RADIO CONTROLLED ELECTRIC POWERED RACING BUGGY

OFF-ROAD RACER TOMAHAWK

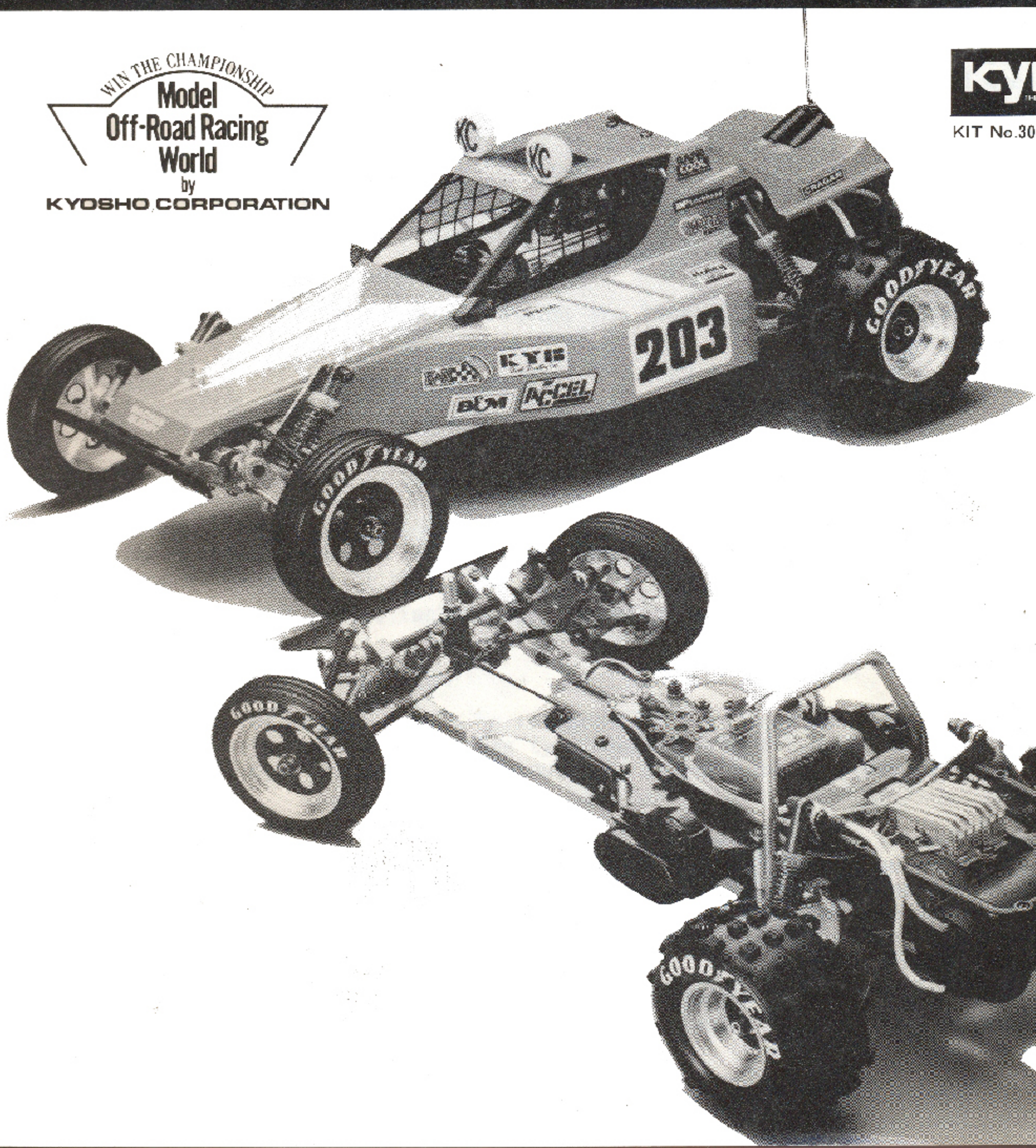
1:10 SCALE MODEL

BATTERY:7.2V-1200mAh/RADIO:2ch
(NOT INCLUDED)

