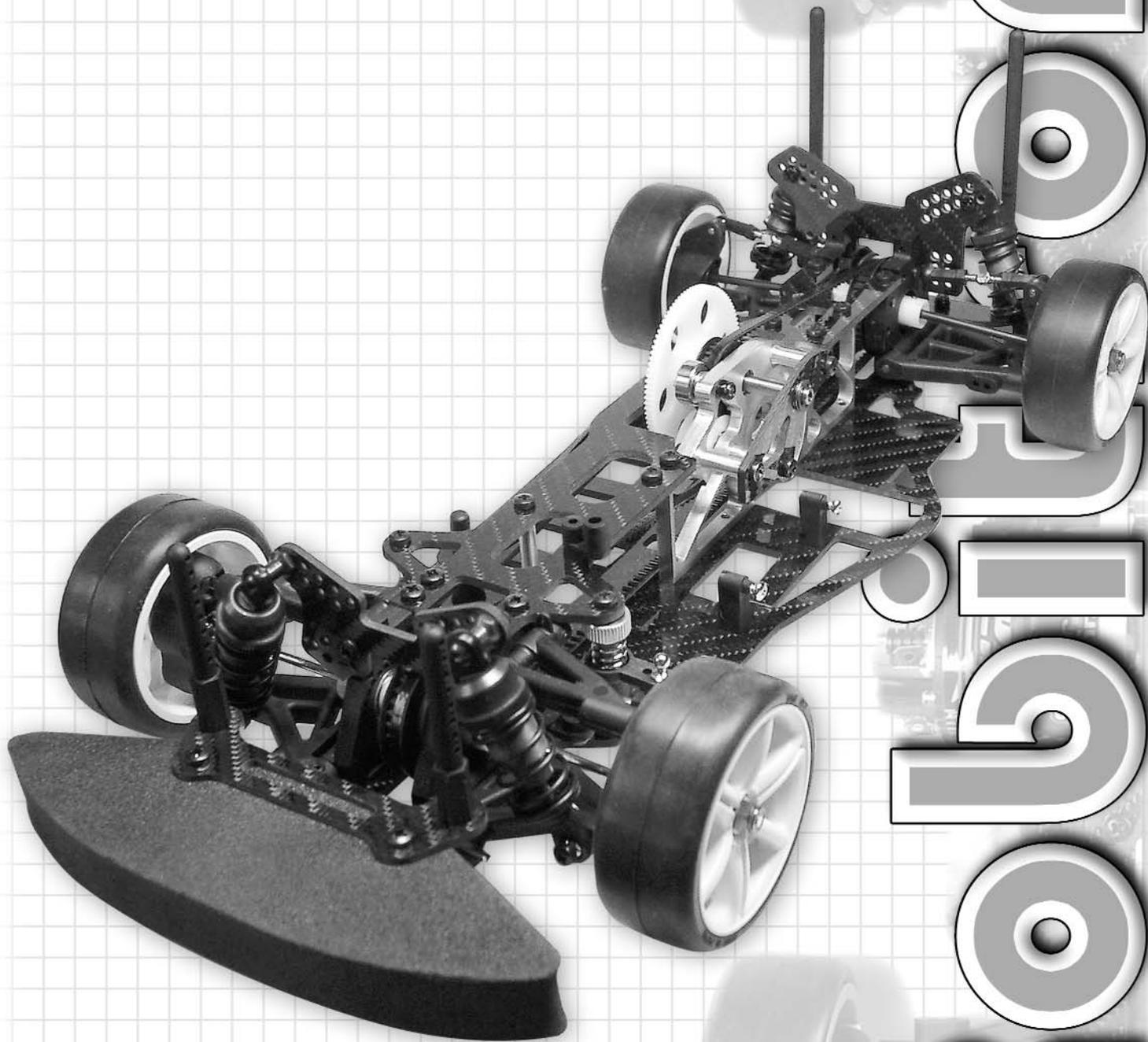


ETC *v1*

EXPERT TOURING CAR



HANDBUCH
INSTRUCTION MANUAL

ETC
v1
EXPERT
TOURING
CAR

REQUIRED FOR OPERATION / NICHT IM LIEFERUMFANG ENTHALTEN

- ① 2 Channel Radio Controller Unit
2 Kanal Fernsteuerung Set



- ② UM-3 Batteries (12pcs)
Mignon Akkus (12Stk.)



- ③ Charger for Batteries
Ladegerät für Akkus



- ④ 7.2V Ni-Cd or Ni-MH Battery
7,2V Ni-Cd oder Ni-MH Akku



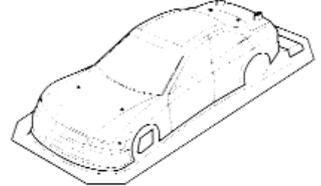
- ⑤ Electric Motor (540 type)
Elektromotor



- ⑥ Speed Controller
Fahrtenregler

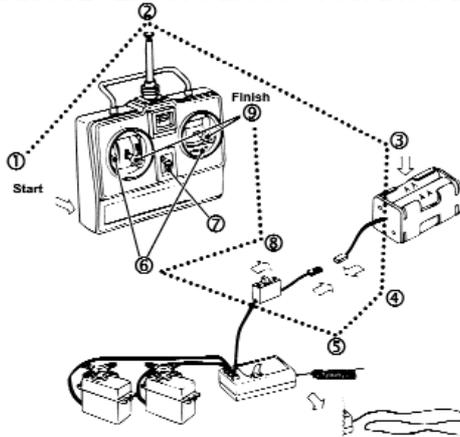


- ⑦ Touring Car Body (190mm)
Tourenwagen Karosserie (190mm)



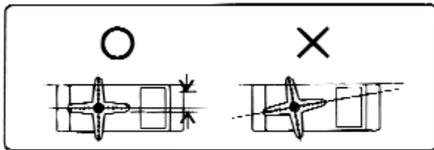
* Carefully read the instruction manual of your 2 channel radio controller before using.
* Lesen Sie bitte vor Benützung die Gebrauchsanweisung Ihres Senders.

RADIO MUST BE SET AT NEUTRAL POSITION BEFORE INSTALLING IN THE KIT. FERNSTEUERUNG MUSS VOR INSTALLATION AUF NEUTRAL POSITION STEHEN.



SEQUENCE TO SET NEUTRAL SCHRITTE ZUR NEUTRALEINSTELLUNG

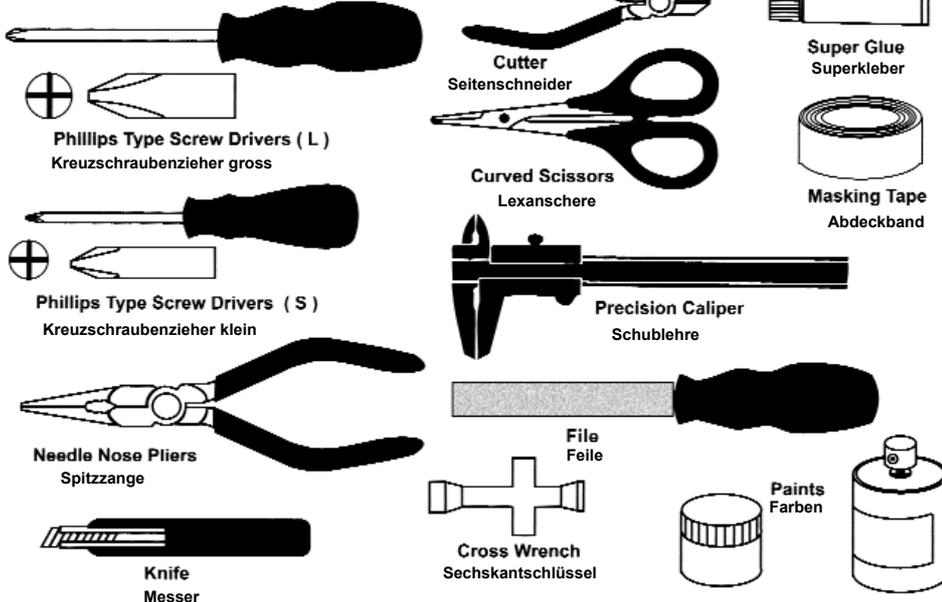
- | | |
|---|--|
| ① Install transmitter batteries. | 1) Senderbatterie einsetzen |
| ② Extend the antenna.(Transmitter) | 2) Antenne herausziehen |
| ③ Install receiver batteries . | 3) Empfängerakkus einsetzen |
| ④ After installing the battery, connect the battery box. | 4) Empfängerbatterie mit Empfänger verbinden |
| ⑤ Extend the antenna. (Receiver) | 5) Empfängerantenne auslegen |
| ⑥ Set the trim-level at center. | 6) Trimmung auf Mittelstellung |
| ⑦ Turn on the switch. (Transmitter) | 7) Sender einschalten |
| ⑧ Turn on the switch. (Receiver) | 8) Empfänger einschalten |
| ⑨ Make sure the servos are in command. | 9) Vergewissern Sie sich, dass die Servos funktionieren |
| ⑩ When the operation stick is in neutral, servo horns must be in neutral as well. | 10) Bei Neutralstellung des Senders müssen die Ruderhörner des Servos ebenfalls in Neutralstellung sein. |
| ⑪ Turn off the switch. (Receiver) | 11) Empfänger ausschalten |
| ⑫ Turn off the switch. (Transmitter) | 12) Sender ausschalten |
| ⑬ Retract the antenna. (Transmitter) | 13) Senderantenne einschieben |



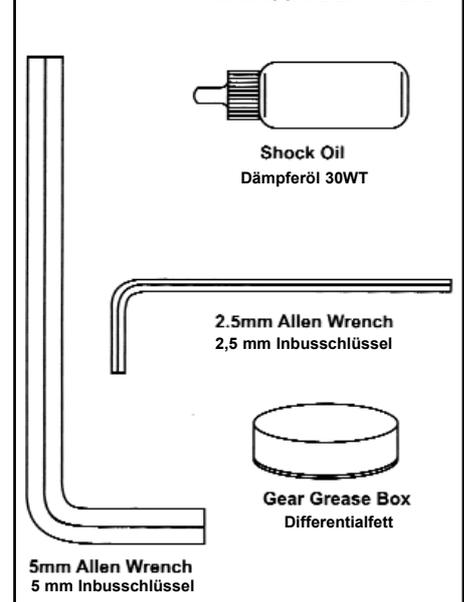
*Adjustment can be made by re-installing the servo horn.

* Ruderhörner nejustieren falls nicht in Neutralstellung

TOOLS NOT INCLUDED IN KIT NICHT IM BAUSATZ ENTHALTEN

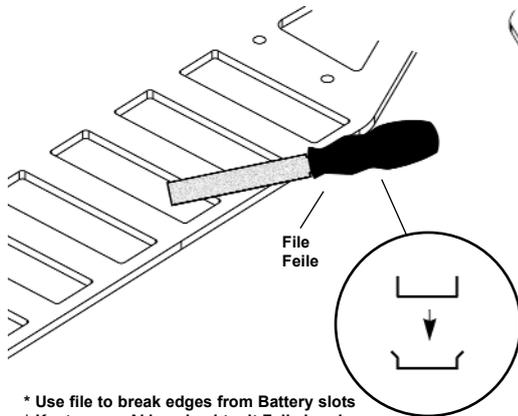


INCLUDED WITH KIT IM BAUSATZ ENTHALTEN

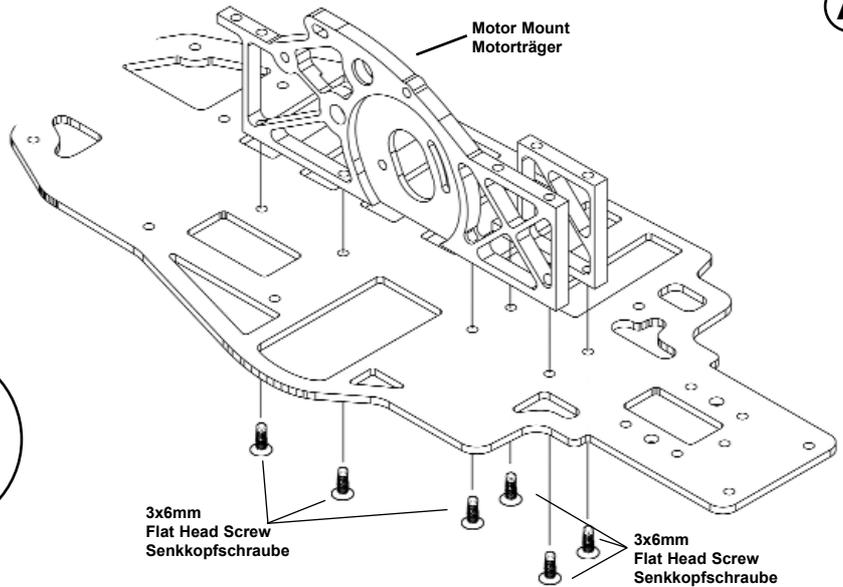


1) ASSEMBLY OF THE MOTOR MOUNT MONTAGE DES MOTORTRÄGERS

A

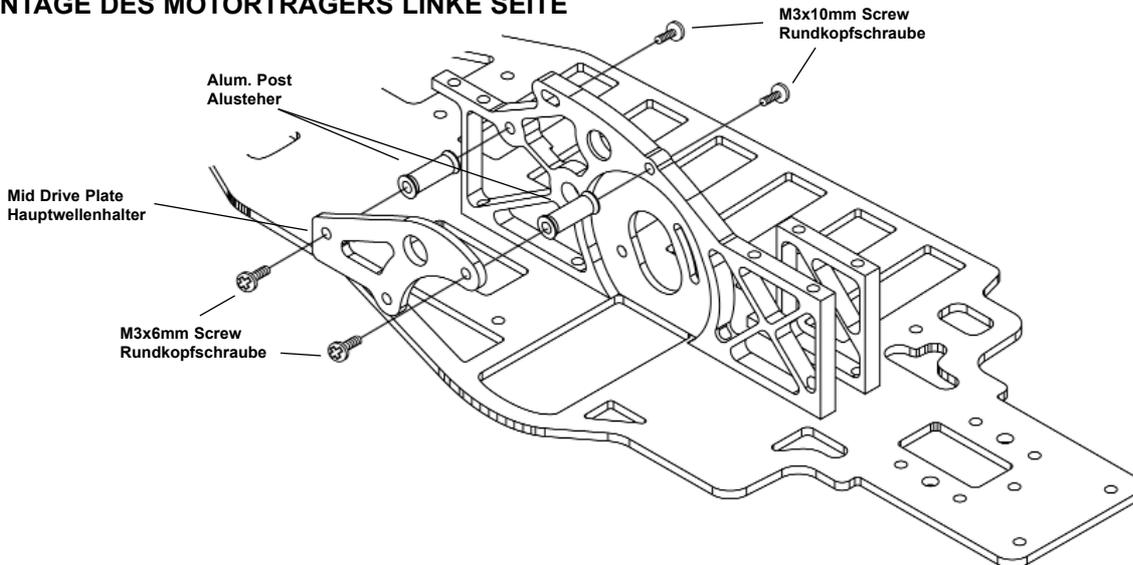


- * Use file to break edges from Battery slots
- * Kanten von Akkuschacht mit Feile brechen



