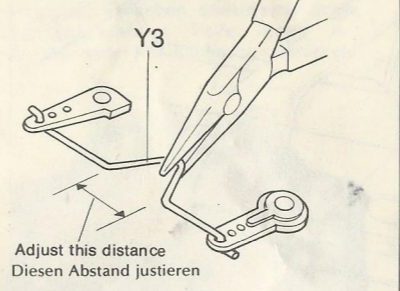
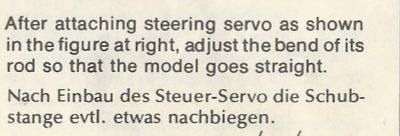


22 «Installation of RC Mechanisms» «Einbau der RC Anlage (Im Kit nicht enthalten)»

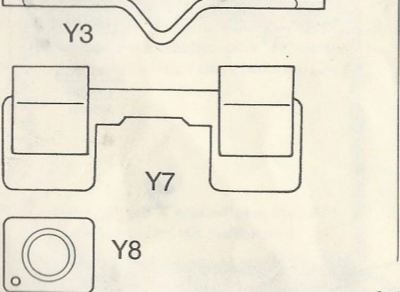
Switch servo must not touch battery. Schalter-Servo darf Batterien nicht berühren !!



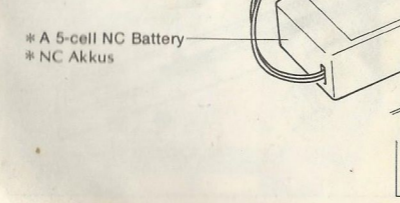
After attaching steering servo as shown in the figure at right, adjust the bend of its rod so that the model goes straight.
Nach Einbau des Steuer-Servo die Schubstange evtl. etwas nachbiegen.



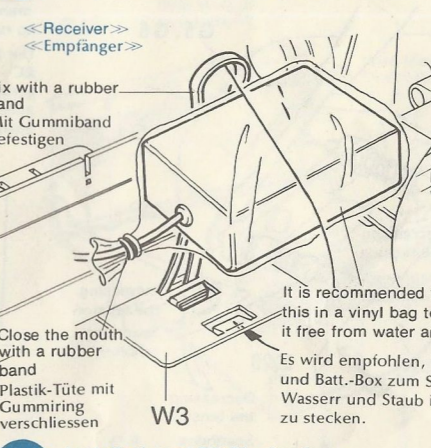
«Parts (full size)»
«Teile in Originalgröße»



A pair of connectors is not contained in this kit. Kabel-Kupplungen im Kit nicht enthalten

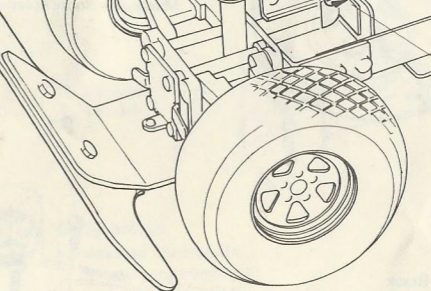
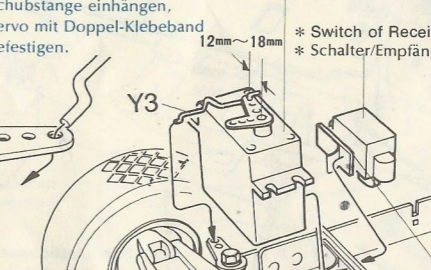


21 Receiver and Receiver Battery Box Empfänger und Empfänger-Batt. Box

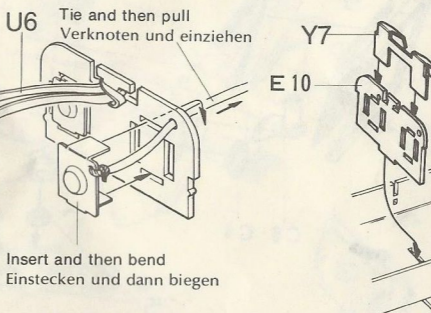


22 Installation of RC Mechanisms Einbau der RC Anlage (Im Kit nicht enthalten)

Insert rod as shown in the figure and then fix servo with double faced adhesive tape. Schubstange einhängen, Servo mit Doppel-Klebeband befestigen.

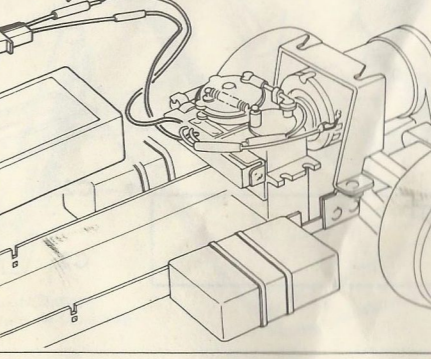


«Y8 Part»
«Y8 Teil»

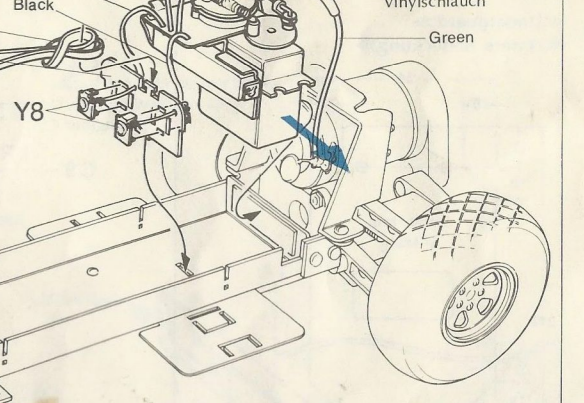
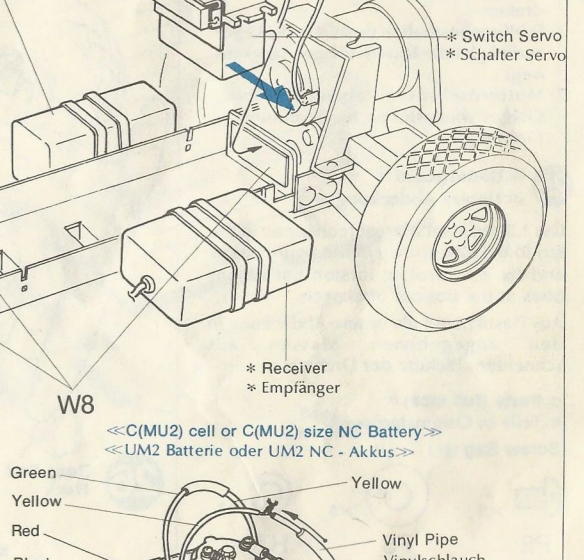
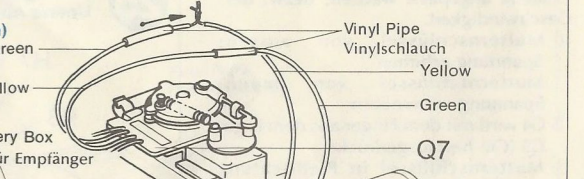
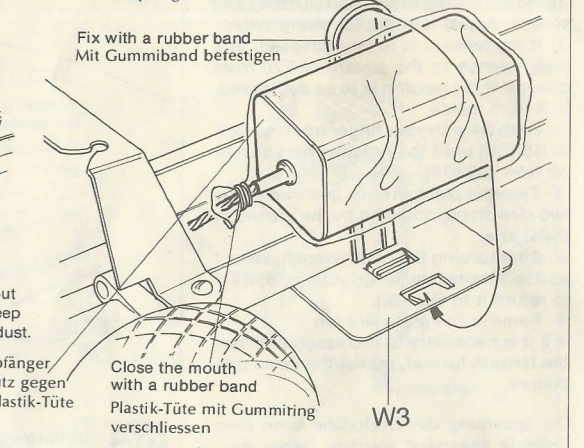


23 Installation of Battery Einbau der Batterien

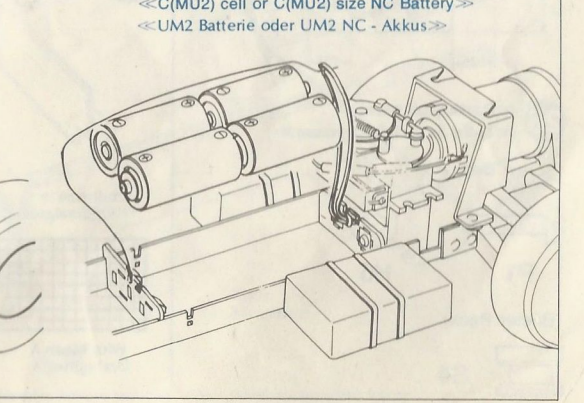
«A 5-cell NC Battery»
«NC Akkus»



«Receiver Battery Box» «Empfänger-Batterie Box»



«C(MU2) cell or C(MU2) size NC Battery»
«UM2 Batterie oder UM2 NC - Akkus»

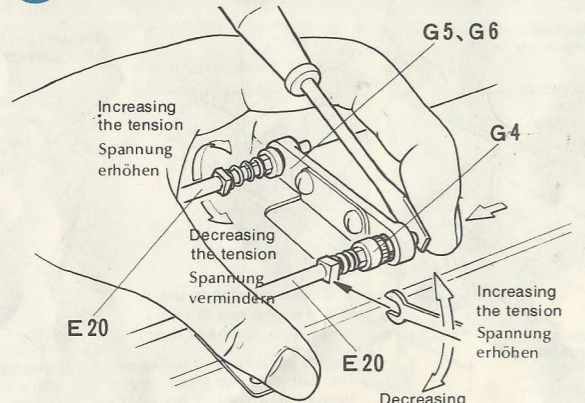


24 <<Adjustment of Suspension>>
<<Nachstellen der Radaufhängungen>>

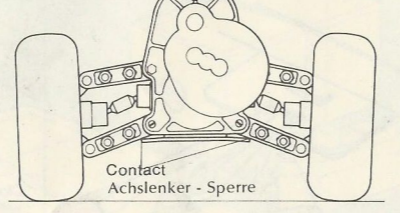
The tension of suspension can be adjusted according to the road surfaces and speeds. Adjust it in the following order.
 ① If the tension is to be increased, fit a plate wrench to the square of E20 from outside. If the tension is to be decreased, fit it from inside.
 ② Push G4 with your finger from the side of G5 (G6) until the notched part comes off from G5 (G6).
 ③ Turn the plate wrench in either of the two directions indicated by the arrows in the figure.
 ④ After turning the plate wrench, keep it as it is. Meanwhile, let go your hold of G4 to return it to G5 (G6).
 ⑤ Remove the plate wrench.
 * If it is necessary to increase(decrease) the tension further, repeat the same procedure.

Die Spannung der Drehstäbe kann dem Gelände angepasst werden, bezw. der Geschwindigkeit.
 ① Mutternschlüssel von aussen: Spannung erhöhen
 Mutternschlüssel von innen: Spannung vermindern
 ② G4 wird mit dem Finger aus dem Lager G5 (G6) herausgedrückt
 ③ Mutternschlüssel in Pfeilrichtung drehen
 ④ Schlüssel festhalten und G4 in die Lager zurückgleiten lassen (Finger langsam weg)
 ⑤ Mutternschlüssel abziehen. Evtl. Obiges wiederholen bis Spannung in Ordnung.

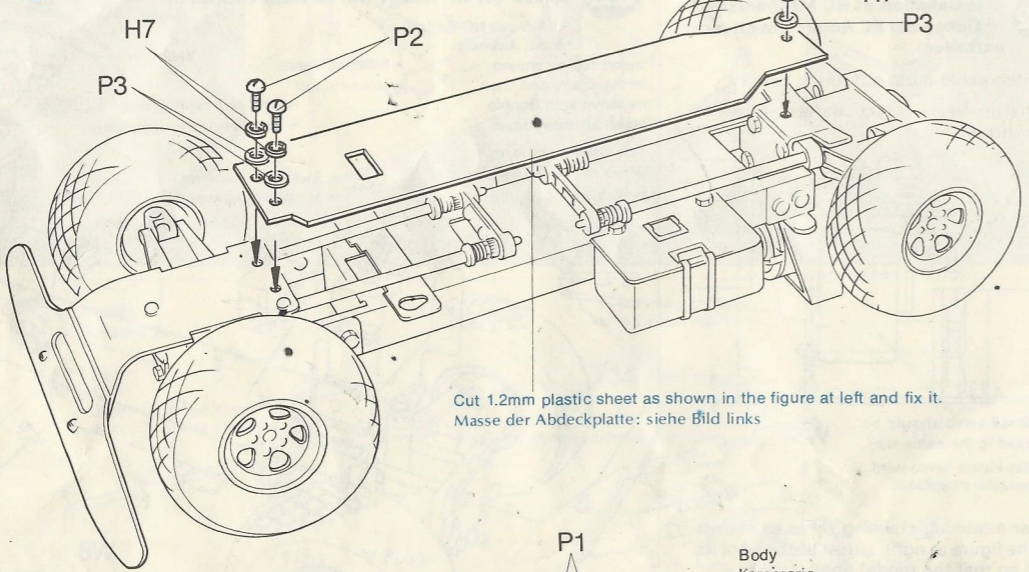
24 Adjustment of Suspension
Nachstellen der Radaufhängungen



Check suspension with the radio control mechanism and motor power source mounted. Its tension is smallest when the parts indicated by the arrows in the figure are in contact. It is recommended to increase the tension when the model is to run across rough or uneven places.
 Die Spannung der Drehstäbe soll mit eingebauter RC - Anlage erfolgen. Die Spannung ist am geringsten, wenn die Achslenker auf der Sperre aufliegen. Bei rauhem und unebenem Gelände die Spannung erhöhen.