WIN THE CHAMPIONSHIP
Model
Off-Road Racing
World
by
KYOSHO CORPORATION

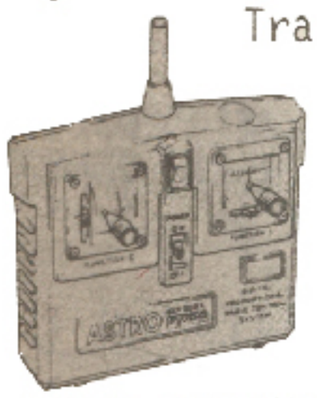
KYOSHO
THE FINEST RADIO CONTROL MODELS

KIT No.3065



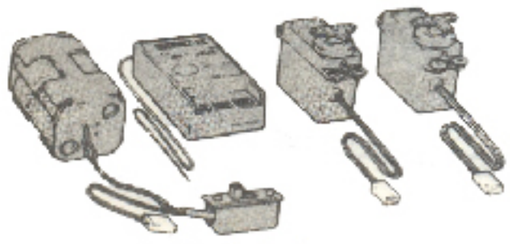
RADIO CONTROL SET

A 2 channel, 2 servo digital proportional radio control unit is required for driving this model car. A unit of such a radio can be used for any models with 2 channel control system.



Transmitter

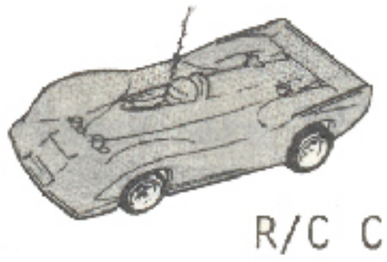
Battery Case



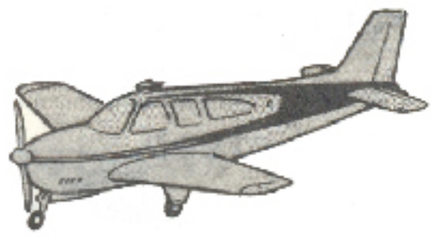
Receiver

Servo

Switch



R/C Car



Airplane

Boat

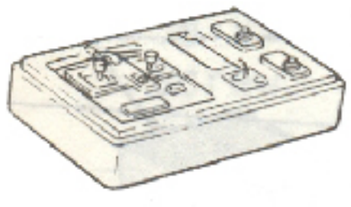
NICAD BATTERY

It is formally called a nickel cadminum battery, which is more economical than a dry cell battery, since it can be recharged for reuse over and over again. Also, with its regularized voltage it is an ideal power source for driving radio control models.

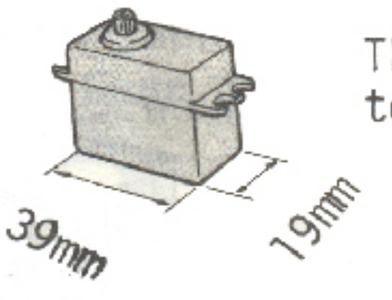
THINGS TO BE PROCURED BESIDES THE KIT

As Tomahowk is designed exclusively for racing, use smaller size receiver/servos in order to make it in super light weight. Maximum size of servo which can be used are as shown above.

Battery for Radio control Unit



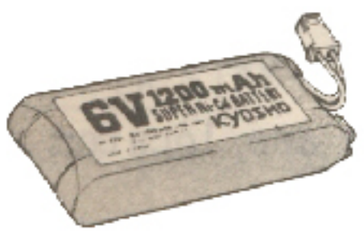
2 ch. Radio Control System



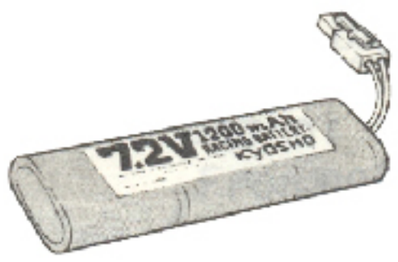
The maximum demension to mount

[Nicad Battery for Power Source]

6N-1200 battery or 7.2V-1200 racing battery are ideal for the purpose.



