

- READY TO ASSEMBLE R/C MODEL KIT
- THREE STEP FORWARD AND REVERSE SPEED CONTROL
- AUTHENTIC PATTERN FRONT AND REAR SEMI-PNEUMATIC TIRES
- HIGHLY DETAILED INJECTION MOULDED BODY AND FRAMEWORK

# 1/10th SCALE R/C U.S. ARMY HIGH PERFORMANCE BUGGY FAST ATTACK VEHICLE

TAMIYA PLASTIC MODEL CO. ★★

OSHIKA, SHIZUOKA-CITY, JAPAN.

- REALISTIC SOLDIER DRIVER FIGURE AND M-60 MACHINE GUN
- FRONT AND REAR WHEEL INDEPENDENT SUSPENSION
- INCLUDES HIGH PERFORMANCE RS-540'S MOTOR
- SEALED GEAR BOX WITH DIFFERENTIAL
- BATHTUB A.B.S. RESIN FRAME





# FAST ATTACK VEHICLE



## RADIO CONTROL UNIT

This kit is designed for a 2 channel 2 servo digital proportional type of radio control system. Almost any 2 channel radio can be used. There are some older 2 channel and 3 to 8 channel sets that are unsuitable because their servos and receiver will not fit into the space provided.

### Funkfernsteueranlage

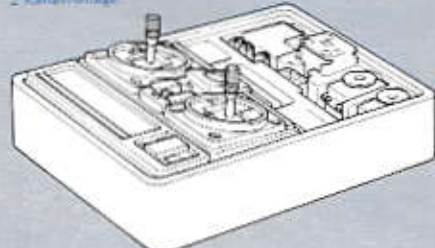
Dieses Modell ist für den Einbau einer 2 Kanal-Anlage mit 2 Servos ausgelegt. Verschiedene Fabrikate haben jedoch Bauteile (Servo, Empfänger etc.) die größenmäßig nicht verwendet werden können.

### Necessary Items

Folgende Teile werden benötigt:

#### 2 channel radio control unit

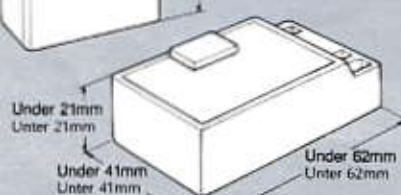
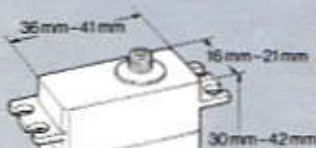
2 Kanal-Anlage



Batteries for RC Unit  
Batterien für RC Anlage



«Suitable Servo and Receiver Size»  
«Größe der Servos und des Empfängers»



«Power Source»  
«Stromversorgung»

★ This kit is designed to use a Tamiya Ni-Cd (6V) or (7.2V) battery pack. Purchase it separately at your hobby supply house.

★ Nur aufladbare NC Akkus von Tamiya verwenden. 6 Volt (5 Zellen) oder 7,2 Volt (6 Zellen)



Tamiya Ni-Cd (7.2V) Battery  
Tamiya NC 7.2V Akku



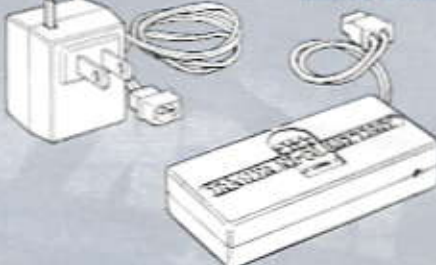
Tamiya Ni-Cd (7.2V) Racing Pack  
Tamiya NC 7.2V Racing Pack



FOR  
MAXIMUM  
PERFORMANCE  
USE ONLY  
TAMIYA NI-CD  
BATTERIES



Tamiya Ni-Cd (6V) Battery  
Tamiya NC 6V Akku



Tamiya Ni-Cd 7.2V Quick Charger (6V charger is also available)  
Tamiya NC 7.2V Quick Charger  
Tamiya NC 6V Quick Charger

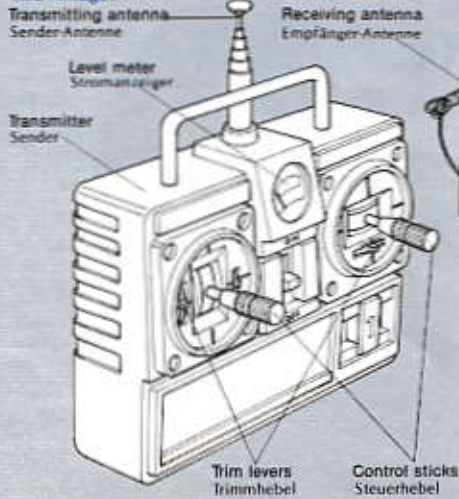


The optional nickel cadmium battery contains either 5 or 6 cells of 1200mAh capacity. This battery gives your model excellent accelerating ability, etc. Also, it is economical because it can be charged more than 300 times.

Die Tamiya NC Akkus haben entweder 5 oder 6 Zellen mit 1200mAh. Mit diesen Akkus kann das Fahrzeug einmalig beschleunigt werden, sie sind wirtschaftlich, denn die Akkus können ca. 300 mal aufgeladen werden.

## «RC Equipment»

### «RC Anlage»



Transmitting antenna  
Sender-Antenne

Receiving antenna  
Empfänger-Antenne

Receiver  
Empfänger

Batteries and battery box for receiver  
Batterie und Batterie-Box für Empfänger

Receiver switch  
Empfängerschalter

Servo horn  
Servohorn

Level meter  
Stromanzeiger

Transmitter  
Sender

Trim levers  
Trimmhebel

Control sticks  
Steuerhebel

Steering servo  
Steuer-Servo

Switch servo  
Schalter-Servo

## «Tamiya Ni-Cd 6V Mini Pack»

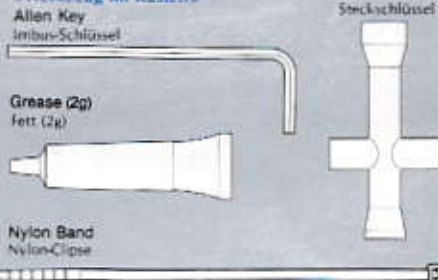
The Tamiya Mini Pack 6V Ni-Cd battery is an ideal substitute for your existing receiver battery. It is



quickly rechargeable from the Tamiya 7.2V battery; is light in weight and will provide about 20 minutes of operation with each quick charge (15 minutes).

## «Tools in this kit»

### «Werkzeug im Kasten»



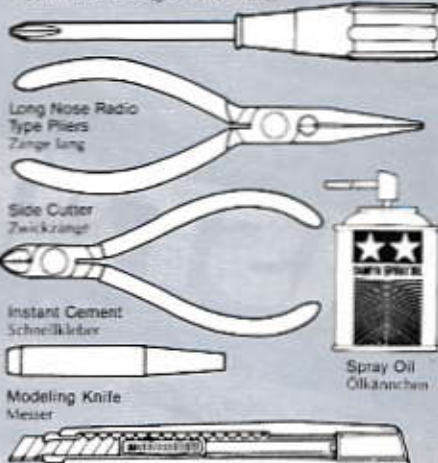
Grease (2g)  
fett (2g)

Nylon Band  
Nylon-Clipse

## «Not included in kit»

### «Im Kasten nicht enthalten»

★ Screwdrivers (large and middle)  
★ Schraubenzieher (gross und middle)



Long Nose Radio  
Type Pliers  
Zange lang

Side Cutter  
Zwickzang

Instant Cement  
Schnellkleber

Modeling Knife  
Messer

★ Tweezers and cellophane tape will also assist in construction.

★ Pinzette und Tesafilm erleichtern das Bauen

## «Painting»

### «Bemalung»

Painting is an important point in finishing any model. Refer to page 16 for suggestions and examples. Spray paint the large areas. Use Tamiya acrylics for details.

## «Composition of Digital Proportional System»

The digital proportional system comprises a transmitter, receiver, servos, etc.

Transmitter : Serves as a control box. Stick movements are transformed into radio wave signals which are transmitted through the antenna.

Receiver : Receives signal from the transmitter.

Servos : Servo transforms signals received by the receiver into mechanical movements and actuates the control portion of the car.

## «Funkfernsteueranlage»

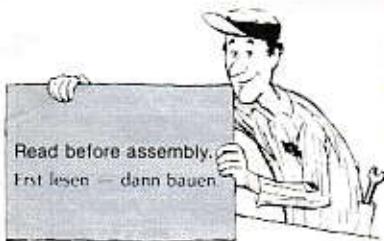
Für RC Elektromodelle wird eine 2 Kanal Anlage mit 2 Servos empfohlen. Die 2 Kanal Anlage besteht aus:

Sender : Hebelbewegungen werden in Funkwellen umgesetzt und geben über einen Empfänger Impulse an die im Auto eingebauten Servos.

Empfänger : Empfängt Signale vom Sender.

Servos : Signale vom Empfänger werden im Servo mechanisch übersetzt





Read before assembly.  
Erst lesen — dann bauen

This kit is designed to use a Tamiya Ni-Cd 7.2V Racing Pack, normal 7.2V and 6V Ni-Cd battery for power source.

There are many small screws, nuts and similar parts. Assemble them carefully referring to the drawings. To prevent trouble and finish the model with good performance, it is necessary to assemble each step exactly as shown.

Für diesen Kit kann man den Tamiya 6 Volt und 7.2 Volt Akku oder den Tamiya 7.2 V Racing Pack verwenden.

Viele kleine Schrauben und Muttern etc. müssen genau der Anleitung nach eingebaut werden. Exaktes Bauen bringt ein gutes Modell mit bester Leistung.

Stellen mit diesem Zeichen erst fetten, dann zusammenbauen.

**Grease** Apply grease to the places shown by this mark. Apply grease first, then assemble.

«Screwdrivers»

«Schraubenzieher»

You should have at hand the two types of screwdrivers as shown below. Use only the correct driver to prevent damage to the screws.

Man sollte 2 verschiedene Schraubenzieher haben, um Beschädigung der Schraubenköpfe zu vermeiden.

- + Screwdriver large (Full-sized)
- + Schraubenzieher gross (Originalgröße)



For 3mm self tapping screw, 3mm screw and 5mm screw. Use one that has a length over 8cm. Schraubenzieher mit einer Länge über 8cm verwenden.

- + Screwdriver middle
- + Schraubenzieher mitte



For 2.6mm self tapping screw, 2mm screw and damper shaft. Für 2.6mm Blechschrauben, 2mm Schraube und Dämpfer Welle.

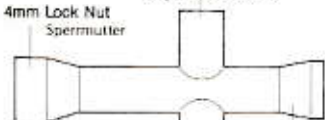
«Tool»

«Werkzeug»

Box and Allen Wrenches are included in kit. Use them for screws and nuts as shown.

Steckschlüssel und Imbusschlüssel sind im Kit enthalten.

- Ball Pin Kugelschraube



- 4mm Lock Nut Sperrmutter
- Not used. (2.6mm Nut) 2.6mm Mutter (wird nicht gebraucht)
- 3mm Flange Nut Kragenmutter

«Box Wrench»

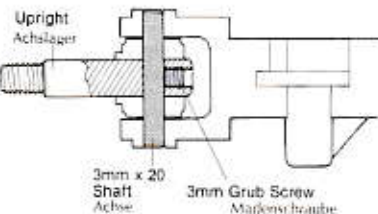
«Steckschlüssel»



«3mm x 20 Shaft»

«3mm x 20 Achse»

Attach 3mm x 20 shaft firmly with 3mm grub screw. Die Achse wird mit 3mm Madenschraube gehalten.

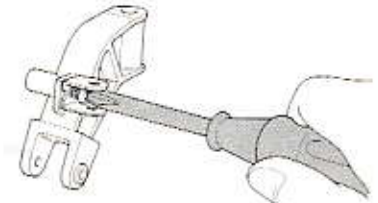


«Self Tapping Screws»

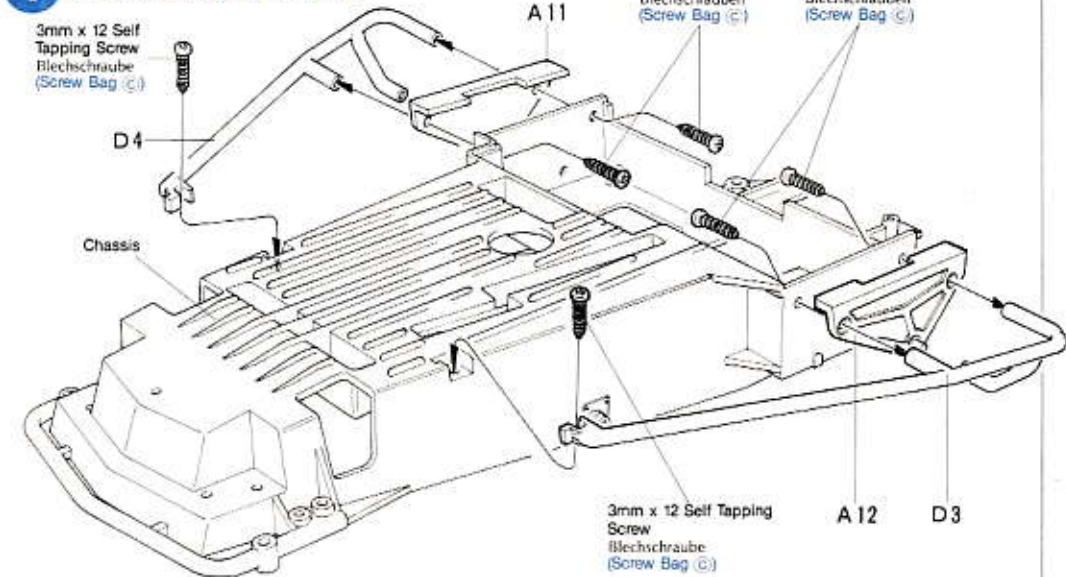
«Blechschrauben (Selbsttreiberschrauben)»

Self tapping screws require more power to fasten. Use a driver with a large grip. Stop screwing when the threads are no longer seen. Using force may break off heads.

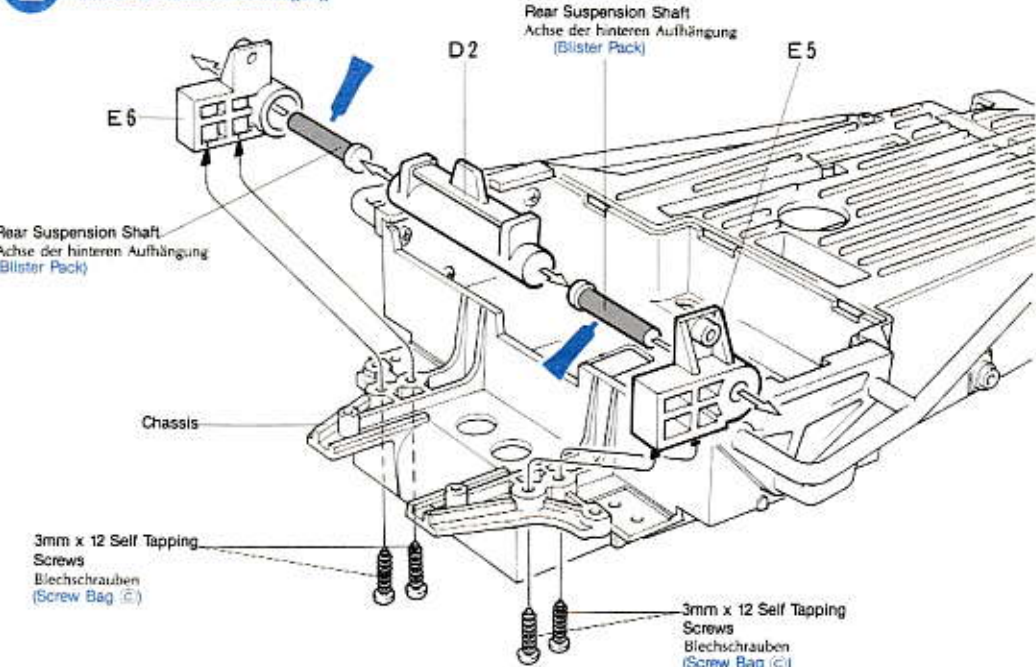
Zum Anziehen der Blechschrauben braucht man mehr Kraft. Der Schraubenzieher sollte einen guten Griff haben. Wenn Gewinde nicht mehr sichtbar ist, mit Schrauben aufhören, es könnte sonst der Schraubenkopf abbrechen.



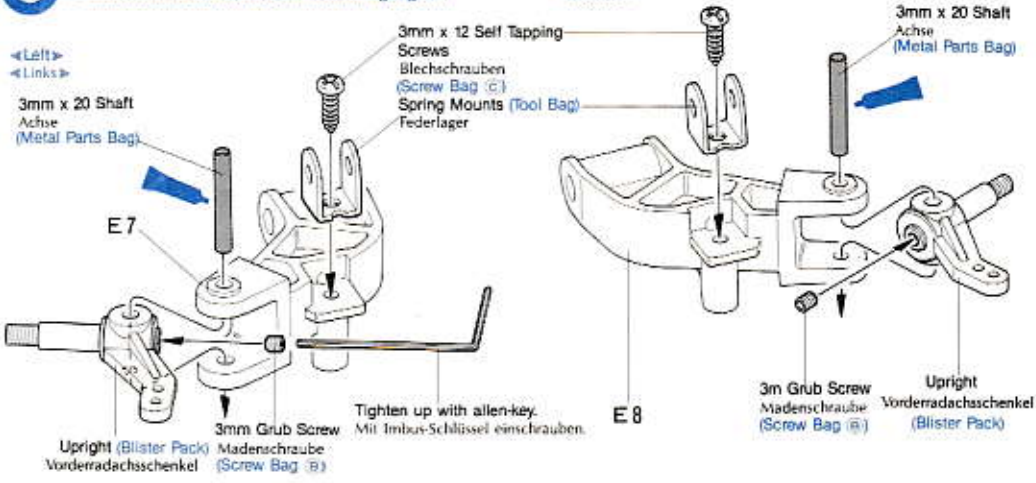
**1 Attaching Nerf Bars**  
Anbau der Seiten-Rammschutzbügel



**2 Attaching Rear Suspension Shafts**  
Einbau der hinteren Aufhängung



**3 Assembly of Front Arms 1**  
Zusammenbau der vorderen Radaufhängungen 1





**4** «Tapping of D8»  
«Zusammenschrauben von D8»

Tap D8 with damper shaft before attaching it.  
Vor Einbau, D8 mit Welle einschrauben.