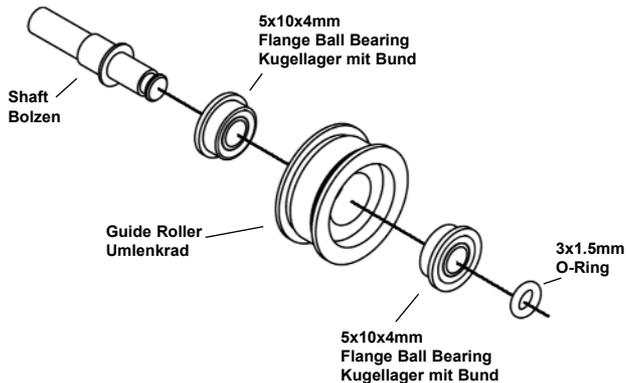
2) ASSEMBLY OF THE MOTOR MOUNT LEFT-SIDE MONTAGE DES MOTORTRÄGERS LINKE SEITE

A



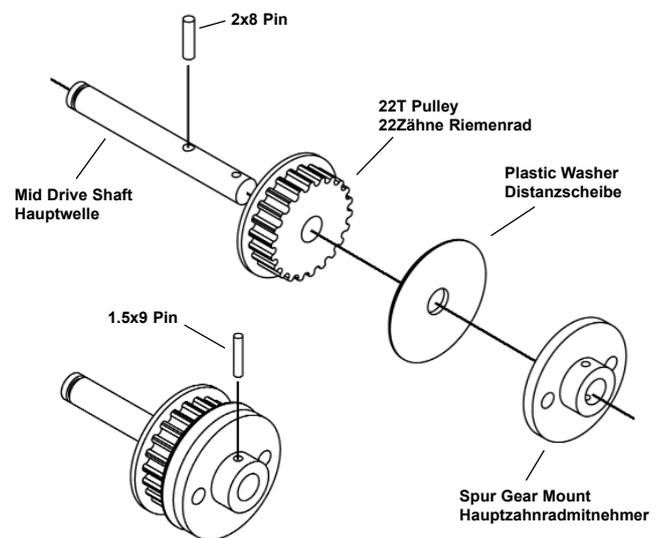
3) ASSEMBLY OF THE GUIDE ROLLER MONTAGE DER UMLENKROLLE

A



4) ASSEMBLY OF THE MID DRIVE SHAFT MONTAGE DER HAUPTWELLE

A

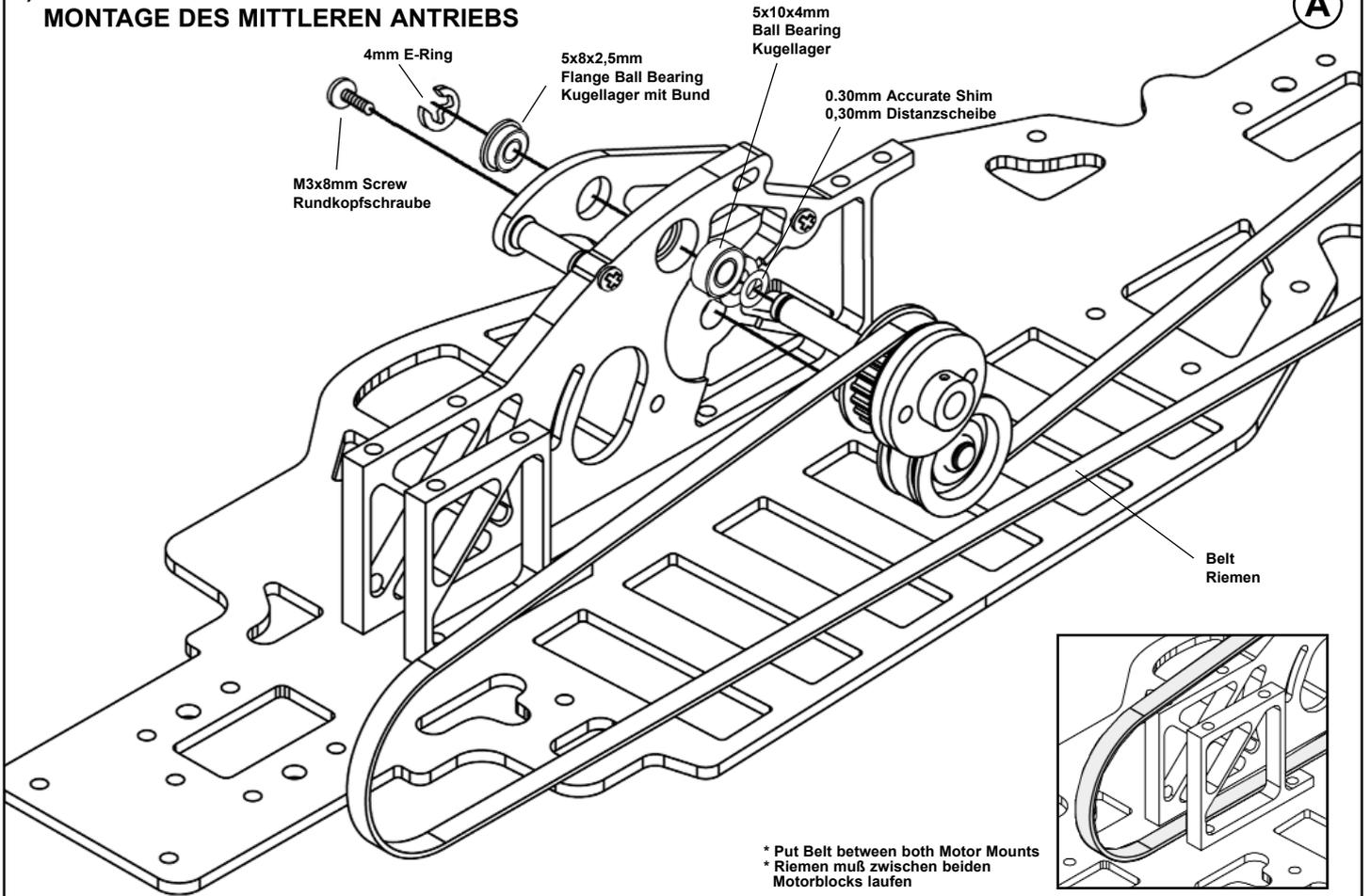


* Use 2x M3x6mm Screw for the Spur Gear (Page 20)

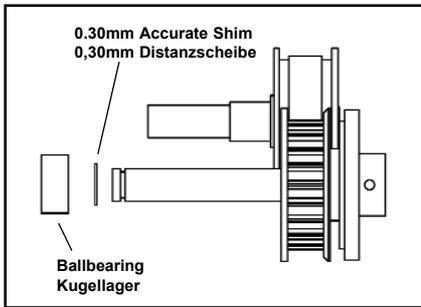
* 2x M3x6mm Rundkopfschrauben für das Hauptzahnrad verwenden (Seite 20)

5) ASSEMBLY OF THE MID DRIVE MONTAGE DES MITTLEREN ANTRIEBS

A



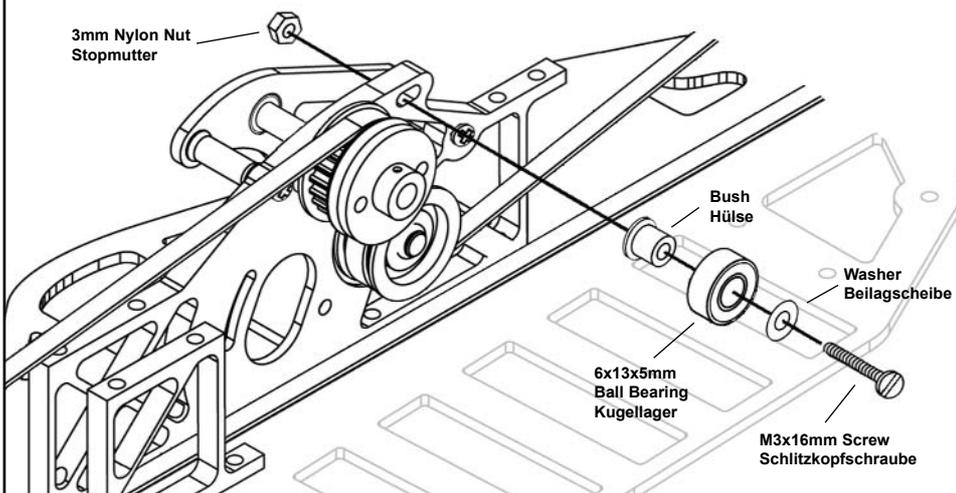
* Put Belt between both Motor Mounts
* Riemen muß zwischen beiden Motorblocks laufen



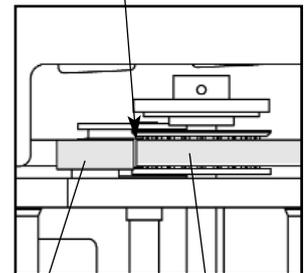
* Use the 0.30mm Accurate Shim. If the Pulley is not in the center of the Guide Roller, try 0.20 or 0.10mm Shim.
* Verwenden Sie die 0,30mm Distanzscheibe. Falls sich das Riemenrad nicht in der Mitte von der Umlenkrolle befindet, versuchen Sie die 0,20 oder 0,10mm Scheibe.

6) ASSEMBLY OF THE BELT CONTROLLER MONTAGE DES RIEMEN KONTROLLRADES

A



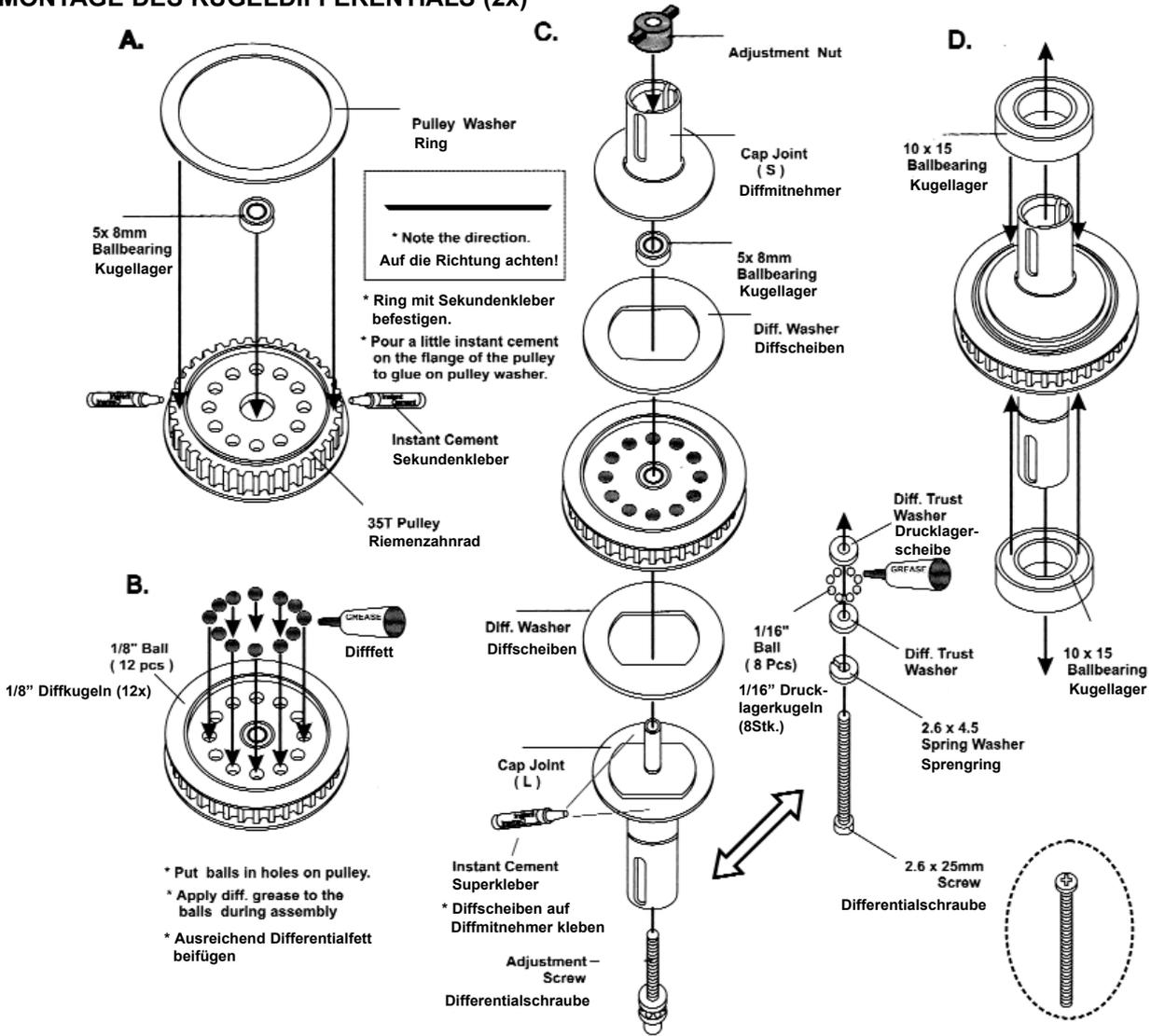
* Adjust 0.5mm between the ball bearing and the belt
* Stellen Sie ca. 0,5mm Abstand zwischen Kugellager und Riemen ein



6x13x5mm Ball Bearing Kugellager
Belt Riemen

7) BALL DIFFERENTIAL ASSEMBLY (Builds 2 differentials) MONTAGE DES KUGELDIFFERENTIALS (2x)

B

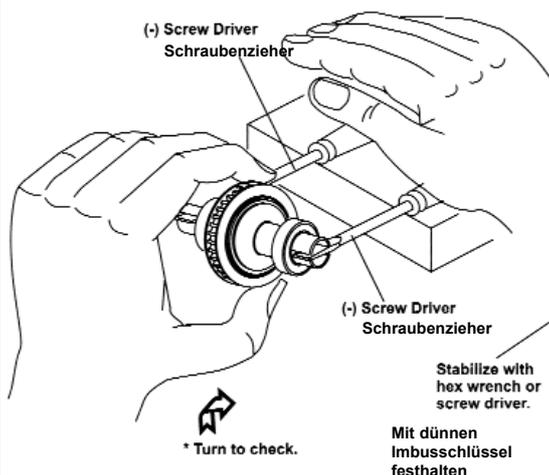


CHECKING BALL DIFFERENTIAL

"A"

Hold both cap joints with screw drivers and try to turn the differential gear.
If the differential gear moves too freely or is over tight make adjustments as shown in next step.

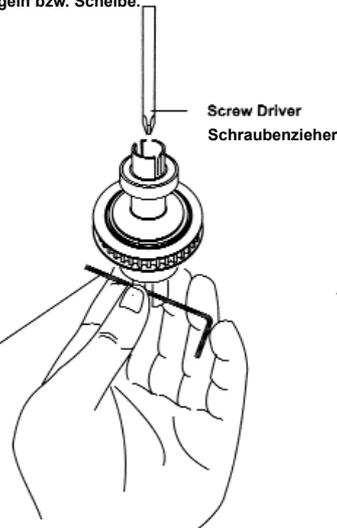
Stecken Sie 2 Schraubenzieher in die Schlitze und versuchen Sie das Riemenrad zu drehen.
Wenn sich das Riemenrad leicht dreht oder zu streng ist gehen sie wie Schritt B vor.



"B"

Adjusting the hex screw with a phillips screw driver (small) will tighten or loosen the ball differential. Please note that if this screw is over tightened or the ball differential moves too freely damage may occur to the balls and the diff. washer. (Please check very carefully)

Durch verstellen der Differentialschraube können Sie das Diff locker oder strenger einstellen. Bitte vorsichtig einstellen, sonst beschädigen Sie die Kugeln bzw. Scheibe.



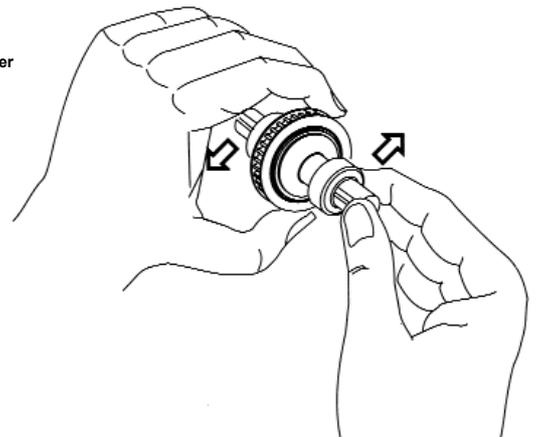
"C"

To test the effectiveness of the ball differential hold the gear tightly with one hand and turn one cap joint.

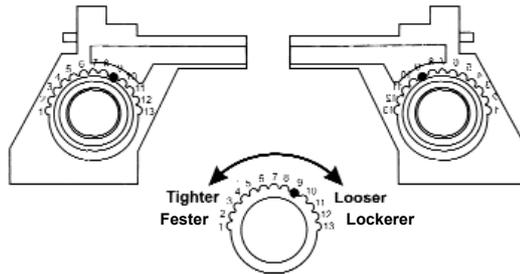
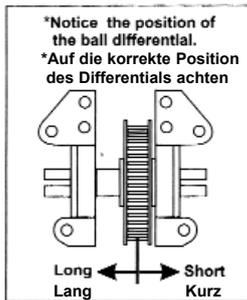
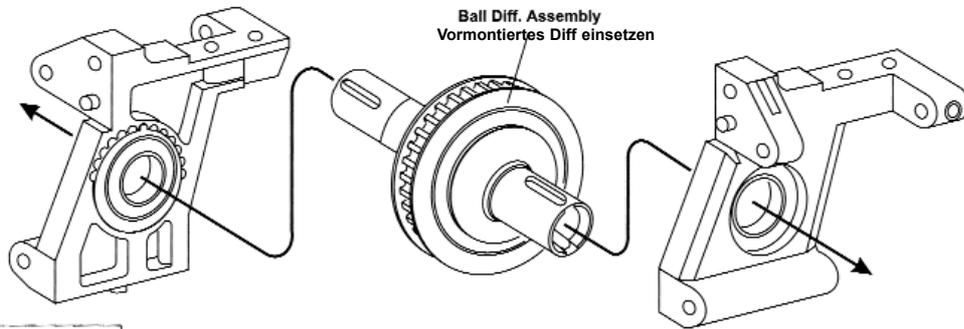
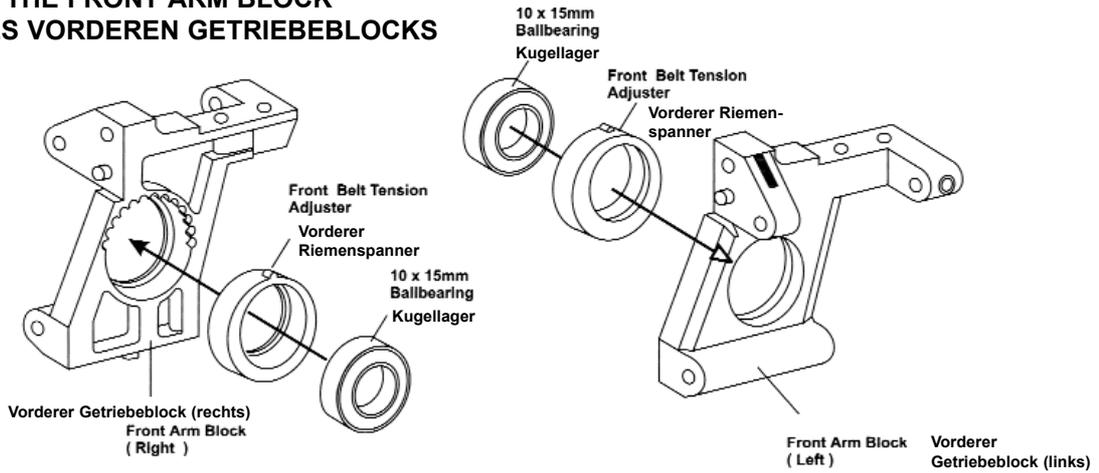
Does the other cap joint move in the opposite direction?

By tightening the adjustment screw the effectiveness of the ball differential will be lost.

Um das Differential zu testen, halten Sie mit einer Hand das Riemenrad und drehen an einem der Diffmitnehmer. Die Diffmitnehmer müssen sich entgegengesetzt drehen.