6N-1200 Battery

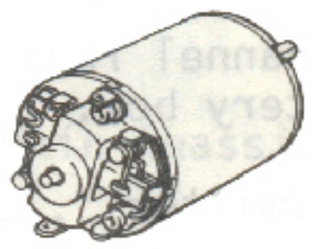


7.2V Racing Battery

[Motor]

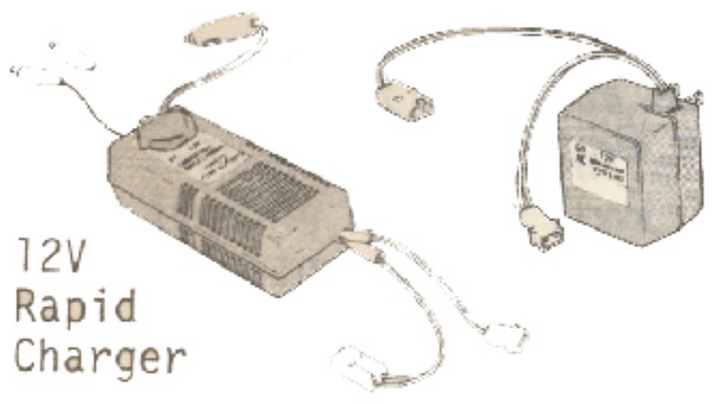
Regular motor is equipped on Tomahawk. However, for the people who require more speed, we would like to recommend Le Mans 480T (having high torque for 8 minute racing).

)tion parts, Le Mans motor, include cord, condenser and screws.



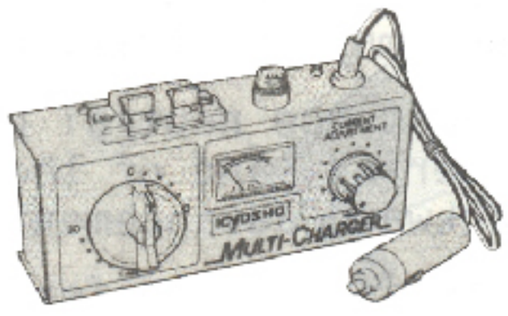
[Charger for Nicad Battery]

The Nicad batteries are capable to be recharge for recurrent use over 300 times. We have 2 types of chargers: one is a 15-hours type powered from a household 100V outlet, and the other is a rapid type taking only 15 minutes to charge a battery powered from a 12V car cigarette lighter.



12V Rapid Charger

100V AC Charger from Household Outlet



The multi charger is a multi purpose rapid type charger to be able to recharge 5N or 6N 1200 battery and a battery of a receiver of a radio control set.

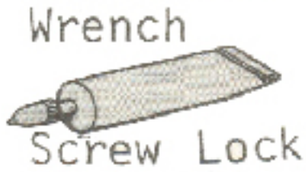
Multi Charger
(12V General Purpose Rapid Charger)

TOOLS REQUIRED FOR ASSEMBLING

[Included in kit]

1.5mm Allen Wrench

2mm Allen Wrench



Screw Lock Cement

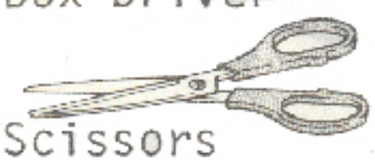
[Purchased separately]

+Driver (L.S)