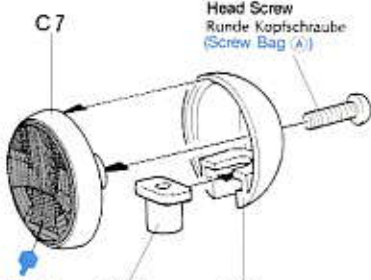
- Tap by screwing in all threads.
- Das Gewindeteil ganz einschrauben

**Damper Shaft**  
Use one as a tap and another as a tool.  
Dämpferwelle  
Eines als Welle, das andere als Werkzeug verwenden

**6** «Headlights»  
«Scheinwerfer»

Make 2 sets.  
2 Satz machine

3mm x 10 Round Head Screw  
Runde Kopfschraube (Screw Bag (A))



Chrome Silver (X11)  
«4mm Lock Nut»  
«4mm Sperrmutter»

- Nylon portion prevents the nuts from becoming loose. Tighten up.
- Nylon-Einlage verhindert, dass Mutter sich lockert.

Nylon Portion  
Nylon-Einlage

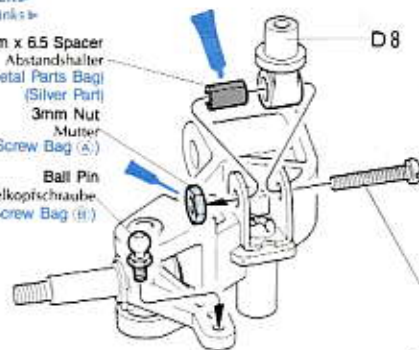
**«CAUTION ON THINNER AND LIQUID THREAD LOCK»**

ALL THINNERS ATTACK PLASTIC, EVEN PLASTIC MODEL PAINTS AND THINNERS. NEVER DIP PARTS INTO THINNERS OR PAINT, NOR WASH THEM WITH THINNERS. BE VERY CAREFUL IN PAINTING OVER AREAS WHERE SELF TAPPING SCREWS ARE USED! MAKE SURE TO USE ONLY TAMIYA LIQUID THREAD LOCK TO PREVENT SCREWS FROM COMING LOOSE. OTHER BRANDS WILL MELT PLASTIC!  
«VORSICHT IM GEBRAUCH VON VERDÜNNER UND LIQUID THREAD LOCK (SCHRAUBENSICHERUNG)»  
ALLE VERDÜNNER GREIFEN DAS PLASTIK-MATERIAL UND AUCH DIE PLASTIK-FARBEN AN. PLASTIKTEILE NIE IN VERDÜNNER LEGEN ODER VERSUCHEN, PLASTIK-FARBE MIT VERDÜNNER ZU ENTFERNEN ODER ABZUWASCHEN. FLÄCHEN MIT SCHRAUBEN, DIE MIT SCHRAUBENSICHERUNG GESICHERT SIND, NUR MIT BESONDERER VORSICHT BE-MALEN. WIR EMPFEHLEN, NUR TAMIYA LIQUID THREAD LOCK ZU VERWENDEN.

**4** Assembly of Front Arms 2  
Zusammenbau der vorderen Radaufhängungen 2

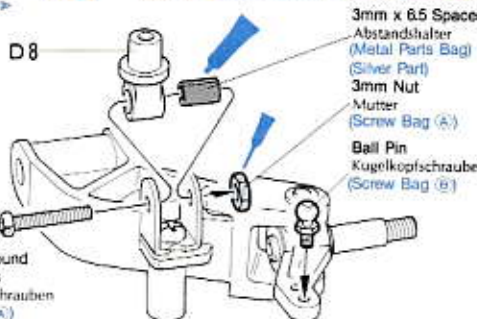
«Left»  
«Links»

3mm x 6.5 Spacer  
Abstandshalter (Metal Parts Bag) (Silver Part)  
3mm Nut  
Mutter (Screw Bag (A))  
Ball Pin  
Kugelschraube (Screw Bag (B))



«Right»  
«Rechts»

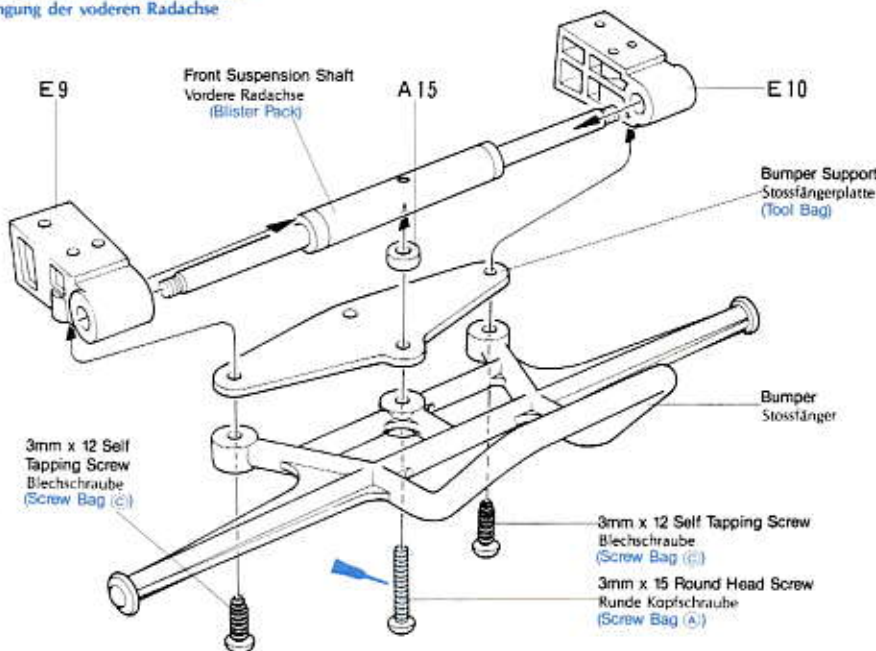
3mm x 15 Round Head Screws  
Runde Kopfschrauben (Screw Bag (A))



Apply only Tamiya Liquid Thread Lock to screws and nuts painted blue in drawings. Nur TAMIYA Liquid Thread Lock an Schrauben und Muttern verwenden, die in Anleitung blau gezeichnet sind. Andere Sicherungsmittel können das Plastikmaterial zerstören.

**CAUTION**  
USE ONLY TAMIYA LIQUID THREAD LOCK. OTHER BRANDS WILL MELT PLASTIC!

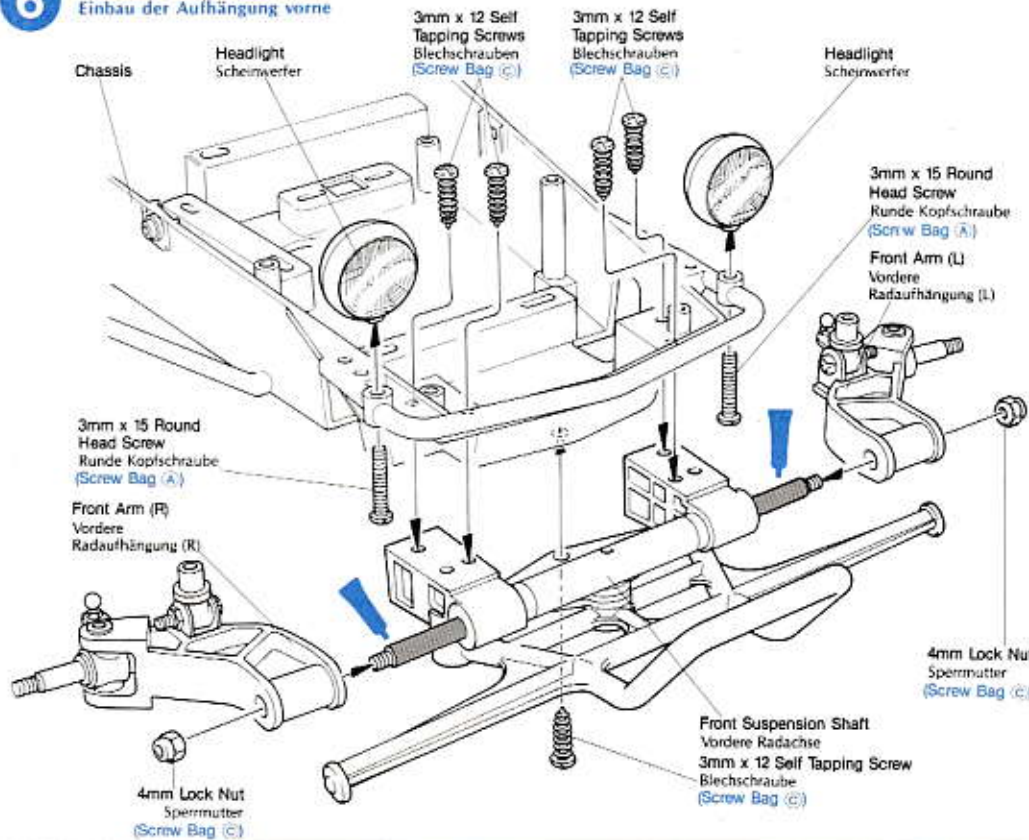
**5** Attaching Front Suspension Shaft  
Anbringung der vorderen Radachse



3mm x 12 Self Tapping Screw  
Blechschaube (Screw Bag (C))

3mm x 12 Self Tapping Screw  
Blechschaube (Screw Bag (C))  
3mm x 15 Round Head Screw  
Runde Kopfschraube (Screw Bag (A))

**6** Attaching Front Arms  
Einbau der Aufhängung vorne



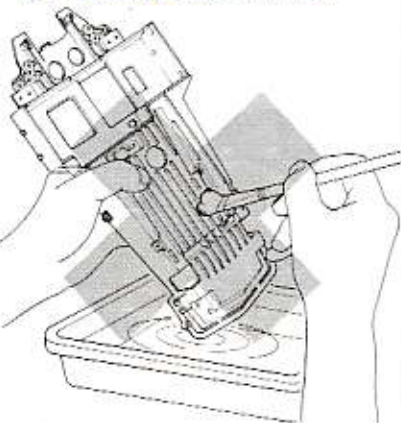
3mm x 15 Round Head Screw  
Runde Kopfschraube (Screw Bag (A))

Front Arm (R)  
Vordere Radaufhängung (R)

4mm Lock Nut  
Sperrmutter (Screw Bag (C))

Front Suspension Shaft  
Vordere Radachse  
3mm x 12 Self Tapping Screw  
Blechschaube (Screw Bag (C))

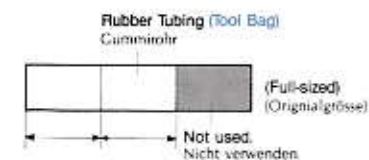
4mm Lock Nut  
Sperrmutter (Screw Bag (C))



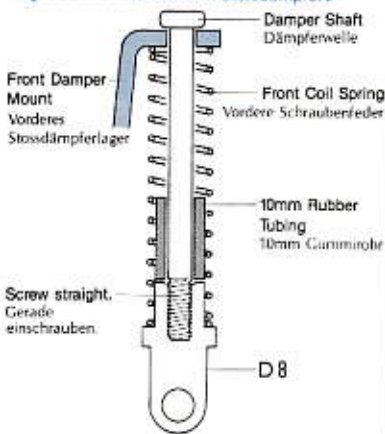


## 7 «Rubber Tubing» «Gummirohr»

- ★ Make two 10mm lengths.
- ★ Mache 2 Stück Gummirohr mit je 10mm.



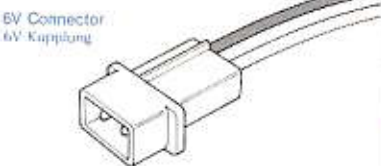
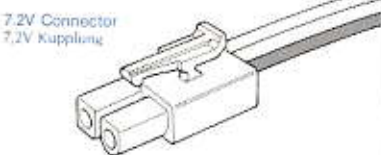
### «Cross Section of Front Damper» «Querschnitt der vorderen Stossdämpfer»



## 9 «Power Source» «Stromversorgung»

RC Fast Attack Vehicle can use a Tamiya Ni-Cd 6V or 7.2V battery. Use connector included with battery or spare parts (5106 for 7.2V, 5039 for 6V) as a connector for speed controller.

Der RC Fast Attack Vehicle fährt mit Tamiya Ni-Cd 6V oder 7.2V Akku. Das Kupplungsstück liegt dem entsprechender Akku bei, oder ist als Zubehör im Fachhandel zu haben.



### «Wire Splicing» «Kabel verwisten»

Separate each wire and twist them together.  
Die Drähte trennen und einzeln zusammenwisten



3cm Heat Shrink Tubing  
3cm Abdeckrohr  
(Tool Bag)



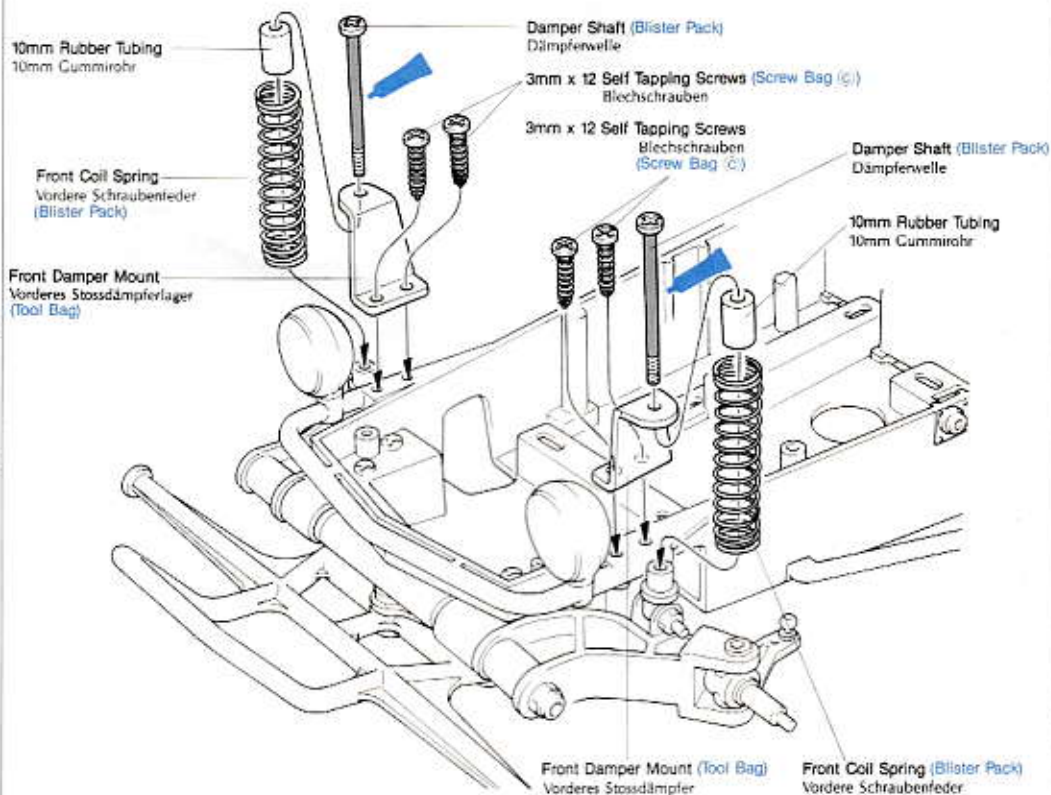
- Tubing shrinks with heat
- Mit heißem Föhn Abdeckung verstricken



### TAMIYA CEMENT PEN

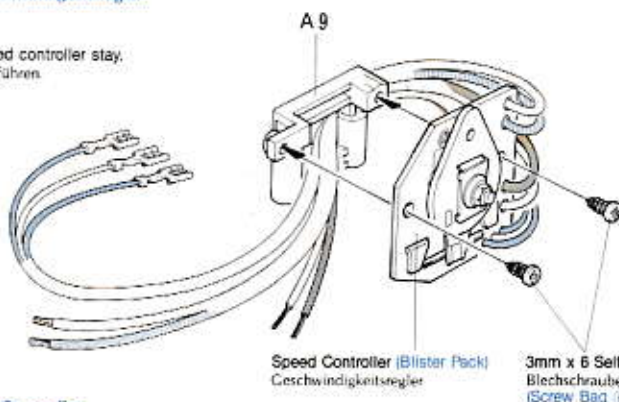
A handy, self-contained pencil sized glue dispenser for accurate application of Tamiya cement right where you want it. Will not dry out in pen. Cement smears are a thing of the past.

## 7 Attaching Front Coil Springs Einsetzen der vorderen Schraubenfedern



## 8 Attaching Speed Controller Stay Lagerbock für Geschwindigkeitsregler

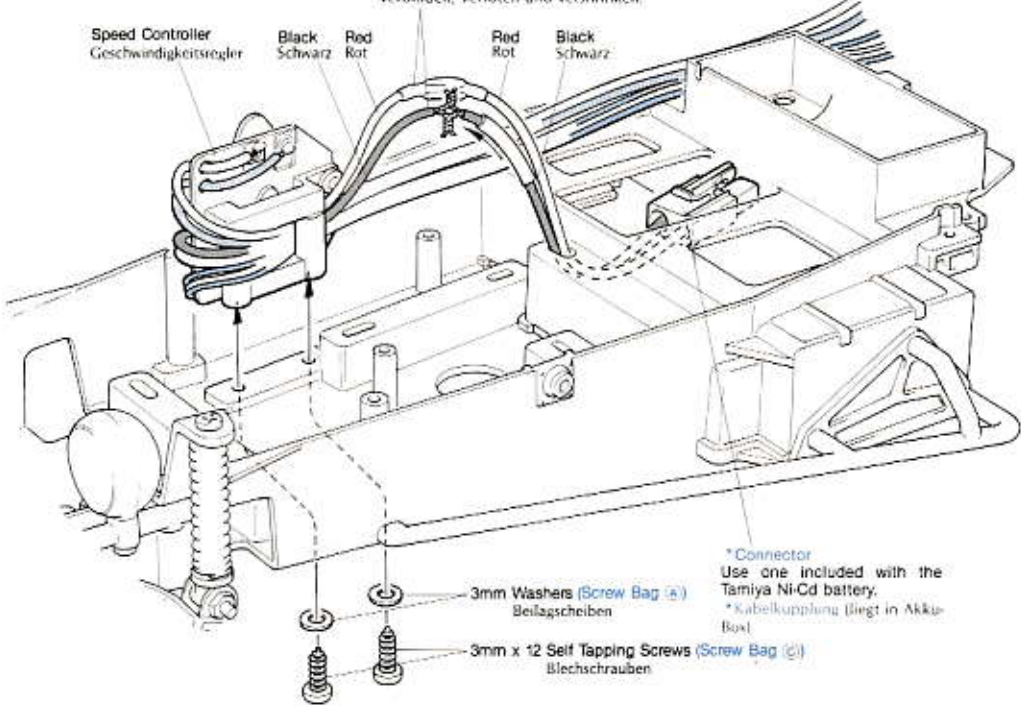
- Pass wires through speed controller stay.
- Drähte durch Lagerbock führen



## 9 Attaching Speed Controller Einbau des Geschwindigkeitsreglers

Connect Red to Red and Black to Black, then insulate splices with heat shrink tubing.  
Kabel rot mit rot, schwarz mit schwarz verbinden, verlöten und verstricken.