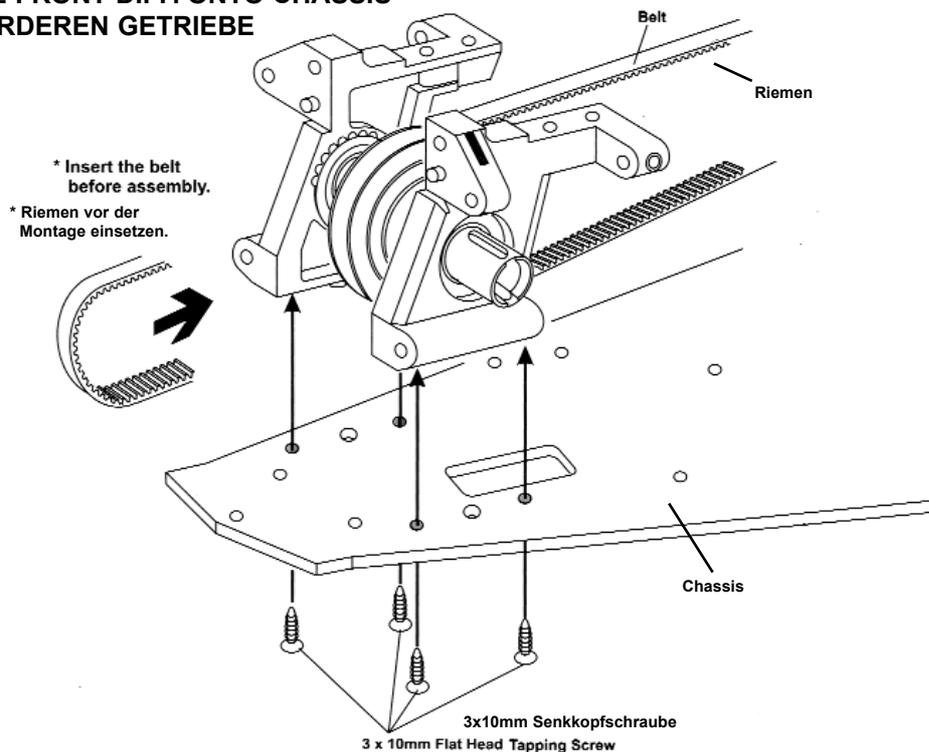
8) ASSEMBLY OF THE FRONT ARM BLOCK MONTAGE DES VORDEREN GETRIEBEBLOCKS



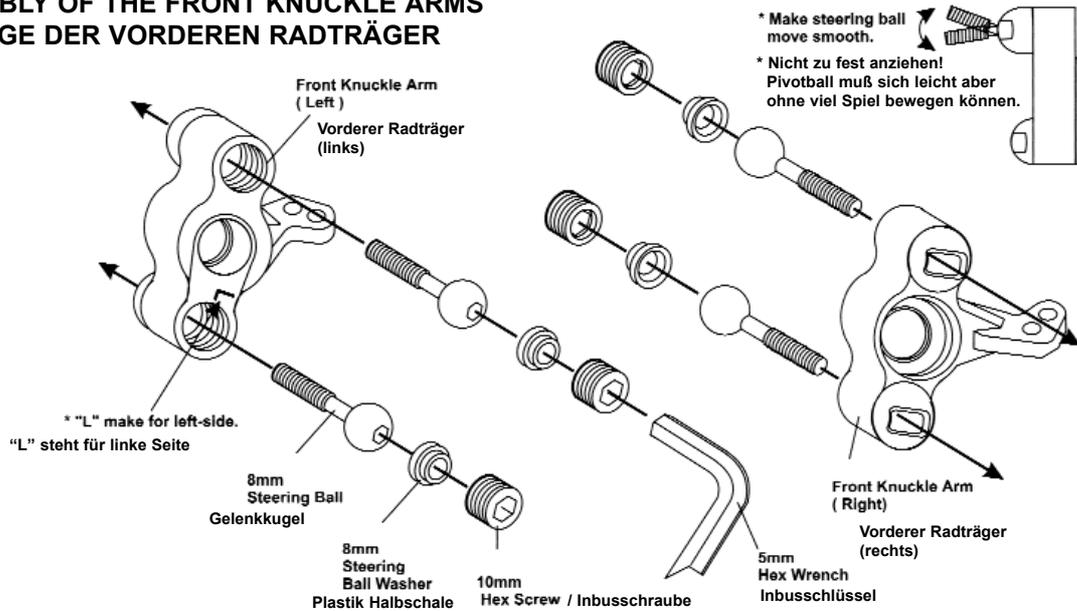
*Both-side of the belt tension adjuster must place in same position. The best position is No. 9

*Beide Seiten gehören in die gleiche Position. Die Standardposition ist Nr. 9

9) ASSEMBLY OF THE FRONT DIFF. ONTO CHASSIS MONTAGE DES VORDEREN GETRIEBE AUF DAS CHASSIS

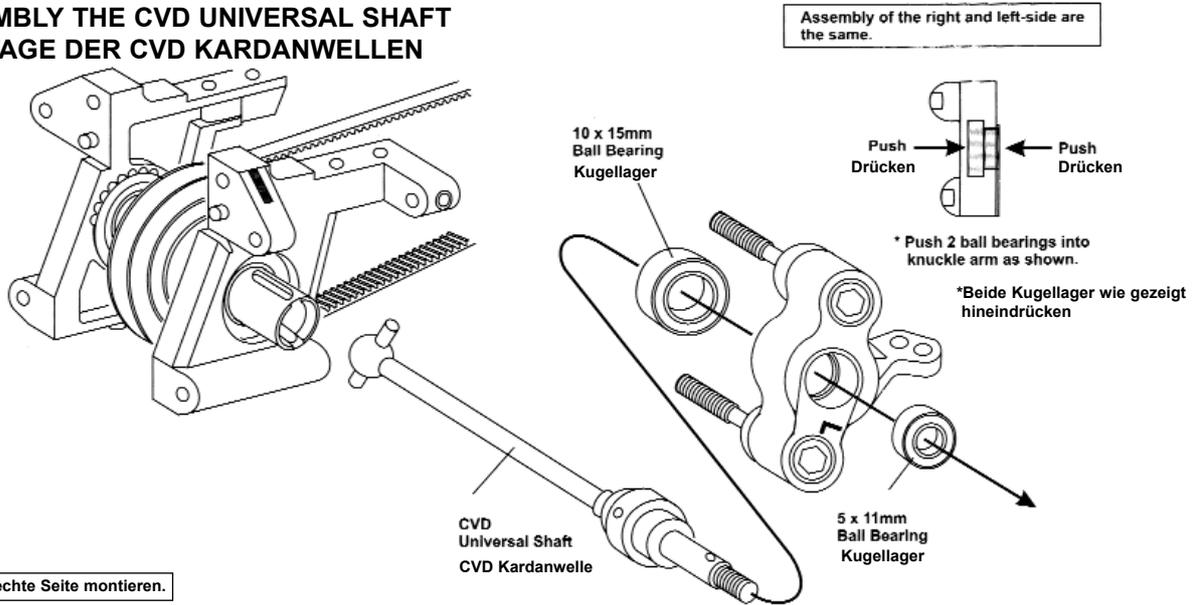


10) ASSEMBLY OF THE FRONT KNUCKLE ARMS
MONTAGE DER VORDEREN RADTRÄGER



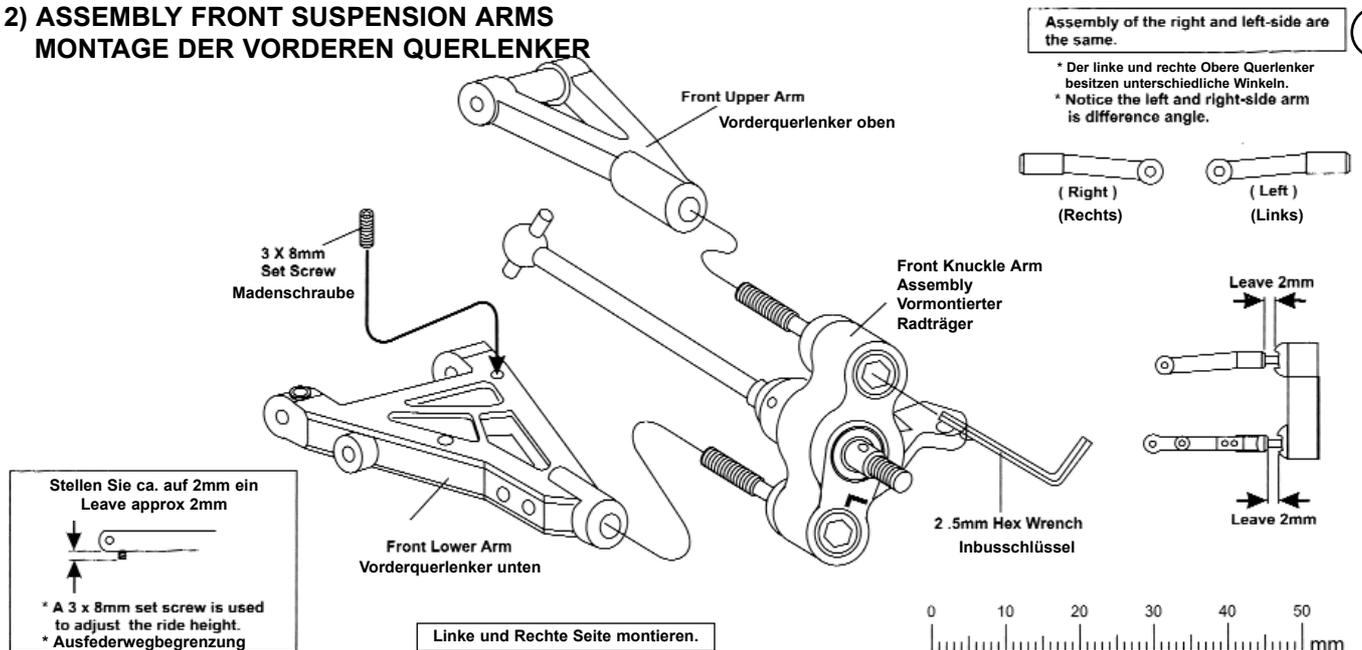
C

11) ASSEMBLY THE CVD UNIVERSAL SHAFT
MONTAGE DER CVD KARDANWELLEN



C

12) ASSEMBLY FRONT SUSPENSION ARMS
MONTAGE DER VORDEREN QUERLENKER



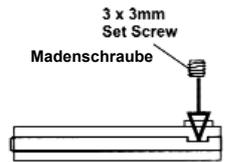
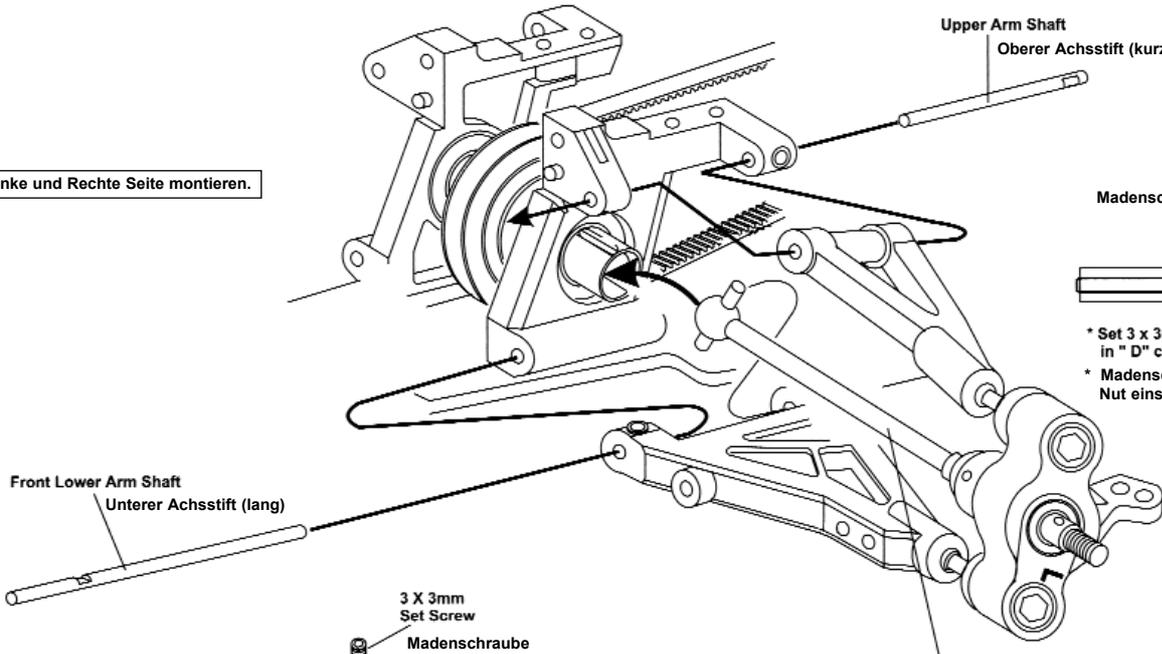
C

13) ASSEMBLY THE FRONT SUSPENSION ARM TO ARM BLOCK MONTAGE DER VORDEREN AUFHÄNGUNG AN DIE GETRIEBEBOX

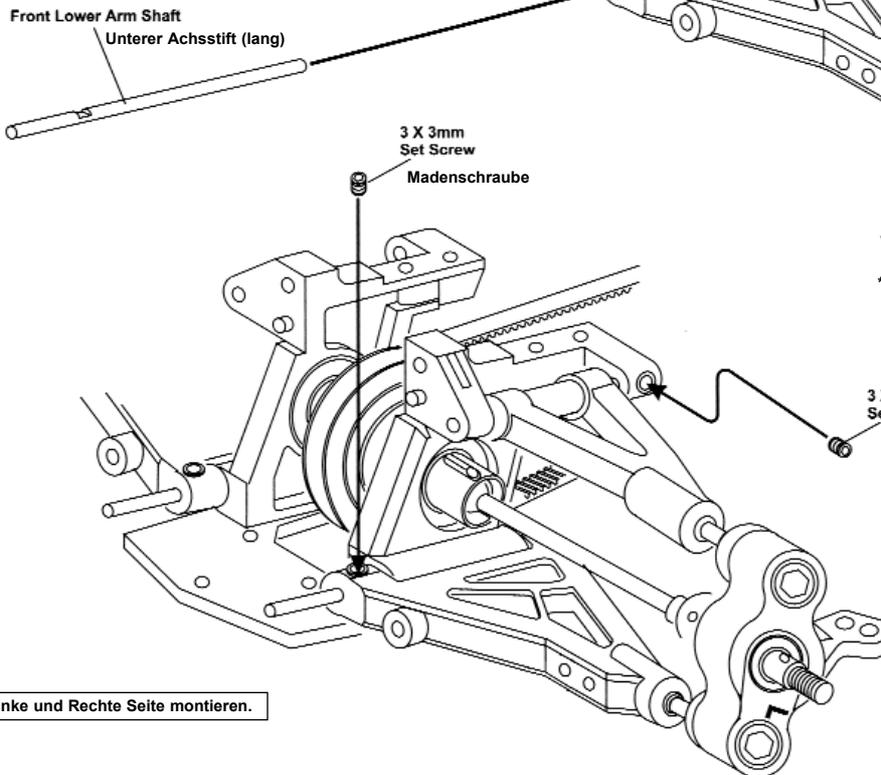
Assembly of the right and left-side are the same.

(C)

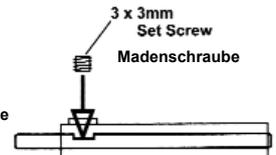
Linke und Rechte Seite montieren.



* Set 3 x 3mm set screw in "D" cut.
* Madenschraube in die Nut einschrauben



* Insert the drive shaft before assembly.
* Kardan vor der Montage einführen



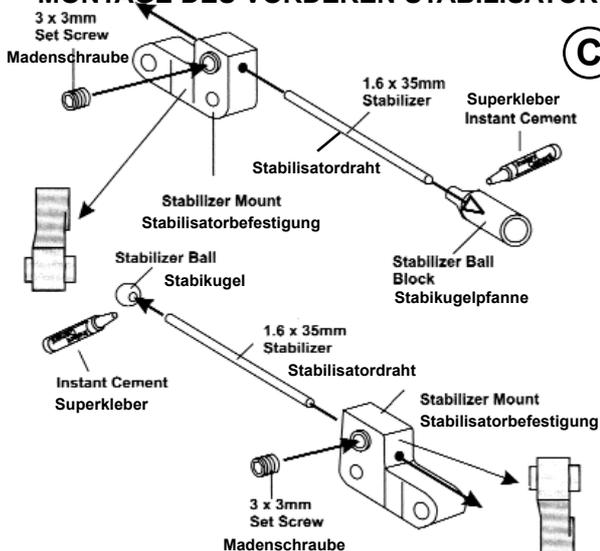
* Set 3 x 3mm set screw in "D" cut.
* Madenschraube in die Nut einschrauben

Linke und Rechte Seite montieren.

Assembly of the right and left-side are the same.

14) ASSEMBLY OF THE FRONT STABILIZER MONTAGE DES VORDEREN STABILISATOR

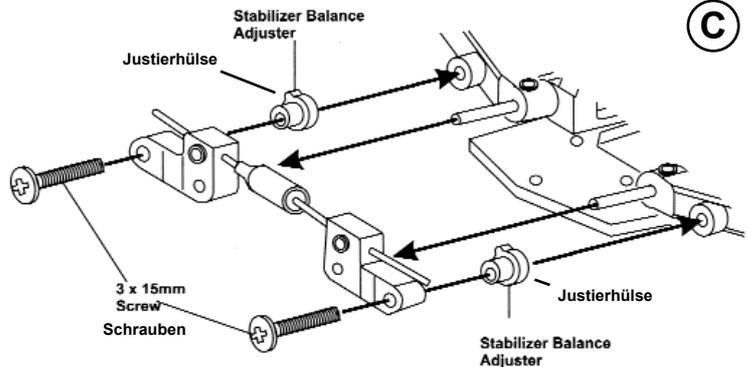
(C)



*Stabilizer is not necessary / Stabilisator ist nicht erforderlich.

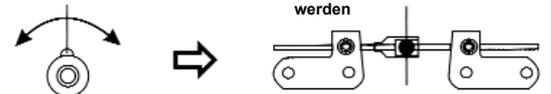
15) ASSEMBLY OF THE FRONT STABILIZER TO ARM BLOCK / MONTAGE DES VORDEREN STABILISATOR

(C)



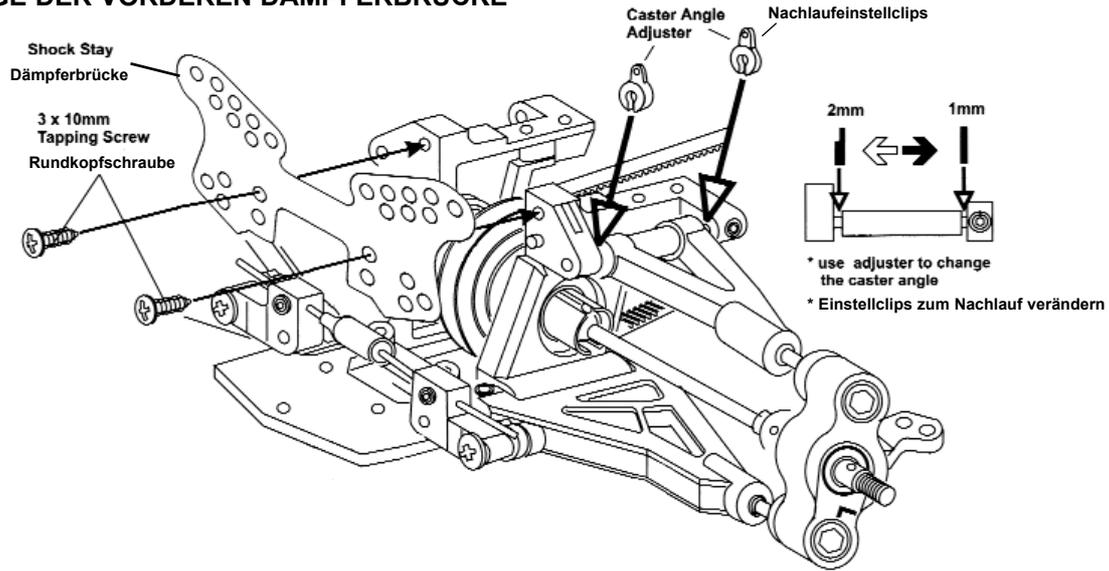
* Turn stabilizer balance adjuster to adjust the stabilizer in the same angle.