25 Underguard
Untere Abdeckung

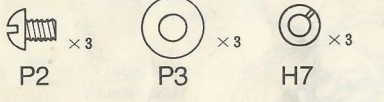


Cut 1.2mm plastic sheet as shown in the figure at left and fix it. Masse der Abdeckplatte: siehe Bild links

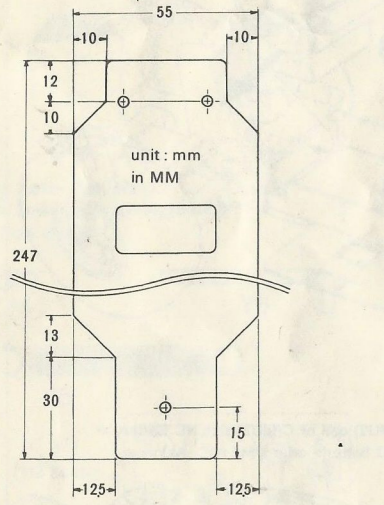
25 <<Underguard>>
<<Untere Abdeckung>>

Cut 1.2mm plastic sheet (contained in the kit) to the size shown in the figure below and fix it to protect torsion bar assemblies at the bottom of chassis.
 Aus Plastikplatte die untere Abdeckung in den angegebenen Massen ausschneiden. (Schutz der Drehstäbe)

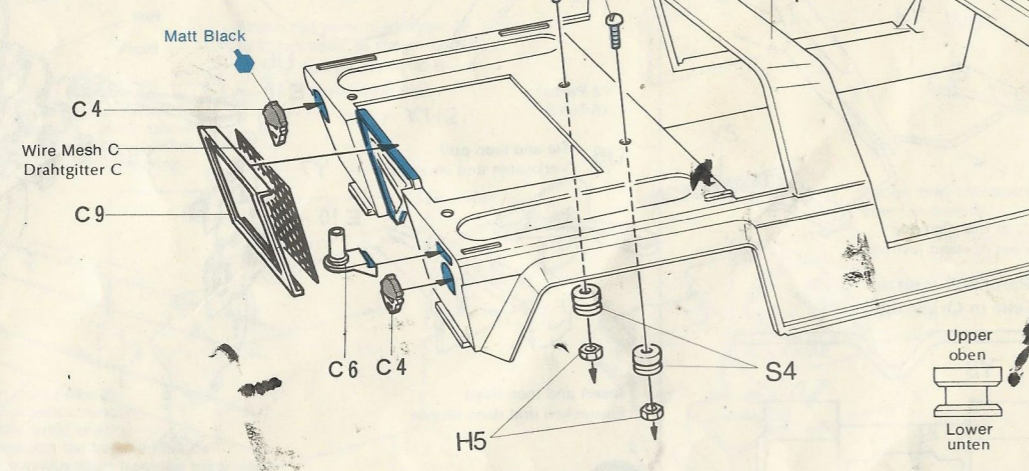
<<Parts (full size)>>
<<Teile in Originalgrösse>>
(Screw Bag 6)



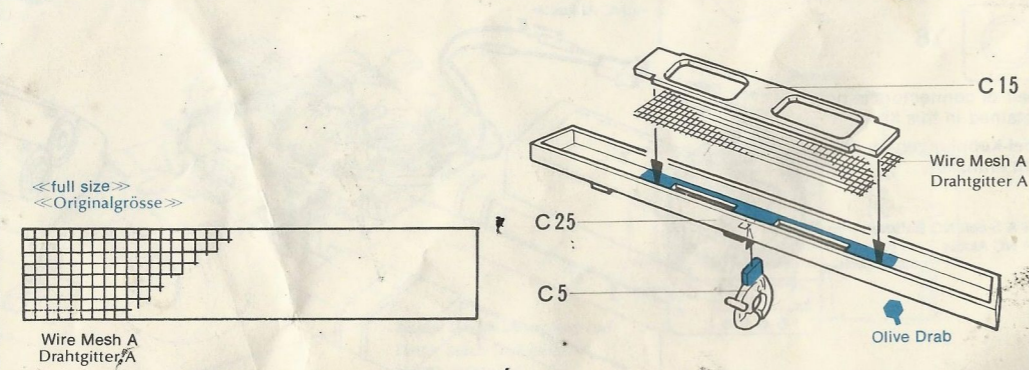
<<Underguard>>
<<Untere Abdeckung>>



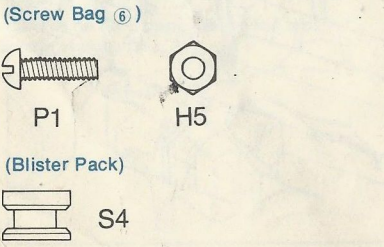
26 Rear End Heck



27 Rear Bumper Stosstange



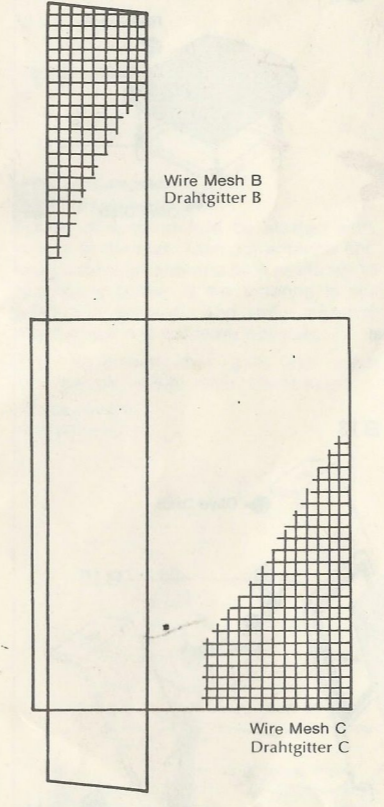
26 <<Parts (full size)>>
<<Teile in Originalgrösse>>



27 <<Rear Plate>>
<<Heckabdeckung>>

Wire mesh B for rear plate is to be put between C13 (C14) and C3. Insert it before attaching C3 to A3.
 Drahtgitter B zwischen C13 (C14) und C3 einlegen, dann erst C3 auf A3 kleben.

<<Full Size>>
<<Originalgrösse>>

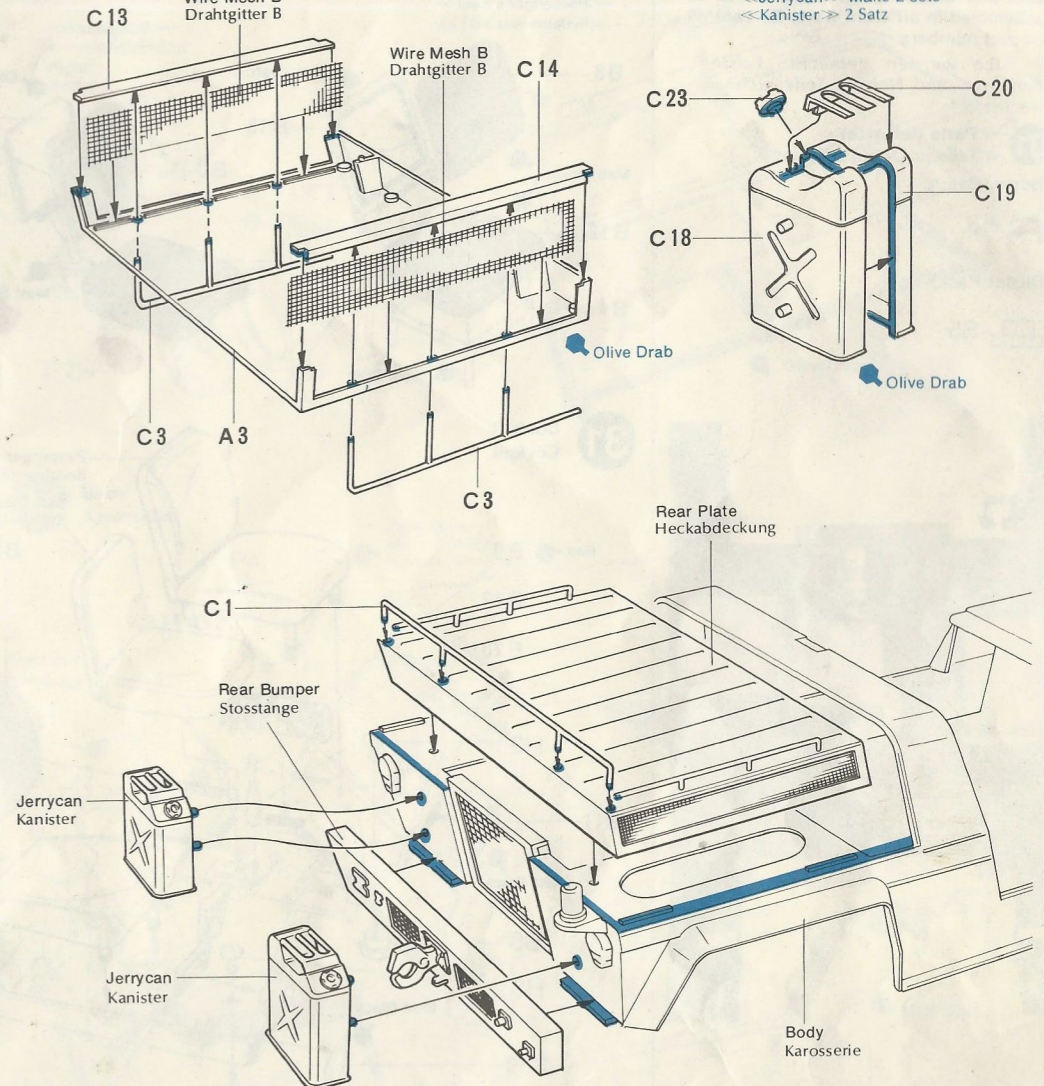


<<Strength the Body>>
<<Verstärkung der Karosserie>>

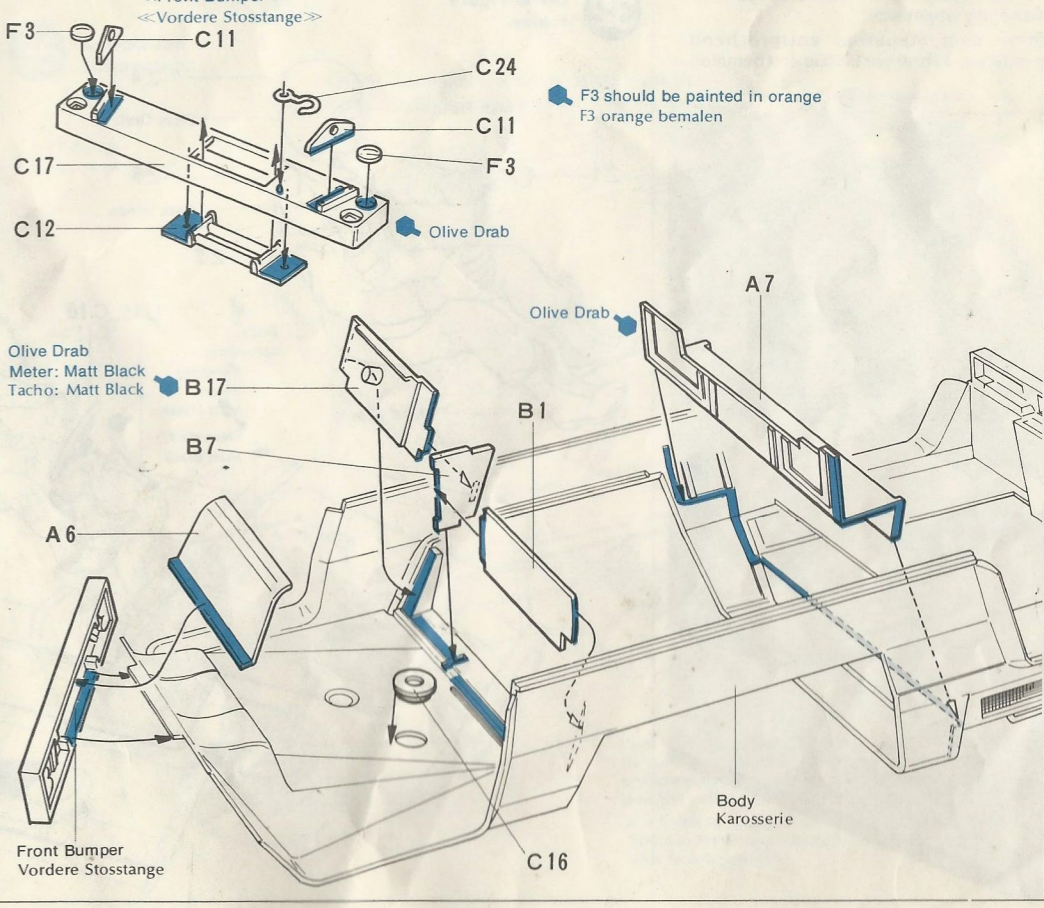
Cut off plastic sheet and cement it for reinforcement. It is recommended to reinforce the joints of parts on the inside with epoxy adhesive.
 Teile aus Plastikplatte ausschneiden und wie gezeigt einkleben. Es wird empfohlen, die angeklebten Teile innen mit Giessharz oder Plastikfüller zu verstärkeln.



28 Rear Plate Heckabdeckung



29 Body Inside Karosserie Innenteile



30 Seats Sitze

Make three seats, passenger's seat, sub seat and driver's seat. There are to be assembled in different ways. Be careful of part numbers.

3 Sitze werden gemacht: Fahrer-, Beifahrer- und Notsitz. Teile nicht verwechseln!

31 Parts (full size) Teile in Originalgrösse

(Screw Bag 6)

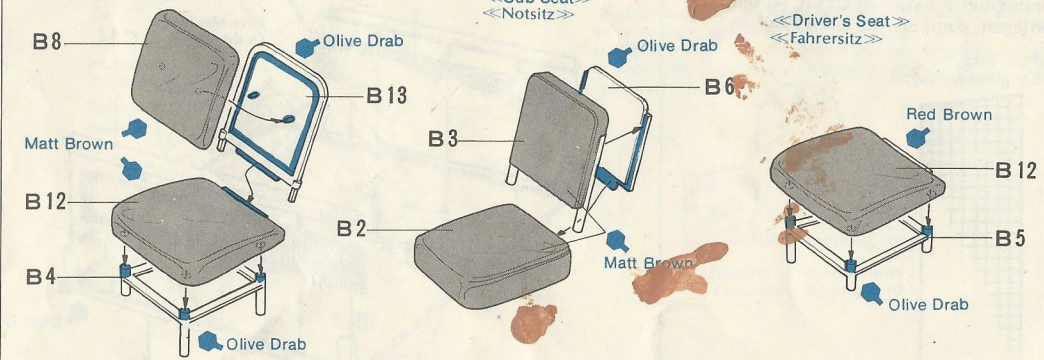
H3

(Blister Pack)