Parts marked \* are not contained in kit.  
Teile mit \* sind nicht im Kit enthalten





«R/C Equipment»

«RC-Anlage»

This kit requires a 2 channel 2 servo digital proportional radio. Be sure to read through the manual for your radio first, then start assembly.

Dieses Model ist für den Einbau einer 2-Kanal-Anlage mit 2 Servos ausgelegt. Anleitung von Fernlenkung erst gut lesen, dann mit Bauen beginnen.

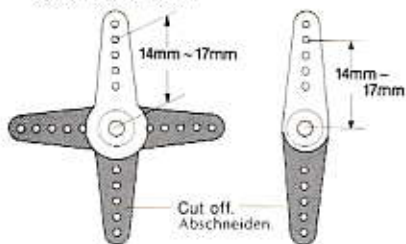
Use new batteries. It's impossible to control correctly if voltage drops.

Nur neue Batterien oder Akkus verwenden. Bei Schwanken der Stromstärke kann das Fahrzeug nicht genau gesteuert werden.

10 «Servo Control Horn»  
«Servohorn»

The shape of servo control horns vary from manufacturer to manufacturer. Cut off shaded area of your servo horns as shown.

Je nach Hersteller sind die Servohörner verschieden. Schraffierte Flächen von Servohorn abschneiden.



11 «Servo Saver»  
«Steuer-Schubstangen»

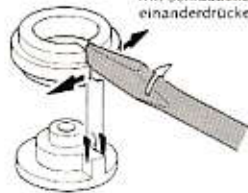
Select one servo saver base from S4, 7, 8 or 10 according to the make of your servo, then mount servo.

Servo Saver Base je nach Servo auswählen und an das Steuer Servo anbringen.

«Attaching S6»

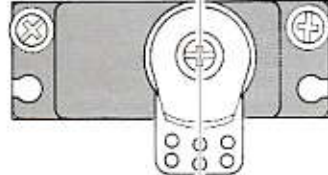
«Einbau S6»

Spread by rotating screwdriver. Mit Schraubenzieher etwas auseinanderdrücken.



«Servo Saver»

«Servo Saver»



Attach servo saver as shown with servo at neutral.

Servo-Saver anbringen, wenn Servo auf neutral steht.

«Tightening Ball Joints»

«Eindrehen der Kugelkopfschnapper»

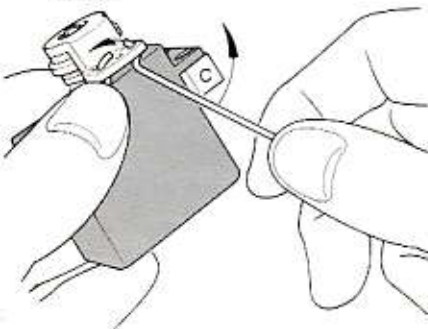
Screw on ball joint 6mm. 6mm einschrauben.



«Attaching Rod»

«Einsetzen der Servo-Schubstangen»

Insert rod and move as shown. Schubstange einsetzen und wie gezeigt drehen.



«R/C Equipment»  
«RC-Anlage»

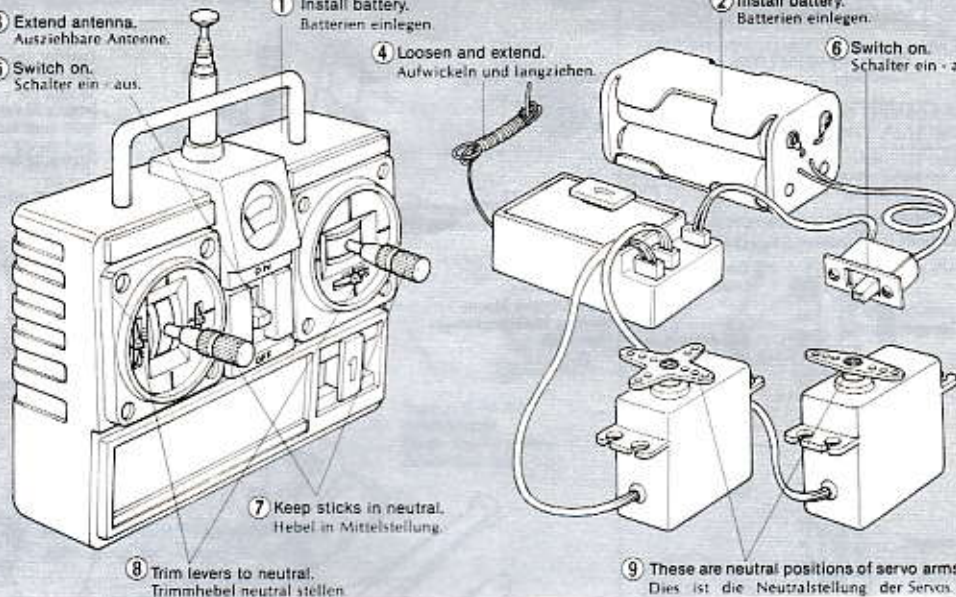
Check out R/C equipment in sequence. Funkfernsteueranlage nach Anleitung überprüfen.

- 3 Extend antenna. Ausziehbare Antenne.
- 5 Switch on. Schalter ein - aus.

- 1 Install battery. Batterien einlegen.
- 4 Loosen and extend. Aufwickeln und langziehen.

- 2 Install battery. Batterien einlegen.

- 6 Switch on. Schalter ein - aus.



- 7 Keep sticks in neutral. Hebel in Mittelstellung.
- 8 Trim levers to neutral. Trimmhebel neutral stellen.

- 9 These are neutral positions of servo arms. Dies ist die Neutralstellung der Servos.

10 Attaching Servo Stay  
Anbringung des Servo-Halter A8

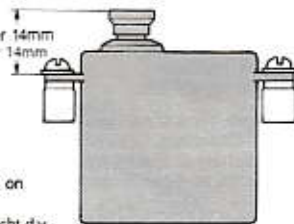
- 3mm x 12 Self Tapping Screw. Blechschraube (Screw Bag (C))
- 3mm Washer (Screw Bag (A)). Beilagscheibe

A8 Select either according to the height of servo. Teile je nach Höhe des Servo verwenden.

When the part shown right above is under 14mm.

When the part shown right above is over 14mm.

- 3mm x 12 Self Tapping Screw. Blechschraube (Screw Bag (C))
- 3mm Washer. Beilagscheibe (Screw Bag (A))
- \* Servo \* Servo
- \* Do not use servo horn on steering servo.
- \* Auf dem Steuerservo nicht das Servohorn verwenden.



If servo part shown above is under 14mm, attach servo stay A8 as shown. Wenn der oben gezeigte Abstand unter 14mm ist, Halter A8, wie gezeigt einbauen.

11 Attaching Servo Saver  
Zusammenbau des Servo-Saver

Servo Saver Screw Use one matched to servo. Schrauben für Servo Saver Die zum Servo passende Schraube verwenden. 3mm self tapping screw 2.6mm self tapping screw 2mm x 8 screw

- S1 (for 3mm, 2.6mm screw) (für 3mm, 2.6mm Schraube)
- S2 (for 2mm screw) (für 2mm Schraube)
- S3

Servo Saver Base Select one according to servo. Servo Saver Base Die zum Servo passende aussuchen. S4, S7, S8, S10

\* Steering Servo \* Steuerservo

Servo Saver Base

Servo Saver Base

Servo Saver Screw

Schrauben für Servo Saver



S4 FUTABA



2.6mm Self Tapping Screw Blechschraube (Screw Bag (B))



S7 SANWA/ACOMS



3mm Self Tapping Screw Blechschraube (Screw Bag (C))



S8 FUTABA



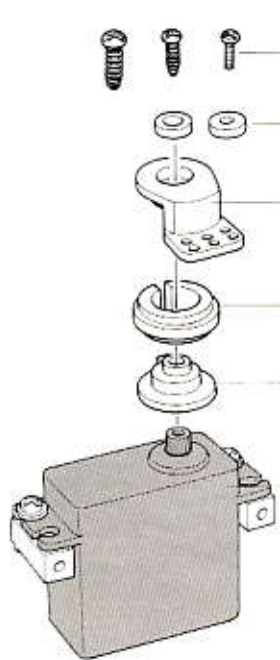
2mm x 8 Round Head Screw Runde Kopfschraube (Screw Bag (D))



S10 ACOMS

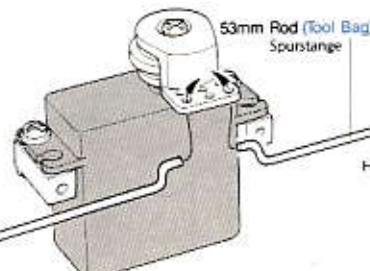


2mm x 8 Round Head Screw Runde Kopfschraube (Screw Bag (E))



Ball Joint (Tool Bag) Kugelkopfschnapper

75mm Rod (Tool Bag) Spurstange



53mm Rod (Tool Bag) Spurstange

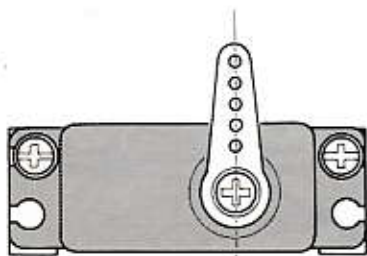
Ball Joint (Tool Bag) Kugelkopfschnapper

Tighten to approx. 6mm. Höchstens 6mm einschrauben.

Tighten to approx. 6mm. Höchstens 6mm einschrauben.



## 12 <<Servo Horn>> <<Servo-Horn>>

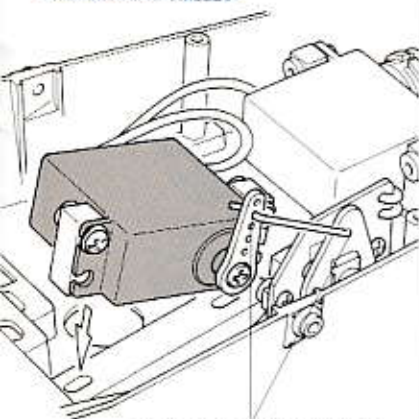


- Attach servo horn as shown with servo at neutral.
- Servo-Horn anbringen, wenn Servo auf neutral steht.

### <<Switch Rod>> <<Schalter-Schubstange>>

File corner off with a file. Die Kante der Schubstange etwas abschleifen, darf nicht auf Reglerplatte schließen.

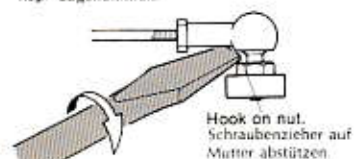
### <<Attaching Switch Servo>> <<Schalterservo Einbau>>



- Insert switch rod first, then attach servo to chassis.
- Erst Schubstange einhängen, dann Servo auf Chassis schrauben.

## 14 <<Removing Ball Joint>> <<Abnahme des Kugelkopfes>>

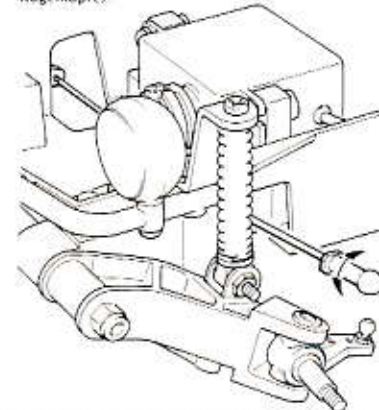
- Twist screwdriver to remove ball joint.
- Mit Schraubenzieher (wie gezeigt) wird Kugelkopf abgenommen.



Hook on nut. Schraubenzieher auf Mutter abstützen.

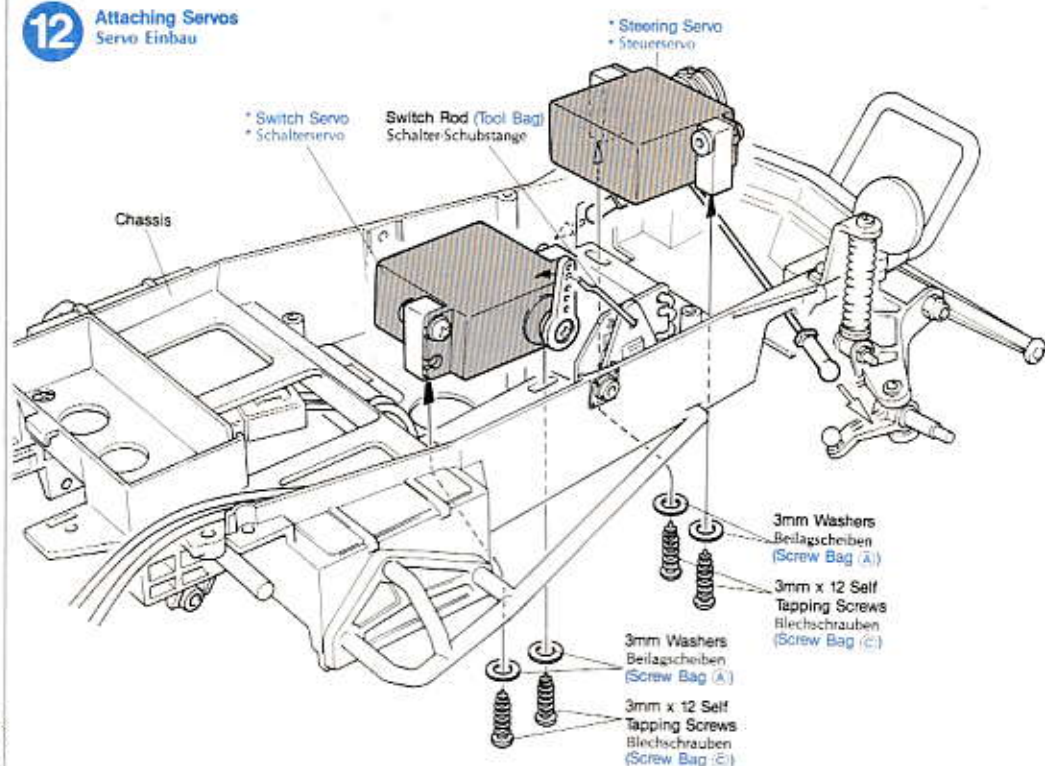
### <<Adjustment of Rod Length>> <<Einstellen der Schubstangenlänge>>

- Adjust length by rotating ball joint.
- Einstellen der Länge durch drehen des Kugelkopfes.



**LIQUID THREAD LOCK**  
This is a metal screw thread locking agent in a handy tube for use on R/C vehicles, to prevent loss of screws and nuts during operation. Will not harm plastic parts and screws remain removable when necessary.

## 12 Attaching Servos Servo Einbau



\* Steering Servo  
\* Steuerservo

\* Switch Servo  
\* Schalterservo

Switch Rod (Tool Bag)  
Schalter Schubstange

Chassis

3mm Washers  
Beilagscheiben (Screw Bag (A))

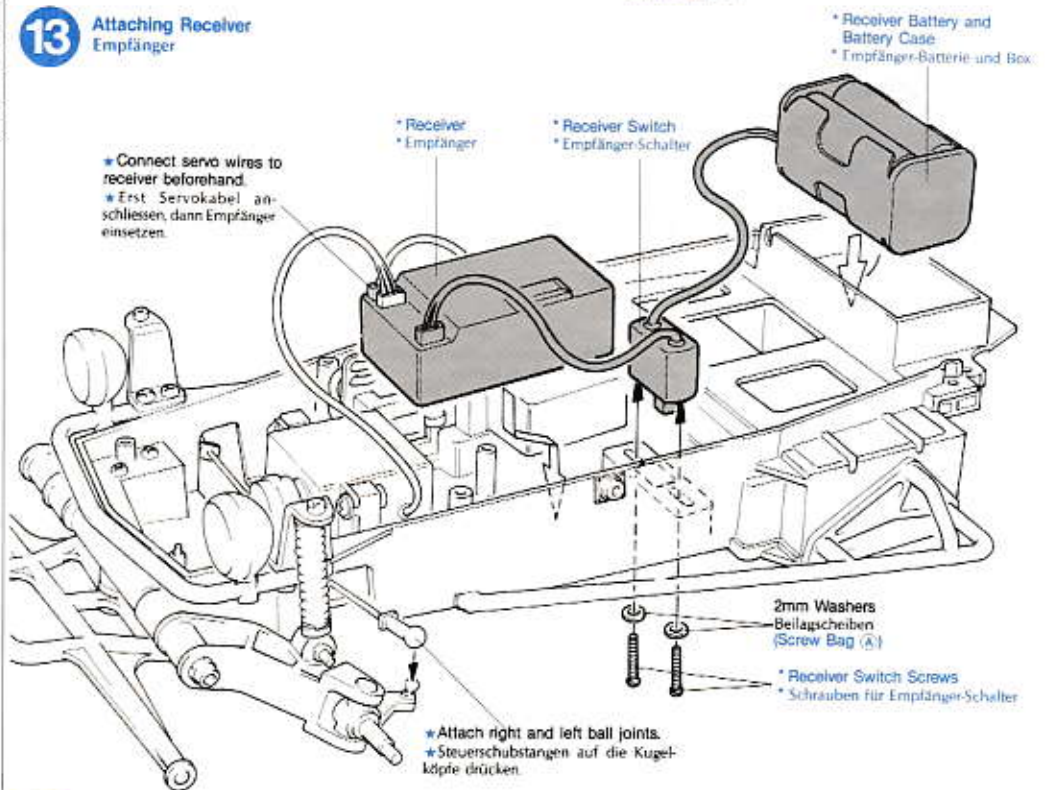
3mm x 12 Self Tapping Screws  
Blechschräuben (Screw Bag (C))

3mm Washers  
Beilagscheiben (Screw Bag (A))

3mm x 12 Self Tapping Screws  
Blechschräuben (Screw Bag (C))

## 13 Attaching Receiver Empfänger

- Connect servo wires to receiver beforehand.
- Erst Servokabel anschließen, dann Empfänger einsetzen.



\* Receiver Battery and Battery Case  
\* Empfänger-Batterie und Box

\* Receiver  
\* Empfänger

\* Receiver Switch  
\* Empfänger-Schalter

2mm Washers  
Beilagscheiben (Screw Bag (A))

\* Receiver Switch Screws  
\* Schrauben für Empfänger-Schalter

- Attach right and left ball joints.
- Steuerschubstangen auf die Kugelköpfe drücken.