* Keep stabilizer ball in the center.
* Kugel muß in der Mitte fixiert werden



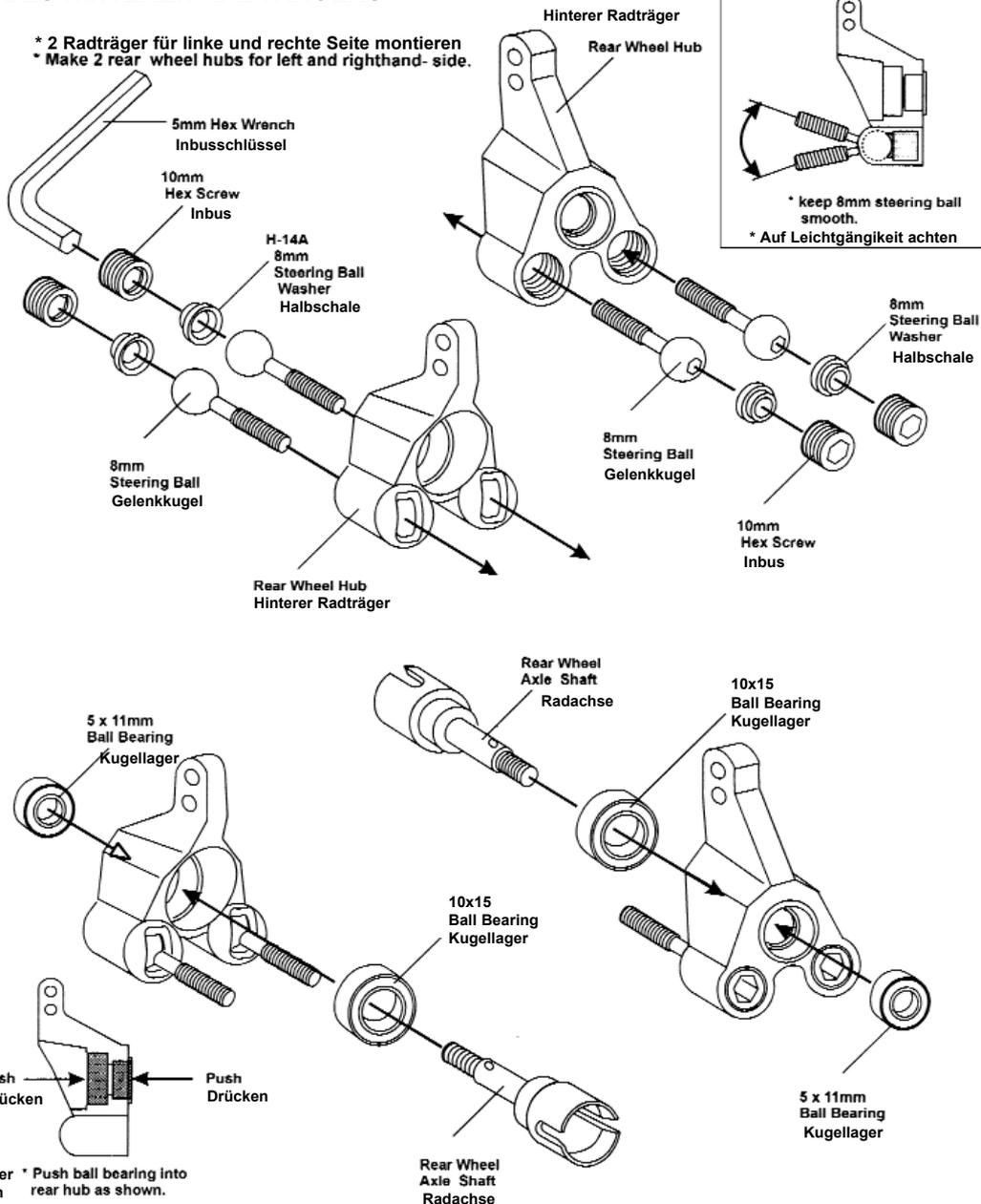
16) ASSEMBLY OF THE FRONT SHOCK STAY MONTAGE DER VORDEREN DÄMPFERBRÜCKE

C



17) ASSEMBLY OF THE REAR WHEEL HUB MONTAGE DES HINTEREN RADTRÄGERS

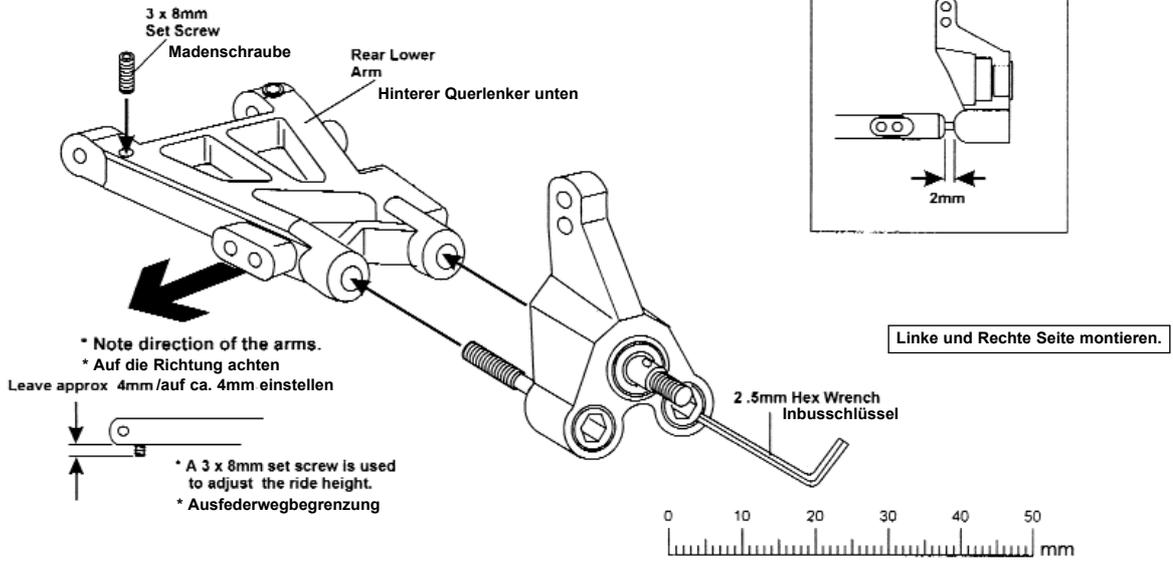
D



* Kugellager wie in der Skizze hineindrücken
* Push ball bearing into rear hub as shown.

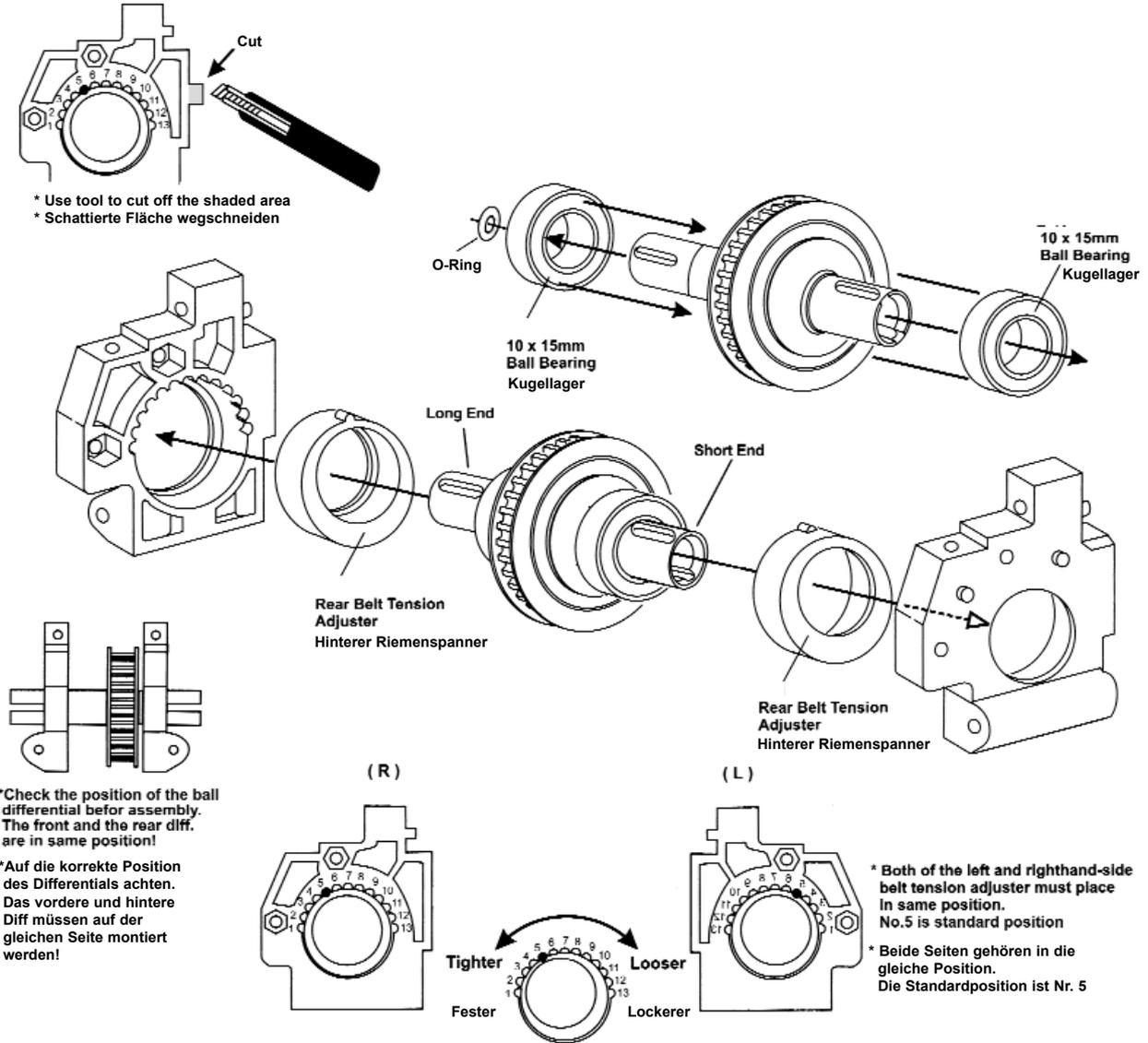
18) ASSEMBLY OF THE REAR HUBS INTO REAR ARMS MONTAGE DER HINTEREN RADTRÄGER

(D)



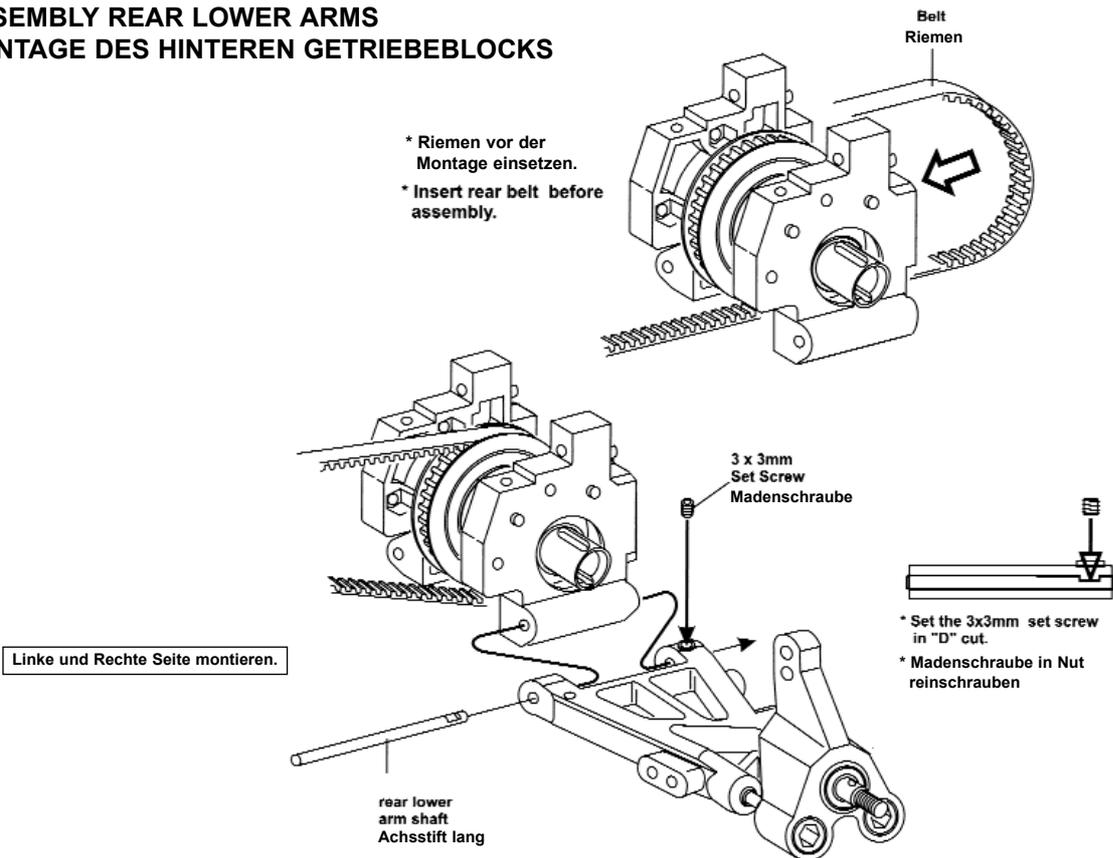
19) ASSEMBLY OF THE REAR DIFFERENTIAL INTO REAR BLOCK MONTIEREN DES HINTEREN GETRIEBES

(D)



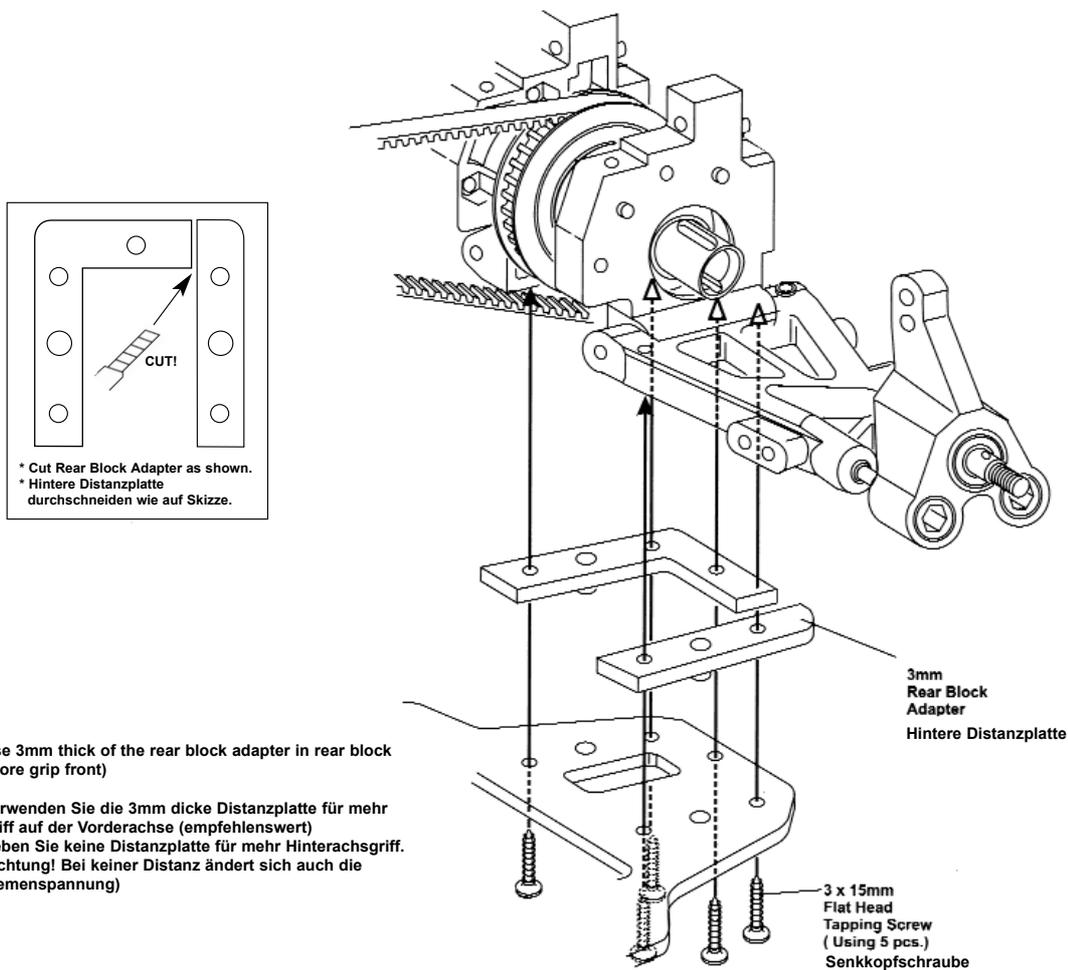
20) ASSEMBLY REAR LOWER ARMS MONTAGE DES HINTEREN GETRIEBEBLOCKS

D



21) ASSEMBLY OF THE REAR DIFFERENTIAL ONTO CHASSIS MONTAGE DES HINTEREN GETRIEBEBLOCKS AUF DAS CHASSIS

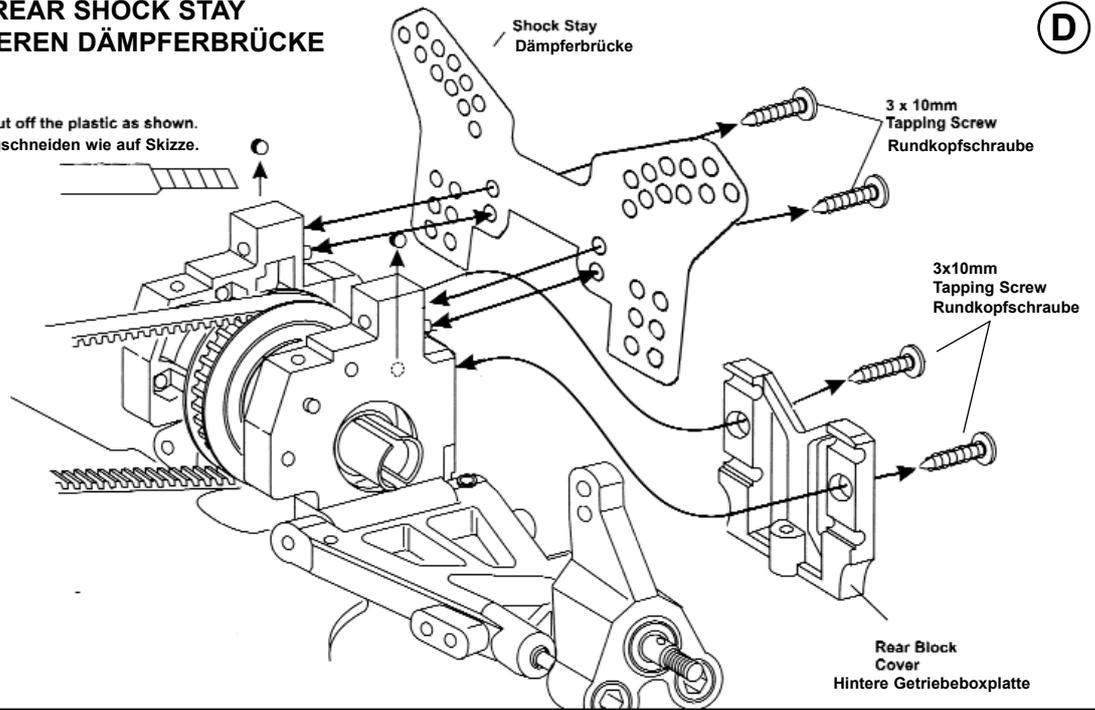
D



22) ASSEMBLY OF THE REAR SHOCK STAY MONTAGE DER HINTEREN DÄMPFERBRÜCKE

(D)

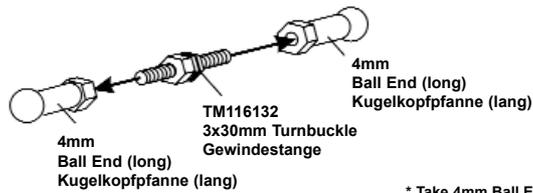
* Cut off the plastic as shown.
*Plastik wegschneiden wie auf Skizze.