Radio Plier

Box Driver

Cutter

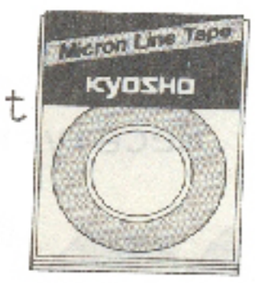


Scissors

Awl

Rubber Cement

Brush

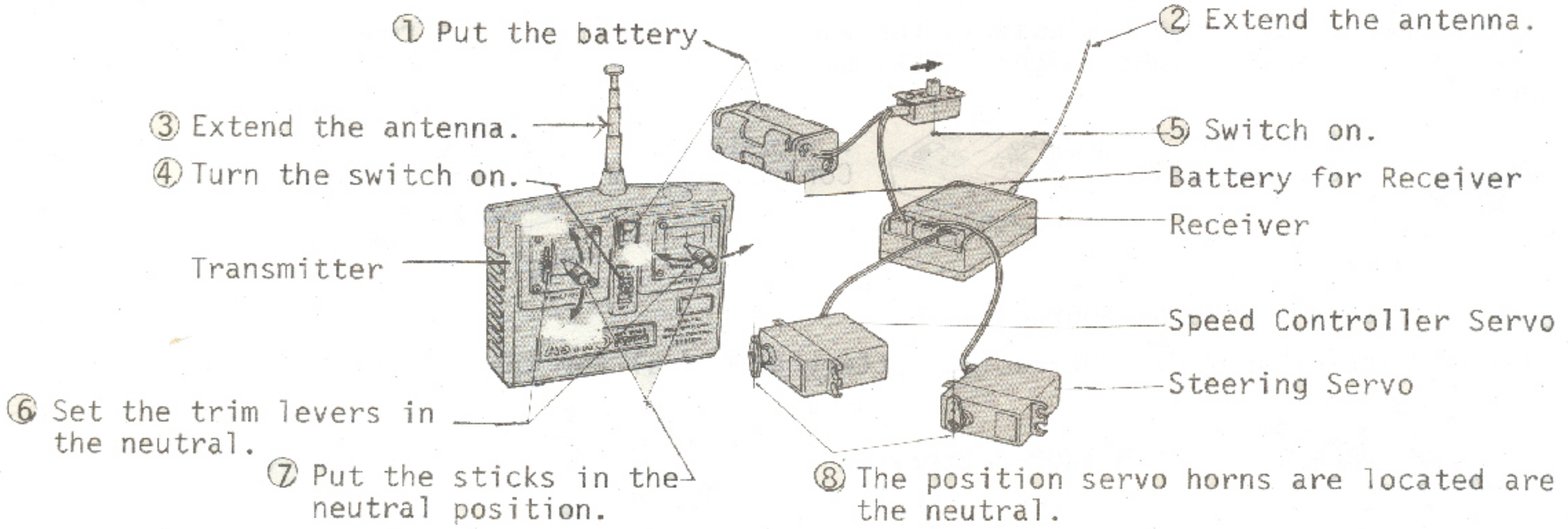


Micron Tape

Polyca Colors

HOW TO CHECK THE RADIO CONTROL UNIT

Manipulate the radio in order of the number ① to ⑧.



*When turning the switch on, get the switch of the transmitter first, then that of the receiver.

A 2 channel radio control set is composed of a transmitter, a receiver, two servos, and a battery box.

*Transmitter ..... This is to control the models. The manipulation of the control sticks is signaled from an antenna in the form of electric waves.

*Receiver ..... Transmits the wave signals received to the servos.

*Servos ..... Operate the controls by means of motor and gears according to signals provided from the receiver.

*Antenna ..... Plays an important role of emitting the wave signals from the transmitter antenna, and the receiver antenna catches them. They must be fully extended when in operation.

*Trim Levers ..... Adjust the neutral position of the servos and fine tuning of steering, and of the speed controller to control forward or backward advancement.

*Servo Horn ..... This is to transfer the movements of the servo to a controlled component. There are several types in shape to be selected depending upon the use.