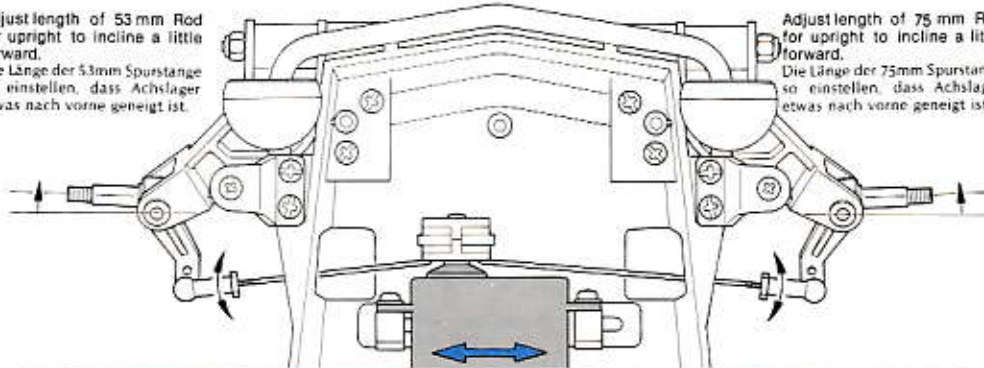
## 14 Adjustment of Steering Einstellung der Steuerung

Adjust steering by changing length of rods or changing position of servo.  
Die Steuerung kann eingestellt werden entweder durch verändern der Schubstangenlänge oder des Servos.

Adjust length of 53 mm Rod for upright to incline a little forward.  
Die Länge der 53mm Spurstange so einstellen, dass Achslager etwas nach vorne geneigt ist.

Adjust length of 75 mm Rod for upright to incline a little forward.  
Die Länge der 75mm Spurstange so einstellen, dass Achslager etwas nach vorne geneigt ist.

- Make sure to check neutral position of servo and then adjust steering.
- Neutralstellung des Servo überprüfen und dann Steuerung einstellen.

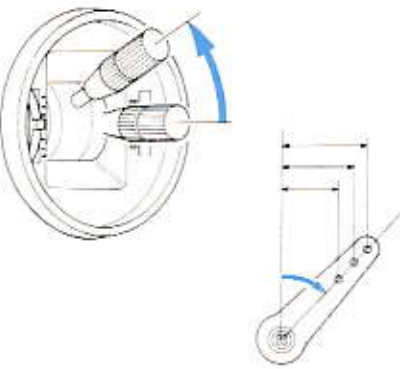




**15** <Servo Horn & Stroke>  
<Servo Horn und Ausschlag>

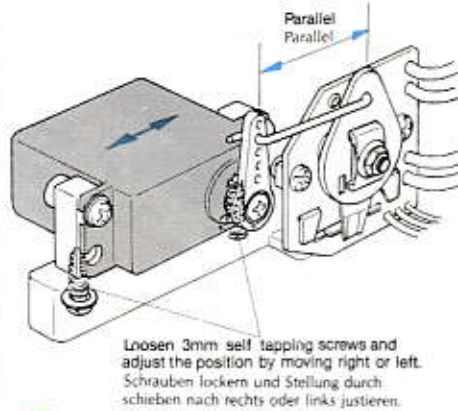
Movement of switch, steering or shaft can be altered by changing hole position of servo horn. The closer to the axis the hole is, the smaller the movement becomes, and the farther from the axis, the longer the throw.

Schalter, Steuerung oder Schaltung kann verändert werden durch wechseln der Löcher im Servohorn.



**15** Adjustment of Speed Controller  
Einstellung des Fahrreglers

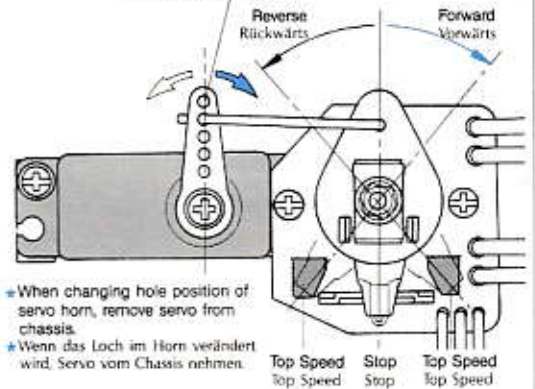
Adjust position of speed controller to make servo horn and blade parallel at stop position. Servo-Horn und Schalterzunge müssen parallel bei Stop stehen, evtl. etwas nachstellen.



Loosen 3mm self tapping screws and adjust the position by moving right or left. Schrauben lockern und Stellung durch schieben nach rechts oder links justieren.

Adjust hole position of servo horn so that switch blade moves to the place shown when transmitter stick is pushed full up and down. Loch im Servohorn so wählen, dass Schalterzunge sich richtig bewegen kann, wenn Senderhebel voll nach oben oder unten gedrückt wird.

★The farther from the axis the hole is, the larger the movement becomes.



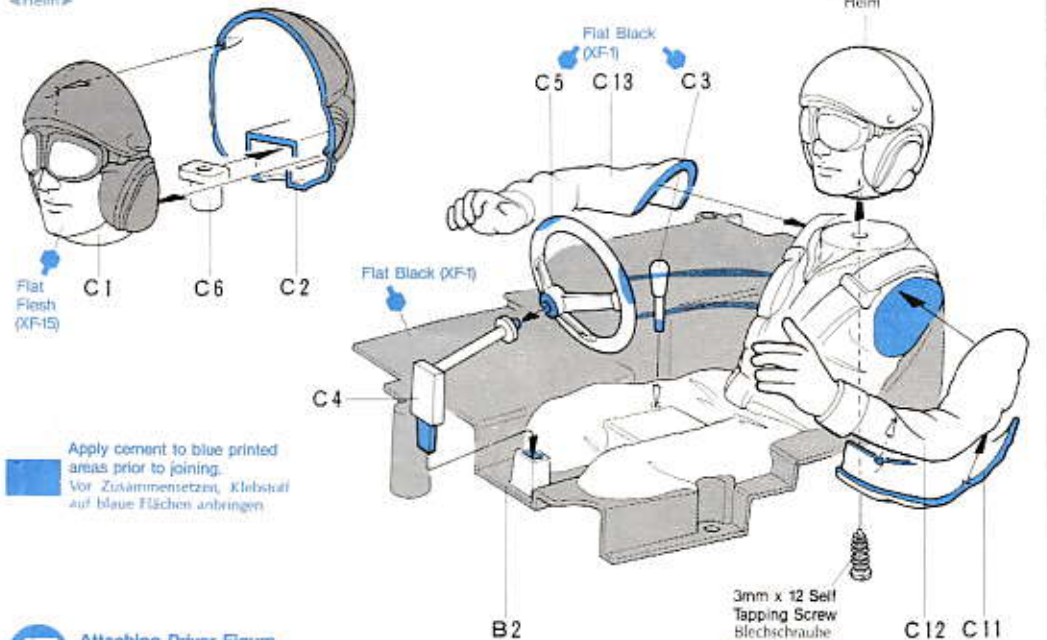
**16** <Driver Figure>  
<Fahrerfigur>

Driver in kit has modern U.S. Army uniform. If you want to apply camouflage pattern, refer to figure below! Der Fahrer hat eine moderne US-Uniform. Tarnanzug siehe unten.



**16** Assembly of Driver  
Zusammenbau der Fahrerfigur

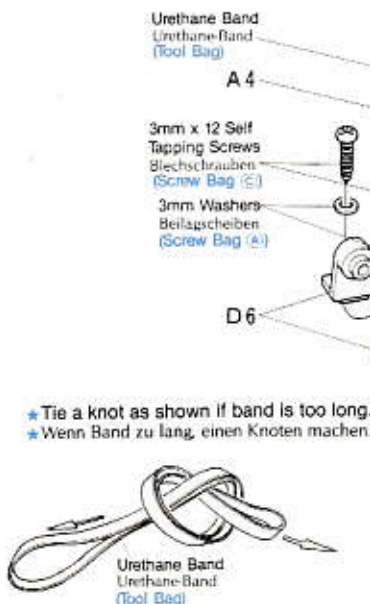
<Helmet>  
<Helm>



**17** Attaching Driver Figure  
Fahrerfigure Einbau

★Route antenna wires.  
★Kabel durch Antennenrolle schieben.

Khaki (XF-49) + Flat White (XF-2) or Flat Green (XF-6) + Flat Yellow (XF-3)



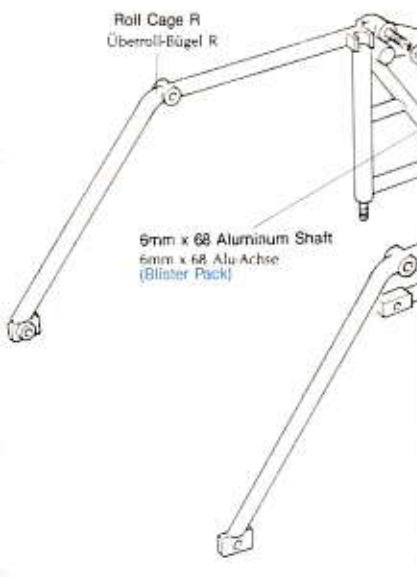
3mm x 12 Self Tapping Screws  
Blechschräuben (Screw Bag (C))

3mm x 27 Round Head Screw  
Runde Kopfschraube (Screw Bag (D))

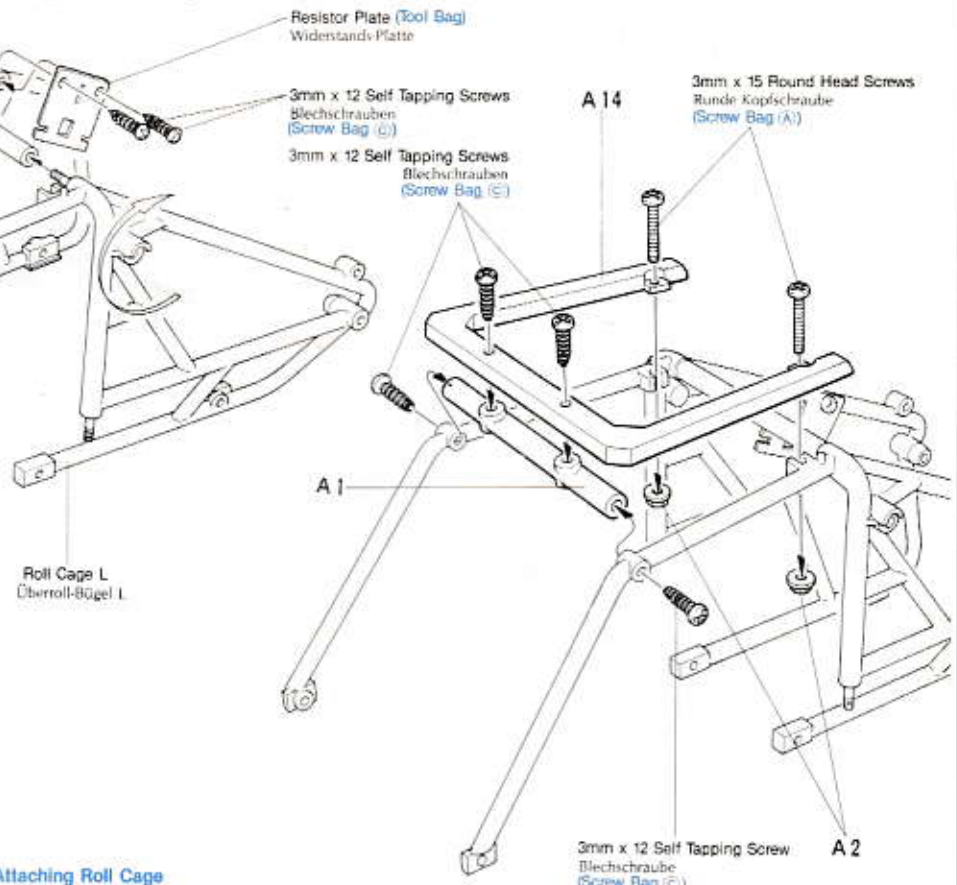
★Do not put wires between driver figure and chassis.



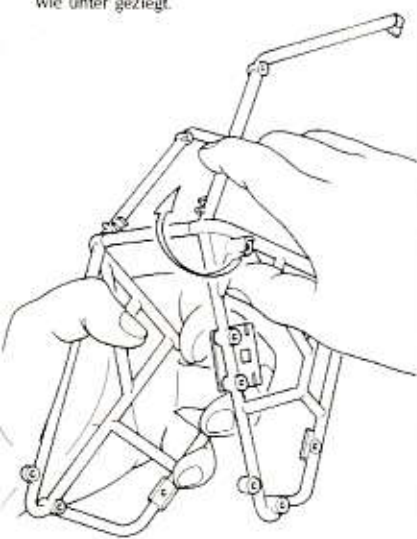
**18** <Roll Cage>  
<Überrollbügel>



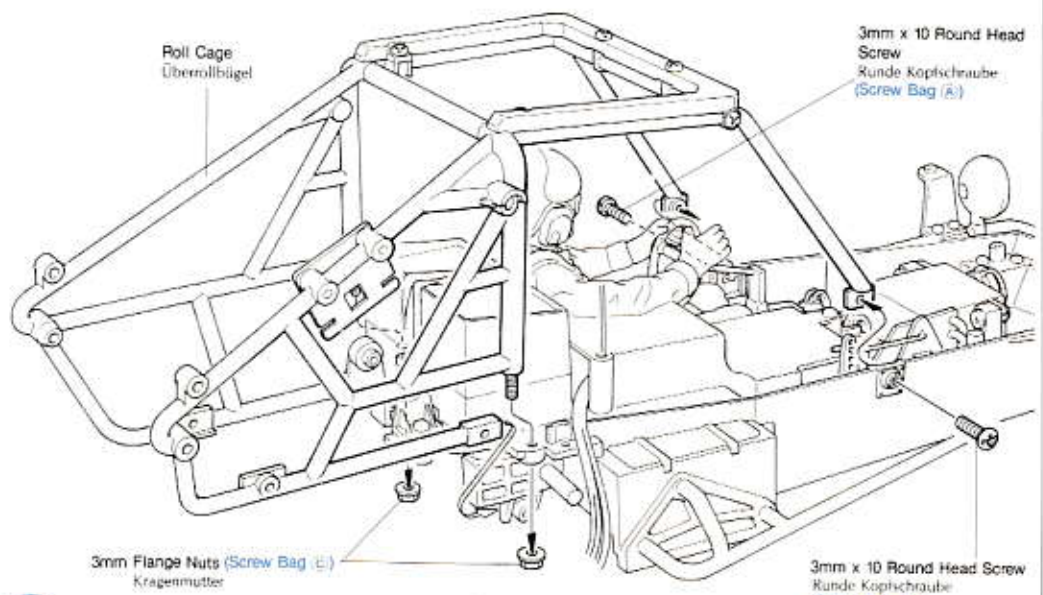
**18** Assembly of Roll Cage  
Montage des Überrollbügels



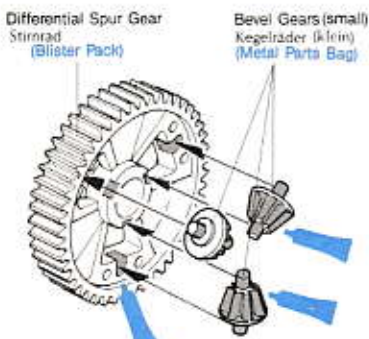
★ Screw roll cage to shaft by rotating as shown below.  
★ Käfig auf Achse schrauben und dabei drehen, wie unten gezeigt.



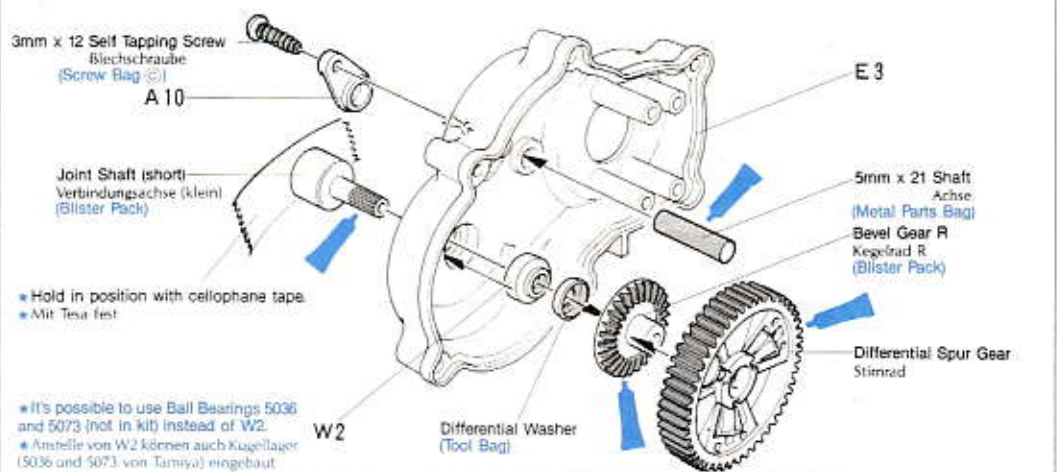
**19** Attaching Roll Cage  
Einbau des Überrollbügels



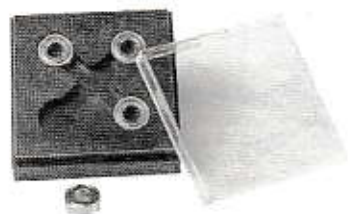
**20** <Differential Spur Gear>  
<Differentials>



**20** Assembly of Gear Case R  
Getriebe-Gehäuse R



Item No. 5073 Ball Bearing set (4 pcs.)  
★ Replace W2 with optional Ball Bearings.  
Kugellagersatz 5073  
★ Besser als W2 sind Kugellager (nicht im Kit)

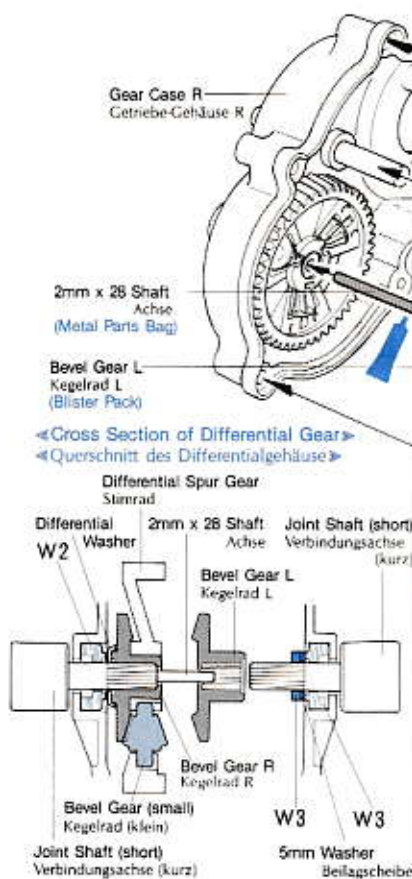


★ Hold in position with cellophane tape.  
★ Mit Tesafest

★ It's possible to use Ball Bearings 5036 and 5073 (not in kit) instead of W2.  
★ Anstelle von W2 können auch Kugellager (5036 und 5073 von Tamiya) eingebaut

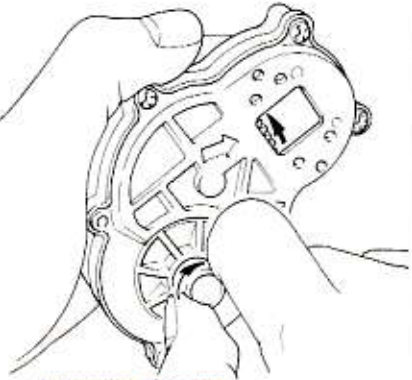


**21** «Assembly of Gear Case L»  
«Getriebe-Gehäuse L»



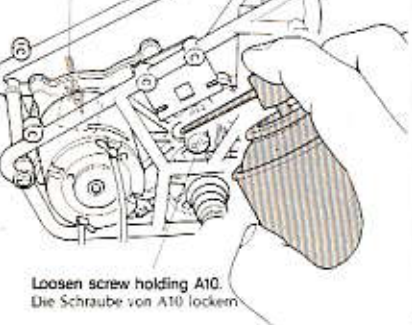
«Test Rotation of Gears»  
«Prüfen des Differentials»

After assembling gear case, check whether joint shafts rotate smoothly by rotating them by hand. Check movement of differential gear by holding one and rotating the another.  
Nach Zusammenbau des Getriebegehäuses, mit der Hand die Achsen drehen und prüfen, ob alles leicht dreht. Beide Seiten prüfen.