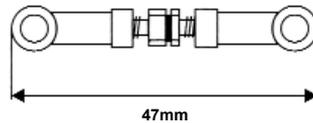
23) ASSEMBLY OF THE REAR UPPER ROD MONTAGE DER HINTEREN QUERLENKERSTANGE

(D)

* Assemble 2 upper rods. (Right and Left)
* Montieren Sie 2 Gewindestangen (Rechts und Links)

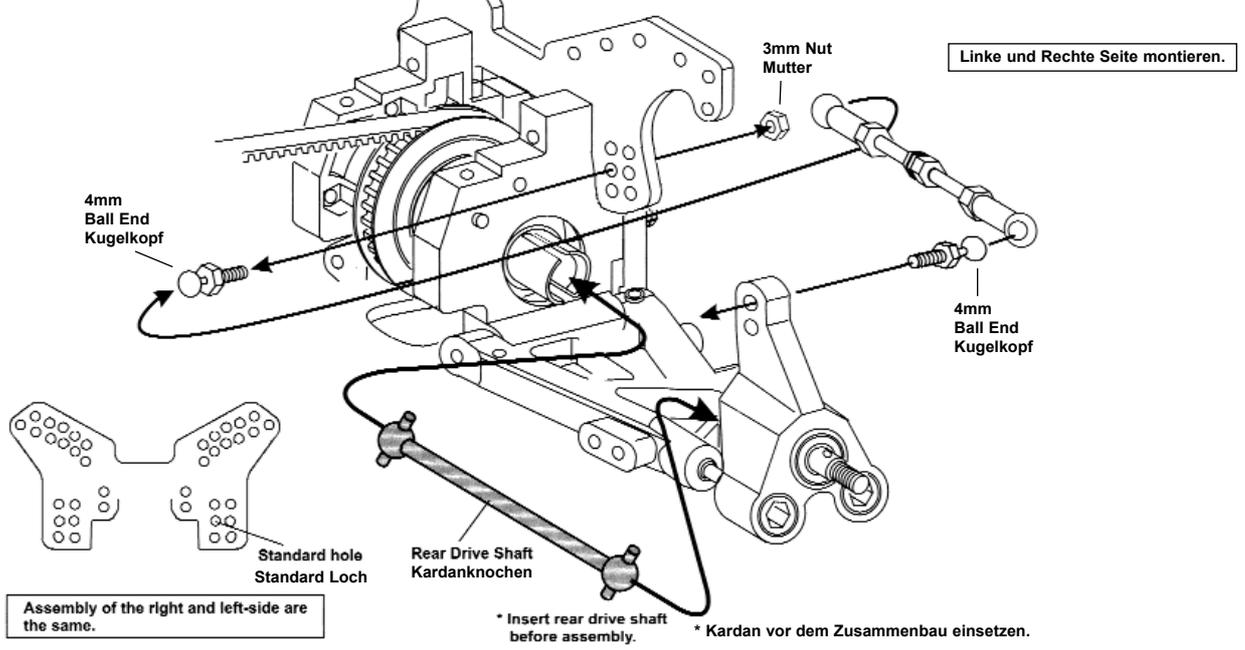


* Take 4mm Ball End from Bag G
* Entnehmen Sie Kugelkopfpfanne von Verpackung G



24) ASSEMBLY OF THE REAR DRIVE SHAFT MONTAGE DER HINTEREN ANTRIEBSWELLE

(D)

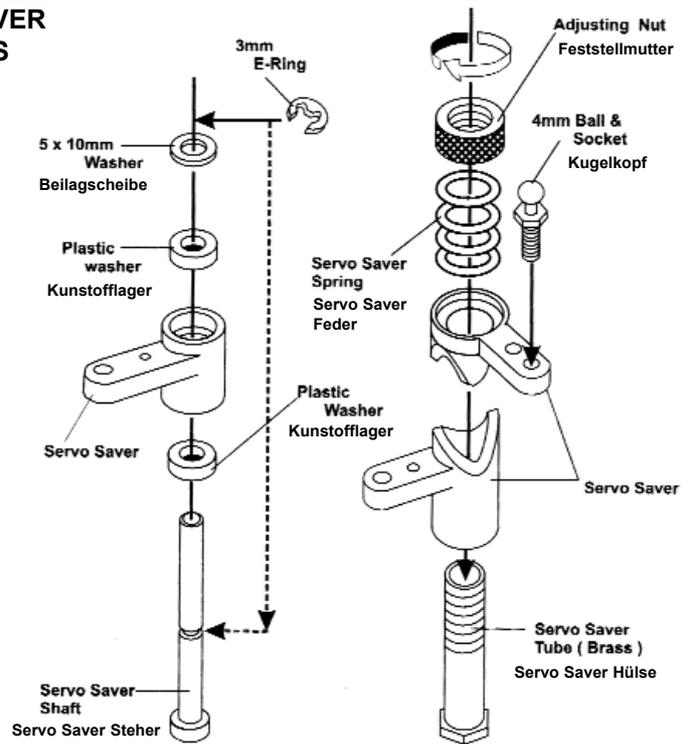
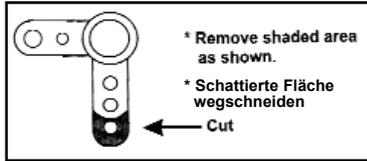


Assembly of the right and left-side are the same.

* Insert rear drive shaft before assembly. * Kardan vor dem Zusammenbau einsetzen.

25) ASSEMBLY OF THE SERVO SAVER
MONTAGE DES SERVO SAVERS

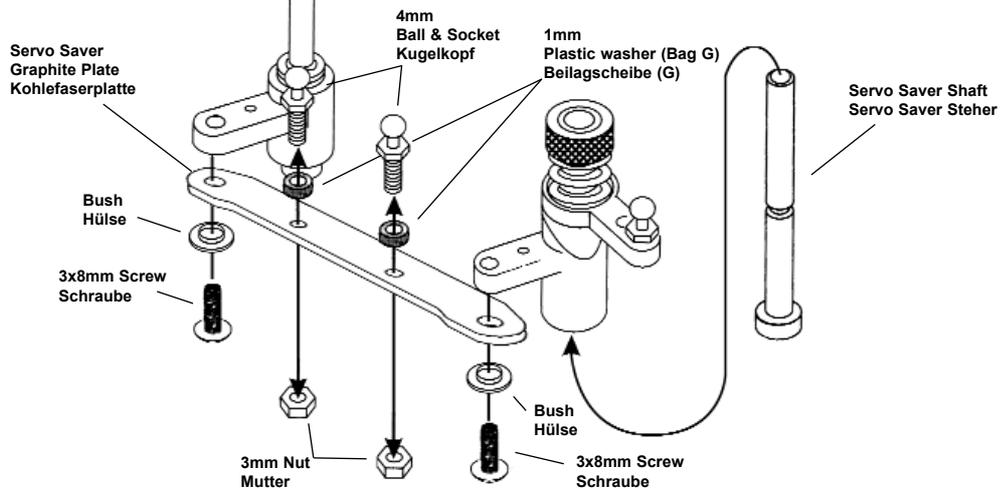
E



* Make servo saver turn smooth.
* Feststellmutter nicht zu fest anziehen.
Auf Leichtgängigkeit achten!

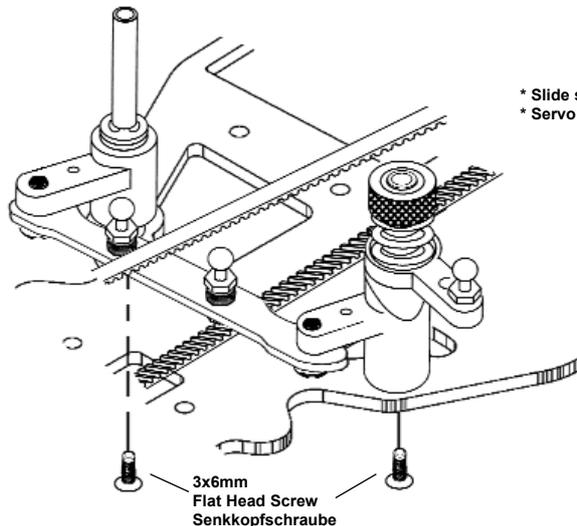
26) ASSEMBLY OF THE SERVO SAVER
MONTAGE DES SERVO SAVERS

E



27) ASSEMBLY OF THE SERVO SAVERS ONTO CHASSIS
MONTAGE DES SERVO SAVERS AUF DAS CHASSIS

E



* Slide servo saver unit through belt before assembly.
* Servo Saver zwischen Riemen vor Montage einführen.

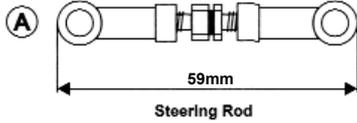
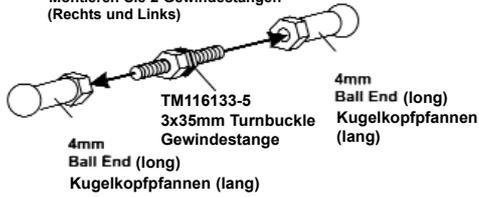
28) ASSEMBLY OF THE STEERING ROD AND SERVO ROD / MONTAGE DER LENKSPURSTANGEN

(E)

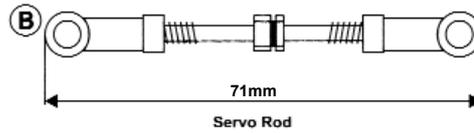
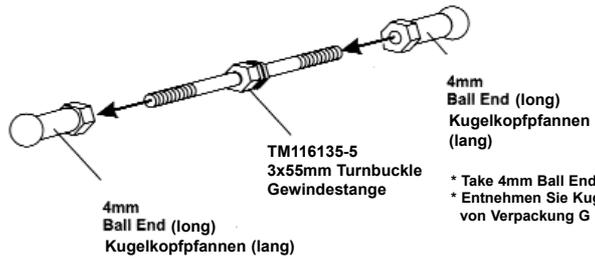
A) Steering Rod / Lenkspurstangen

* Assemble 2 steering rods.
(Right and Left)

* Montieren Sie 2 Gewindestangen
(Rechts und Links)



B) Servo Rod / Servospurstange



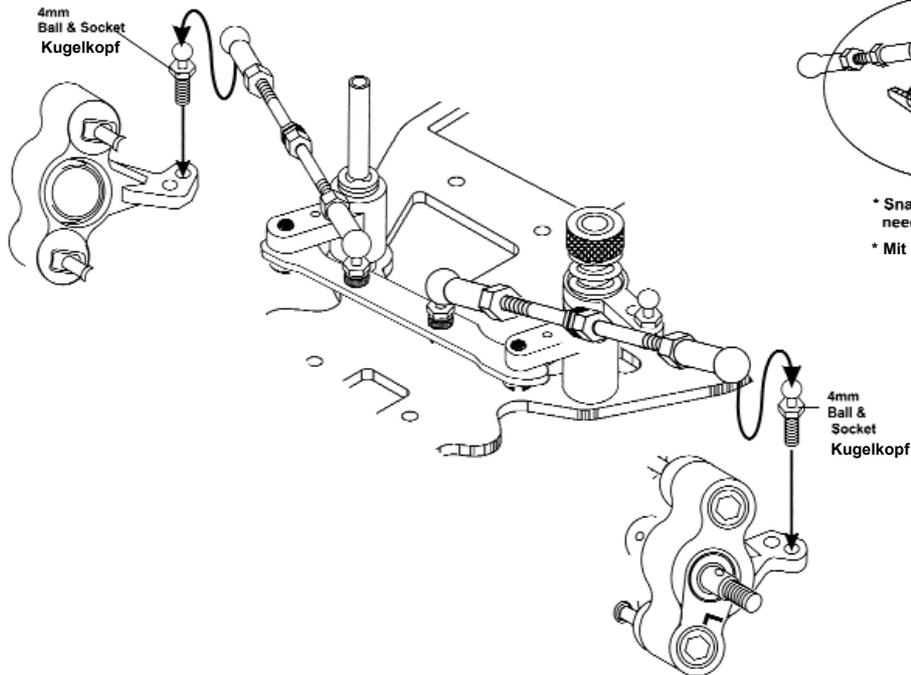
4mm Ball End (long) Kugelkopffanne (lang)

TM116135-5 3x55mm Turnbuckle Gewindestange

* Take 4mm Ball End from Bag G
* Entnehmen Sie Kugelkopffanne von Verpackung G

29) ASSEMBLY OF THE STEERING ROD / MONTAGE DER LENKSTANGEN

(E)

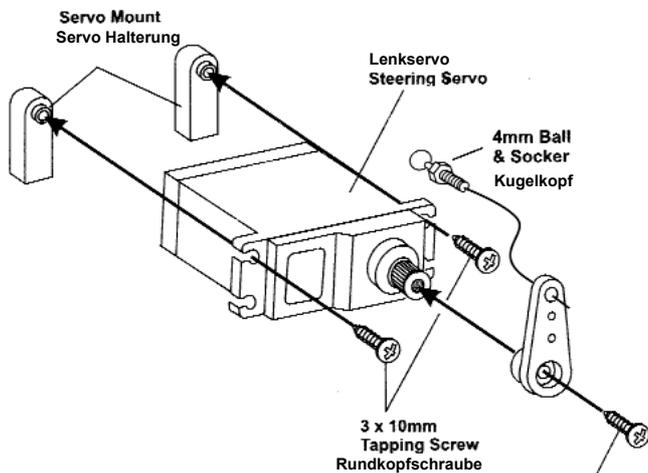


* Snap on with needle-nose pliers.

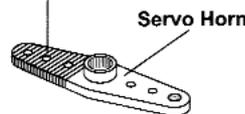
* Mit Zange zusammenfügen

30) ASSEMBLY OF THE STEERING SERVO / MONTAGE DES LENKSERVOS

(E)

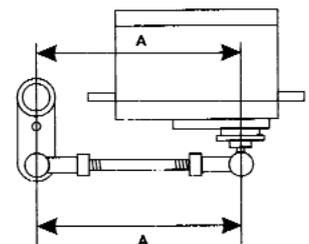


* Wegschneiden
* Cut Off.



* Remove shaded area as shown.

* Schattierte Fläche entfernen



* Align servo saver and steering servo as shown.

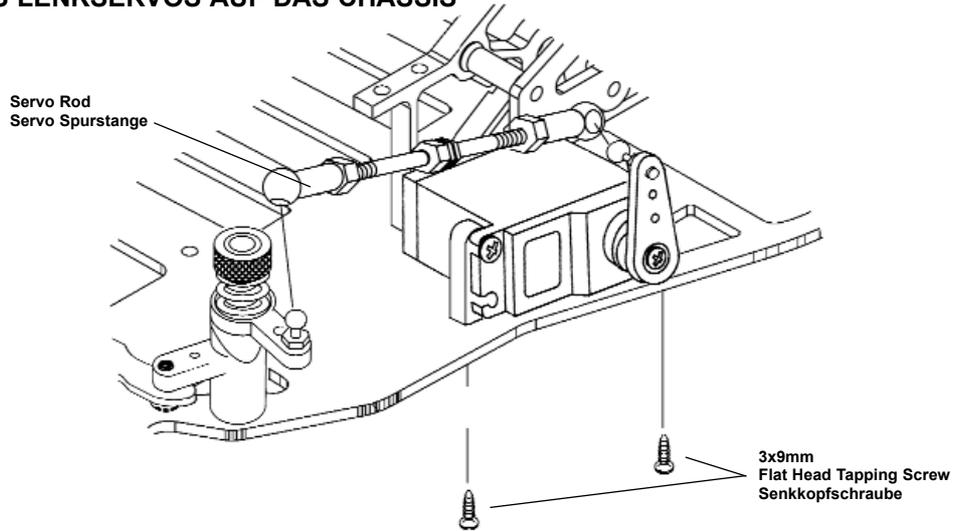
* Achten Sie auf korrekte Anordnung der Lenkarme wie Skizze

* Use the screw provided with your radio.