BEFORE ASSEMBLY

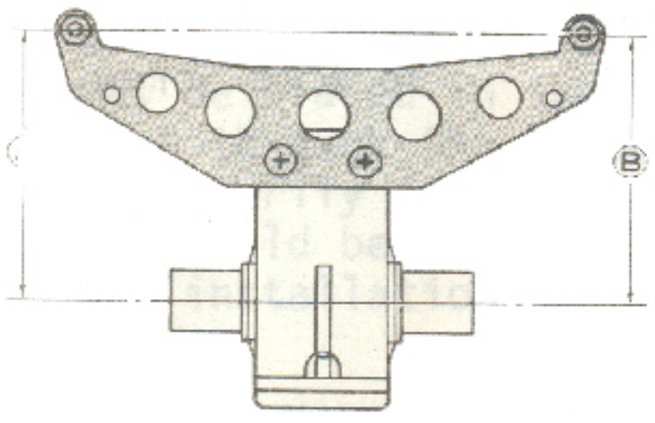
Please read through this instruction before assembly. Your previous understading of the structure will enable you to fabricate the kit without difficulty. When you have purchased the model, check the components in the kit prior to your start of the assembly. Any claim for replacing or refund for the model in the process of assembly will not be accepted.

*The bolts and nuts used in the assembling steps are illustrated in actual size.
*Any place indicated with SW LOCK requires application of the "Thread Lock" agent which is included in the kit.

1 INSTALLATION OF MOTOR COVER

[small parts to be used]