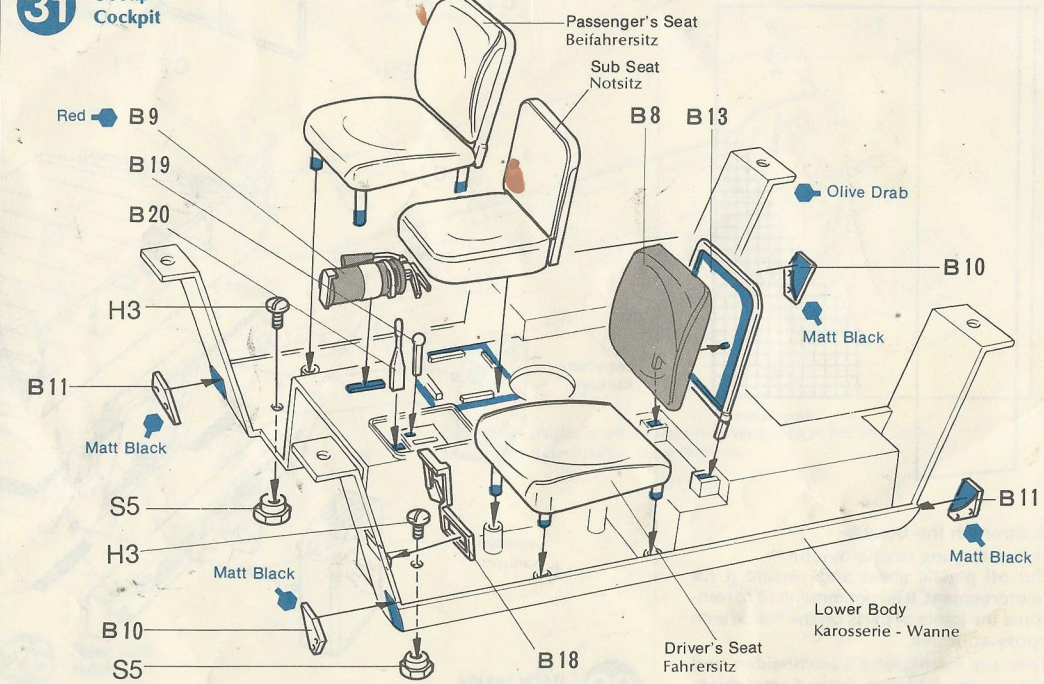
S5

30 Seats Sitze

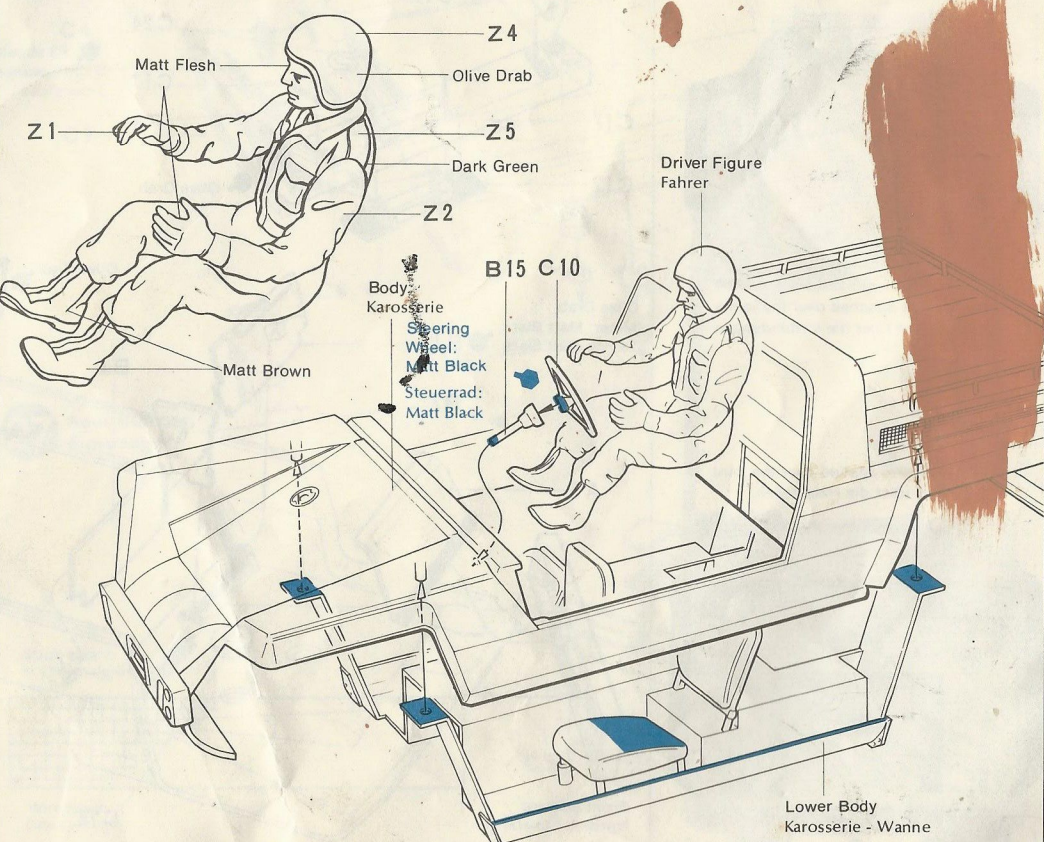
Passenger's Seat Beifahrersitz



31 Cockpit Cockpit



32 Driver Figure Fahrer

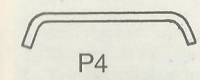


33 Window Windschutzscheibe

Too much cement may cloud the windshield. Apply just enough cement to fix. Windschutzscheiben vorsichtig mit wenig Klebstoff anbringen.

34 Parts (full size) Teile in Originalgrösse

(Screw Bag 6)

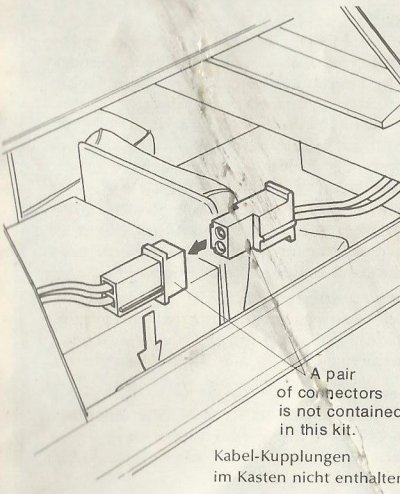
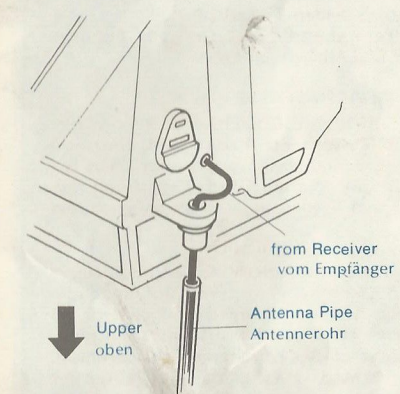


35 Completion Endmontage

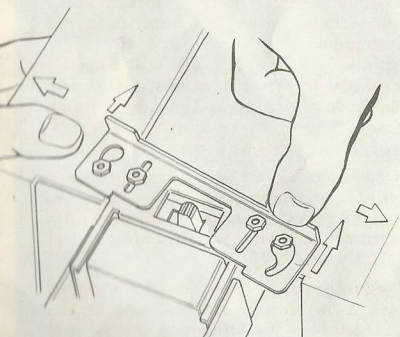
Fixing of body should be started with mount at the rear. Take out antenna and pass it through antenna pipe as shown in the figure below. If the antenna is not stretched properly, the radio control mechanism will not work normally.

Erst Antennenkabel gut und straff verlegen Siehe Bild unten (steht Kopf).

Antenna Antenne

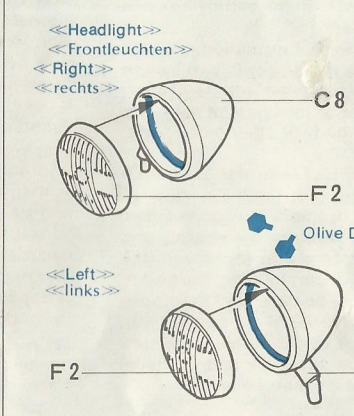


Fixing of Body Einbau der Karosserie

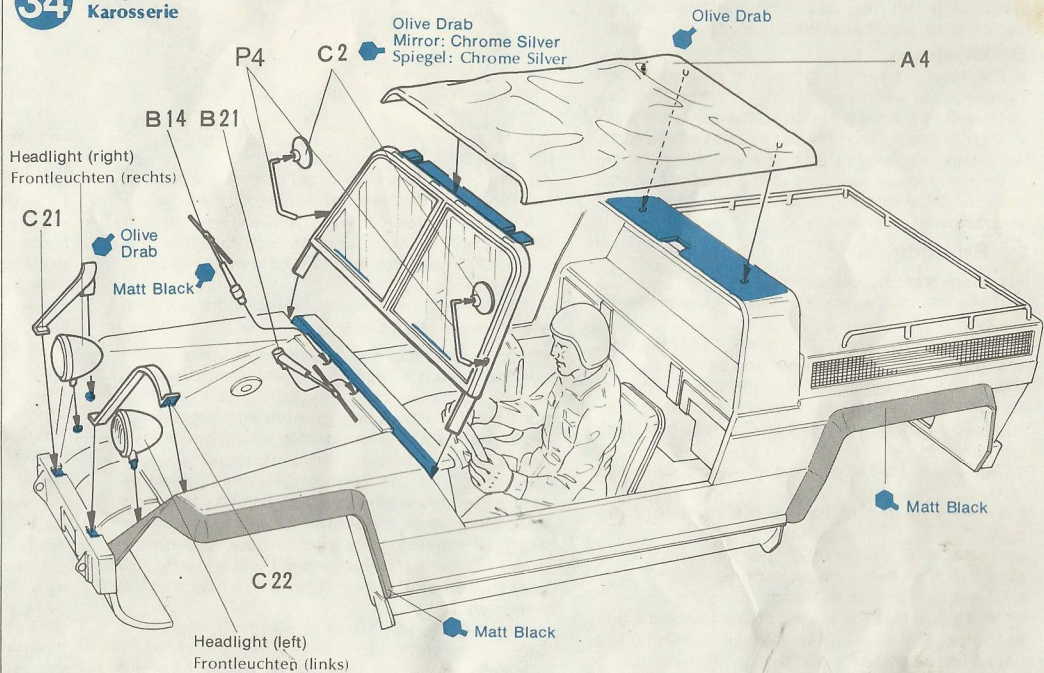


After fitting rear catch metal properly, fit front one as shown in the figure. Fix S5 while widening body. Karosseriehalter gut einstecken und verschrauben. Anhängen (Karosserie etwas dehnen).

33 Window Windschutzscheibe



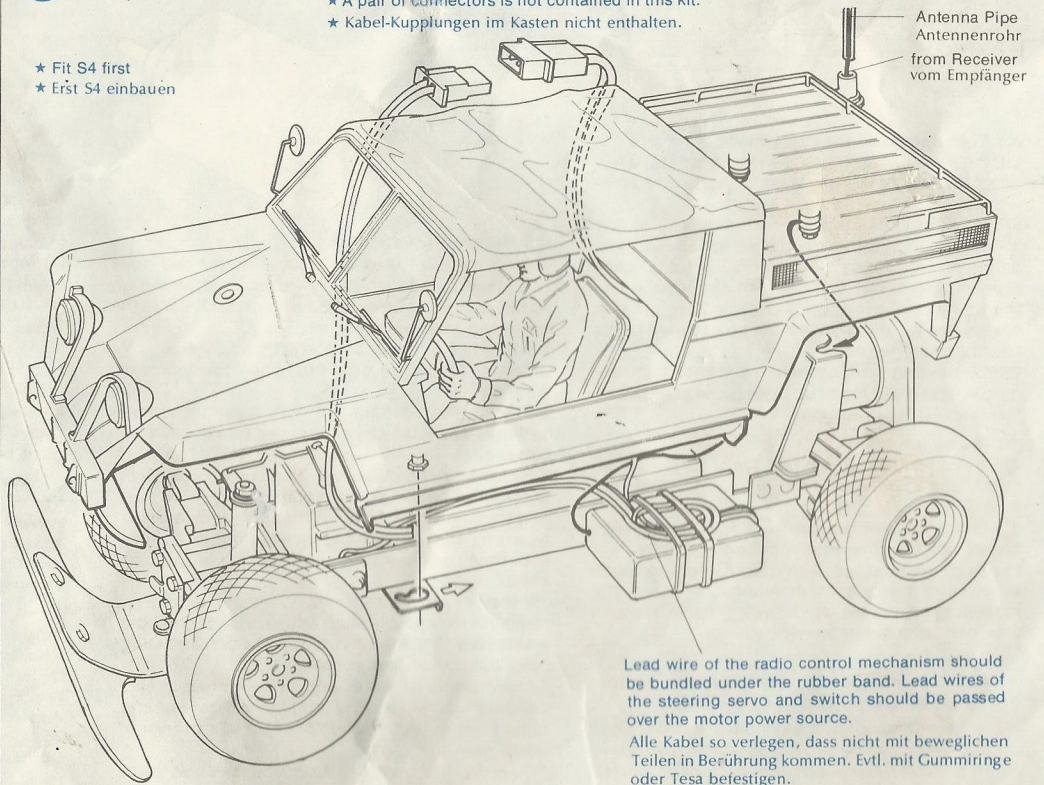
34 Body Karosserie



35 Completion Endmontage

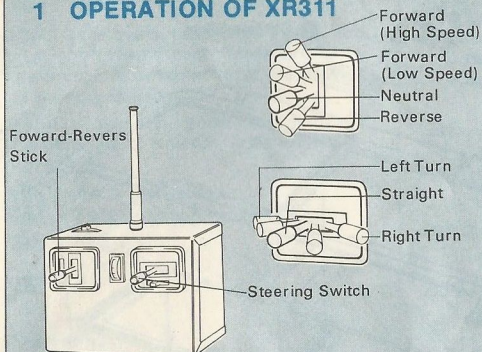
A pair of connectors is not contained in this kit. Kabel-Kupplungen im Kasten nicht enthalten.

Fit S4 first. Erst S4 einbauen.



Lead wire of the radio control mechanism should be bundled under the rubber band. Lead wires of the steering servo and switch should be passed over the motor power source. Alle Kabel so verlegen, dass nicht mit beweglichen Teilen in Berührung kommen. Evtl. mit Gummiringe oder Tesa befestigen.

1 OPERATION OF XR311



1 OPERATION OF XR311

(1) Driving Techniques

A. Forward and Reverse

If the forward-reverse stick is pushed up slightly, the XR311 will move forward. If the stick is pushed down, the car will move backwards. If the stick is pushed to its full extent the car will run at full speed. When the car is running forward, pushing down the stick is used as an emergency stop. If the stick is returned to the neutral position, the switch is off, and the car will slowly come to a halt.

B. Steering

If the steering stick is gradually pushed to the right, the car will turn to the right. When the stick is moved to the extreme right, the car is on maximum right lock. Thus the car makes various turns according to the position of the steering stick. Similarly, the car can turn to the left in the same manner. If the steering stick is returned to neutral, the car will run straight.

2 Running in.

(1) Inspection before running.

Put the car on the small box provided for metal parts.

- Make sure that the gear, wheels, and pinion etc. move smoothly. Apply grease and oil to the gears, axle shaft, bearings etc. Some tolerance is necessary in the meshing of the gears and axle shaft.
- Make sure that the gear box is free from dust, grit etc.
- Make sure that all connections are secure and correct.
- Make sure that all screws, nuts and bolts are tight.
- Operate the transmitter gradually and make sure that the servos respond correctly.
- Correctly position antenna.
- Make sure that the wheels do not touch the box or the car and that wire is not wound around the gear box, servo horn or rod.



(2) Test operation for adjustment.

Lift the body as shown and run the motor for a few minutes, so that the gears, axle shafts and bearings adjust themselves to use.

- Run the motor on trial for one minute at low speed, and for another minute at high speed. In so doing, make sure that no abnormal noise is heard especially from the gear box. (An abnormal noise will be heard if the shaft is over heating.) In this case, some oil and grease must be supplied to the bearings and gearing.
- Watch bearing surfaces when the motor is running so that it will stand up to long use at high performance without trouble.