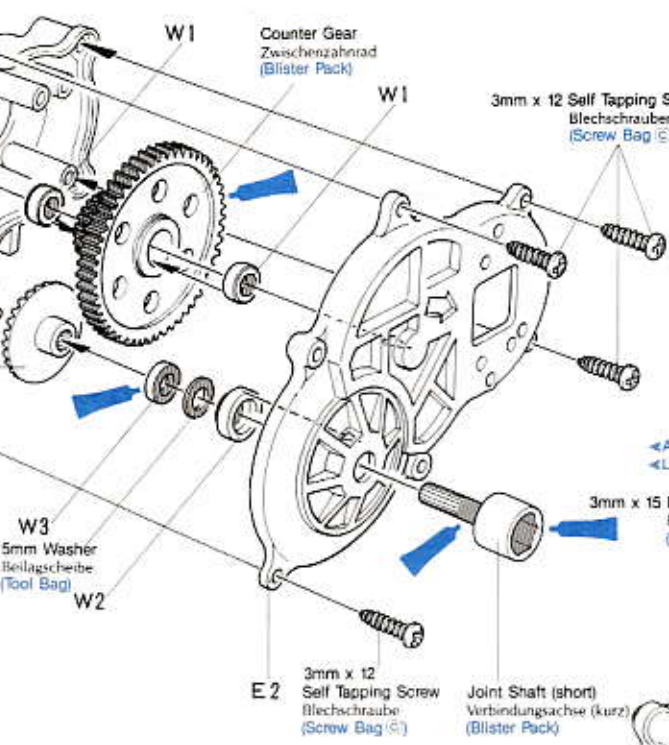


«Lubrication of Gears»  
«Wartung des Getriebes»

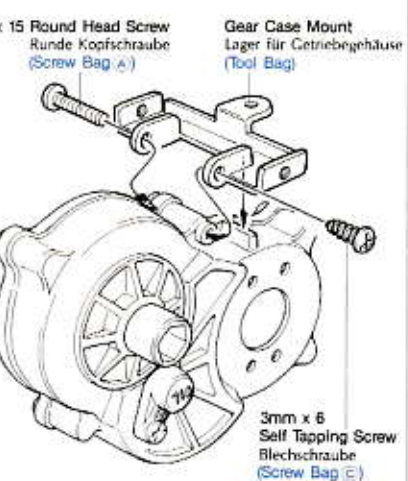
Loosen screw holding A10 in place (attached in step 20) and lubricate with spray oil, as shown.  
Den Öldeckel A10 öffnen (Schraube lockern) und Öl einsprühen.  
You can lubricate through hole for motor.  
Ölen möglich durch Loch für Motor.



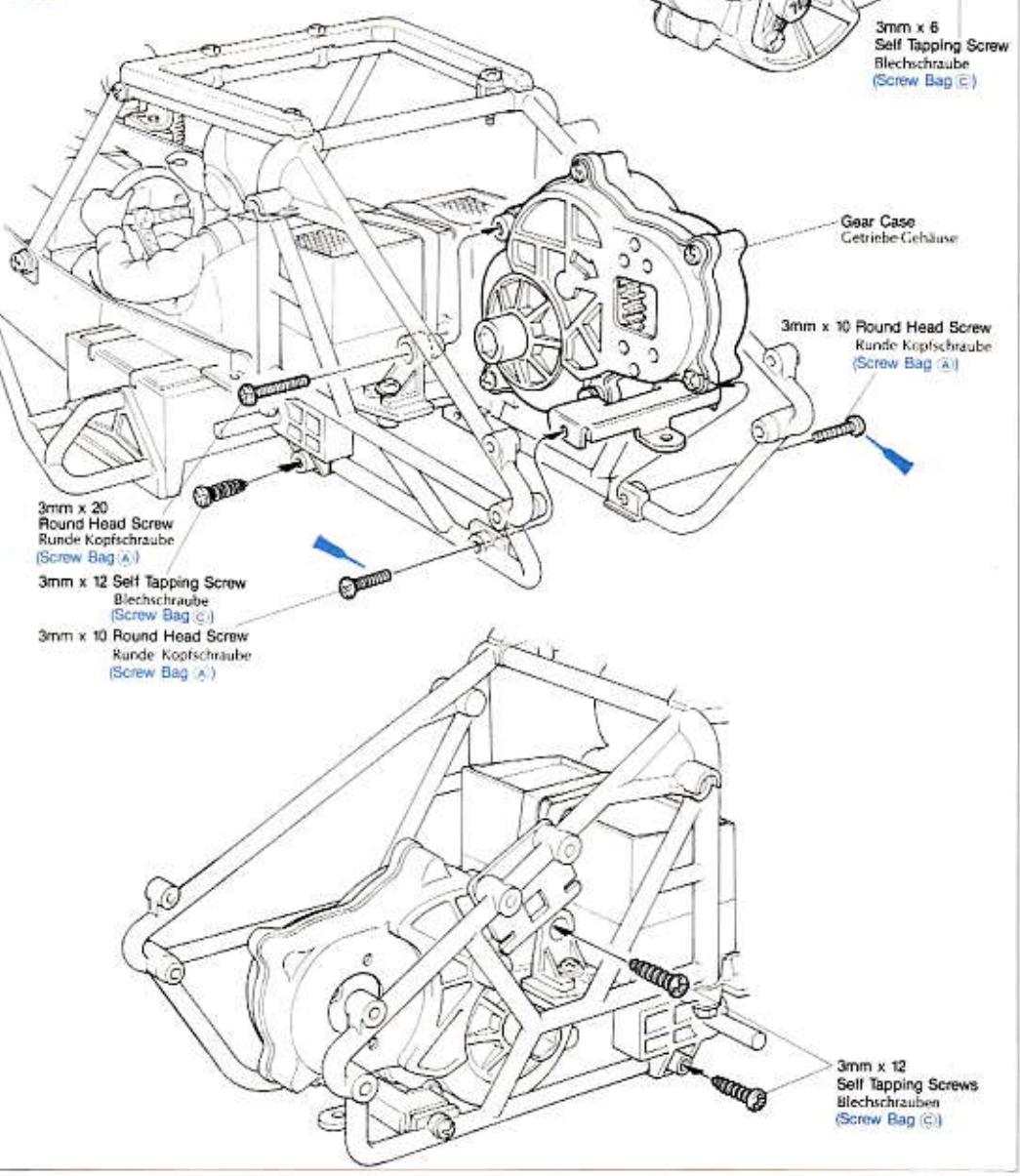
**21** Assembly of Gear Case  
Zusammenbau des Getriebes



«Attaching Gear Case Mount»  
«Lager für Getriebegehäuse»



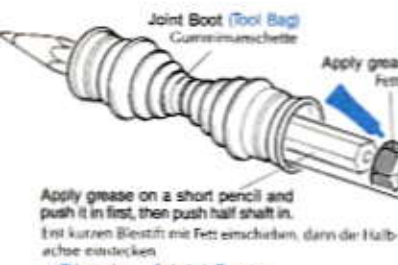
**22** Attaching Gear Case  
Einbau des Getriebes



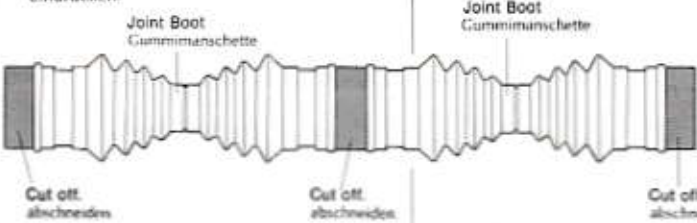
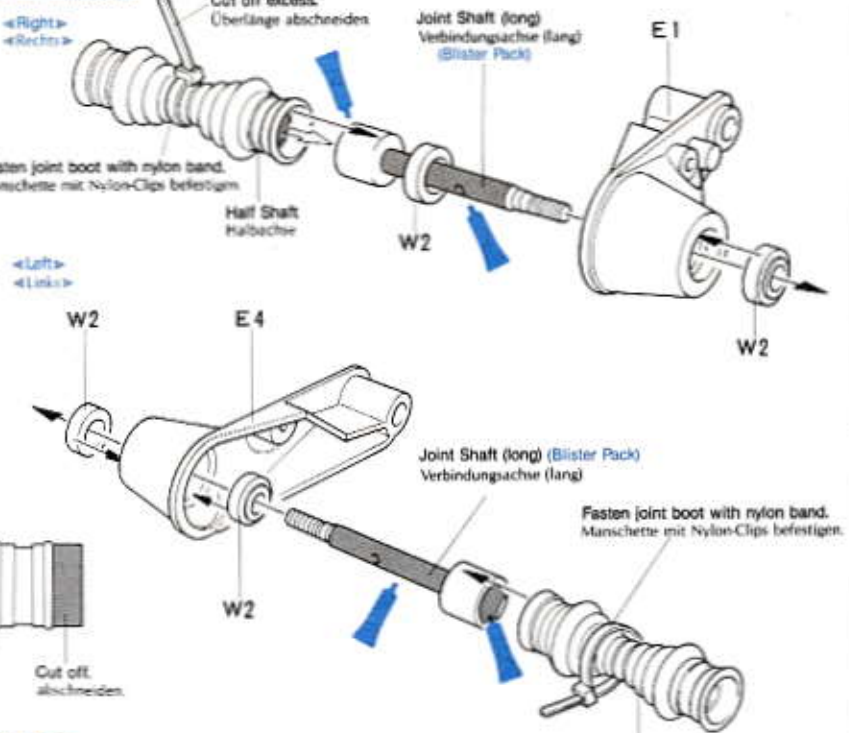


**23** «Assembly of Half Shaft»  
«Zusammenbau der Halbachse»

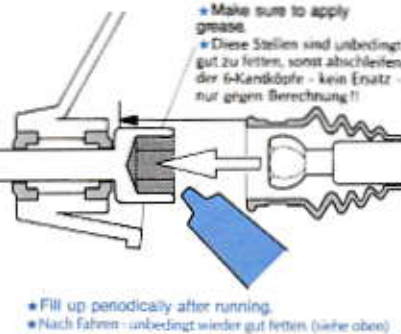
Make 2 sets.  
2 Satz machen.



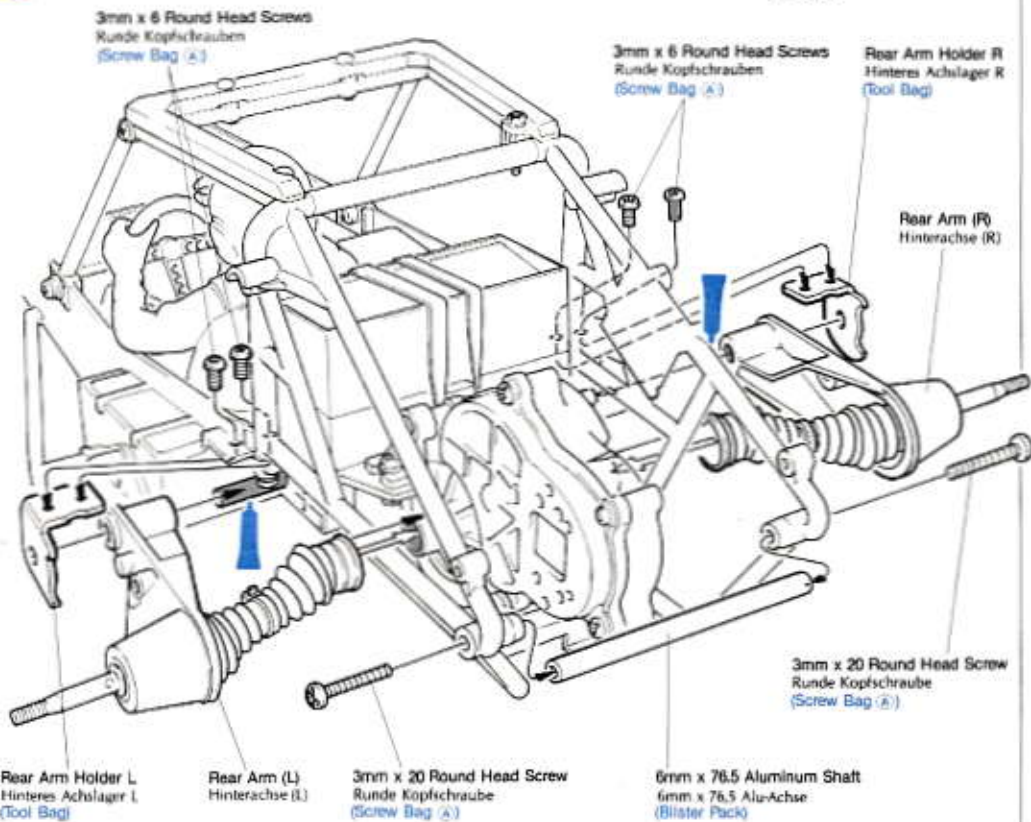
**23** Assembly of Rear Arms  
Zusammenbau der Hinterachse



«Greasing of Half Shaft»  
«Fetten der Halbachsen»

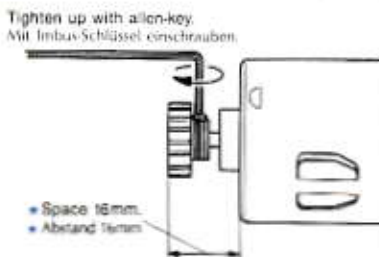
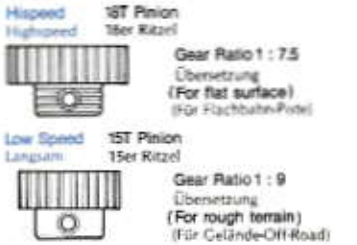


**24** Attaching Rear Arms  
Einbau der Hinterachsen

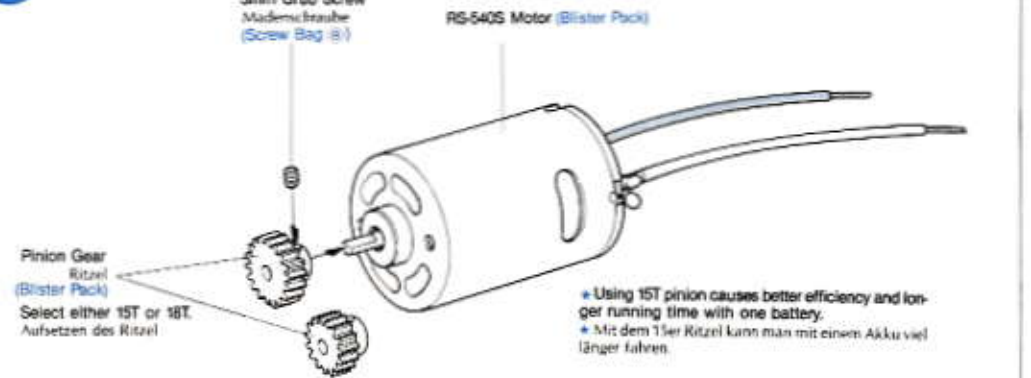


**25** «Selection of Gear Ratio»  
«Übersetzung»

Select either 15T or 18T pinion gear.  
Ritzel mit 15 oder 18 Zähnen nehmen.



**25** Attaching Pinion Gear  
Runde Kopfschraube



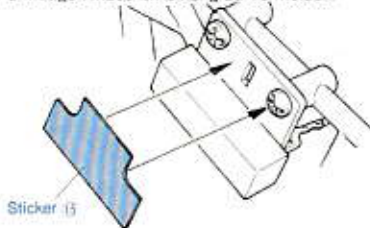
**TAMIYA**  
**MODEL**  
**MAGAZINE**  
INTERNATIONAL

A magazine for enthusiasts who make or modify models of all kinds. From the neophyte to the expert, articles of interest about modeling and the full sized vehicle. Coverage of all plastic kit maker's products.



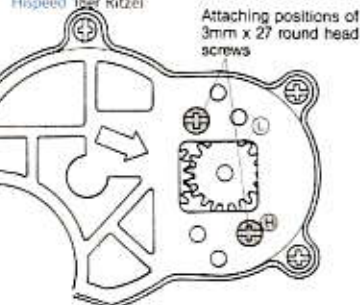
## 26 «Resistor» «Widerstand»

Speed control resistor will become hot during running. Apply warning label to resistor plate as shown for safety. Be sure to properly adjust speed controller to prevent unnecessary heat build up.  
Der Fahrgler kann während des Fahren heiss werden. Warnaufkleber anbringen. Der Fahrgler muss genau eingestellt sein um unnötige Hitzeentwicklung zu vermeiden.