- 3ø x 8 screw .. 2
- 3ø x 15 screw . 2
- 3ø Nut 2

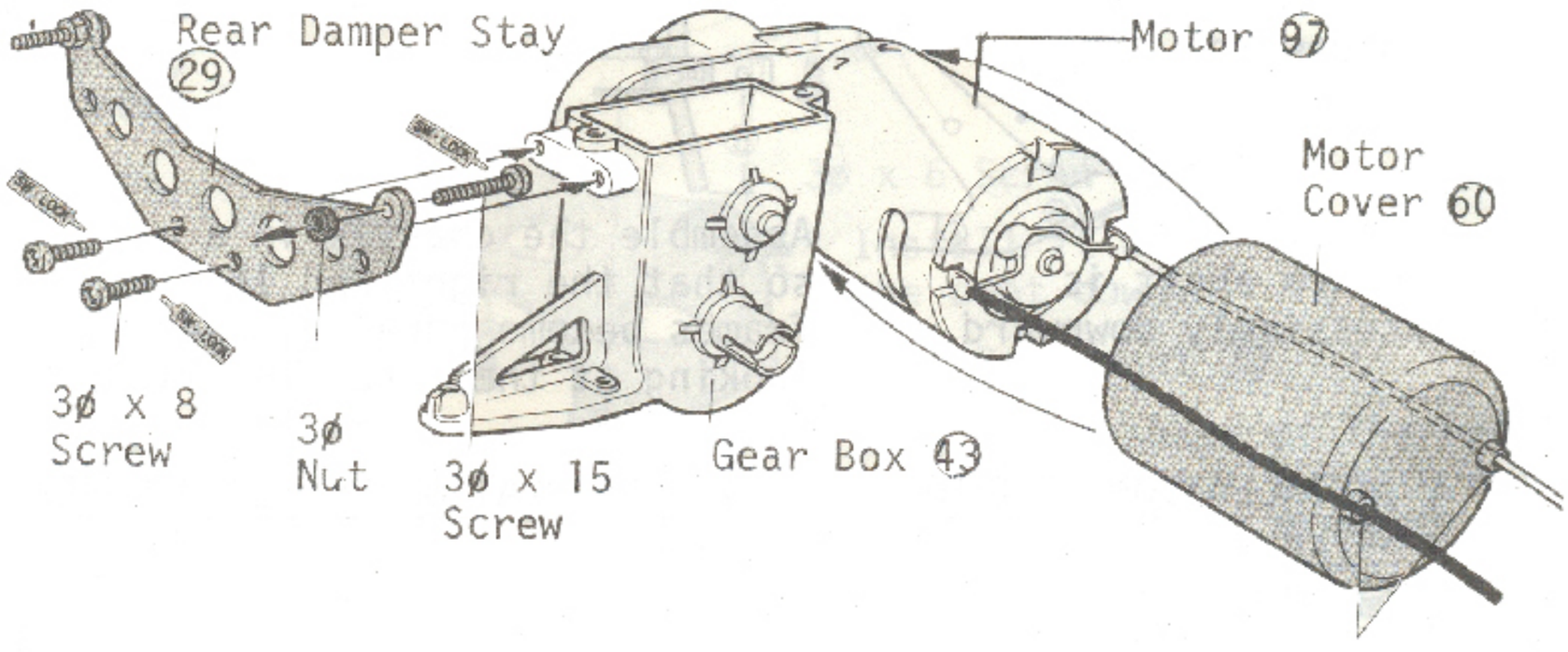


Install them in such a way that A and B are of the same length.

1 INSTALLATION OF MOTOR COVER

The rear damper to be bolted here.

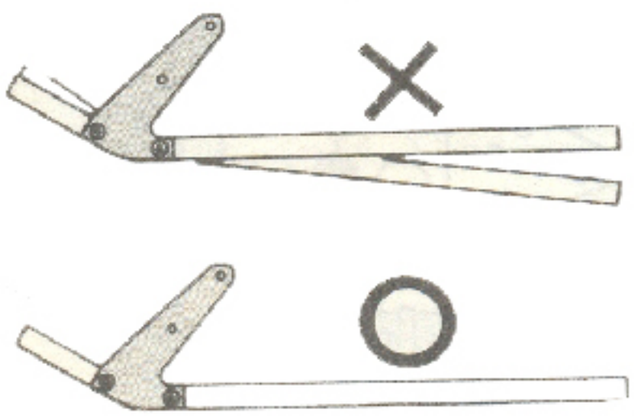
Seal the motor with the motor cover all the way till it stops.



2 INSTALLATION OF FRONT DAMPER STAY

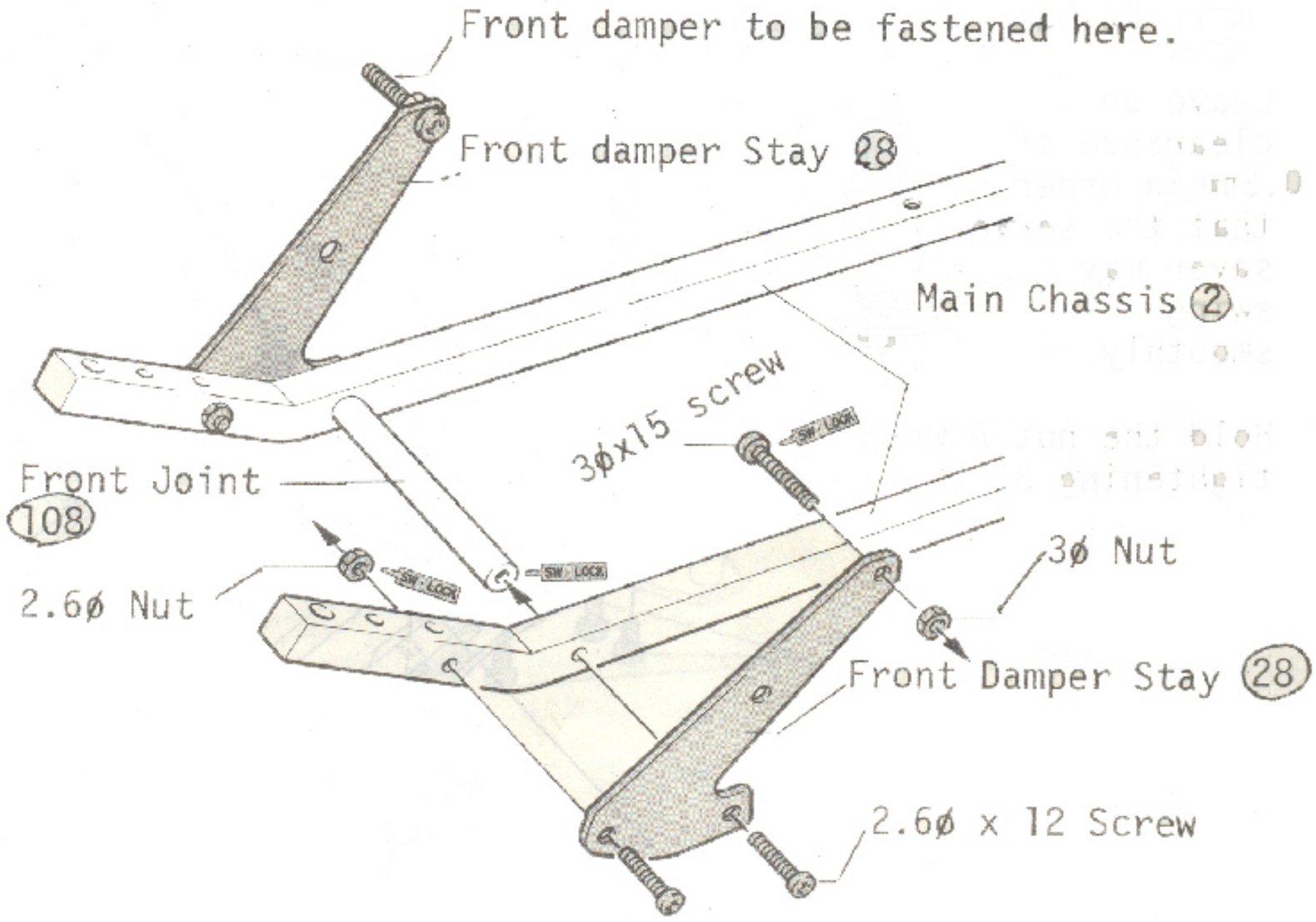
[small parts to be used]