(3) Techniques.

- Do not let the car run fast for at least five minutes, and choose only flat ground for trial running.
- Make sure that the controls, low speed, high speed, stop, and reverse function correctly.
- After five minutes test running, check each screw and tighten them again. To avoid the loosening of screws, rapid cure adhesive or screw lock cement are recommended.

3 Fuse

- * If the fuse has blown, investigate and remove the cause before putting in a new one.
- * The fuse is used as a safeguard against short circuits which can be caused by wrong wiring, etc. When a 5-cell nickel cadmium battery or C(UM2) size nickel cadmium batteries are used.

(1) Causes of Short circuit

(a) Short circuit by wrong wiring

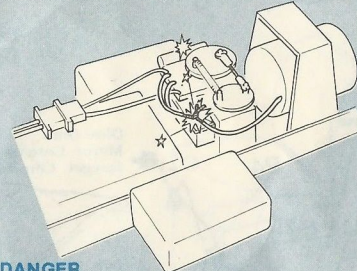
The switch cords which should be connected with the motor are connected with the battery box or a 5-nickel cadmium battery.

(b) Short circuit by imperfect insulation

The joints between the motor cords and switch cords must be perfectly insulated with vinyl pipes, etc. If the exposed wires of the cords at the joints come in touch with the body or other metal parts, short circuit will occur.

(c) Short circuit by contact between the switch plate metal and chassis.

Positive current flows in the switch plate metal, while negative current flows in the chassis and gearbox. If the former comes in touch with the latter, short circuit will occur. In fixing the switch plate metal and gearbox, be careful of their positions so that they are not brought into contact with each other by the shock of collisions. Make sure that there is no error in assembly and no metal pieces are in contact with each other.



(2) DANGER

- * Do not use a fuse with larger ampere capacity or substitute wire for the fuse because it blows easily.
- * A 5 cell nickel cadmium battery can furnish strong current. If the fuse does not blow at the time of short circuit, the switch and cords will burn. This is dangerous.
- * If you need extra fuses, contact the store at which you bought the kit.

(3) Do not put too much load on the motor

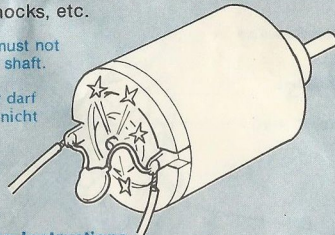
* If the switch is kept on when wheel rotation (motor rotation) is hindered, the motor will heat and burn. If, for instance, grass or string is entangled in the gears or the model car is held down by an obstacle, immediately return the transmitter sticks to neutral and the "Forward-Reverse" change-over switch to the stop position. If the batteries are connected when the switch is on, the model car will start moving. If, in such a case, you hold it down in a hurry, the motor will be overloaded. Be sure to turn off the switch before connecting the power source.

(4) Short Circuit by Wires of Motor Condenser

Short circuit will occur also when a wire of the noiseless condenser attached to the motor comes in touch with the motor shaft or other metal parts. Be careful of the wire position shocks, etc. so that the wires are not brought in touch with them by collision shocks, etc.

Condenser must not touch motor shaft.

Kondensator darf Motorachse nicht berühren.



4 Running Instructions

Tamiya's XR311 uses an electric motor and does not make a loud noise. However, it attains high speed, and must be handled with care. Observe the following instructions.

- * Antenna Rod must be correctly adjusted.
- * Do not touch the gear box when the motor is running
- * Do not short circuit the high capacity storage batteries especially when you use nickel cadmium batteries.
- * Before switching on the radio control mechanism, make sure that there is no other person transmitting nearby. If there is, compare the type and frequency band of your radio control with those of his. Avoid all possibility of interference.
- * If the car moves abnormally, the cause may be radio interference. In such a case, stop the car and make sure that the servos operate correctly and obey the transmitter controls.
- * Avoid pools of water and other unreasonable conditions to ensure the long life of your car and radio control unit. Remember this is a precision instrument.
- * Remove the batteries from the car and radio control unit when not in use.

1 Einlaufen

Den Motor einige Minuten laufen lassen, damit sich Getriebe, Achse und Lager einjustieren können. Den Motor eine Minute langsam und eine Minute schnell laufen lassen. Darauf achten, dass kein abnormales Geräusch im Getriebe ist (dies kann durch Überhitzen entstehen - in diesem Fall dann etwas Öl oder Fett in die Zahnräder oder Lager).

Den Wagen zum Prüfen nicht länger als 5 Minuten und nur auf flachem Boden laufen lassen. Darauf achten, dass langsam -schnell-vorwärts-rückwärts- und Halte-Funktionen richtig arbeiten. Danach alle Schrauben und Muttern prüfen, evtl. etwas nachziehen. Tamiya's XR311 hat einen Elektro Motor und macht fast kein Geräusch. Dieser Motor fährt jedoch sehr schnell und muss mit Sorgfalt behandelt werden.

(1) Auf Folgendes ist zu achten:

- * Antennenkabel muss richtig sitzen
- * Nicht bei laufendem Motor ins Getriebe greifen
- * Spannung nicht Kurzschliessen, speziell bei Nickel Cadmium Akkus.
- * Bei Einschalten des Senders darauf achten, dass nicht noch einer in der Nähe "funk". Frequenz prüfen, damit nicht zwei auf einer Welle funken. Wellensalat vermeiden.
- * Wenn der Wagen nicht richtig fährt, Sender und Empfänger überprüfen, ebenso Servos.
- * Um Wasserlachen besser herumfahren, sonst unreparabler Schaden am Fahrzeug.
- * Nach "Feierabend" Batterien aus Sender, Empfänger und Antrieb entfernen.

2 Running in Inspektion

Fahrzeug auf kleine Schachtel stellen. Überprüfen ob Zahnräder, Räder und Getriebe leicht drehbar sind. Evtl. Fetten oder Ölen wo notwendig an Wellen und Lagerbüchsen. Zahnräder und Wellen müssen etwas Spielraum haben.

Getriebe muss staubfrei sein!

Alle Schrauben und Muttern müssen festgezogen sein. Alle Stromkabel müssen gut angeschlossen sein. Sender betätigen und prüfen, ob alle Servos richtig arbeiten. Sitzt Antenne richtig? Räder dürfen Karosserie nicht berühren. Darauf achten, dass Kabel das Getriebe oder die Servos nicht berühren oder klemmen.

(1) Am Start

Batterien für Motor, Sender und Empfänger einlegen. Alle Hebel auf "neutral" stellen. Sender einschalten. Empfänger einschalten. Alle Hebel kurz der Reihe nach betätigen, darauf achten, dass alle Funktionen richtig arbeiten. Evtl. nachjustieren an Trimmhebeln. Obiges muss der Reihe nach gemacht werden. Wenn nämlich der Empfänger vor dem Sender eingeschaltet wird, dann kann durch einen anderen Funker das Fahrzeug unkontrolliert in Bewegung gesetzt werden. Bei Feierabend alles wiederholen und Batterien herausnehmen.

Nach dem Vergnügen das Fahrzeug reinigen, Sand und Staub vom Fahrzeug entfernen, Getriebe ölen und nachfetten, ebenso Achsen und Lagerbüchsen sowie alle Teile überprüfen.

3 Sicherung:

Wenn die Sicherung durchbrennt, vor einsetzen einer Neuen, erst die Fehlerquelle beseitigen. Bei Verwendung von Nickel Cadmium Akkus ist dies vielleicht möglich.

(1) Kurzschlüsse entstehen:

- Schaltekabel zum Motor sind an Energiequelle angeschlossen.
- Kurzschluss durch schlechte Isolierung: Kabel an Motor und Schalter müssen in Vinylschläuchen stecken, sonst bei Berührung mit Metall Kurzschluss.
- Kurzschluss zwischen Schalter und Chassis: Plus-Strom fließt in Schalter, Minus in Getriebe und Chassis. Plus und Minus-Teile dürfen sich nicht berühren.

(2) Vorsicht:

Keine Sicherungen mit grösserer Ampere verwenden. - Nicht überbrücken! Nickel Cadmium Akkus erzeugen grosse Leistung, Wenn Sicherung nicht durchbrennt, kann Schalter und Kabel brennen. Gefährlich!

Wenn Fahrzeug durch Stroh, Gras oder sonstige Hindernisse zum stehen kommt, sofort abschalten! Schalthebel für Steuerung auf neutral stellen, Vorwärts/rückwärts auf stop. Vor Einsetzen der Batterien alles auf "aus" stellen.

Auch die Drähte des Kondensators können Kurzschlüsse verursachen. Darauf achten, dass sich keine Drähte berühren können.

TROUBLESHOOTING

If the car does not run well, read the following.

A) Motor does not turn

- Isn't the fuse burnt out? If it is, investigate the cause with reference to page 16.
- The switch is actuated by the servo. If the servo does not operate, check the switches of transmitter and receiver, and make sure that the voltage and current of the batteries are correct.
- If the motor does not rotate when switch servo operates, check wiring is correct and that there is no short circuit.
- If the motor does not function (a rare occurrence), remove wires and check the motor by directly connecting its lead wires to the power source.
- If the radio control unit is not satisfactory, enquire with the manufacturer. The radio control unit is very precisely constructed and must be handled with great care accordingly.

B) Motor rotates but the car does not move

- Gearing is loose. Tighten up the gear fixing grub screw with a allen wrench.

C) Speed is slow

- The voltage and current of the batteries are incorrect.
- Isn't a fuse for higher amperage used in place of the exclusive fuse? It will allow abnormal current to flow, which may cause the switch to melt or burn and result in a failure of its speed change function.
- Does the switch move well between "fast" and "slow" positions? If not, adjust the length of the switch servo rod so that the switch can be switched well between "fast" and "slow", "stop" and "back". Be sure that the distance between the switch and servo horn screws is 32mm.
- If oil supply is not enough, sometimes shaft and bearings overheat. Apply grease and oil to the shaft and shaft holders. If the shaft has overheated, take out the shaft from the car, and polish it to ensure smooth rotation.
- Is the shaft free from grass leaves and pebbles? If not, the motor will burn out. They must be completely removed from the shaft.

D) The car does not run straight

- Do the wheels face straight forward when the steering stick is in the central position? If not, adjust the bend of the servo rod accordingly.
- Aren't the wheel fixing screws loose? If the wheel is not firmly fixed, it will shake during rotation and the model will not go right on. All the wheels must be firmly fixed.

E) The car does not turn as expected

E-1 Check the movement of the steering servo. If the electric power is low the servo will not move sufficiently.

F) Forward and Backward functions are reversed

- Make sure that the switch and motor wires are connected correctly.
- Make sure that the switch and batteries are connected correctly.
- If the car moves backwards when the forward-reverse stick is pushed up, alternate the wiring of switch plate and motor.

G) Lack of control

- Antenna must be adjusted correctly.
- Make sure that the power of the batteries is up to standards.
- If the servo moves abnormally when the receiver switch is on, and the transmitter switch is off, another transmitter is causing interference.

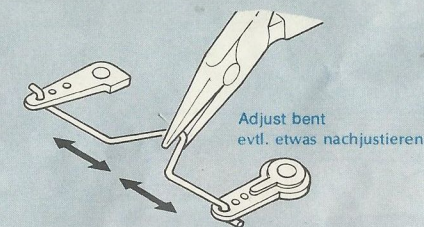
STORUNGEN UND URSACHEN

A) MOTOR DREHT SICH NICHT:

- Ist Sicherung durchgebrannt? Fehlerquelle siehe Seite 16.
- Der Schalter ist mit dem Servo verbunden. Wenn Servo sich nicht bewegt, Schalter des Empfängers und des Senders, sowie die Stromspannung überprüfen.
- Wenn Schalter und Servo in Ordnung — dann Drahtanschlüsse überprüfen (evtl. Kurzschluss).
- Wenn Motor nicht läuft, evtl. direkt an Batterie zum Prüfen anschliessen.
- Wenn Funkanlage nicht richtig arbeitet, zum Fachhändler gehen — NICHT versuchen, SELBST zu reparieren.

B) MOTOR DREHT, ABER WAGEN LÄUFT NICHT:

- Zahnrad im Getriebelager ist locker - nachziehen.



C) GESCHWINDIGKEIT IST LANGSAM:

- Die Spannung der Batterien ist zu schwach.

- Es darf nur die für diesen Kit geeignete Sicherung verwendet werden, da sonst grössere Spannung die Schalter durchbrennen kann.
- Lässt sich gut von "schnell" auf "langsam" umschalten? Wenn nicht, dann Länge des Schalter Servo verändern.
- Alle drehbaren Teile müssen immer gefettet sein. Wenn Antriebswelle überhitzt ist, ausbauen, glätten und neu schmieren.
- Es darf kein Gras etc auf der Motorwelle sein, sonst Brandgefahr.

D) WAGEN LÄUFT NICHT GERADE:

- In Neutralstellung müssen die Räder gerade nach Vorne stehen. Evtl. Servostange nachbiegen und neu justieren.
- Überprüfen dass Radmuttern fest angezogen sind, sonst gibt es das berühmte "Eiern".

E) WAGEN FÄHRT NICHT IN DIE GEWÜNSCHTE RICHTUNG:

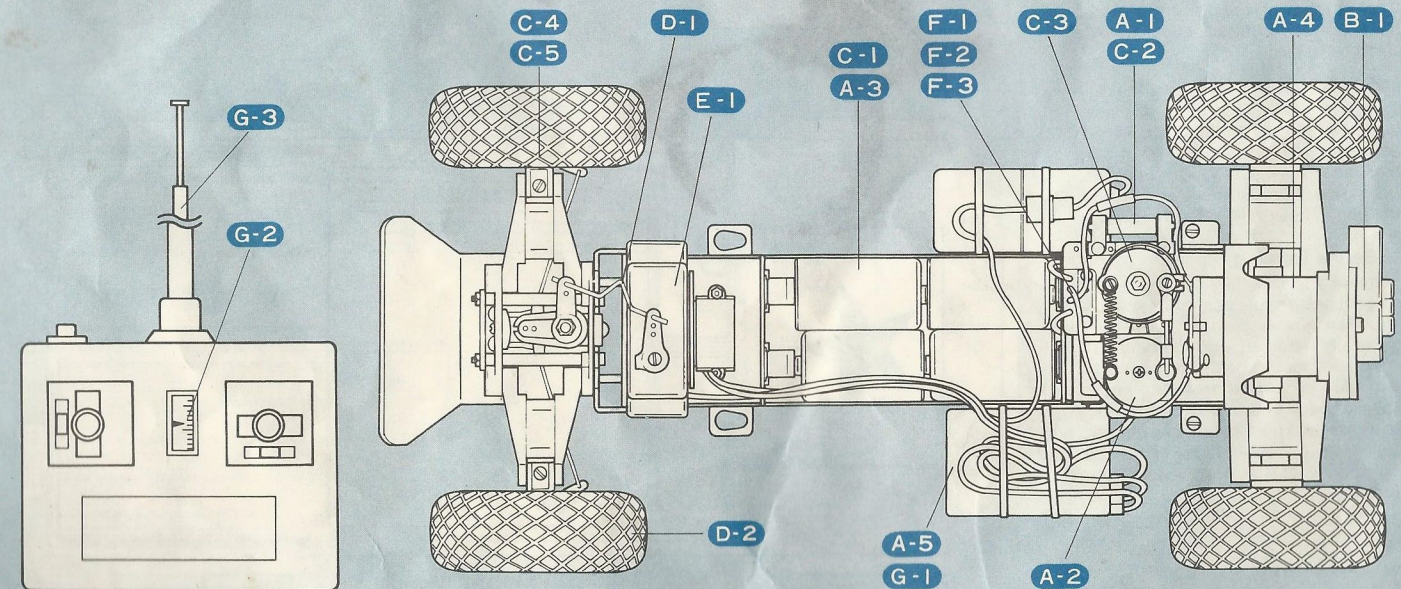
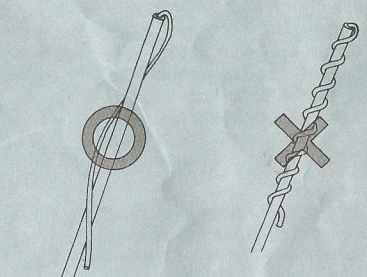
- Stromspannung für Servos überprüfen. Wenn Spannung schwach, dann dreht Servo auch nicht.