* Benützen Sie die Schraube die dem Servo beigelegt ist

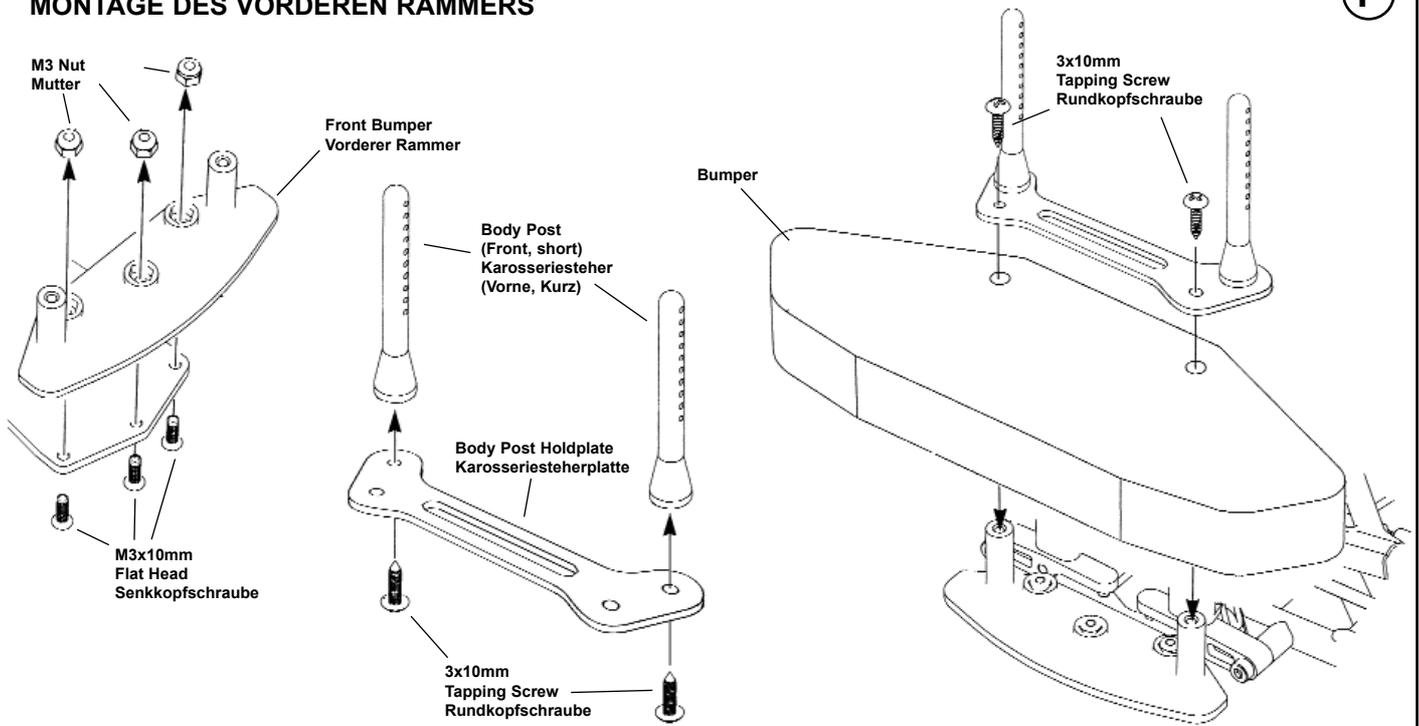
31) ASSEMBLY OF THE STEERING SERVO ONTO CHASSIS MONTAGE DES LENKSERVOS AUF DAS CHASSIS

E



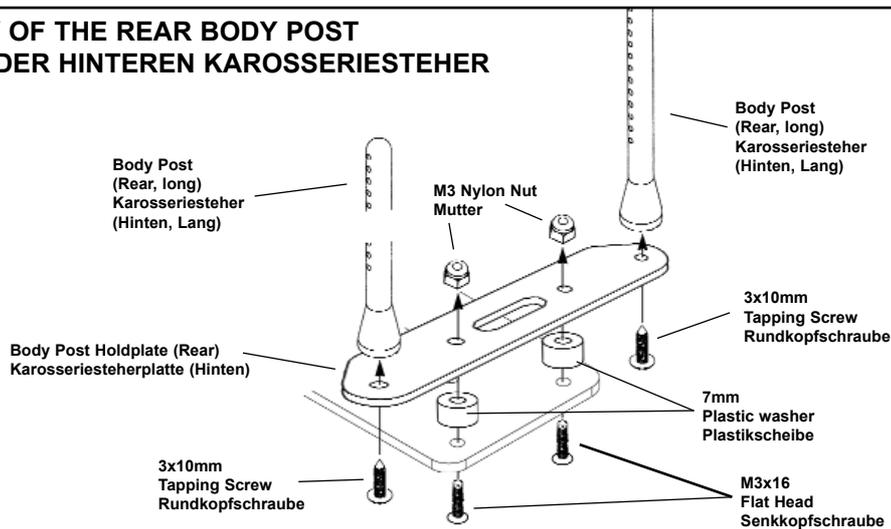
32) ASSEMBLY OF THE FRONT BUMPER MONTAGE DES VORDEREN RAMMERS

F



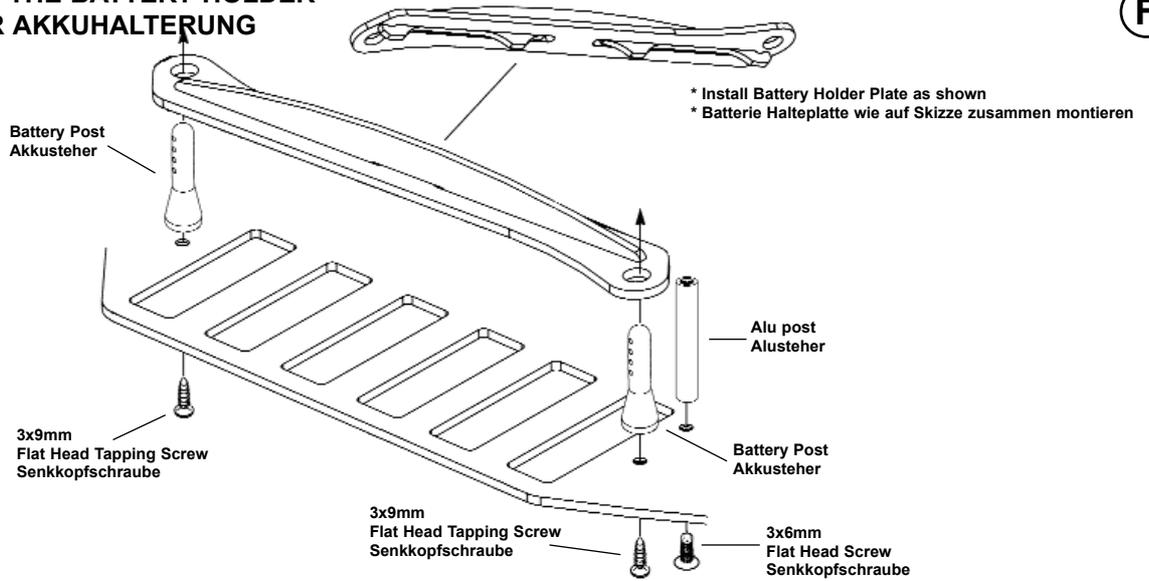
33) ASSEMBLY OF THE REAR BODY POST MONTAGE DER HINTEREN KAROSSERIESTEHER

F



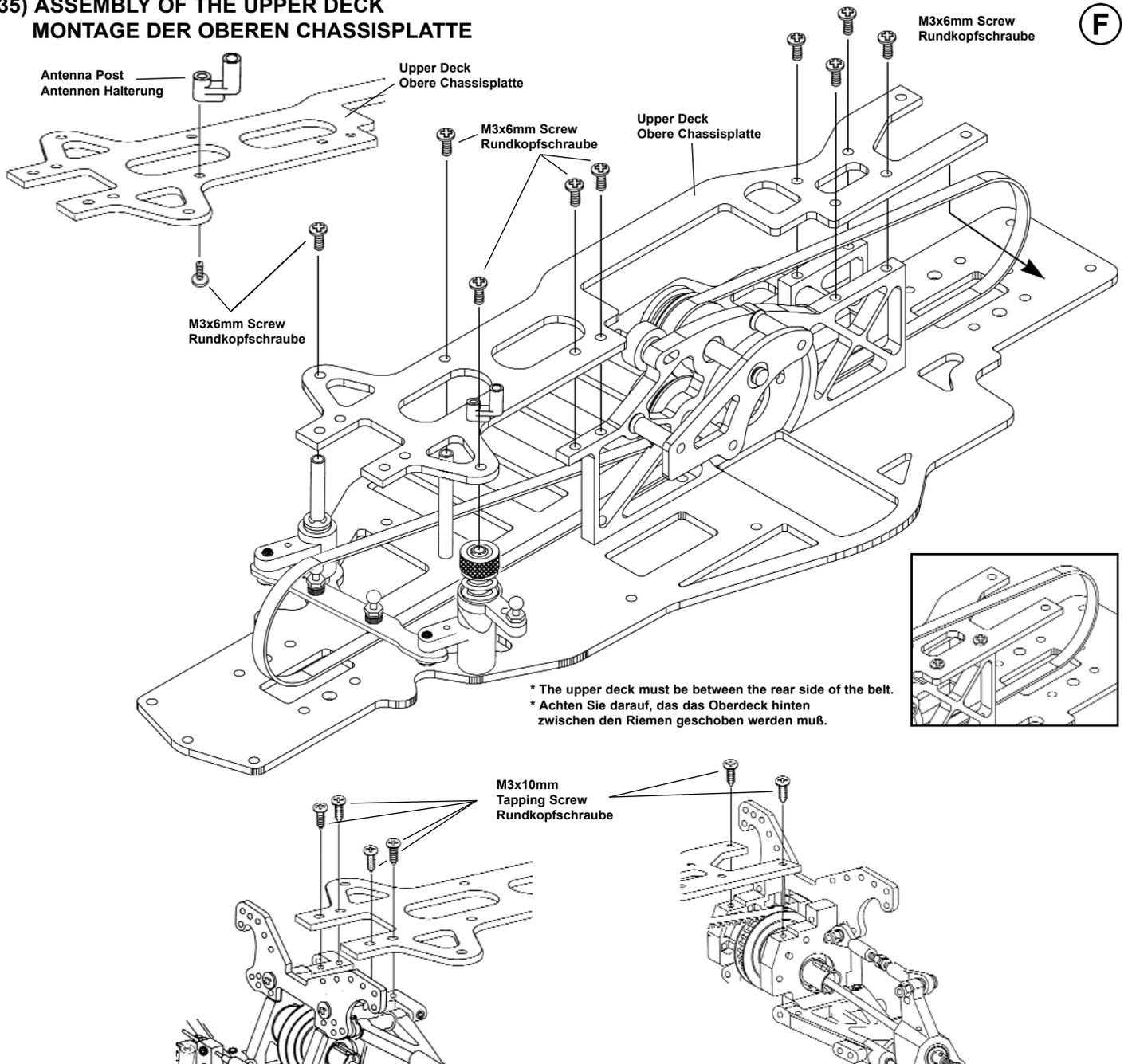
34) ASSEMBLY OF THE BATTERY HOLDER MONTAGE DER AKKUHALTERUNG

F



35) ASSEMBLY OF THE UPPER DECK MONTAGE DER OBEREN CHASSISPLATTE

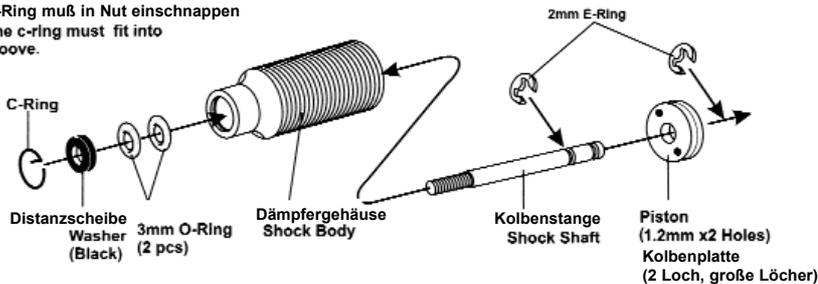
F



36) SHOCK ASSEMBLY / MONTAGE DER STOSSDÄMPFER



- * C-Ring muß in Nut einschnappen
- * The c-ring must fit into groove.



- * Cut the piston from the plastic parts tree.
- * Schneiden Sie die Kolbenplatte von den Plastikteilen herrunter



- * Use pliers to snap on E-Ring.



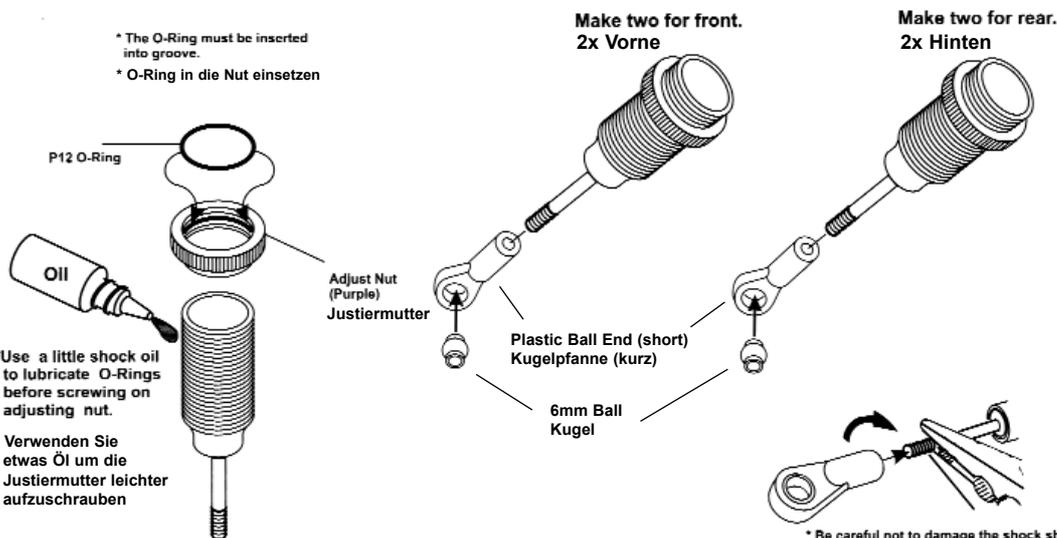
- * Put a little oil to 3mm o-ring before assembly.
- * Geben Sie vor dem Einbau etwas Silikonöl auf die O-Ringe

- * Verwenden Sie die Zange für E-Clips

37) ASSEMBLY OF THE 4MM BALL END / MONTAGE DER 4MM KUGELPFANNEN

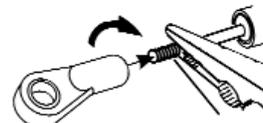


- * The O-Ring must be inserted into groove.
- * O-Ring in die Nut einsetzen



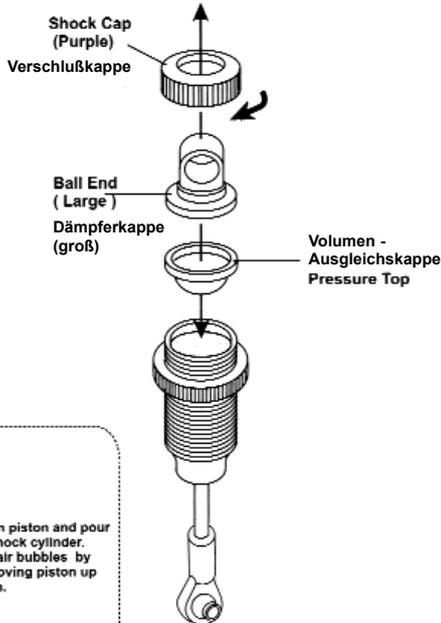
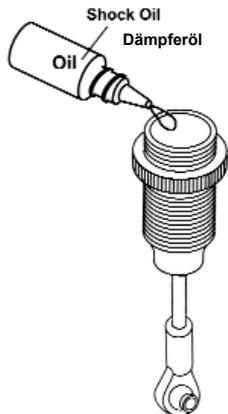
- * Use a little shock oil to lubricate O-Rings before screwing on adjusting nut.

- * Verwenden Sie etwas Öl um die Justiermutter leichter aufzuschrauben



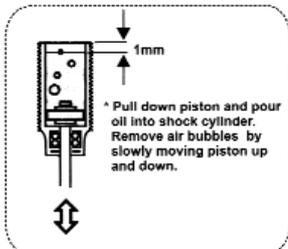
- * Be careful not to damage the shock shaft.
- * Vorsichtig mit der Zange. Beschädigen Sie nicht die Kolbenstange.

38) FILLING THE SHOCK OIL / BEFÜLLEN DER STOSSDÄMPFER

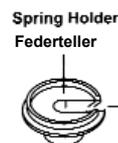


Dämpfer befüllen:

Kolbenstange ganz nach unten schieben und Dämpferkolben mit Öl bis auf 1mm befüllen. Langsam Kolbenstange nach oben und unten bewegen, damit Luftblasen entweichen können. Diaphragm aufsetzen und überschüssiges Öl entweichen lassen. Oberteil aufschrauben und fest zuziehen. Kolben muß sich ganz hineinschieben lassen, ansonsten etwas aufschrauben und noch etwas Öl entweichen lassen.



- * Pull down piston and pour oil into shock cylinder. Remove air bubbles by slowly moving piston up and down.