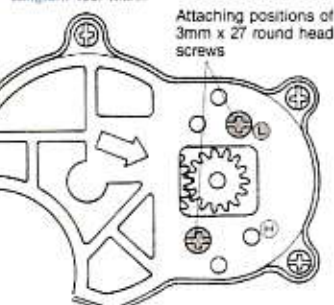


## «Attaching Motor» «Einbau des Motors»

Hole positions for attaching motor differ according to pinion gear used. Refer to figures below.  
Die Löcher zur Motorhalterung sind je nach Zahnritzel verschieden. Siehe Bilder unten.  
Hispeed 18T Pinion  
Hispeed 18er Ritzel



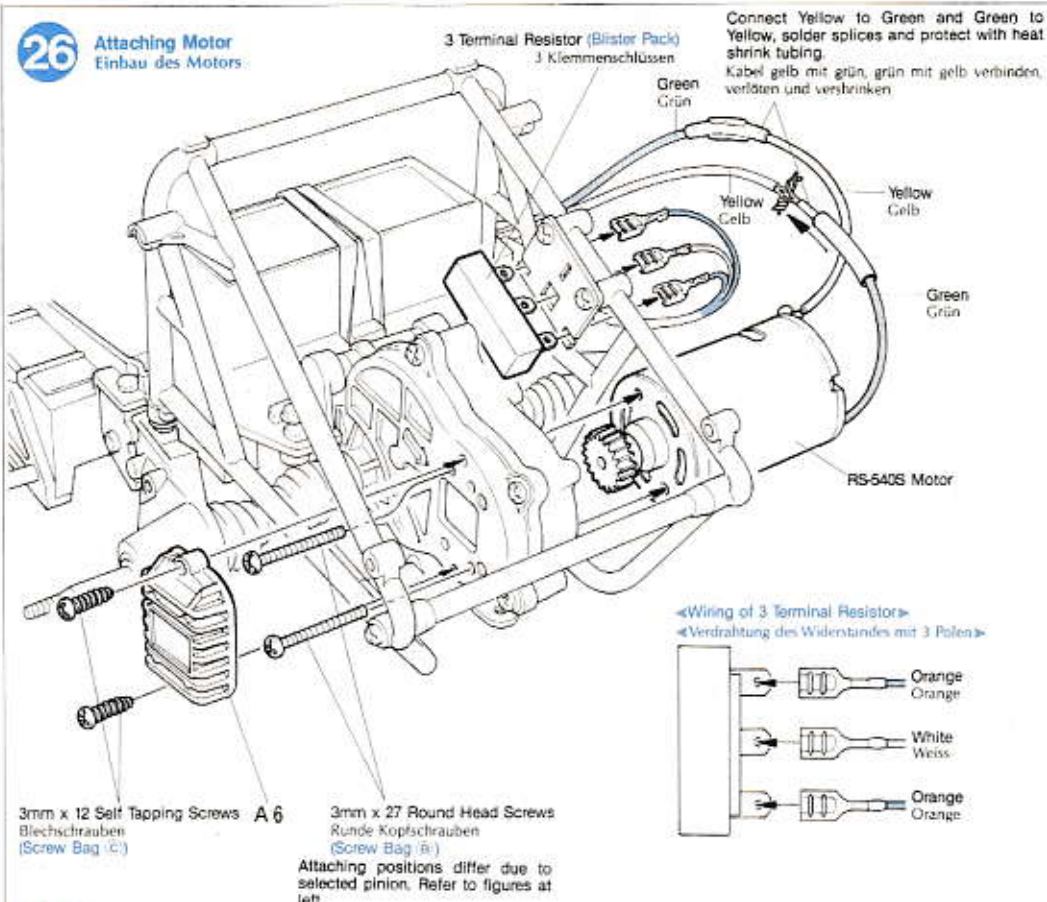
Low Speed 15T Pinion  
Langsam 15er Ritzel



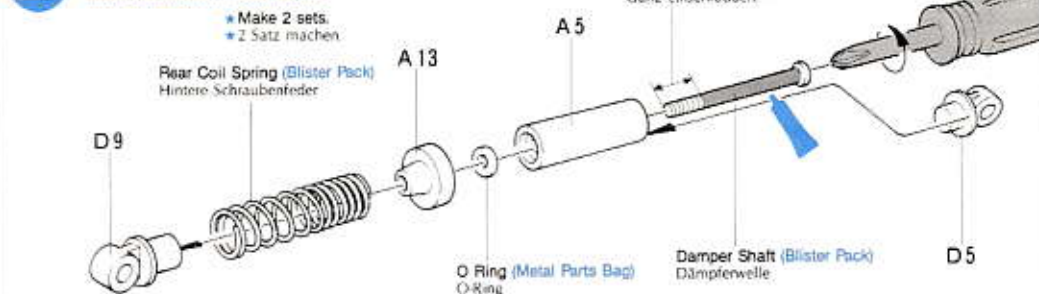
## 28 «Attaching Dampers» «Einbau der Stossdämpfer»



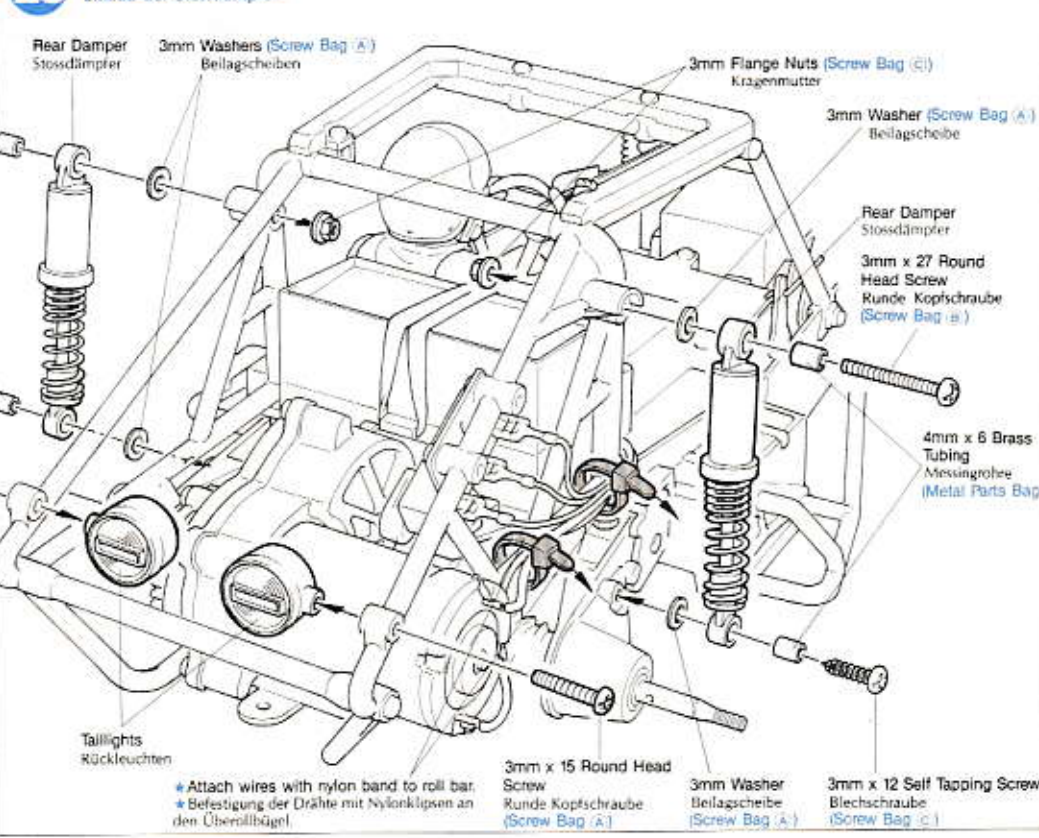
## 26 Attaching Motor Einbau des Motors



## 27 Assembly of Rear Damper Bau der hinteren Stossdämpfer

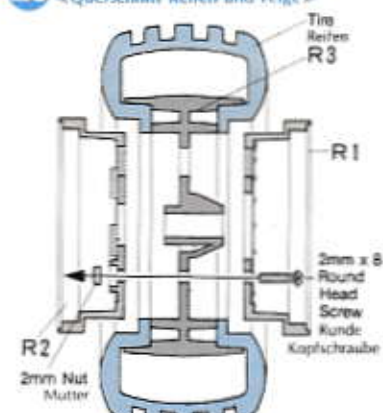


## 28 Attaching Rear Dampers Einbau der Stossdämpfer





### 29 <Cross Section of Wheel> <Querschnitt Reifen und Felge>



#### <Cementing of Wheels>

##### <Reifen aufkleben>

Apply cyanoacrylate instant cement to tires to prevent them from coming off. Schnellkleber verwenden.



### 29 Assembly of Wheels Räder

Insert F3 to front tire and R3 to rear tire. Insert as shown and rotate 90 degrees. Make 2 sets.

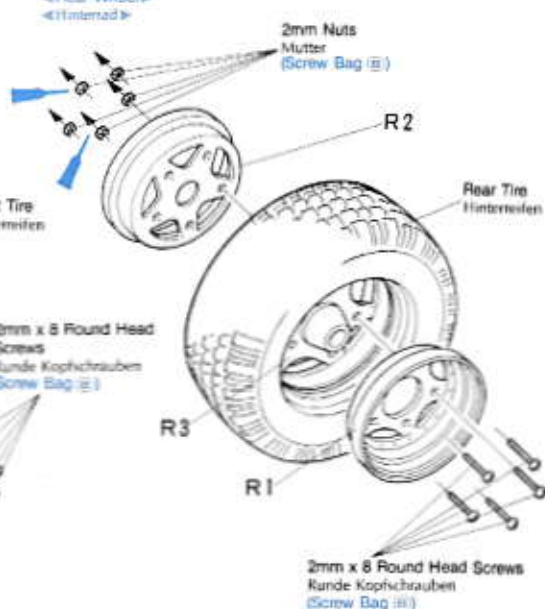
Felgenmitte F3 in die Vorderreifen und R3 in die Hinterräder einstecken und 90° drehen. 2 Satz machen.



#### <Front Wheel> <Vorderrad>



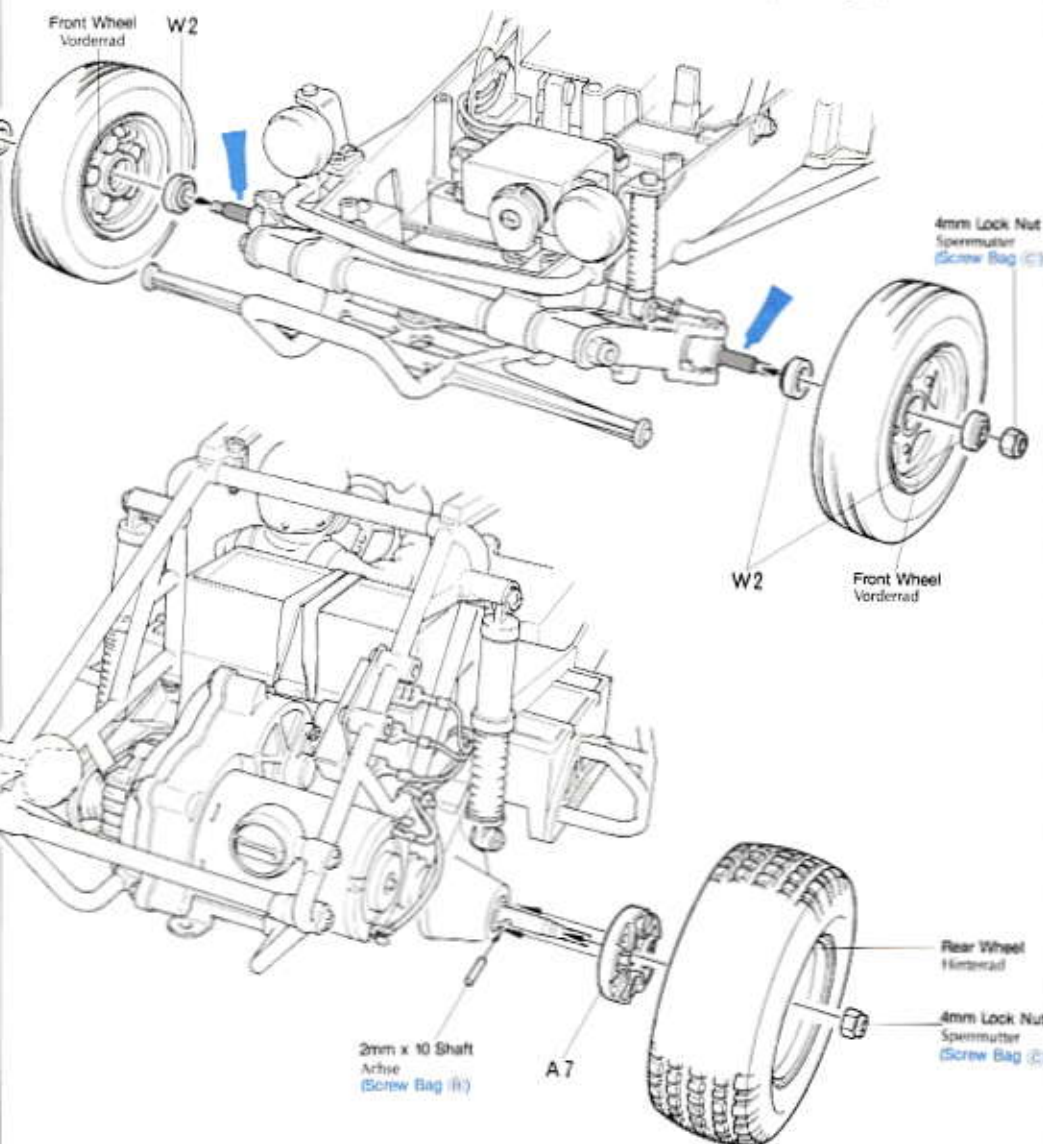
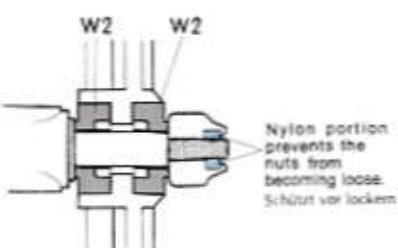
#### <Rear Wheel> <Hinterrad>



### 30 Attaching Wheels Einbau der Räder

### 30 <Attaching Wheels> <Räder Einbau>

#### <Attaching W2> <W2 Einbau>



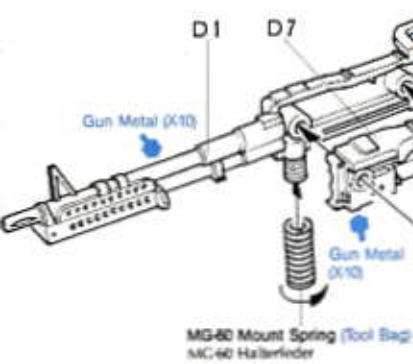
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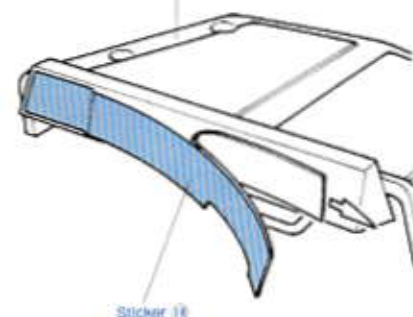


**31** <MG-60>  
<Maschinengewehr MG-60>



<Marking of Engine Hood>  
<Markierung der Motorhaube>

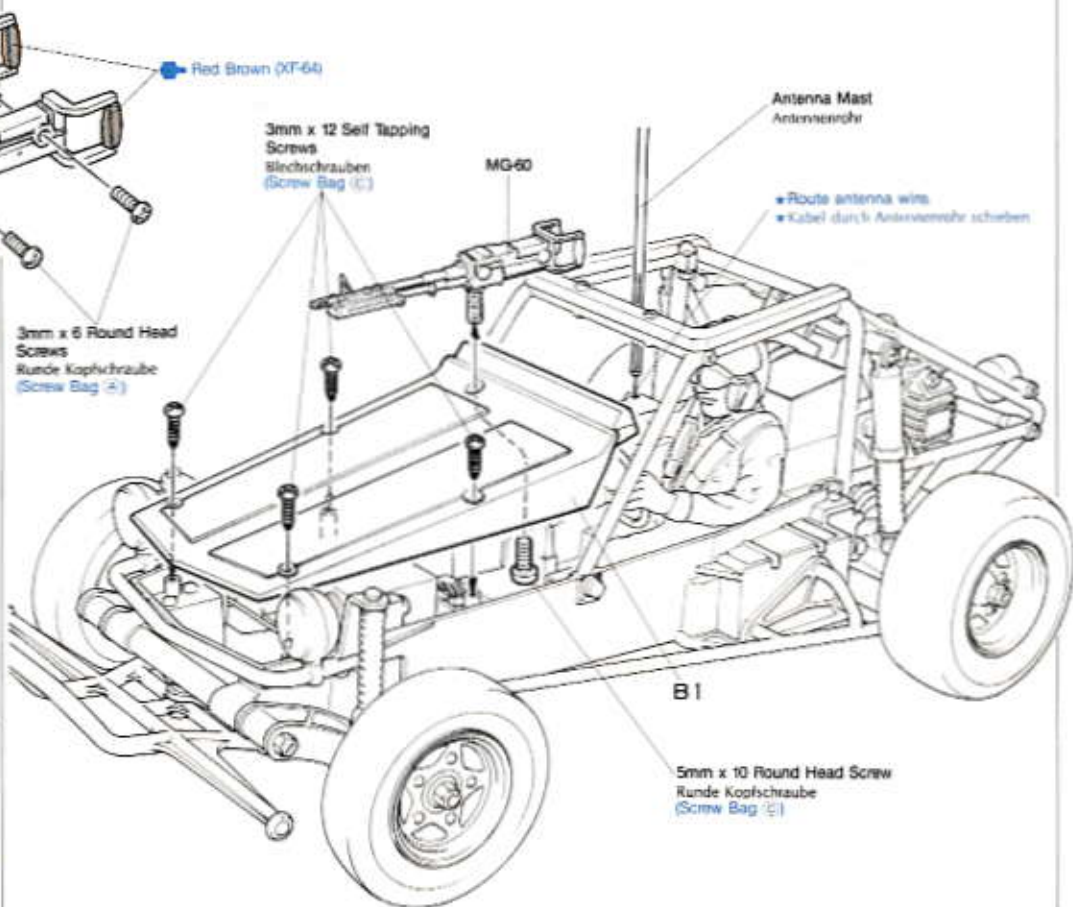
B1



Sticker 18

**31** Attaching Engine Hood  
Motorhaube Einbau

Parts marked \* are not contained in kit.  
Teile mit \* sind nicht im Kit enthalten.



**32** <Installation of Battery>  
<Einbau des Akku>

This kit is designed to use a Tamiya Ni-Cd 6V, 7.2V battery or 7.2V Racing Pack for power source.

Für diesen Kit kann man den Tamiya 6 Volt, 7,2 Volt Akku oder 7,2 V Racing Pack verwenden.