F) VOR-UND RÜCKWÄRTS IST VERWECHSELT:

- Kabelanschlüsse überprüfen.
- Schalter und Batterie-Anschlüsse prüfen.
- Evtl. Kabel von Motor und Schalter umpolen.

G) NICHT GENAUE KONTROLLE:

- Antenne richtig setzen.
- Batteriespannung ungenügend.
- Wenn sich Servos bewegen wenn Schalter auf "aus" - herrscht Wellensalat - ein anderer Sender stört.



PAINTING & MARKING

Da die Farben unter der englischen Bezeichnung zu erhalten sind, geben wir nur die englischen Namen an. **Keine Farben auf Nitrobasis verwenden!!** Wir übernehmen keine Haftung für Schäden die durch falsche Farbwahl entstehen. Nur **Farben verwenden**, die für **Polystyrol Plastik** geeignet sind.

<<Painting and Marking of the XR311>>

The XR311, a new type of high-speed combat support vehicle which will take the place of the jeep in future, is painted olive drab overall. The overfenders which border the wheel arches are made of rubber and should be painted flat black for accentuation. There is a possibility of the US Army's 4-colour camouflage painting being used when the XR311 is officially adopted. It would be also fun to paint the stylish body in your own way. For painting of details, see the assembly drawings. Apply marking as you like.

<<Bemalung der XR311>>

Die Neuentwicklung des alten "Jeep" der XR311 - ist vollkommen mit OLIVE DRAB bemalt, bzw. gespritzt. Die Kotflügelkanten sind mattschwarz. Natürlich kann dieses Fahrzeug je nach Wunsch auch in anderen Farben bemalt werden.

<<Painting>>

When painting your model remember to try and be as authentic as possible. 10 basic colours are recommended for your use. If you stick by these colours you will convey the real aura of the actual machine.

<<Bemalung>>

Beim Bemalen des Modelles soll man versuchen, so genau wie möglich zu sein. 10 Grundfarben werden benötigt für eine "echte". XR311

<<Painting implements>>

Have the following ready to hand: a flat brush for painting large areas, slender and pointed brushes for painting small parts, trays for mixing paints, sprays etc. After painting, remove paint from the brushes with thinner and wash them in water. Lacquer thinner is cheap and good for washing the brushes, but it must be handled with care because it melts plastic.

<<Zubehör für die Bemalung>>

Flacher Pinsel für grosse flächen, dünner und spitzer Pinsel für kleine Teile. Nach Malen den Pinsel mit Verdüner reinigen. Verdüner aber nicht mit Plastik in Verbindung bringen, da sonst Plastik schmilzt.

<<Before Painting>>

Remove all dust dirt and adhesive smears before attempting any painting. Remember painting does not generally hide bad workmanship. As previously mentioned remove excessive glue or joins with a file, sharp knife or very fine emery cloth. Most parts are best painted after assembly, but some inaccessible parts may be painted before removing from the sprue.

<<Vor dem Malen>>

Soll man Staub und Leimreste entfernen. Auch eine gute Bemalung verdeckt nicht schlechte Bauarbeit. Unebenheiten mit Feile oder Klinge entfernen.

Viele Teile lassen sich erst nach dem Zusammenbau bemalen, jedoch die kleinen Teile bemalt man am besten am Spritzling.

<<Colours to be used>>

<<Bemalung>>

- Olive Drab Dark Green
- Matt Black Red
- Matt Brown Chrome Silver
- Matt Flesh

<<Spray painting hints>>

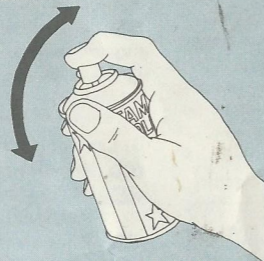
Firstly always spray indoors in windless and dust-free conditions. Spread newspaper under your work. Mix the paint well by shaking the can for three minutes and then test spray against some cardboard from about 20cm, checking that the paint is properly mixed. When spraying the car body, hold the can about 20cm from the plastic, moving the can quickly always in the same direction and ensure an every application. A good tip is to imagine you are spraying a larger surface, i.e. the surrounding newspaper you will then probably achieve a more even finish.

<<Painting and Marking>>

<<Bemalung und Markierung>>

<<Bemalung mit Sprayfarben>>

Nur in zug- und staubfreien Räumen spritzen. Teile auf ausgebreitete Zeitung stellen. Spraydose gut durchschütteln (3 Min) und durch Spritzen auf Karton prüfen, ob Farbe gut gemischt ist. (20cm Abstand). Das Modell in gleicher Richtung grossflächig besprühen. **Keine Sprayfarben auf Nitrobasis sondern nur Sprayfarben für Polystyrol Plastik verwenden.**

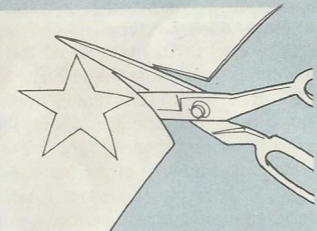


Shake the spray can for about 3 minutes. Spraydose vor Sprühen ca 3 Minuten schütteln.

<<Marking>>

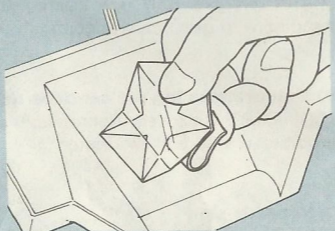
(1) Decals are on seals of sticker tape. A decal to be applied should be cut off beforehand. (2) Peel off the end of lining a little and put the decal in position on the body. Then, remove the lining slowly. In so doing, be careful that the decal does not move out of position and that air is not trapped under it. If the lining is completely removed

in advance, the decal may be wrinkled or contain unwanted air bubbles.

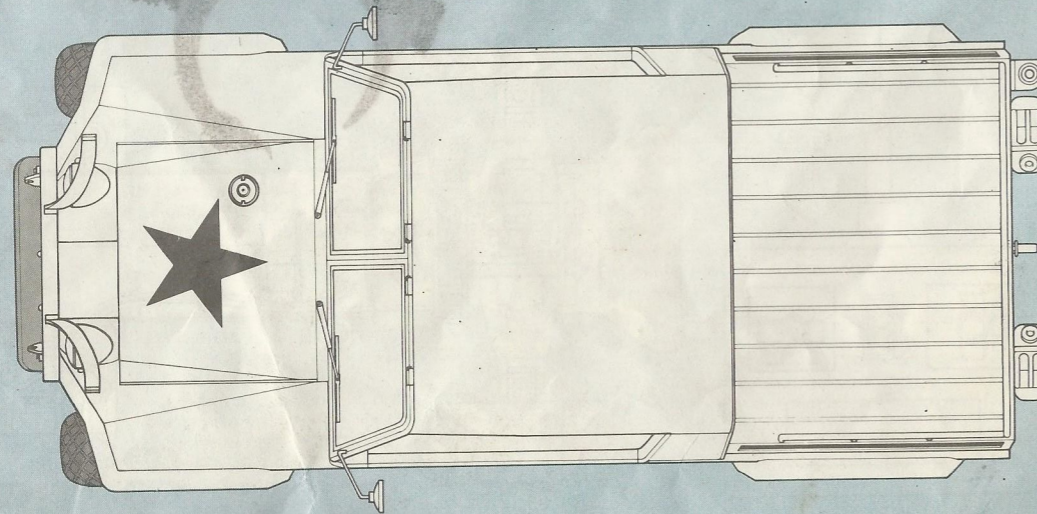
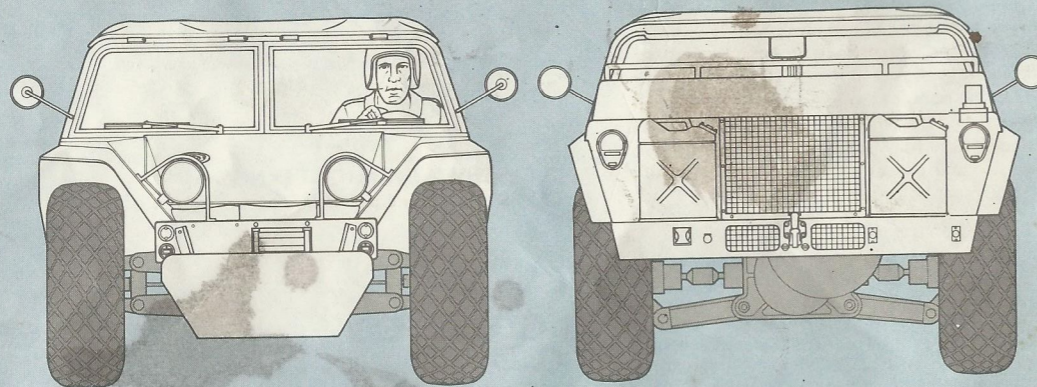
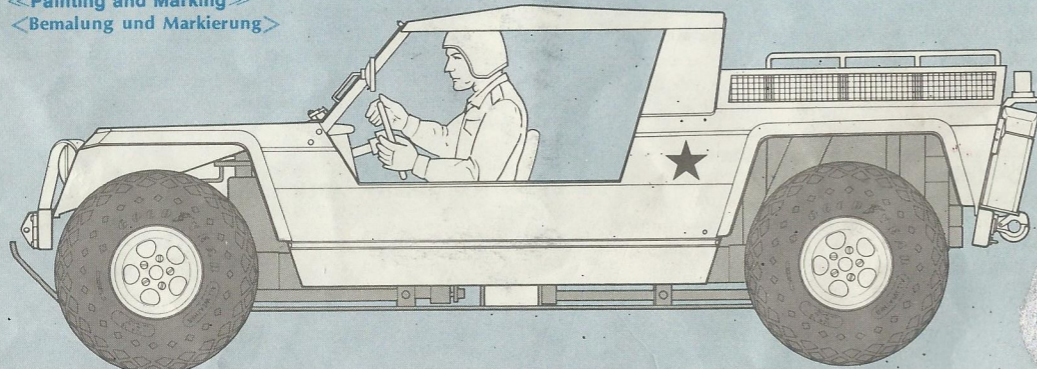


<<Markierung>>

Die Decals sind selbstklebend. Erst ausschneiden, dann anbringen. Das Schutzpapier etwas entfernen. Decals ansetzen und dann vorsichtig aufdrücken und Papier gleichzeitig abziehen. Wenn das Papier vorher ganz abgezogen wird, kann das Decal zerknittern oder es bilden sich Blasen.

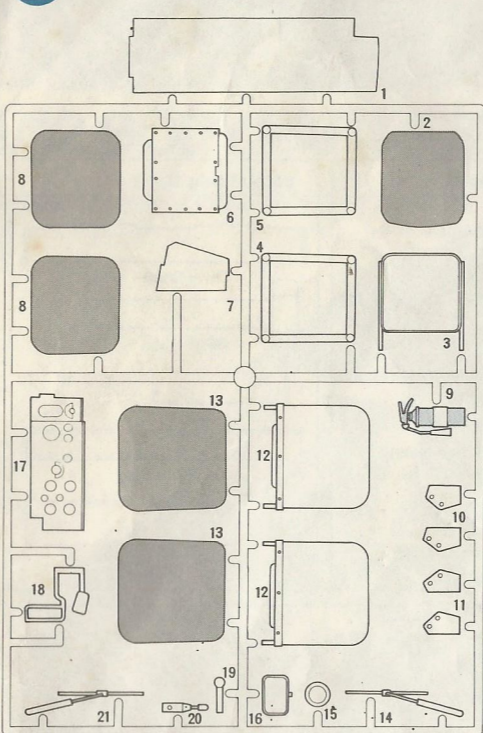


abziehen. Wenn das Papier vorher ganz abgezogen wird, kann das Decal zerknittern oder es bilden sich Blasen.