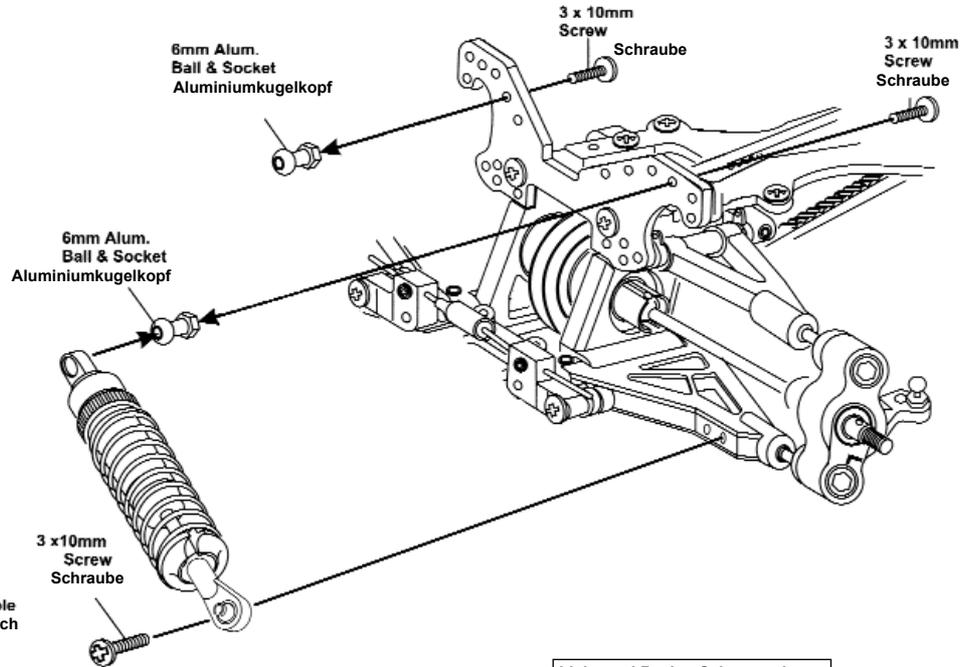
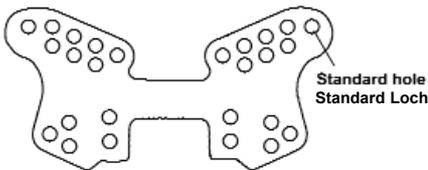
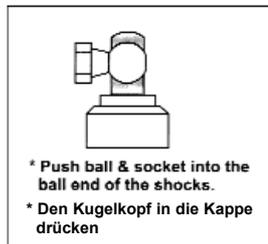


- * Take the spring holder from the plastic parts tree.
- * Entnehmen Sie die Federteller von den Plastikteilen.

39) INSTALLATION OF THE FRONT SHOCK ABSORBER MONTAGE DER VORDEREN STOSSDÄMPFER

G

Assembly of the right and lefthand side are the same.

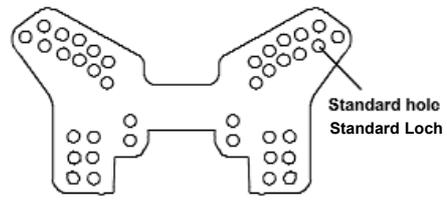


40) INSTALLATION OF THE REAR SHOCK ABSORBER MONTAGE DER HINTEREN STOSSDÄMPFER

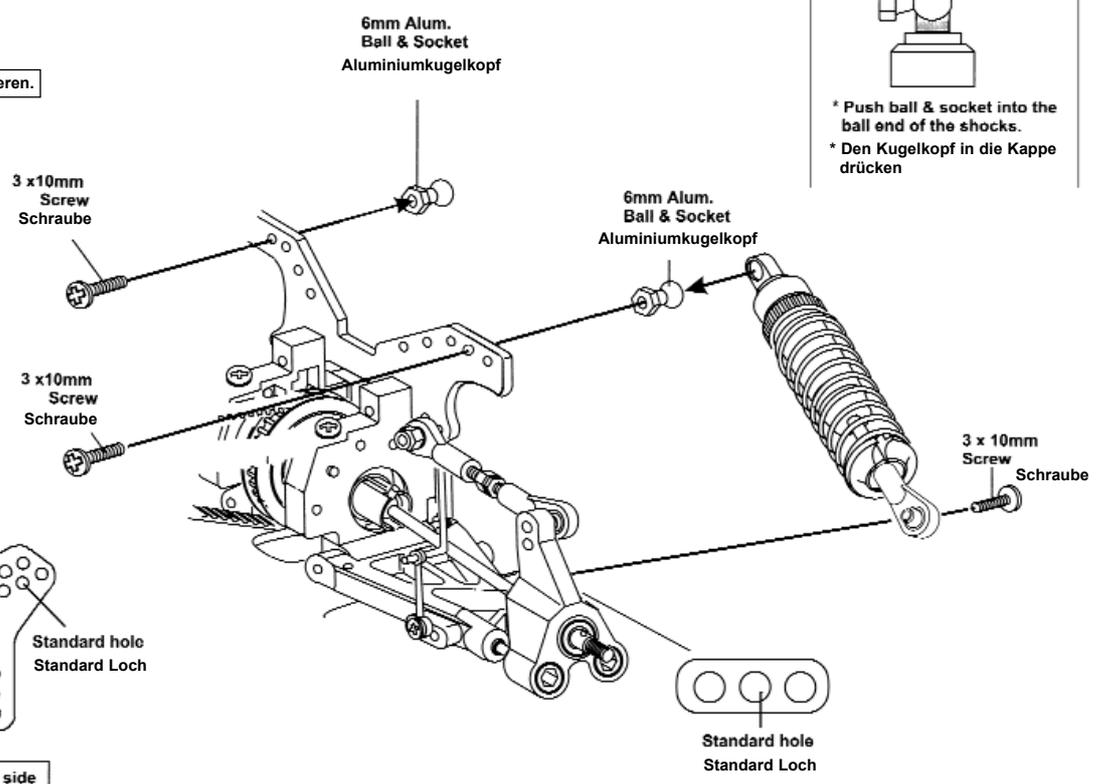
G



Linke und Rechte Seite montieren.

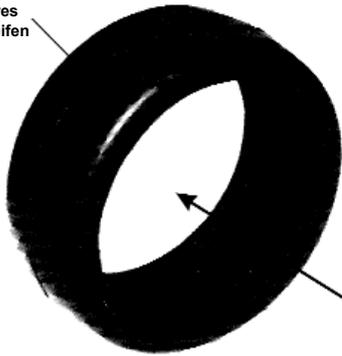


Assembly of the right and lefthand side are the same.

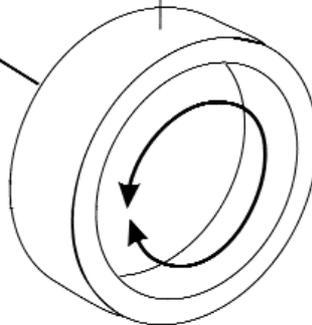


**41) ASSEMBLY OF THE TIRES AND WHEELS
MONTAGE VON REIFEN UND FELGEN**

Tires
Reifen



Tire insert
Reifeneinlage

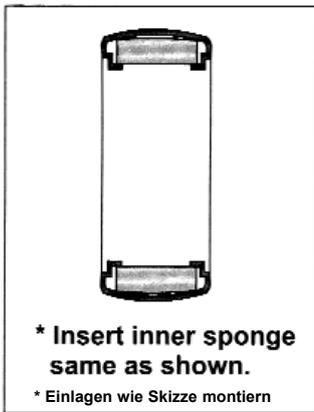
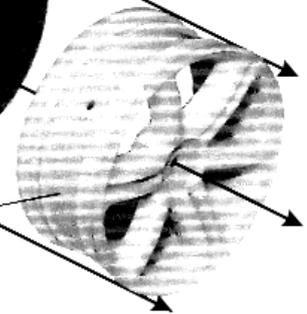


* Insert wheel into tire.

* Felge mit Reifen
zusammenfügen



Six Spoke
Wheel(24mm)
Felge (24mm)

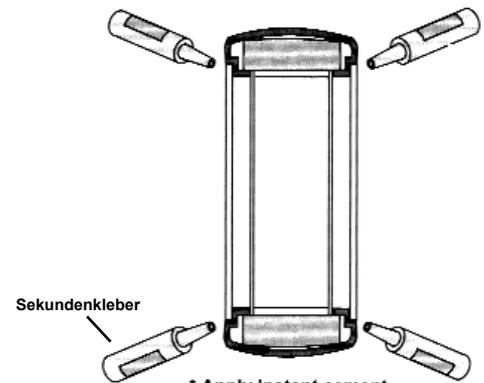


* Insert inner sponge
same as shown.

* Einlagen wie Skizze montieren

* Insert the inner sponge
before assembly.

* Reifeneinlage vor Montage in Reifen einlegen



Sekundenkleber

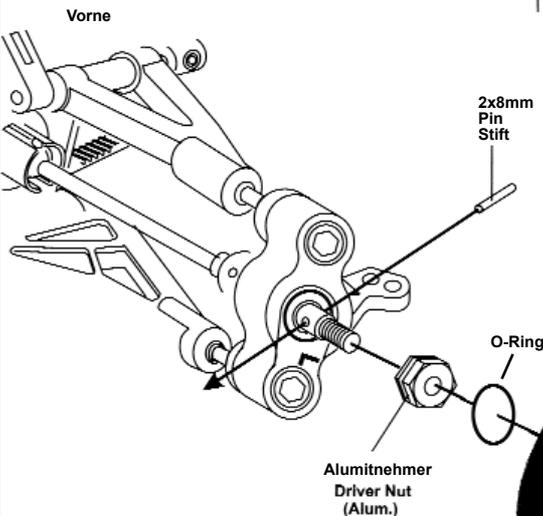
* Apply Instant cement.

* Reifen mit Felge
zusammenkleben

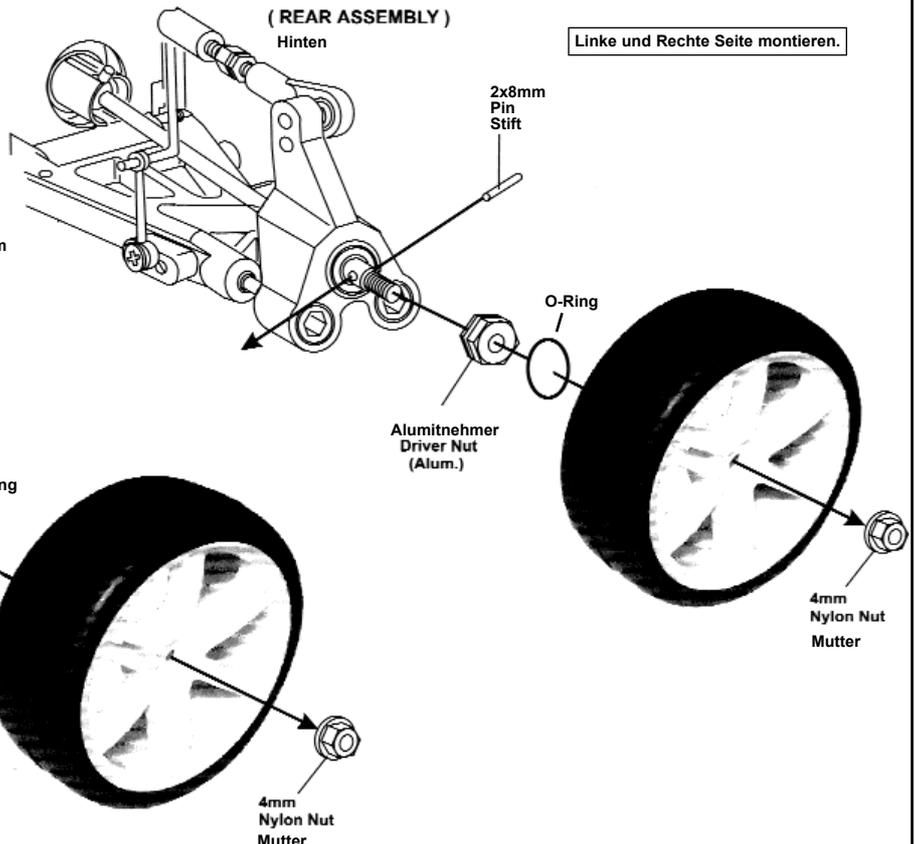
**42) ASSEMBLY OF THE WHEELS INTO WHEEL HUB
MONTAGE DER REIFEN UND RADMITNEHMER**



(FRONT ASSEMBLY)
Vorne

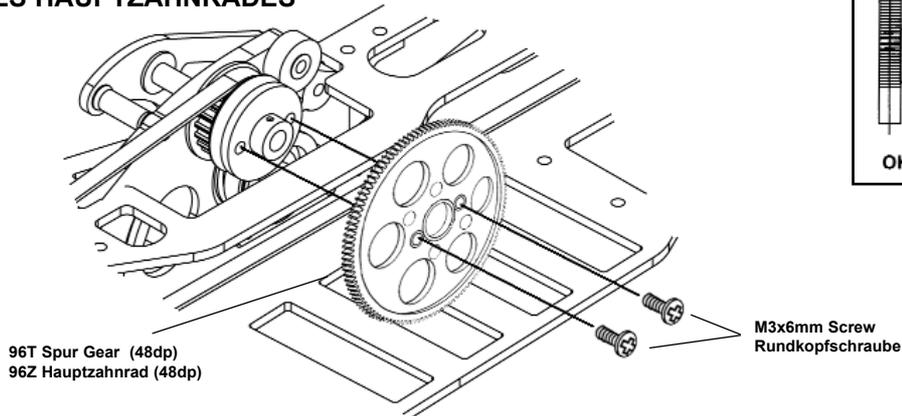


(REAR ASSEMBLY)
Hinten



Linke und Rechte Seite montieren.

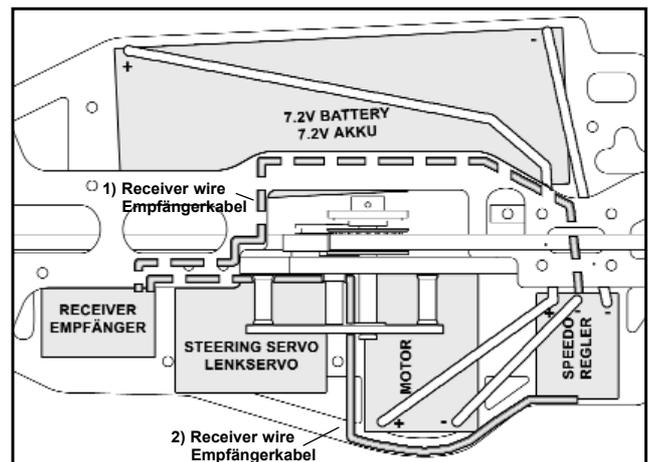
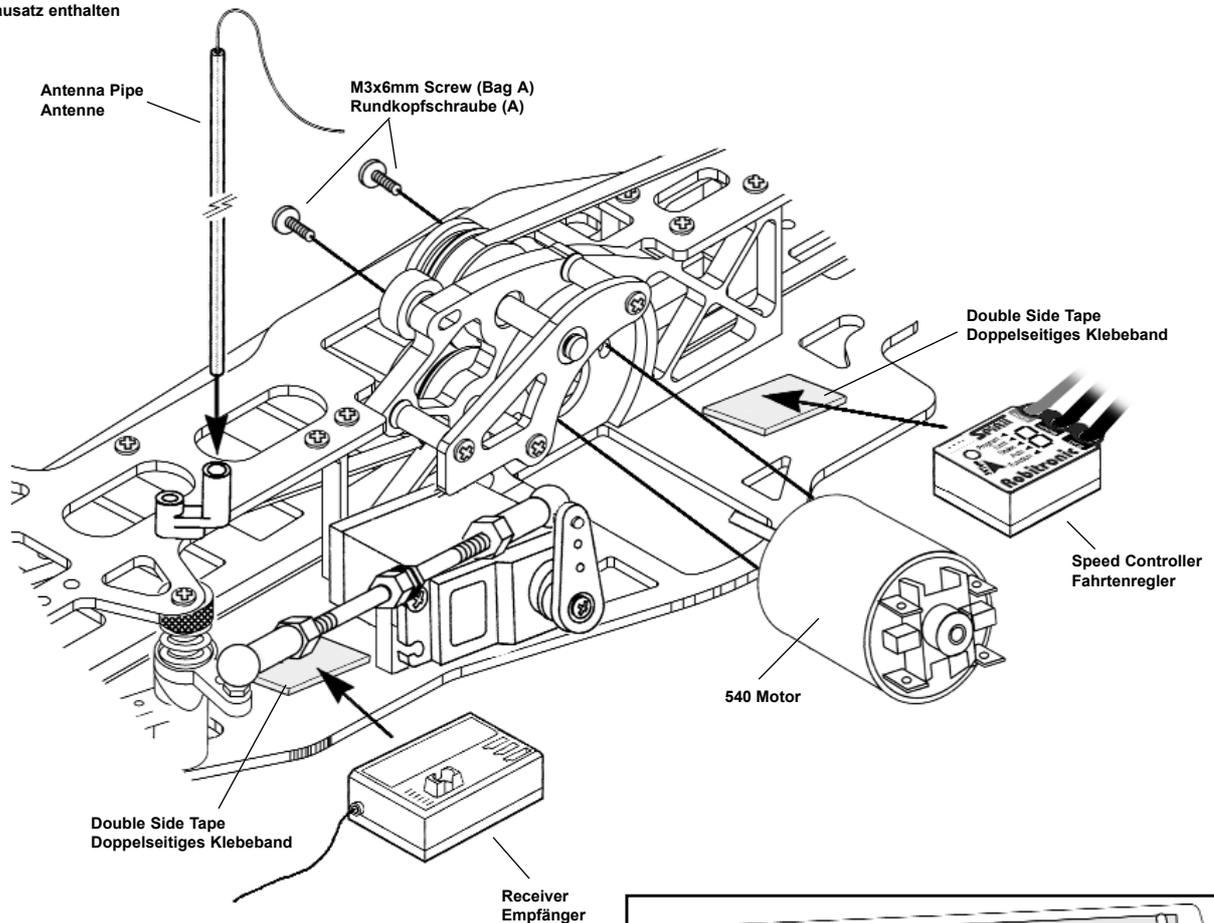
43) ASSEMBLY OF THE SPUR GEAR MONTAGE DES HAUPTZAHNRADES



A

44) INSTALLATION OF THE ELECTRIC PARTS MONTAGE DER ELEKTRONIK

* Not included with kit
* Nicht im Bausatz enthalten



*Fastener of the receiver wire from your Speed Controller (2 possibilities)
1) Guide the receiver wire under the upper deck and use nylon strip to tight it.
2) Guide the receiver wire behind the motor and the steering servo and assure it with a tape.

*Befestigung des Empfängerkabels von Ihrem Fahrtenregler (2 Möglichkeiten)
1) Führen Sie Empfängerkabel unter dem Oberdeck entlang und befestigen Sie ihn mit Kabelbinder.
2) Führen Sie das Empfängerkabel hinter dem Motor und dem Lenkservo entlang und befestigen es mit einem Klebeband.