Tamiya Ni-Cd 7.2V Battery  
Tamiya NC 7.2V Akku



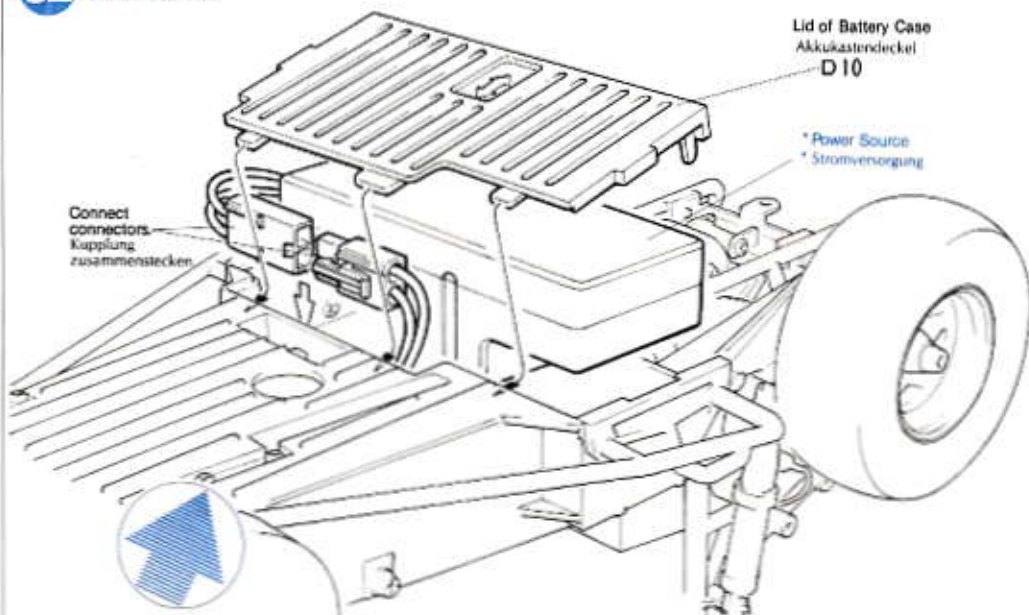
Tamiya Ni-Cd 7.2V Racing Pack  
Tamiya NC 7.2V Racing Pack



Tamiya Ni-Cd 6V Battery  
Tamiya NC 6V Akku

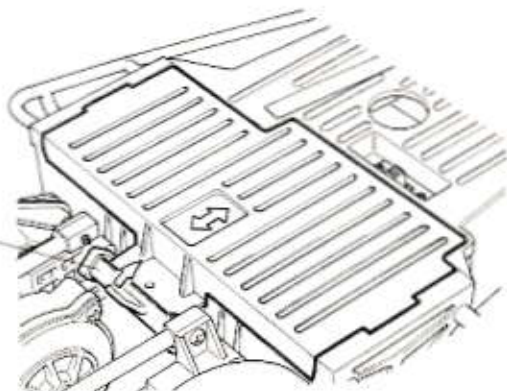


**32** Installation of Battery  
Einbau des Akku



Disconnect Ni-Cd battery when car is not being used.

Fix lid by rotating D2 attached in ●  
Durch drehen des Deckelverschluss wird der Akku-Deckel gehalten.

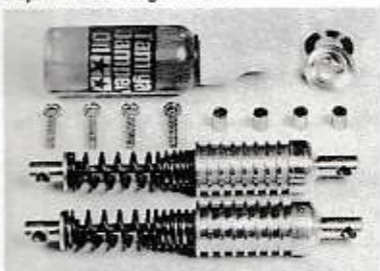




<SUITABLE SPARE PARTS>

<PASSENDE ZUSATZTEILE>

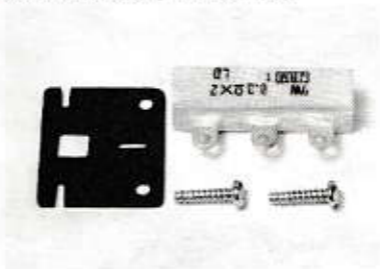
- 5036 Ball Bearing Set (2 pcs.)
- 5038 Tool Set
- 5039 Battery Connector Set (6V)
- 5073 Ball Bearing Set (4 pcs.)
- 5106 7.2V Connector Set
- 5189 RS-540SD Black Motor Sprint
- 5193 Adjustable Racing Shocks



- 5200 RS-540SD Black Motor Endurance
- 5204 Directly Connected Servo Saver
- 5207 Half Shaft Set



- 5212 Ceramic Resistor (Three Terminal)



- 5225 RX-540SD Technipower Motor



- 5228 Plastic Bearing Set

<Tires>

<Reifen>

- 5119 Rough Rider Spare Tire 'Front' with Wheel
- 5120 Rough Rider Spare Tire 'Rear' with Wheel



- 5121 Sand Scorcher Spare Tire 'Front' with Wheel
- 5122 Sand Scorcher Spare Tire 'Rear' with Wheel
- 5152 Holiday Buggy Spare Tire 'Front' with Wheel
- 5153 Holiday Buggy Spare Tire 'Rear' with Wheel
- 5183 Buggy Spike Tires (Rear)

<Battery>

- 5502 Ni-Cd Battery 6V-1200mAh
- 5508 Ni-Cd Battery 7.2V-1200mAh
- 5515 Ni-Cd Racing Pack 7.2V-1200mAh
- 5516 Ni-Cd Mini Pack 6V-150mAh



**TAMIYA**  
TAMIYA PLASTIC MODEL CO.  
62B, OSHIKA, SHIZUOKA-CITY, JAPAN.



«1/10th Scale R/C Buggies»

# The FROG



5841 ..... The Frog

## Willys M38



**WILD WILLY**  
1/10th Scale Buggy with 2.4GHz Radio Control

5835 ..... Wild Willy

# The HORNET



5845 ..... The Hornet

# The GRASSHOPPER



5843 ..... The Grasshopper

# MITSUBISHI PAJERO



5844 ..... Mitsubishi Pajero

### TAMIYA'S R/C GUIDE BOOK

Tamiya's latest Radio Control Guide Book can make you a winner at the racing circuit. Read up on the latest tune up methods, care and maintenance, painting and decorating your cars. Available at your nearest hobby supply house.

### TAMIYA COLOR CATALOGUE

The latest in cars, boats, tanks and ships. Motorized, radio controlled and museum quality models are all shown in full color in Tamiya's latest catalogue. At your nearest hobby supply house.



# FAST ATTACK VEHICLE



## <Inspection before Operation>

Be sure to check the points shown in the figure before starting operation. This is necessary to prevent trouble and accidents. It is recommended to check them with the model put on a base so that the wheels are in the air.

In the first operation after assembly, let the model run slowly for the first five minutes while checking the condition of the steering and switch.

- 1 Make sure that screws, particularly grub screws, are tight enough.
- 2 Make sure that batteries for the transmitter and receiver are new by means of meter or lamp.
- 3 Make sure that Ni-Cd battery has been sufficiently charged.
- 4 Adjust steering servo and/or trims so that the car tracks in a straight line with transmitter at neutral.
- 5 Double check the speed controller for full travel to high speed and stop limits.
- 6 Double check the wiring for breaks and short circuits. Secure with vinyl tape.
- 7 Make sure that lock nuts are tight enough.
- 8 Make sure that the front wheels rotate smoothly and are lightly oiled.
- 9 Do rear wheels rotate smoothly? Lubricate inside of gear box with spray oil.

## <Einfahren>

Nach Zusammenbau das Modell langsam die ersten 5 Minuten laufen lassen und dabei die Steuerung und Schalter auf gute Wirkung beobachten.

- 1 Darauf achten, dass alle Schrauben gut angezogen sind.
- 2 Batterien für Empfänger und Sender müssen voll sein.
- 3 Nur volle Akku's bringen volle Leistung evtl. nachladen.
- 4 Steuerung muss einwandfrei arbeiten. Modell muss geradeaus fahren. Wenn Fahrzeug nach links oder rechts zieht, mit Trimmhebel nach justieren.
- 5 Der Schalter muss auf Top speed gehen und genau stoppen.
- 6 Kabel gut isolieren um Kurzschluss zu vermeiden.
- 7 Muttern müssen gut angezogen sein.
- 8 Vorderrad muss leicht drehen, evtl. ölen
- 9 Drehen die Hinterräder gut! Das Getriebegehäuse innen mit Öl-Spray schmieren.

## <Cautions>

As an electric powered radio control car utilizes high capacity Ni-Cd batteries and high performance electric motors, currents as large as 200 watts flow in the circuits. You must be very careful of all wiring, adjustments, and the handling of the speed controller, otherwise your receiver, servo or speed controller is at high speed will seriously damage or burn out the motor. Never impose too much of a load on the motor.

troiler can be damaged. Please note the following carefully.

## <Bitte beachten!>

Ein ferngesteuertes Auto mit Elektro-Motor braucht viel Strom und einen Motor mit grosser Leistung Bis zu 200 Watt! Alle Verdrahtungen, Einstellungen und der Geschwindigkeitsregler müssen vorichtig gehandhabt oder sicher eingebaut sein, sonst können Empfänger, die Servos oder der Fahrgler beschädigt werden. Bitte folgendes beachten!

## <Car runs with switch off>

Whenever battery is connected, the switch blade of the speed controller must be on the stop position or the car will run as soon as the battery is connected.

## <Das Fahrzeug fährt, obwohl der Schalter aus ist>

Wenn der Akku angeschlossen ist, muss der Fahrgler in der Stop Position sein, klar-sonst haut das Fahrzeug ab

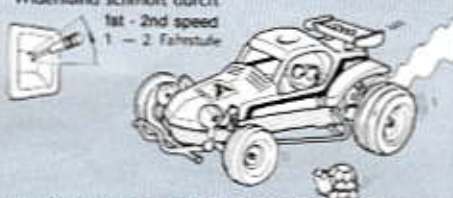
## <Burnt out resistor>

### <Durchgeschmorter Widerstand>



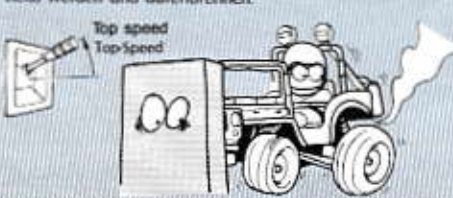
If your car stops due to some foreign object obstructing the wheels, the resistor of the speed controller can burn out.

Wenn das Fahrzeug durch ein Hindernis zum Stehen kommt, können die Räder blockiert werden und der Widerstand schmort durch



Driving for long periods in the 1st or 2nd speeds can also burn out the resistor.

Zu langen fahren im 1. oder 2. Gang lässt den Widerstand heiss werden und durchbrennen.



Stopping the wheels from rotating when the speed

controller is at high speed will seriously damage or burn out the motor. Never impose too much of a load on the motor.

## <Procedure for Running>

- 1 Set up batteries for the motor, transmitter and receiver.
  - 2 Make sure that the sticks and trim levers of the transmitter are in neutral.
  - 3 Turn on the transmitter switch.
  - 4 Turn on the receiver switch.
  - 5 Confirm the movement of each portion by manipulating the sticks. Make adjustment by means of the trim levers, if necessary.
- \* The switches must be operated in this order. If the receiver switch is turned on before the transmitter switch, the model may go out of control because of interference.
- \* Reverse the procedure mentioned above when you finish running the model. Turn off the receiver switch, then transmitter switch. Remove the batteries if the model is not going to be used for awhile.

1 If the motor does not function (a rare occurrence), remove wires and check the motor by directly connecting its lead wire to a fresh battery.

2 Is the servo horn in the proper position? It must be fitted so that the model turns right and left the same amount.

3 Antenna must be adjusted correctly.

4 When shaft or wheels become entangled, motor will overheat. Remove such hindrances immediately.

5 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.

## STÖRUNGEN UND URSACHEN

Wenn Fahrzeug nicht richtig fährt, versuche folgendes:

1 Wenn Motor nicht läuft, evtl. direkt an Batterie zum Prüfen anschließen.

2 Das Servohorn überprüfen. Es muss so eingebaut sein, dass links und rechts gleichmässige Drehung erfolgt.

3 Antenne richtig setzen.

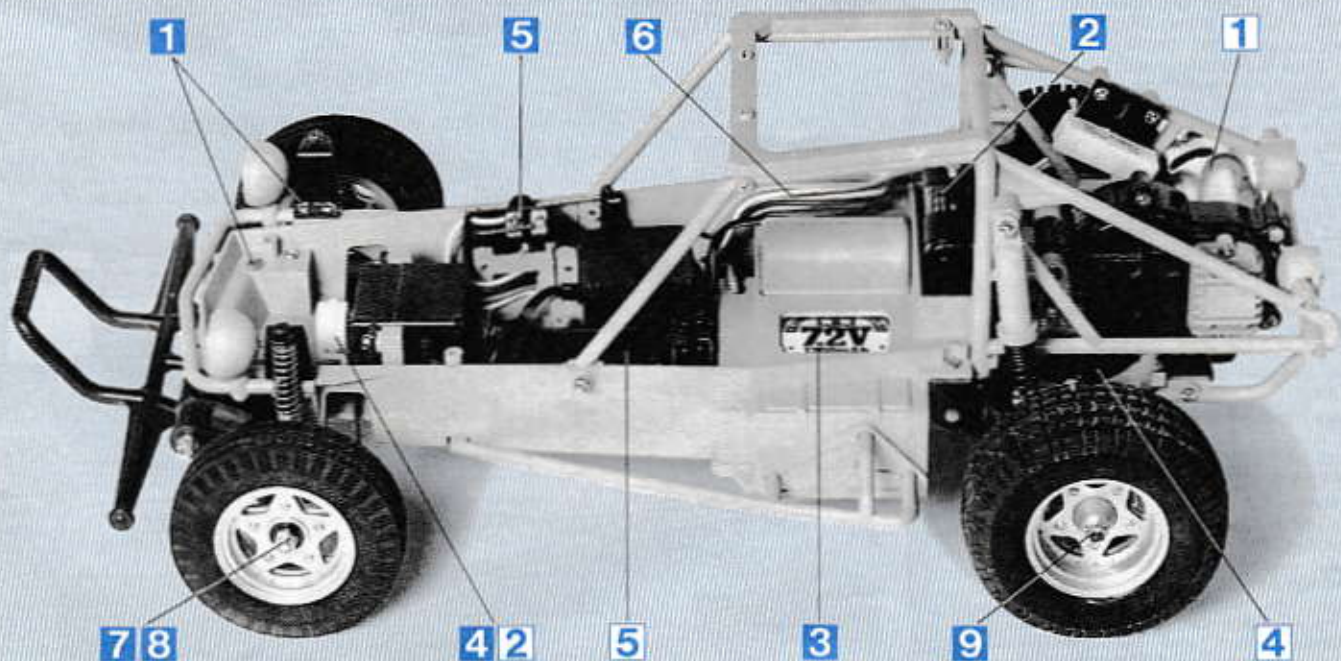
4 Wenn Gras oder Steinchen die Antriebsachsen blockieren, wird der Motor überhitzt. Blockierung sofort entfernen.

5 Wenn Funkanlage nicht richtig arbeitet, zum Fachhändler gehen - NICHT versuchen, SELBST zu reparieren.

## <Maintenance after Running>

After operating the model, do the following to keep optimum performance.


- \* Completely remove sand, mud, dirt, etc.
- \* Oil the suspension, gears, bearings, etc.

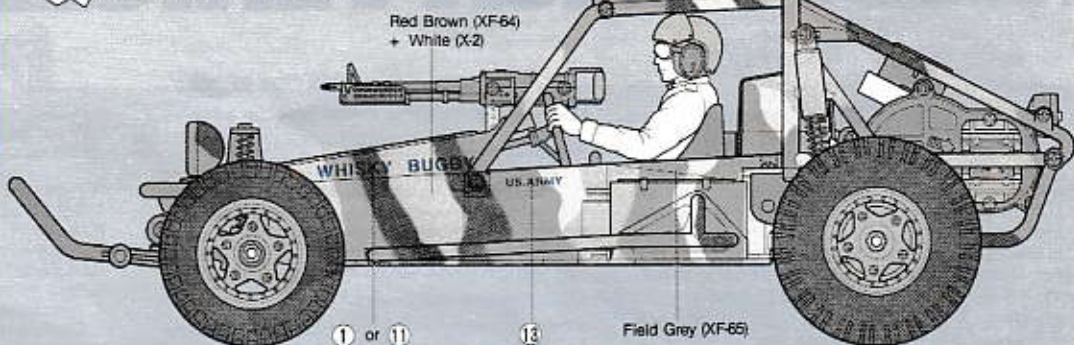




# PAINTING MARKING

## «Painting Example A»

 Camouflage painting of U.S. Army



## «Painting of Fast Attack Vehicle»

The modern U.S. Military camouflage pattern is very colorful, and should be utilized when finishing the model as a FAV. Use the U.S. Army 4 color scheme as shown at right, overall olive drab or a dark yellow sand color. Kit can be made to look like a standard off road buggy by eliminating the machine gun and painting the vehicle in colors of your choice. Roll cage and nerf bars are made from engineering plastic, for strength, and most paints will not adhere to this plastic well. Detail painting is called out during assembly and should be done at that time.

## «Bemalung des schnellen Einsatzfahrzeuges»

Die moderne Tarnung der US-Militär-Fahrzeuge ist sehr bunt und sollte bei diesem Fahrzeug angebracht werden. Sie auch Bild-Schema auf der rechten Seite. Bei Weglassen des MG's hat man ein wunderschönes Gelände-Fahrzeug und bemalt es je nach eigenen Wünschen. Der Überrollkäfig und die seitlichen Rammstützbügel sind aus zähem Plastikmaterial geformt und werden dort die meisten Farben nicht halten!! Bemalung kleiner Details — siehe Anleitung Step für Step.

• Paint body as you like!

### «Colors»

• From Tamiya Acrylic Paints

White .....	X-2
Orange .....	X-6
Red .....	X-7
Gun Meal .....	X-10
Flat Black .....	XF-1
Flat White .....	XF-2
Flat Yellow .....	XF-3
Flat Green .....	XF-5
Hull Red .....	XF-9
J.N. Green .....	XF-11
Flat Flesh .....	XF-15
Khaki .....	XF-49
Buff .....	XF-57
Olive Drab .....	XF-62
Red Brown .....	XF-64
Field Grey .....	XF-65

• From tamiya Paint Marker

Chrome Silver .....	X-11
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### «Spray painting hints»

Firstly always spray indoors in windless and dust-free conditions. Spread paper 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 even application.

### «Marking»

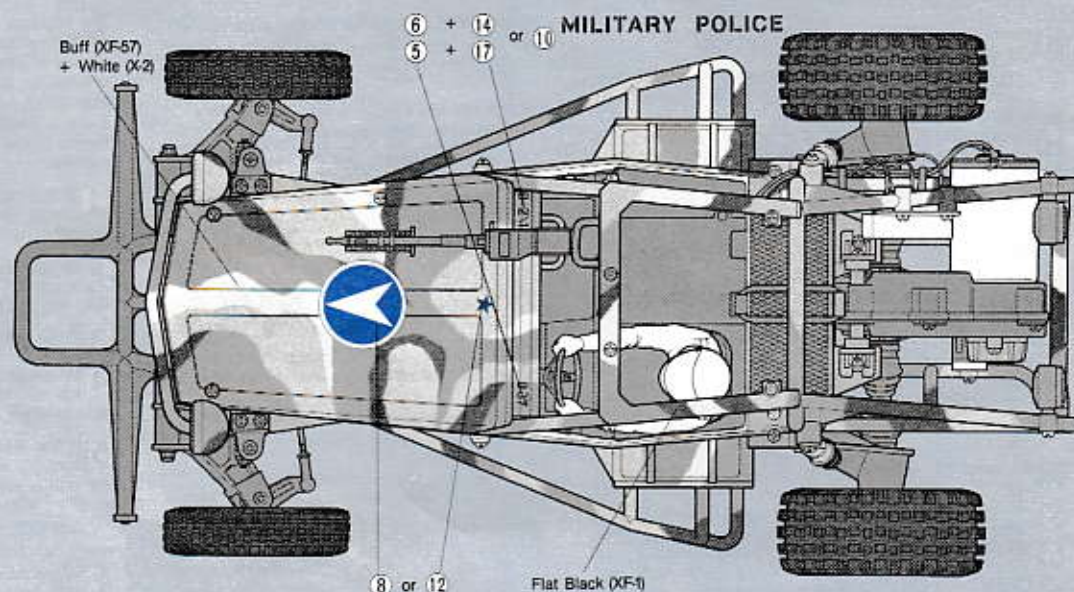
(1) Decals are on seals of sticker tape. A decal to be applied should be cut off beforehand.