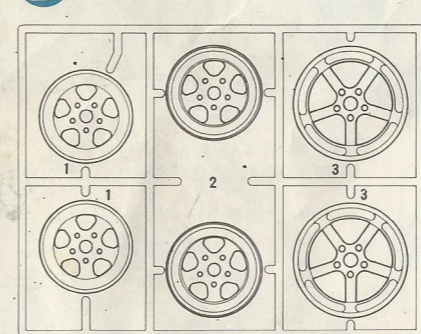


PARTS

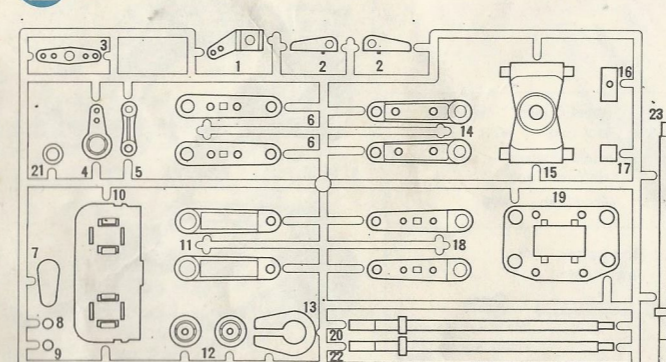
B PARTS



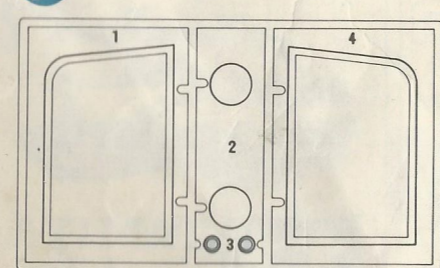
D PARTS (x2)



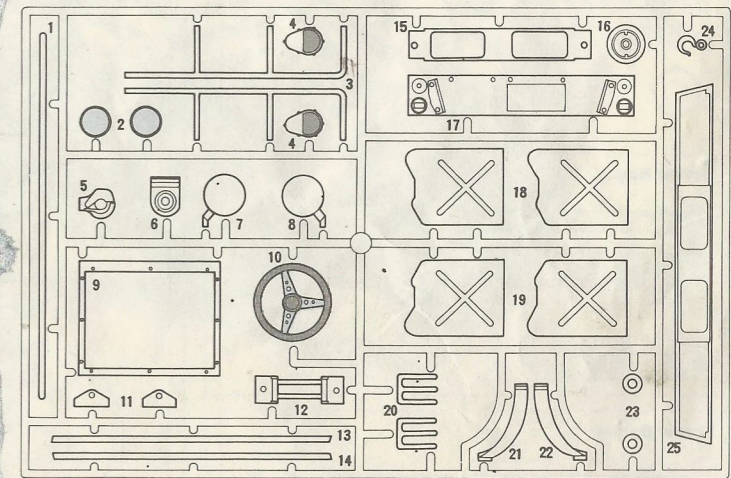
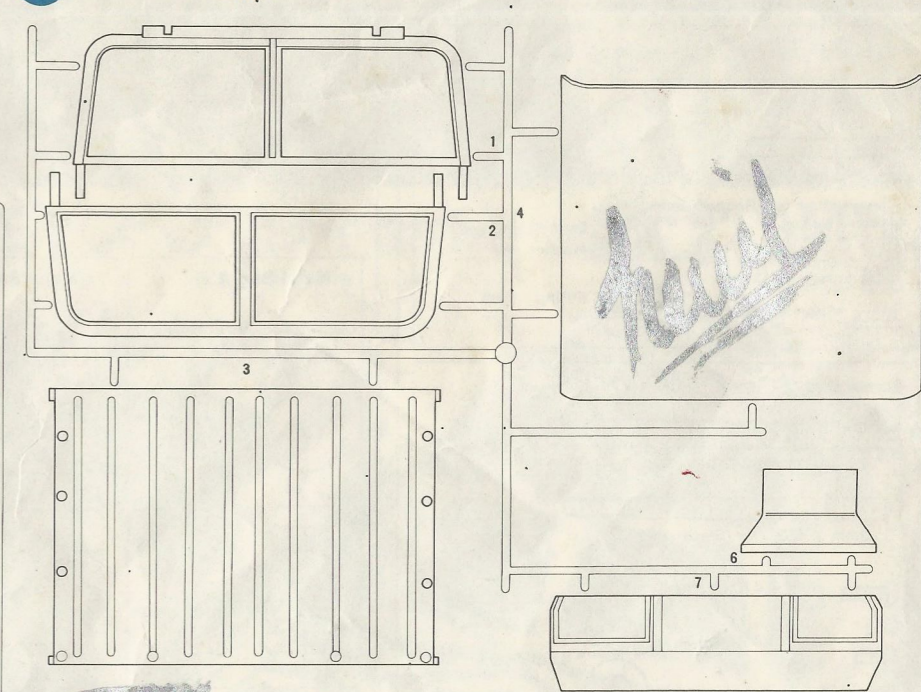
E PARTS (x2)



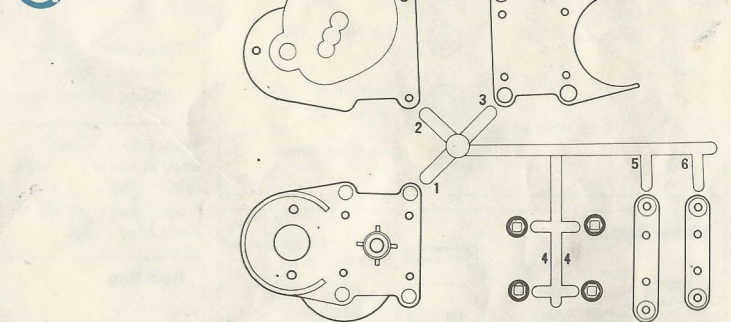
F PARTS



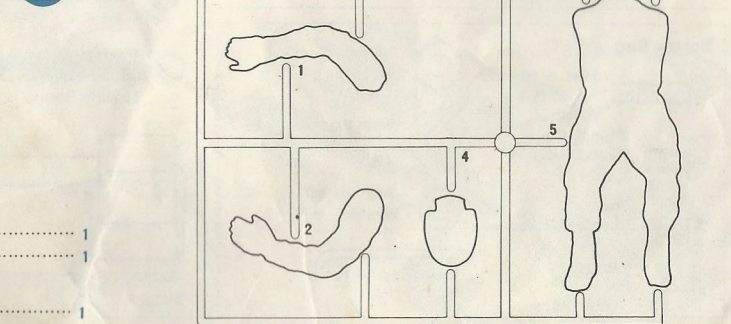
A PARTS



G PARTS



Z PARTS

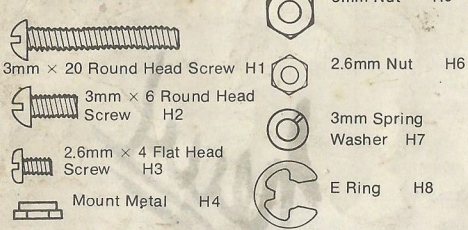


- Body 1
- Lower Body 1
- Decal 1

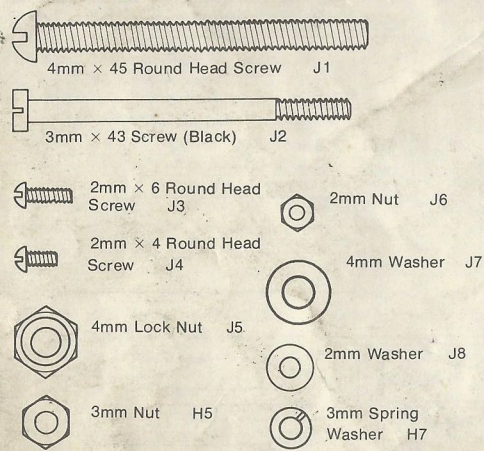
PARTS

«Metal Box»

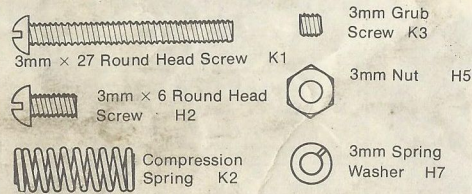
Screw Bag ①



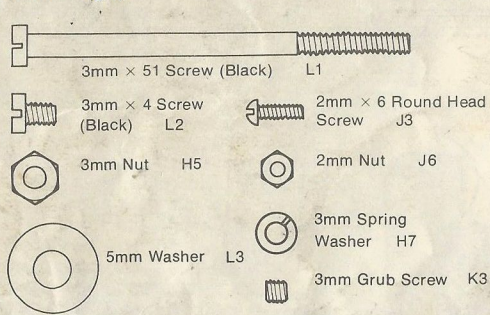
Screw Bag ②



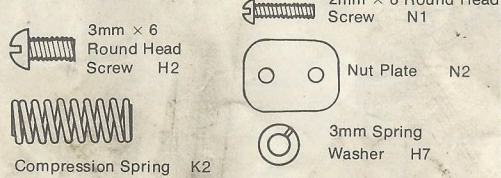
Screw Bag ③



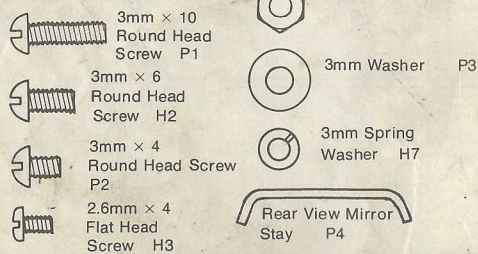
Screw Bag ④



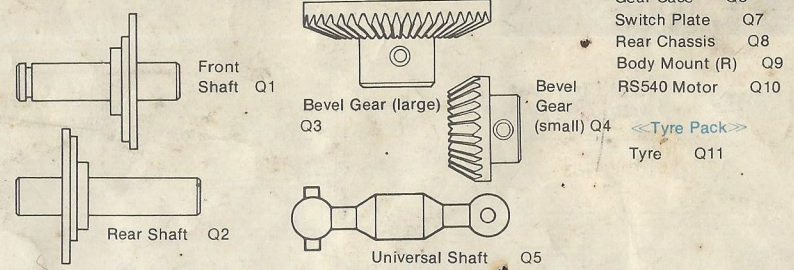
Screw Bag ⑤



Screw Bag ⑥



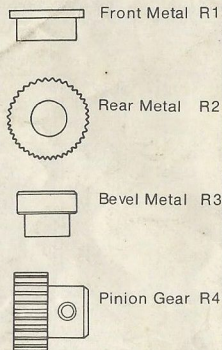
«Blister Pack»



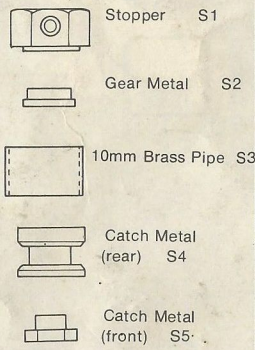
«Tyre Pack»

Tyre Q11

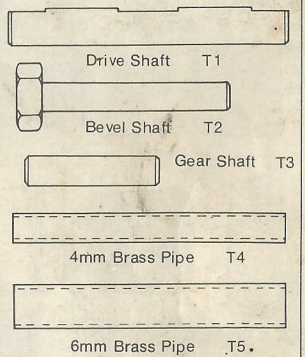
«Metal Bag A»



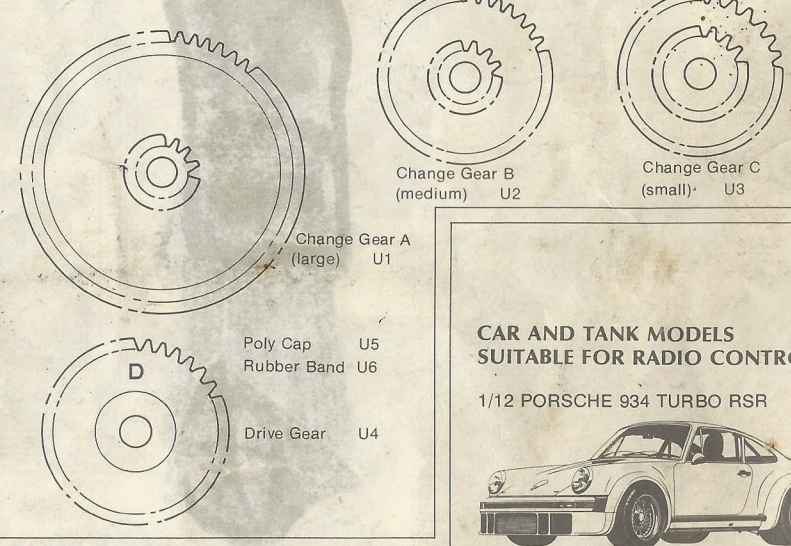
«Metal Bag B»



«Metal Bag C»



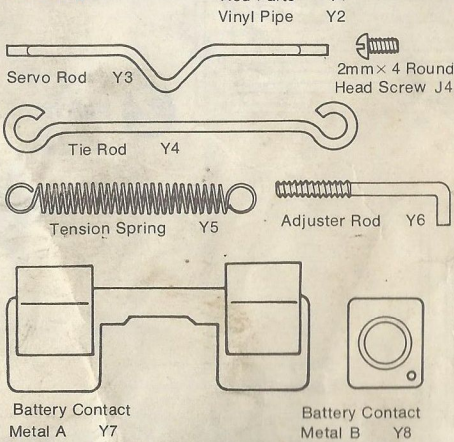
Gear Bag



Chassis V1
Antenna Pipe V2
Plastic Sheet (1.2mm) V3

Front Guard W1
Body Mount (F) W2
Stay W3
Front Chassis W4
Front Stay W5
Under Guard W6
Tool Bag W7
Double Faced W8
Adhesive Tape
Wire Mesh W9