FRONT and REAR WIDTH SETTING

SPURBREITEN EINSTELLUNG

(FRONT)
VORNE

2MM

81MM

81MM

162MM

(REAR)
HINTEN

2MM

81MM

81MM

162MM

Front Down Stop

VORDERE BODENFREIHEIT

Madenschraube zum Einstellen verwenden
Adjust front 3 x 8mm set screw.

A

A=A' is OK

A'

Rear Down Stop

HINTERE BODENFREIHEIT

Madenschraube zum Einstellen verwenden
Adjust rear 3 x 8mm set screw.

B

B=B' is OK

B'

FRONT TOE-IN and TOE-OUT SETTING

VORDERE VORSPUR UND NACHSPUR EINSTELLUNG

Vorspur
Toe-In

Toe-Out
Nachspur

Adjust the length of front steering rod to change the toe angle.
Making the tie rod longer will make the front tires become toe-in. Response will be slower and will over steer.
Making the tie rod shorter will make the front tires become toe-out. Response will be quicker and will under steer.

Verändern Sie die Spur durch Einstellen der Spurstangen.
Vorspur: Kurveneingang weniger Lenkung, Kurvenausgang mehr Lenkung
Nachspur: Kurveneingang mehr Lenkung, Kurvenausgang weniger Lenkung

Neutral Position

REAR TOE-IN and TOE-OUT SETTING

HINTERE VORSPUR UND NACHSPUR EINSTELLUNG

Vorspur
Toe-In

Toe-Out
Nachspur

Verändern Sie die Spur durch Einstellen der 8mm Kugelköpfe.
Vorspur: Mehr Griff (Untersteuern)
Nachspur: Weniger Griff (Übersteuern)

Adjust the length of rear hub 8mm ball change the toe angle.
Making the 8mm ball longer will make the rear tires become toe-in. Response will be under steer.
Making the 8mm ball shorter will make the rear tires become toe-out. Response will be over steer.

Neutral Position

Adjust from rear ball.
Einstellung über hinteren Kugelkopf

FRONT CAMBER ANGLE SETTING

VORDERE STURZ EINSTELLUNG

(FRONT)
VORNE

Sturzeinstellung über vorderen Kugelkopf

Use 2.5mm hex wrench to adjust lower arm ball in front.

Place the model car on a flat surface. Raise the chassis to it's maximum clearance before the wheels leave the ground. Adjust length of the front and rear lower ball so that the wheels arc at right angles to the ground.

REAR CAMBER ANGLE SETTING

HINTERE STURZ EINSTELLUNG

(REAR)
HINTEN

Turnbuckle

Sturzeinstellung über hintere Spurstange

Use 2.5mm hex wrench to adjust lower arm ball in rear.

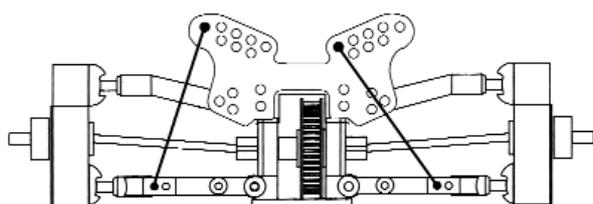
The rear camber adjustment can be made by moving the turnbuckle rod on the upper arms, clockwise or anticlockwise. We suggest zero degrees for the front and one degree negative for the rear.

SHOCK ANGLE SETTING

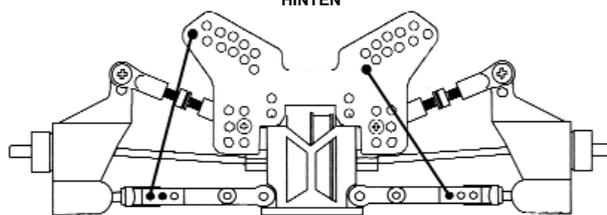
DÄMPFERPOSITIONEN

(FRONT)
VORNE

(REAR)
HINTEN



Firm Hart
Soft Weich
Firm front suspension, less steering.
Soft front suspension, more steering.



Firm Hart
Soft Weich
Firm rear suspension, over steering.
Soft rear suspension, under steering.

GEAR RATIO / ÜBERSETZUNG 1:1.59

48dp	20	21	22	23	24	25	26	27	28	29	30
94	7,47	7,12	6,79	6,50	6,23	5,98	5,75	5,54	5,34	5,15	4,98
96	7,63	7,27	6,94	6,64	6,36	6,11	5,87	5,65	5,45	5,26	5,09
98	7,79	7,42	7,08	6,77	6,49	6,23	5,99	5,77	5,57	5,37	5,19
100	7,95	7,57	7,23	6,91	6,63	6,36	6,12	5,89	5,68	5,48	5,30

64dp	28	29	30	31	32	33	34	35	36	37	38
124	7,04	6,80	6,57	6,36	6,16	5,97	5,80	5,63	5,48	5,33	5,19
126	7,16	6,91	6,68	6,46	6,26	6,07	5,89	5,72	5,57	5,41	5,27
128	7,27	7,02	6,78	6,57	6,36	6,17	5,99	5,81	5,65	5,50	5,36
130	7,38	7,13	6,89	6,67	6,46	6,26	6,08	5,91	5,74	5,59	5,44

HARDNESS OF SHOCK OIL / DÄMPFERÖL VISKOSITÄT



Be aware that different shock oil will change the models performance.
Unterschiedliches Öl ändert die Straßenlage des Fahrzeuges.

Hardness	Weicher ← Softer → Harder → Härter						
	10	20	30	40	50	80	100
Shock Oil							

R/C TIPS

R/C cars are fun to drive, but be aware that driving them in the wrong places can cause serious damage. Never drive near real cars, animals, or people that are unaware the R/C car is being driven.

When learning to drive, go to an area that has no obstacles that can damage your car if you have a crash. Stay away from curbs, parked cars, poles, etc. Always wear shoes when driving.

SAFETY PRECAUTIONS

Follow the outlined rules for safe radio control operation.

1. Make sure that no one else is using the same frequency in your running area. Using the same frequency at the same time can cause serious accidents, whether it's driving, flying, or sailing.
2. Avoid running in standing water and rain. If R/C unit, motor, or battery get wet, clean and dry thoroughly in a dry shaded area.

R/C OPERATING PROCEDURES

1. Make sure the transmitter controls and trims are in neutral.
2. Switch on transmitter.
3. Switch on receiver
Inspect operation using transmitter before running. Revers sequence to shut down after running, and make sure to disconnect or remove batteries.

INSPECTION BEFORE OPERATION

1. Make sure that screws and nuts are tight enough.
2. Make sure that batteries for transmitter are new, and Ni-Cad running batteries have been sufficiently charged.
If batteries are not new or fully charged, the model may run out of order.
3. Adjust steering servo and trim so that the model runs straight with transmitter in neutral.
4. Double check speed controller for neutral position.
5. Double check for wiring breaks and short circuits.
6. Check motor function. Unusual noise or excessive heat build-up in a short period may indicate a damaged motor.
7. Apply grease to suspension, gears, ballbearings, etc.

MAINTENANCE AFTER RUNNING

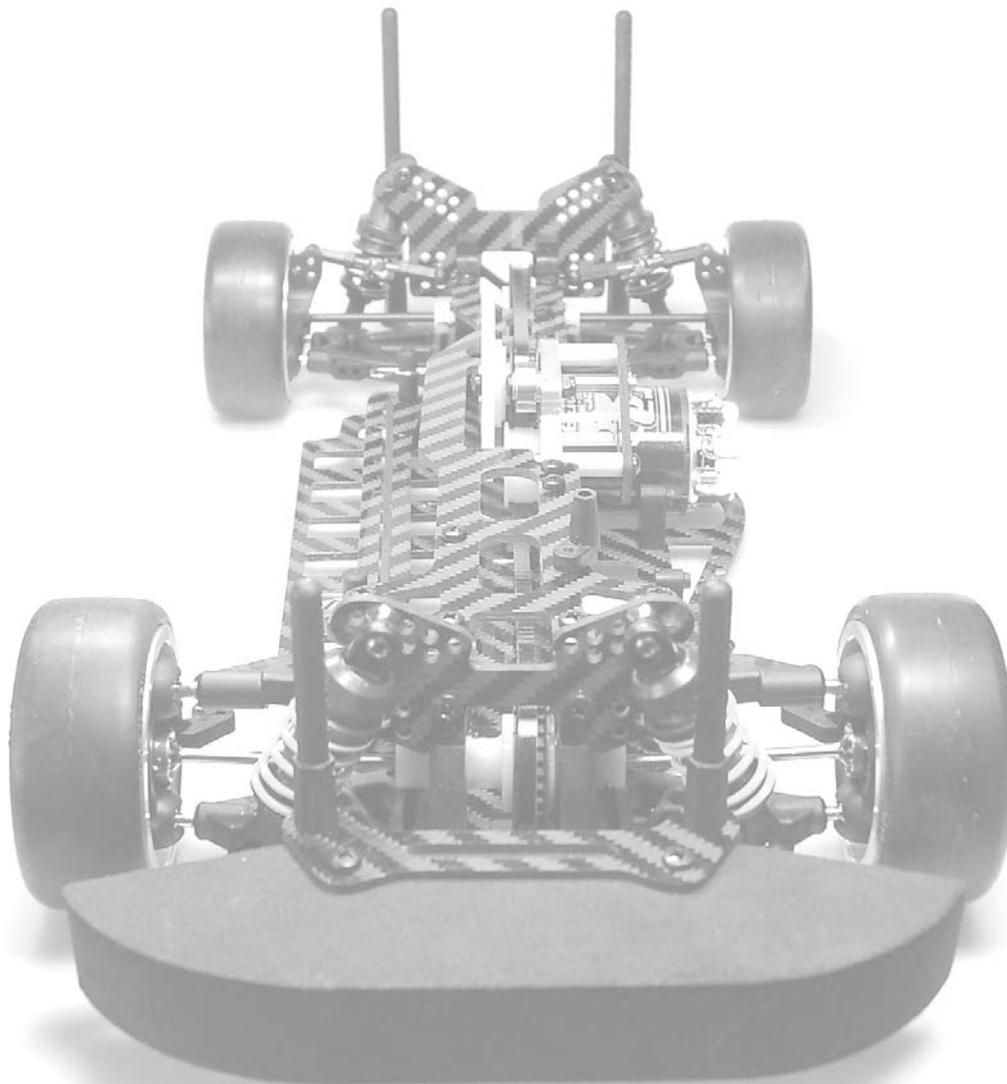
After operating the model, perform the following to maintenance for best performance.

1. After running model, switch off transmitter and remove batteries from model and R/C unit.
2. Completely remove sand, mud, dirt, etc.
3. Apply grease to suspension, gears, ballbearings.
4. Do not use water or solvents to clean your model.

ARTNR/NO.	TUNINGTEILE	TUNINGPARTS
A13T	Tuningriemen Superflex	Tuningbelt Superflex
ES08A	Stabilisator hinten (1)	Stabilizer (1)
HS12	Freilauf-Differential vorne (1)	Alum. One-Way Unit (1 set)
HS12A	Mitnehmer für Freilaufdiff. (2)	Cap Joint for HS-12 (2)
IS05	Querlenker vorne unten , Hart (2)	Front Lower Arms, hard (2)
IS06	Querlenker hinten unten , Hart (2)	Rear Lower Arms, hard

ARTNR/NO.	ERSATZTEILE	SPAREPARTS
A01	Alu Motorträger (2 teilig)	Alum. Motor Mount (2)
A02	Verbindungssteher für Motorträger oben (2)	Alum. Post for Motor Mount (2)
A03	Hauptwellenhalter Carbon	Graphite Plate for Mid Drive
A04	Welle für Umlenkrolle	Shaft for Guide Roller
A05	Umlenkrolle Delrin	Delrin Guide Roller
A06	O-Ring für Umlenkrolle (5)	O-Ring for Guide Roller (5)
A07	Hauptantriebswelle	Mid Drive Shaft
A08	Riemenrad 22 Zähne mit 2x8mm Stift	22T Pulley with 2x8mm Pin
A09	Hauptzahnradadapter mit 1,5x9mm Stift	Spur Gear Mount with 1.5x9mm Pin
A10	Carbon Chassis-Bodenplatte	Graphite Chassis
A12	Hülse u. Scheibe für Riemen-Kontroller	Bush & Washer for Belt Controller
A13	Riemen S 3 M 666	Belt S 3 M 666
A14	Stoßdämpferhaltebrücke vorne Carbon	Graphite Shock Stay front
A15	Stoßdämpferhaltebrücke hinten Carbon	Graphite Shock Stay heck
A16	Lenkplatte Carbon	Graphite Steering Plate
A17	Radioplatte Carbon	Graphite Upper Deck
A18	Radioplatte Abstützung Alu	Alum. Post for Upper Deck
A19	Karosseriehälter Platte vorne	Graphite Body Post Plate front
A20	Karosseriehälter Platte hinten	Graphite Body Post Plate rear
A21	Rammer vorne unten	Front Bumper
A22	Formschaum - Bumper	Sponge Bumper
A23	Kunststoffbeilagen 7mm für A-20 (2)	Plastic Washer 7mm for A20 (2)
A24	Akkuhalter - Steher (2)	Battery Post (2)
A25	Akkuhalter Carbon	Graphite Battery Holder
E07	P-3 O-Ringe für Stoßdämpfer (8)	P-3 O-Ring (8)
E08	Volumen-Ausgleichkappen (4)	Air Pressure Top (4)
E10	Stoßdämpfer-Plastikteile+Kugelpfannen für hi. Anlenkung (1 Set)	Shock Plastic Parts (1 set)
E11	Diff-Scheiben (2)	Differential Washer (2)
E12	1/8" Diff-Kugeln (8)	1/8" Diff. Ball (8)
E13	1/16" Diff-Kugeln u. Scheiben für Drucklager	1/16" Thrust Ball, w/Washer (8)
E17	Antriebsknochen hinten (2)	Rear Drive Shaft (2)
E19	Querlenkerstifte hinten unten (2)	Rear Lower Arm Shaft (2)
E19A	Querlenkerstifte vorne unten (2)	Front Lower Arm Shaft (2)
E23	Servo Saver Steher (2)	Servo Saver Shaft (2)
E24	Servo Saver Hülse (2)	Servo Saver Tube (2)
E25	Servo Saver Feder (1)	Servo Saver Spring (1)
E26	Servo Saver Einstellschraube (1)	Servo Saver Spring Adjuster (1)
E36	4mm Kugelkopf (10)	4mm Ball & Socket (10)
E37	6mm Kugelkopf (6)	6mm Ball & Socket (6)
E38	6mm Kugelkopf (6)	6mm Ball (6)
E48	Diff-Riemenrad 35 Zähne (2)	35T Pully (2)
E56	Lenkung Kunststoffteile	Servo Saver (Plastic Set)
E65	4mm Kugelpfannen (1 Set)	4mm Plastic Ball Joint (1set)
E72	Antenne (1)	Antenna (1)
ES18	Delrin Diff-Mitnehmer (L/R)	Delrin Cap Joint (2)
ES18A	Diff.-Einstellmutter (1)	Adjustment Nut (1)
ES18B	Diff.-Einstellschraube (1)	Adjustment Screw (1)
ES44	Karosseriesteher	Body Post (2)
ES45	1/10 Stoßdämpfer Einstellbar (2)	1/10 Shock Absorber, adjustable (2)
ES45E	Rändelmutter für Stoßdämpfer (2)	Adjustment for shock spring (2)
ES45G	Stoßdämpfergehäuse (2)	Shock Body (2)
ES45H	P-12 O-Ringe für Rändelmutter (4)	P-12 O-Ring (4)
F09B	Stabilisator Stahlstifte vorne (2)	Stabilizer Shaft (2)
H01	Stoßdämpferfedern (4)	Shock Spring (4)
H02	Stoßdämpfer Kolbenstange (2)	Shock Shaft (2)
H05	Querlenker vorne oben + Getriebekasten + Stabilisatorteile	Front Arm Block (1 set)
H06	Querlenker unten vorne/hinten + Karosseriesteher	Lower Arms (F&R), Body Post (1 set)
H07	Querlenkerstifte vorne oben (2)	Front Upper Arm Shaft (2)
H09	Lenkhebel / Radträger vorne (2)	Knuckle Arm (2)

ARTNR/NO.	ERSATZTEILE	SPAREPARTS
H10	Radträger hinten L/R	Rear Wheel Hub (2)
H11	Getriebebox hinten (1 Set)	Rear Gear Box (1 set)
H112B	1mm Scheiben (8)	1mm Washer black (8)
H13	Antriebswelle hinten aussen (2)	Rear Wheel Axle Shaft (2)
H14	Pivotball 8mm (4)	8mm Steering Ball (4)
H15	10mm Alu-Schraube für Pivotball (4)	10mm Alum. Set Screw (4)
H19	CVD - Antriebswellen vorne (2)	CVD Universal Joint (2)
H23	Schraubensatz	Screw Bag
H280	6mm Alum.-Kugeln für Stoßdämpfer unten (4)	Alum. 6mm Shock End (4)
IS02	Alu-Sechskantmitnehmer mit O-Ring (4)	Alum. Wheel Hub with O-ring (4)
RC1015	10x15x4 Kugellager für Differential u. Radträger innen	10x15x4 Ball Bearing
RC4080	4x8x2 Kugellager für Lenkung	4x8x2 Ball Bearing
RC5010	5x10x4 Kugellager für Hauptwelle	5x10x4 Ball Bearing
RC5010F	5x10x4 Kugellager mit Flansch für Umlenkrolle	5x10x4 Flange Ball Bearing
RC5011	5x11x4 Kugellager für Radträger aussen	5x11x4 Ball Bearing
RC5080	5x8x2,5 Kugellager für Differential innen	5x8x2,5 Ball Bearing
RC5080F	5x8x2,5 Kugellager mit Flansch für Hauptwelle	5x8x2,5 Frange Bearing
RC6013	Kugellager 6x13x5	Ball Bearing 6x13x5
TM116132	L/R Gewindestange 30mm	Adjustable Rod 30mm
TM1161335	L/R Gewindestange 35mm	Adjustable Rod 35mm
TM1161355	L/R Gewindestange 55mm	Adjustable Rod 55mm
TS802	E-Ringe Stahl 2mm für Stoßdämpfer	E-Ring 2mm for Shock Absorber
TS804	E-Ringe Stahl 3mm für Lenkung	E-Ring 3mm for Steering
TS805	E-Ringe Stahl 4mm für Hauptwelle	E-Ring 4mm for Mid Drive Shaft



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