(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.

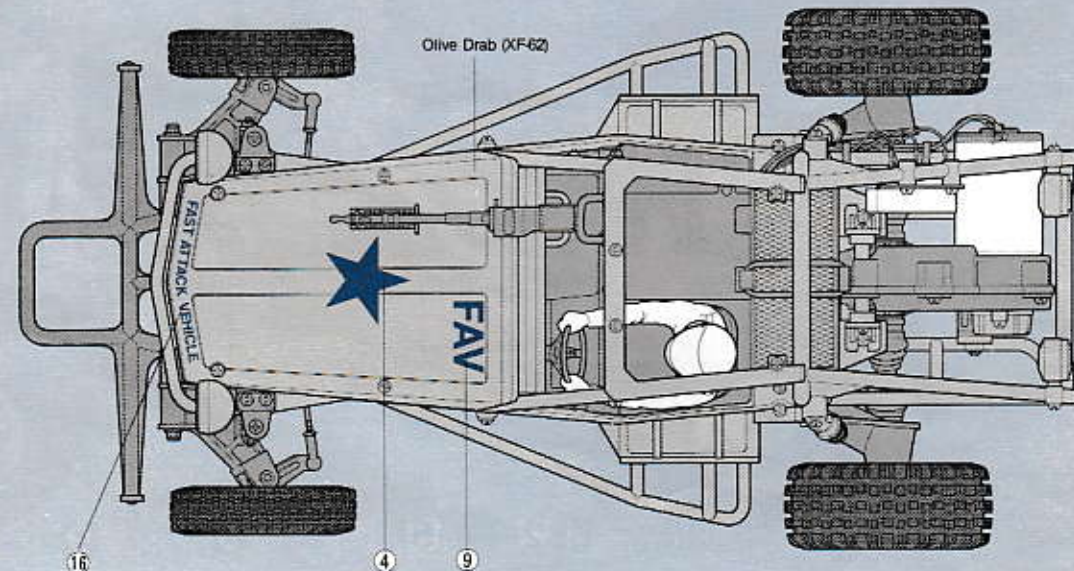
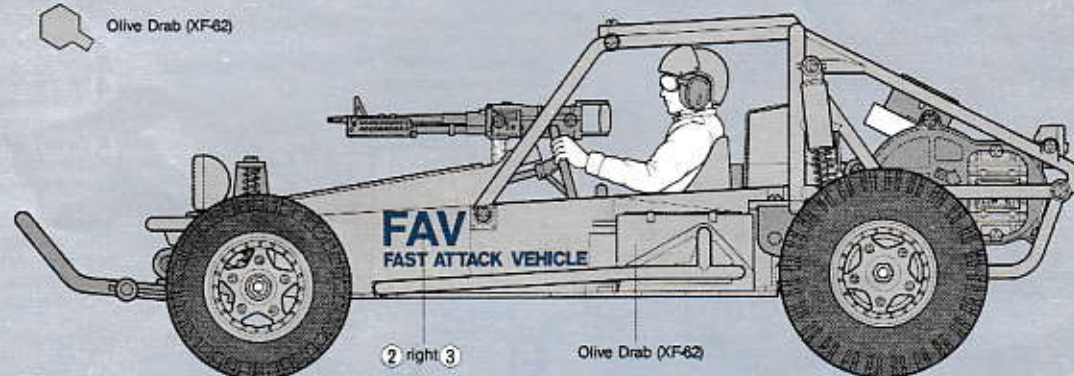
### «Markierung»

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.



## «Painting Example B»

 Olive Drab (XF-62)





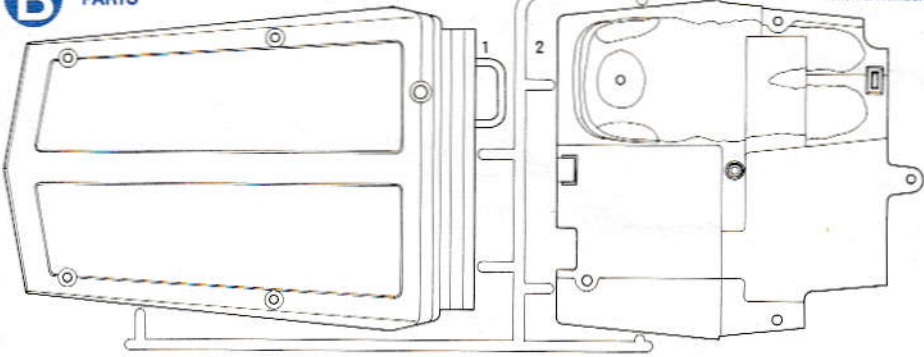
# PARTS

Chassis  
Antenna Mast  
Sticker

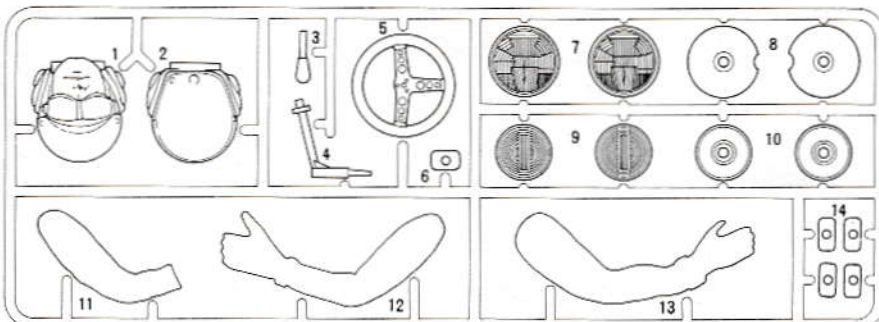
## A PARTS

Not used.  
nicht verwenden

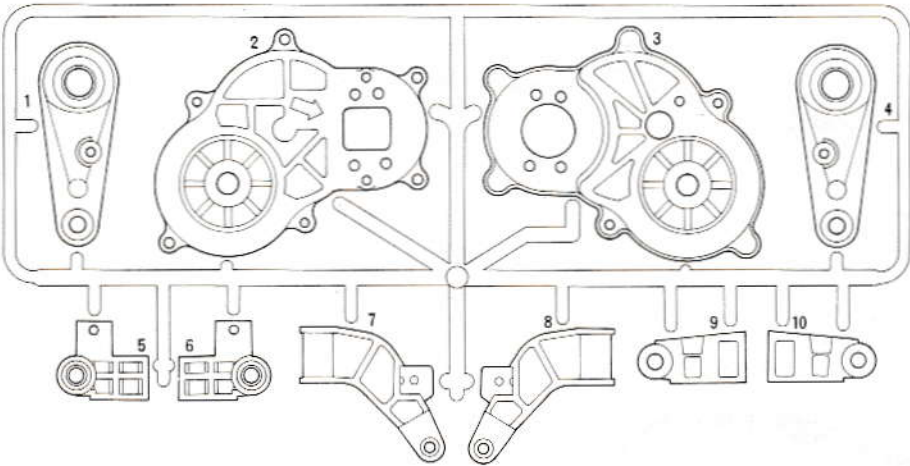
## B PARTS



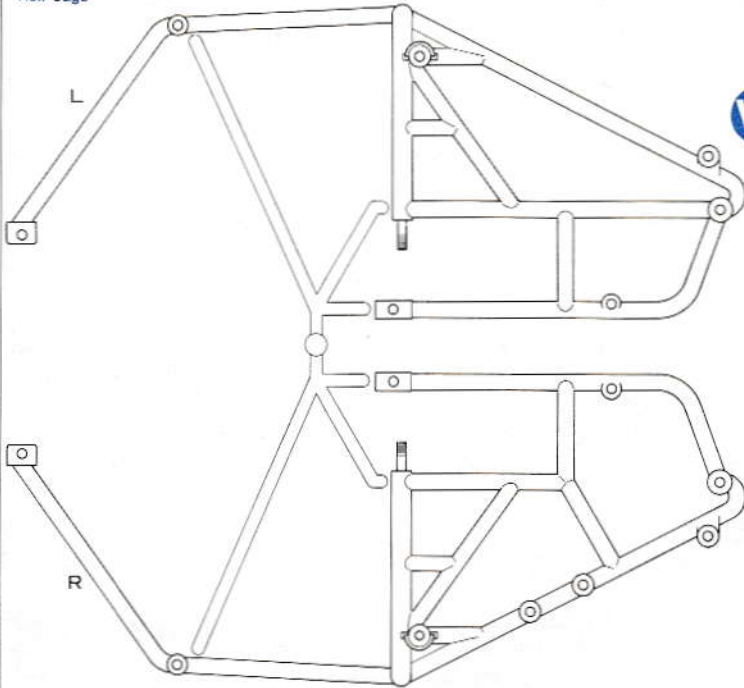
## C PARTS



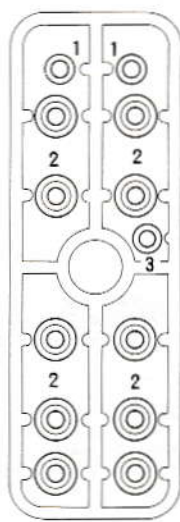
## E PARTS



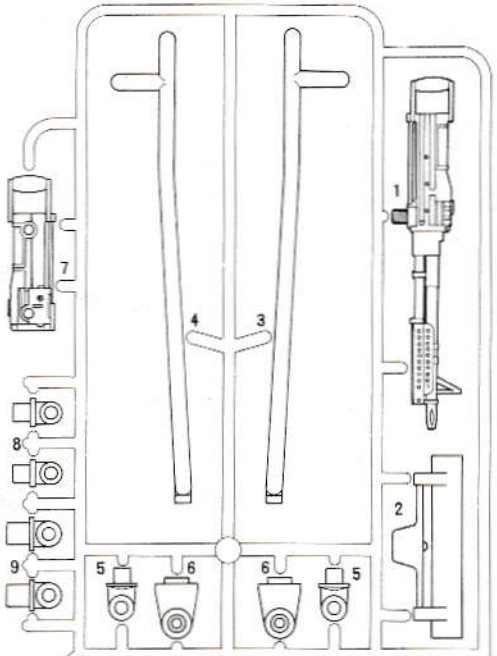
Roll Cage



## W PARTS

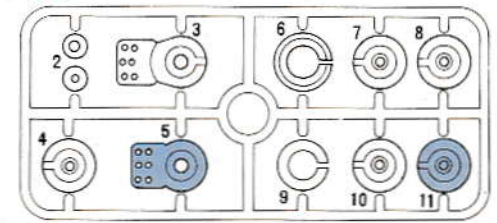


## D PARTS



## S PARTS

Not used.  
nicht verwenden

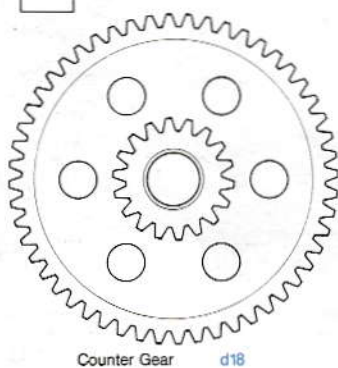
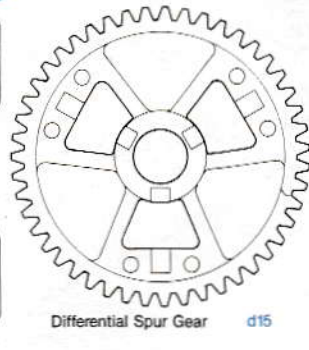
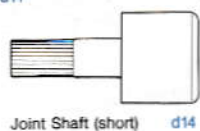
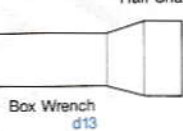
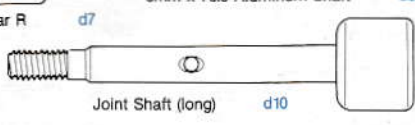
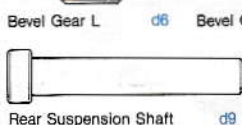
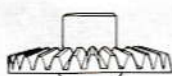
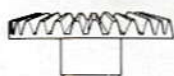
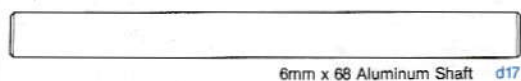
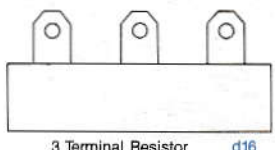
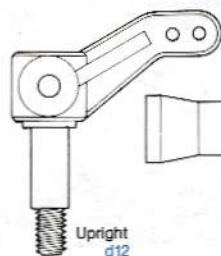
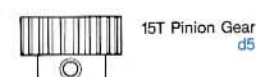
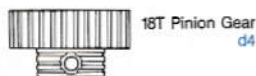
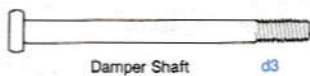
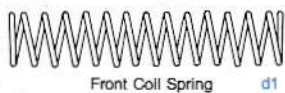




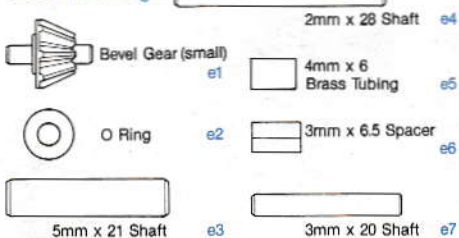
# PARTS

★Extra screws & nuts are included.  
Use them as spares.  
★Ersatz-Schrauben und Mutter liegen  
im Kit bei.

## Blister Pack



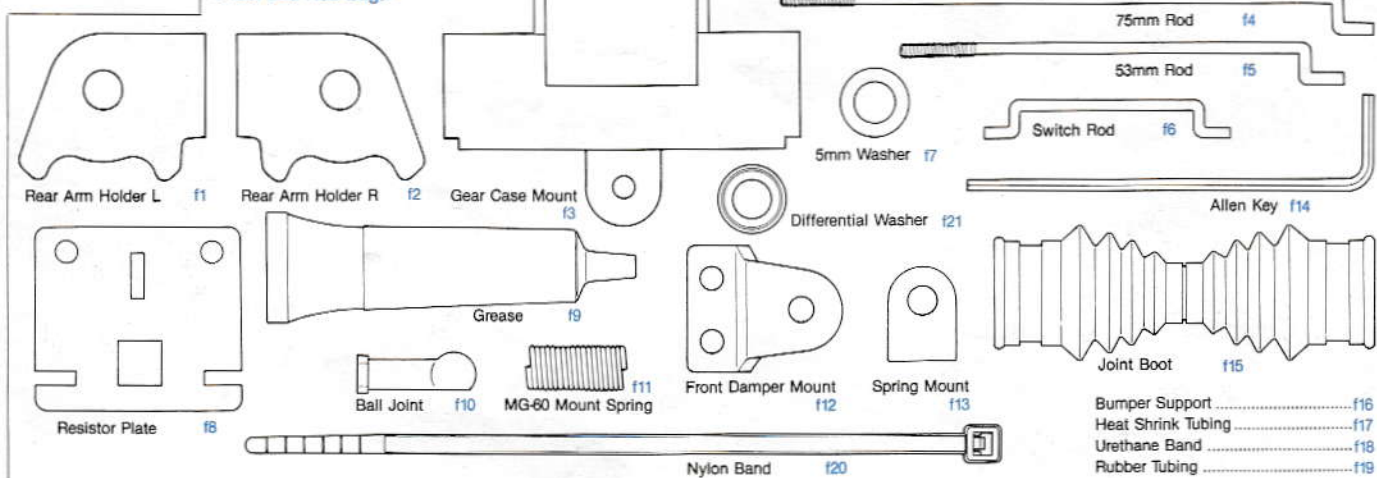
## «Metal Parts Bag»



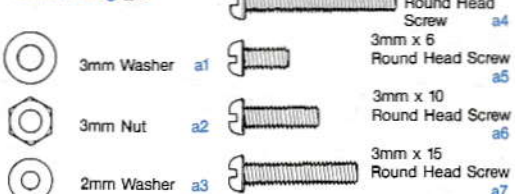
Speed Controller.....d19  
RS-540S Motor.....d20  
Front Suspension Shaft.....d21

## Metal Parts Box

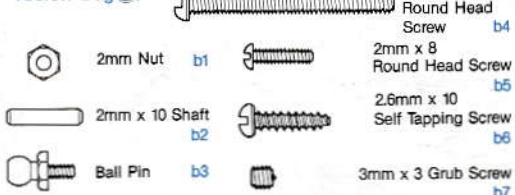
### «Tool and Rod Bag»



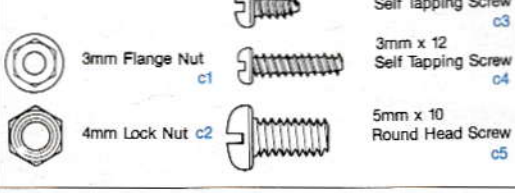
## «Screw Bag A»



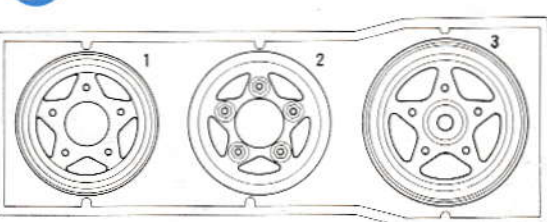
## «Screw Bag B»



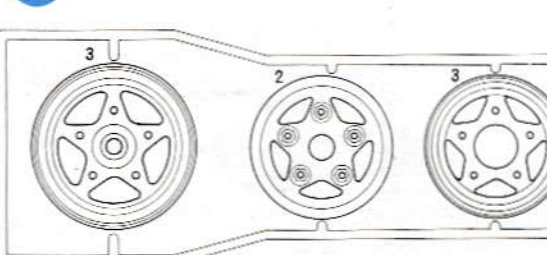
## «Screw Bag C»



## F PARTS



## R PARTS



## «Tire Bag»

Front Tire  
Rear Tire