Rod Bag



CAR AND TANK MODELS SUITABLE FOR RADIO CONTROL

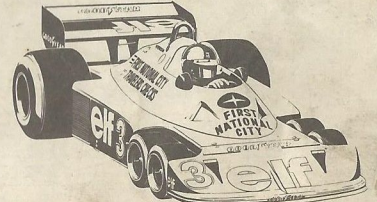
1/12 PORSCHE 934 TURBO RSR



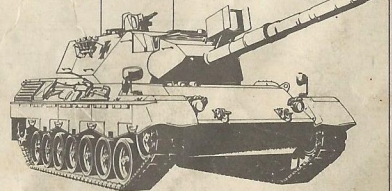
1/12 MARTINI PORSCHE 935 TURBO



1/12 TYRRELL P34 SIX WHEELER



1/16 WEST GERMAN TANK LEOPARD TYPE A4



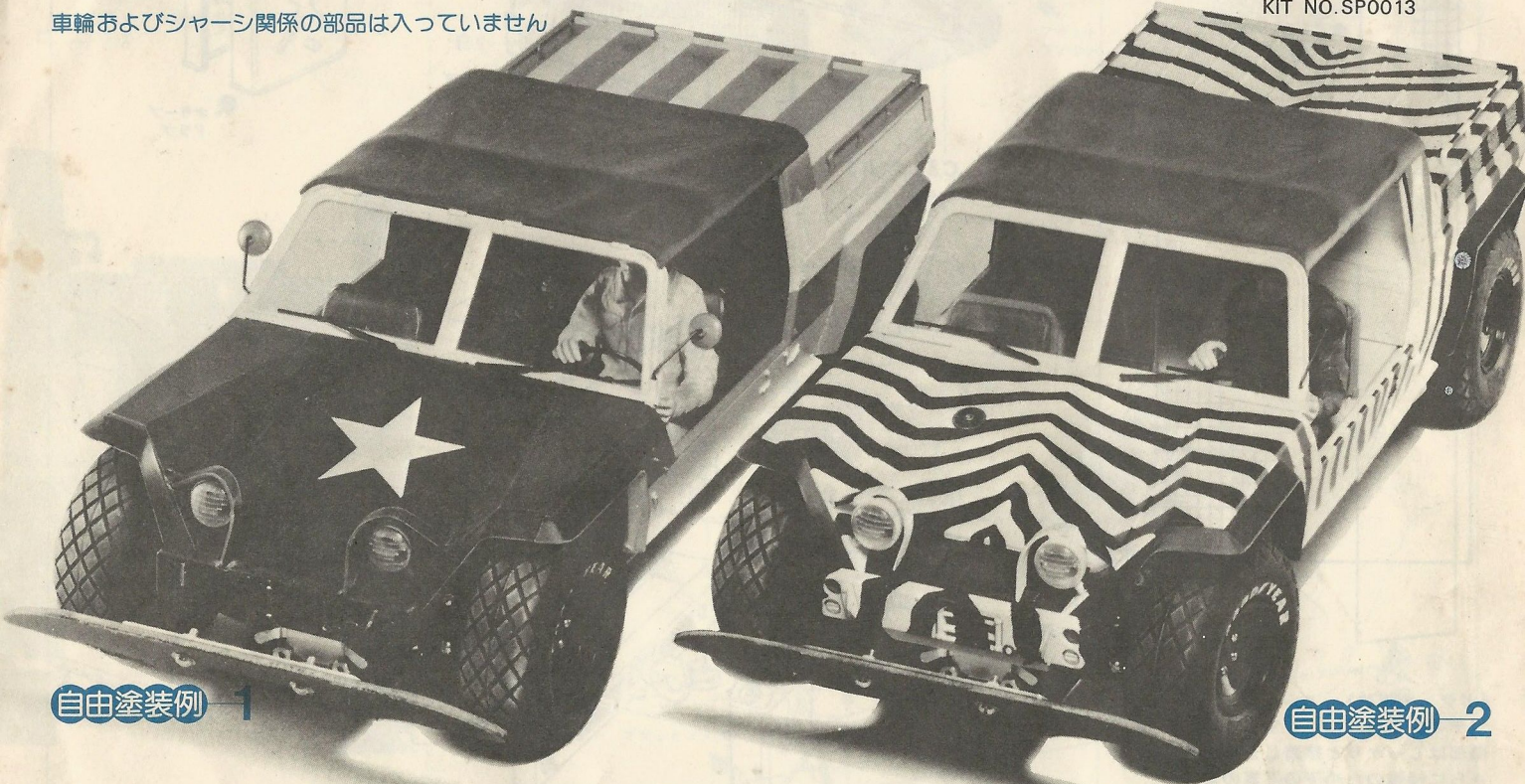
TAMIYA
TAMIYA PLASTIC MODEL CO.
620, OSHIKA, SHIZUOKA-CITY, JAPAN

XR311

1/12 BODY PARTS SET《スペアボディセット》

★★ TAMIYA
TAMIYA PLASTIC MODEL CO.
KIT NO. SP0013

車輪およびシャーシ関係の部品は入っていません



自由塗装例 1

自由塗装例 2



★組立てに入る前に、説明図を最後までよく見て、全体の流れをつかんで下さい。

★ニッパー、ピンセット、ナイフなどの工具を用意して下さい。部品をランナー（枝）からとるときは、ニッパーでいねいに切りとります。無理にもぎとると部品を傷つけることがあります。

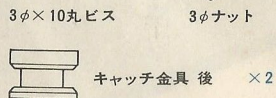
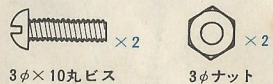
これは塗装指示のマークです。箱を参考に自由な塗装も楽しめます。

★図中の青く塗られた部分は接着箇所です。

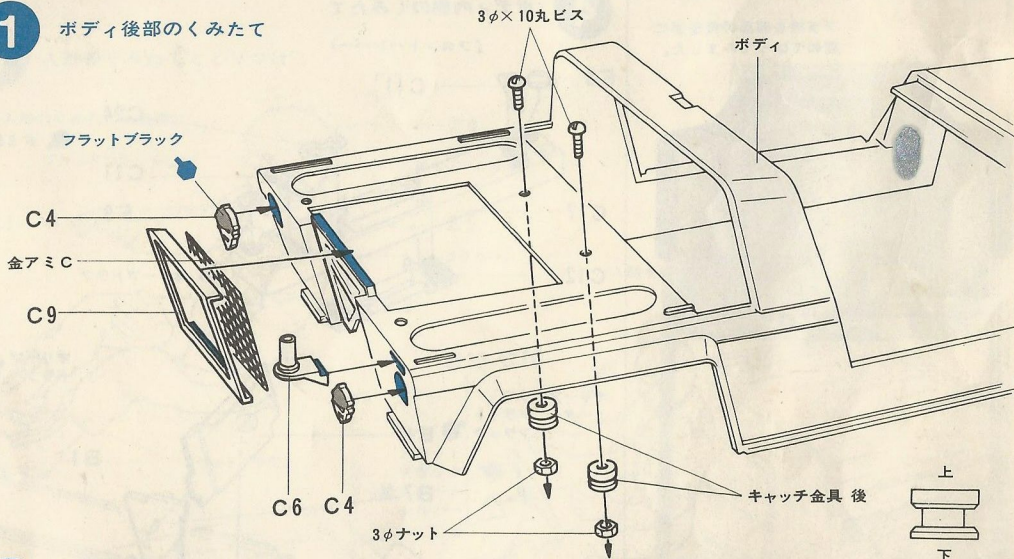
★塗料、接着剤はプラスチック用をお使い下さい。

1 〈使用する金具小物原寸図〉

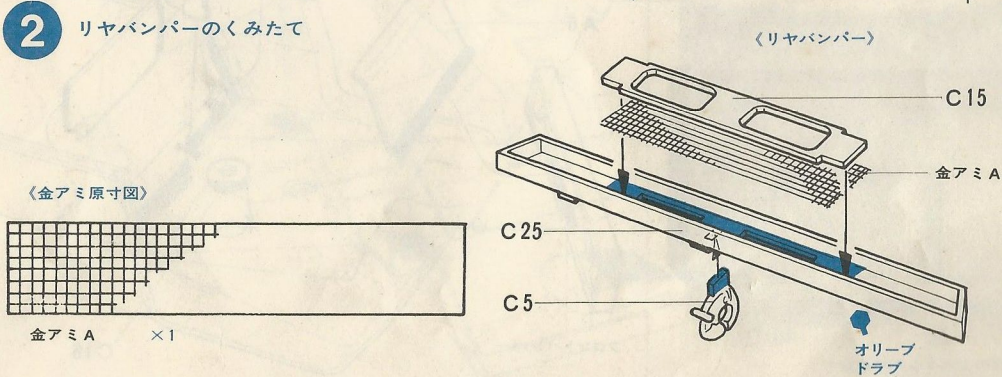
〈金具袋詰より〉



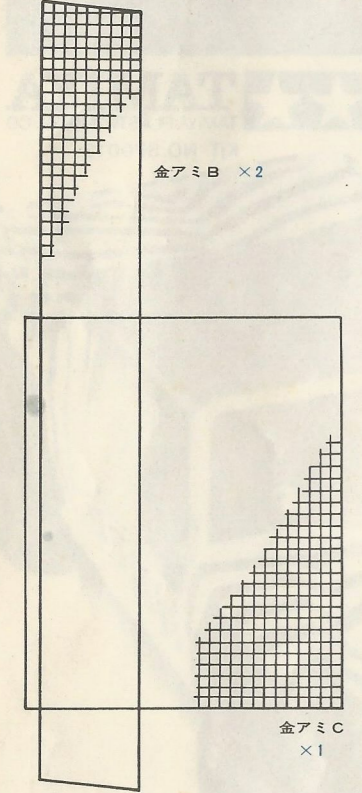
1 ボディ後部のくみ立て



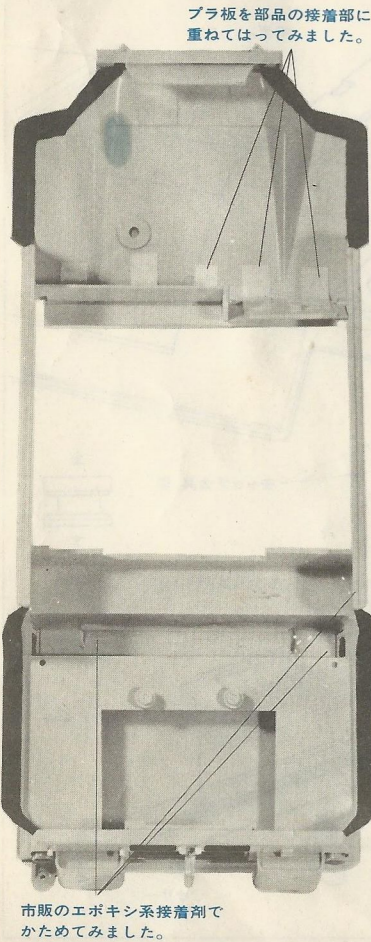
2 リヤバンパーのくみ立て



3 <リヤプレートのくみため>
リヤプレートにとりつける金アミBはC13、C14とC3ではさみます。C3をA3にとりつける前にさし込んでおきます。金アミが部品と合せにくい場合、多少小さめにはさみで修正して下さい。

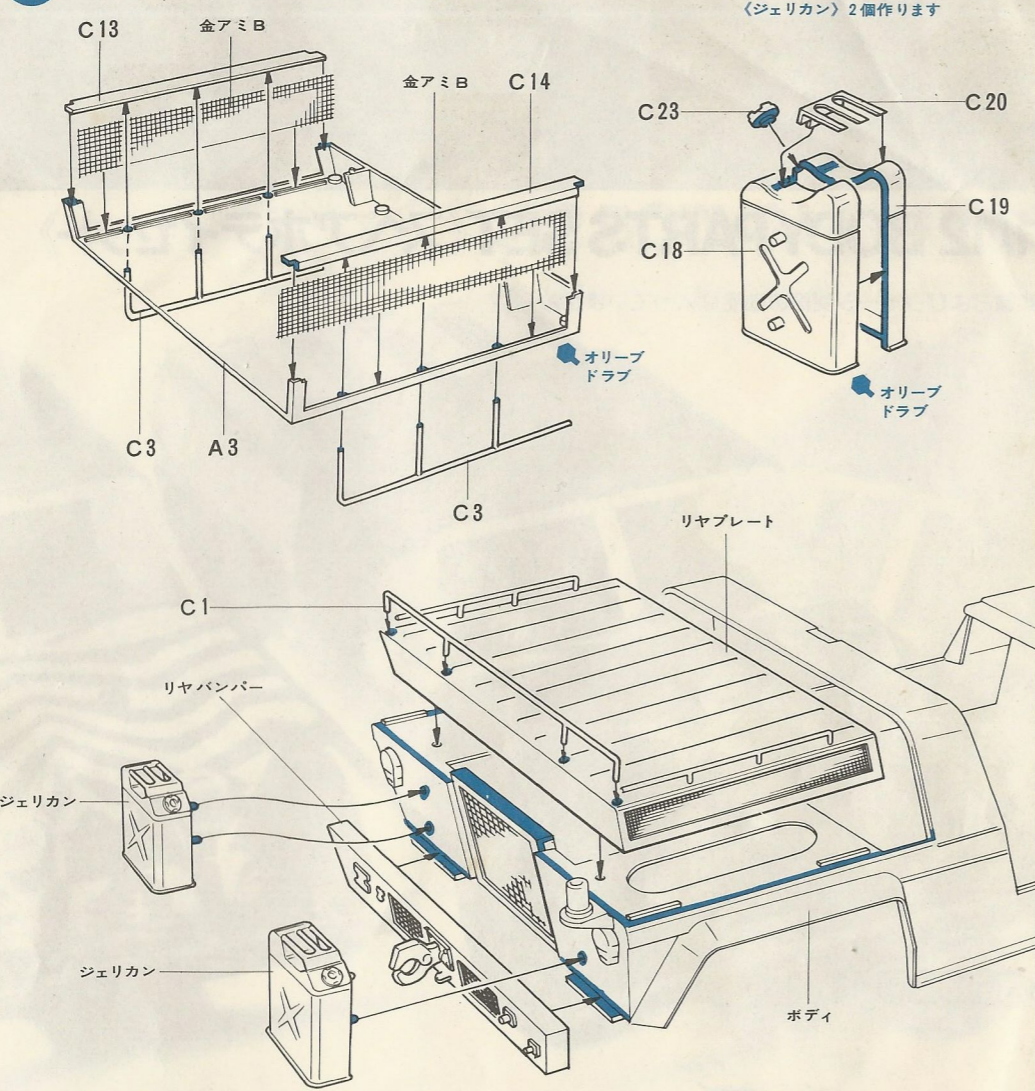


<ボディの補強>
ボディをこわれにくくするため、各接着部はしっかりと接着しましょう。さらに補強のため下の写真のように、裏側からブラ板や、市販のエポキシ系接着剤等で補強するのもよい方法です。

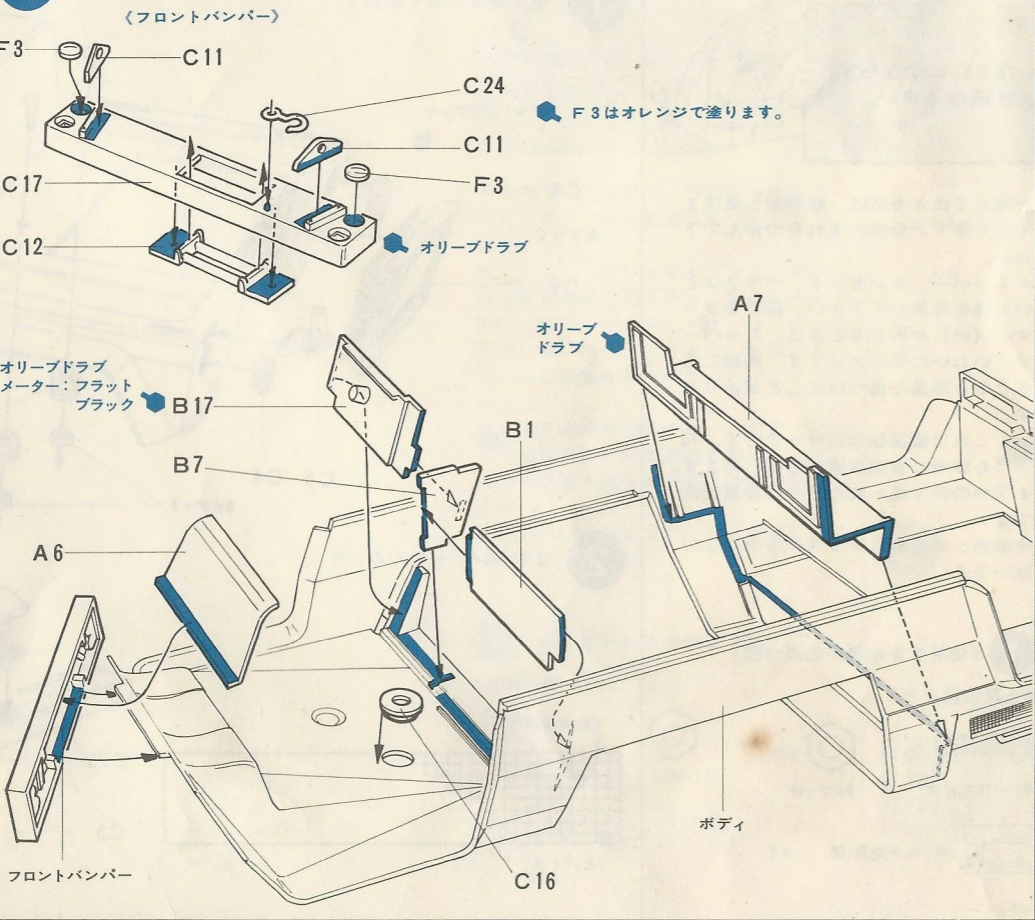


市販のエポキシ系接着剤でかためてみました。

3 リヤプレートのくみたと取り付け <リヤプレート>

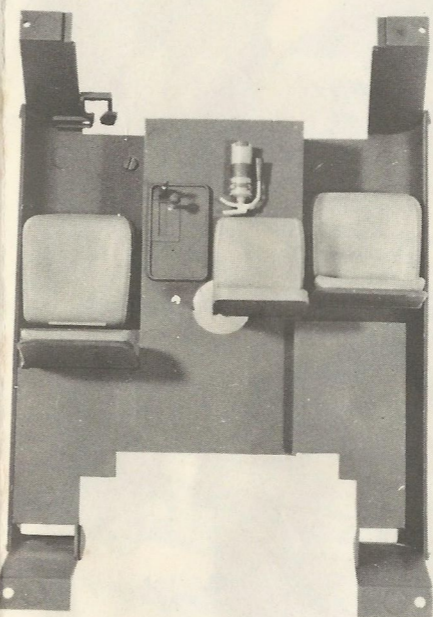
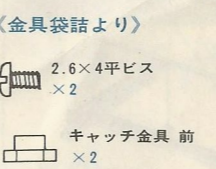


4 ボディ内側のくみため <フロントバンパー>



5 <シートのくみため>
シートは、パッセンジャーシートサブシート、ドライバーズシートの3つを作ります。それぞれ組み立てが違いますから番号をたしかめて組み立てて下さい。

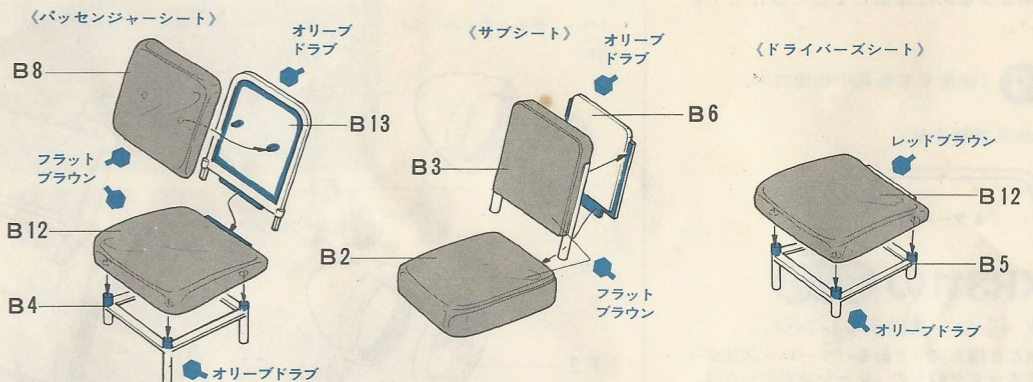
6 <使用する金具小物原寸図>



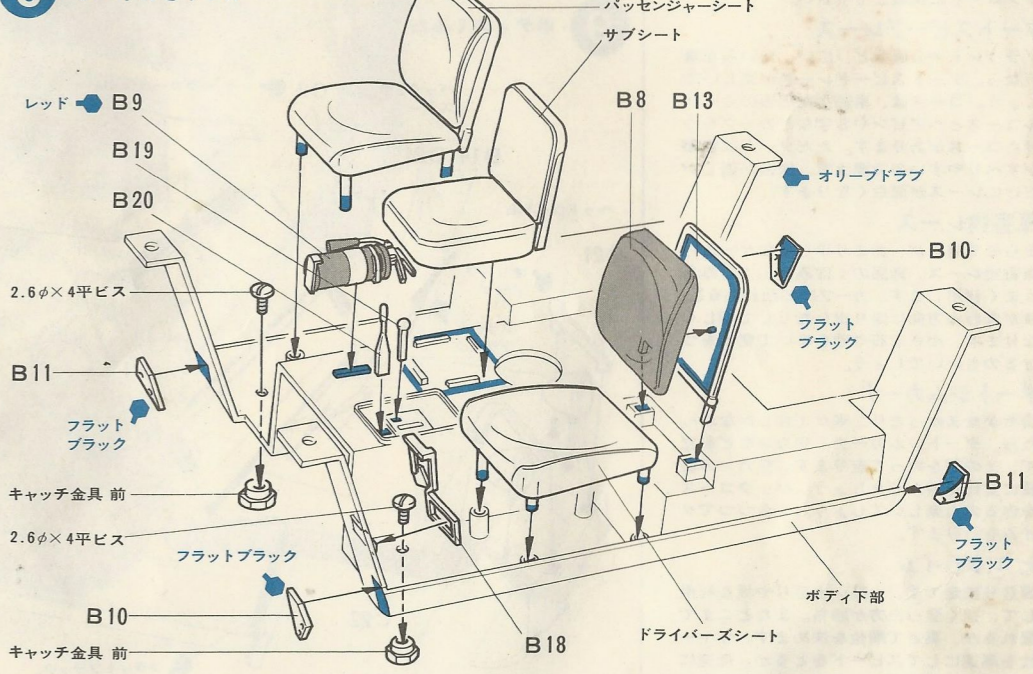
7 <人形のくみたととりつけ>
人形のうではハンドルにあわせてとりつけます。又人形は塗装してからとりつけて下さい。



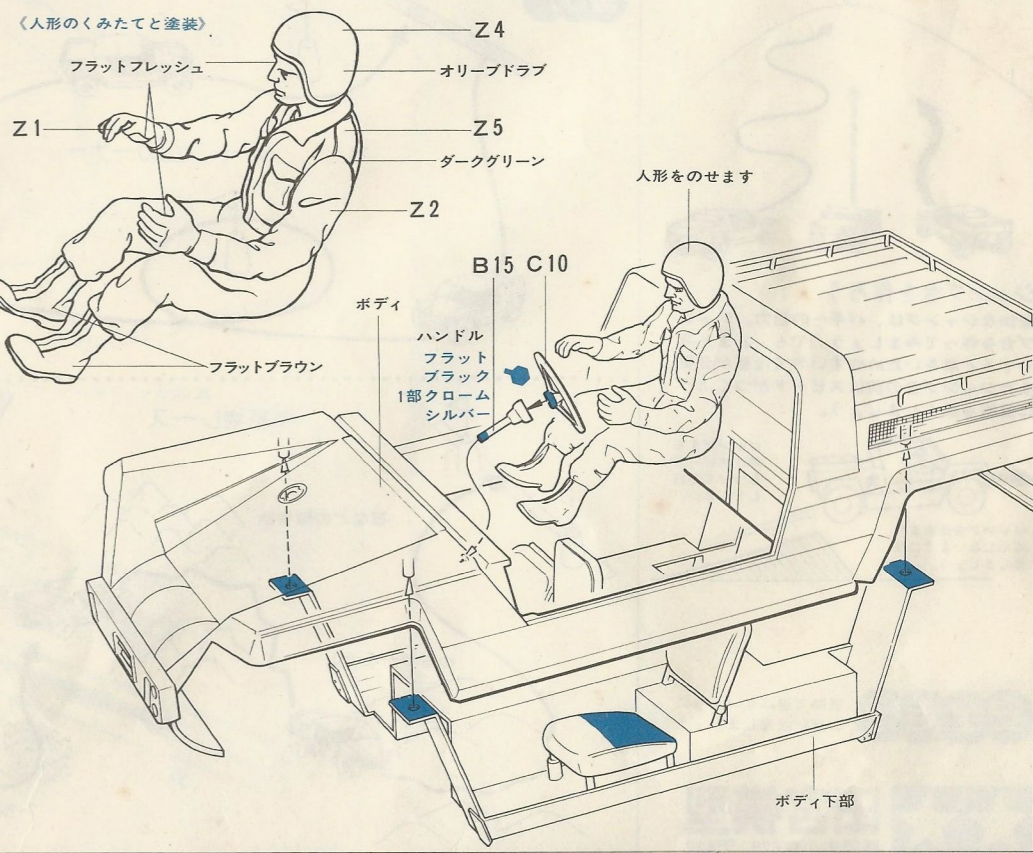
5 シートのくみため



6 シートのとりつけ



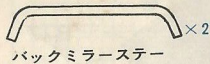
7 人形のくみたととりつけ



8 〈ウインドウのくみため〉
ウインドウとヘッドライトは接着剤が透明部品につくと曇ります。接着剤は少なめに注意してとりつけて下さい。

9 〈使用する金具小物原寸図〉

〈金具袋詰より〉



XR311の遊び方

ダートコースにチャレンジ。

道なき道を走りまわるバギーレースはダイナミックそのもの。レーシングカーとは、またちがった魅力があります。タミヤのXR311コンパクトバギーで、ダートコースやオフロードに挑戦して下さい。

ダートスピードレース

グラウンドや公園など、広い、たいらな場所なら、ダートスピードレースが楽しめます。コースは、単純な円形のオーバルコースとヘアピンやS字などカーブをつけたコースがあります。ただダートは路面がすべりやすいので要注意。操縦が難しいだけにレースが面白くなります。

障害物レース

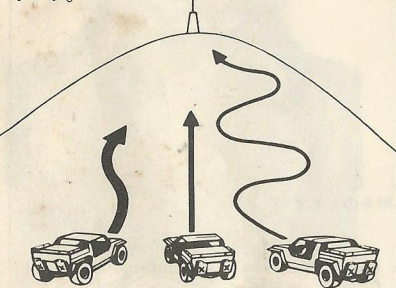
走らせる場所が、あまり平らでなかったら障害物レース。地面のくぼみやふくらみをうまく利用します。カーブに凹凸があると、車が思わぬ方向に走り出したりして楽しくなります。小さな石や砂をまいて変化をつけるのもいいでしょう。

ダートジムカーナ

場所がせまかったり、車が1台しかなかったら、ダートジムカーナ。空カンなどを立て、その間をぬって走ります。空カンの位置に変化を持たせましょう。バックコースを作るのも楽しいでしょう。1台ずつでタイムを計ります。

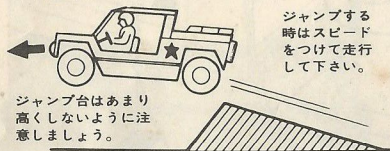
ヒルクライム

坂登り競走です。小高い土盛りや坂を利用して、速く登った方が勝ち。またどこまで登れるか、高さで順位を決めます。ギヤ比を高速にしてスピードをとるか。低速にしてパワーを使うか。じくざくに登るかまっすぐ登るか、ギヤ比とコース取りがポイント。



ジャンプ台を作ろう

豪快なジャンプは、バギーの魅力。ジャンプ台を作ってみましょう。でも、あまり高くすると車をいためやすいので注意が必要。またジャンプ台の前はスピードがつくように直線を長くしましょう。

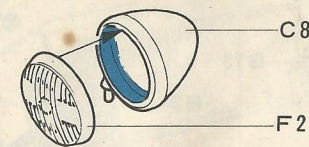


ジャンプ台はあまり高くしないように注意しましょう。

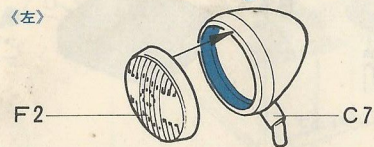
安全走行 道路で遊ばないようにお互い注意しましょう

8 ウインドウのくみため

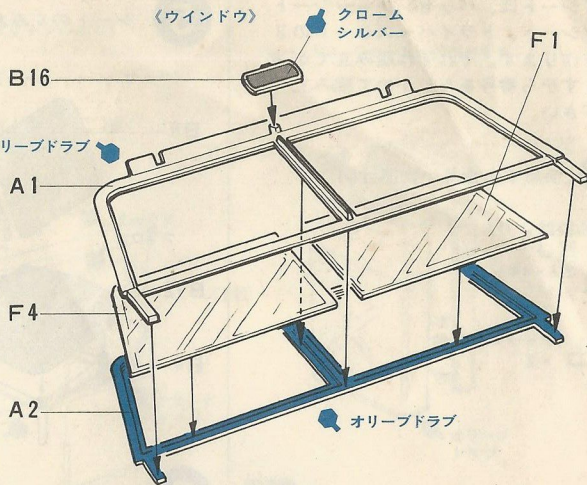
〈ヘッドライトのくみため〉
〈右〉



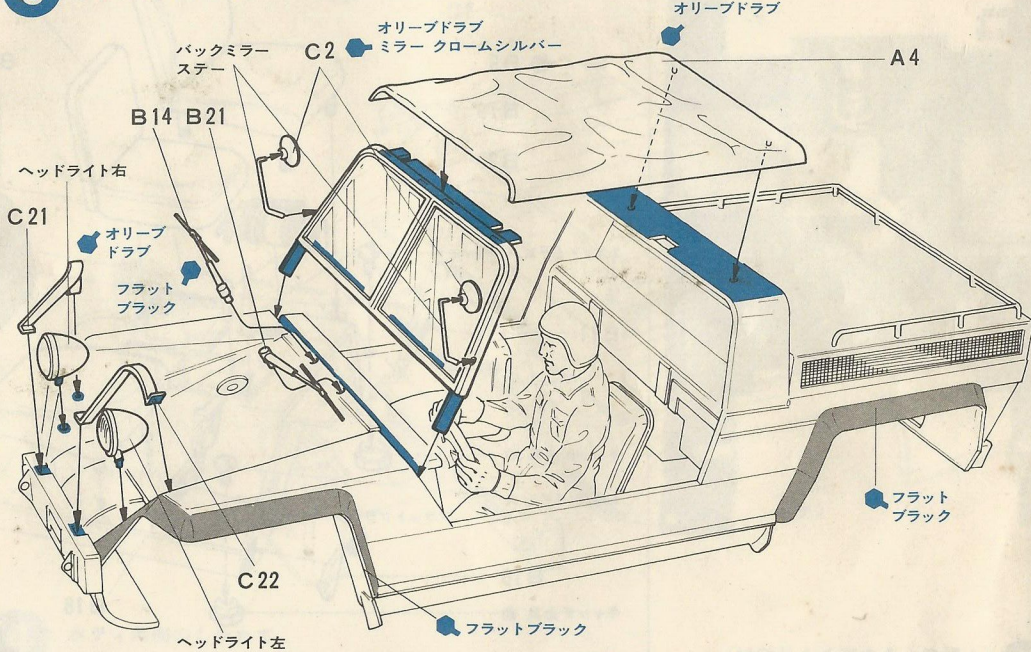
〈左〉



〈ウインドウ〉



9 ボディのくみため



遊び方