- 2.6ø x12 screw 4
- 3ø x 15 screw 2
- 2.6ø Nut .. 2
- 3ø Nut 2



Assemble the chassis in a way so that the right and left frames become parallel when looking at them from the flank.

2 INSTALLATION OF FRONT DAMPER STAY

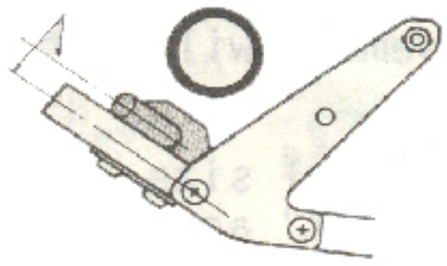


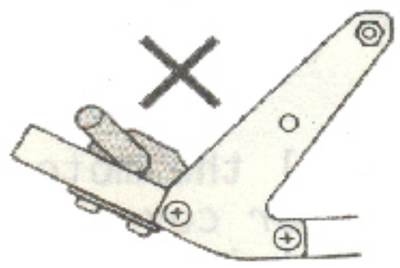
3 INSTALLATION OF ARM SHAFT

[small parts to be used]

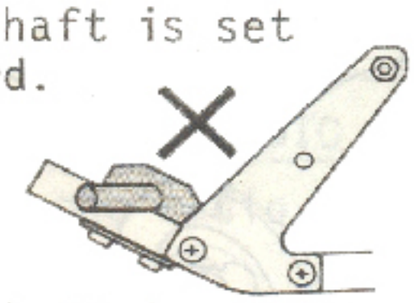
3ø x 15 Screw ... 4

Parallel

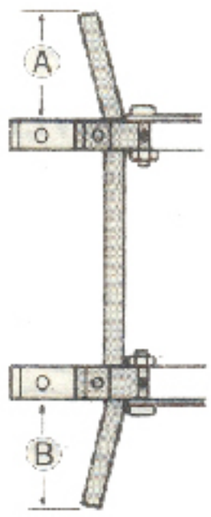




The arm shaft is set too upward.

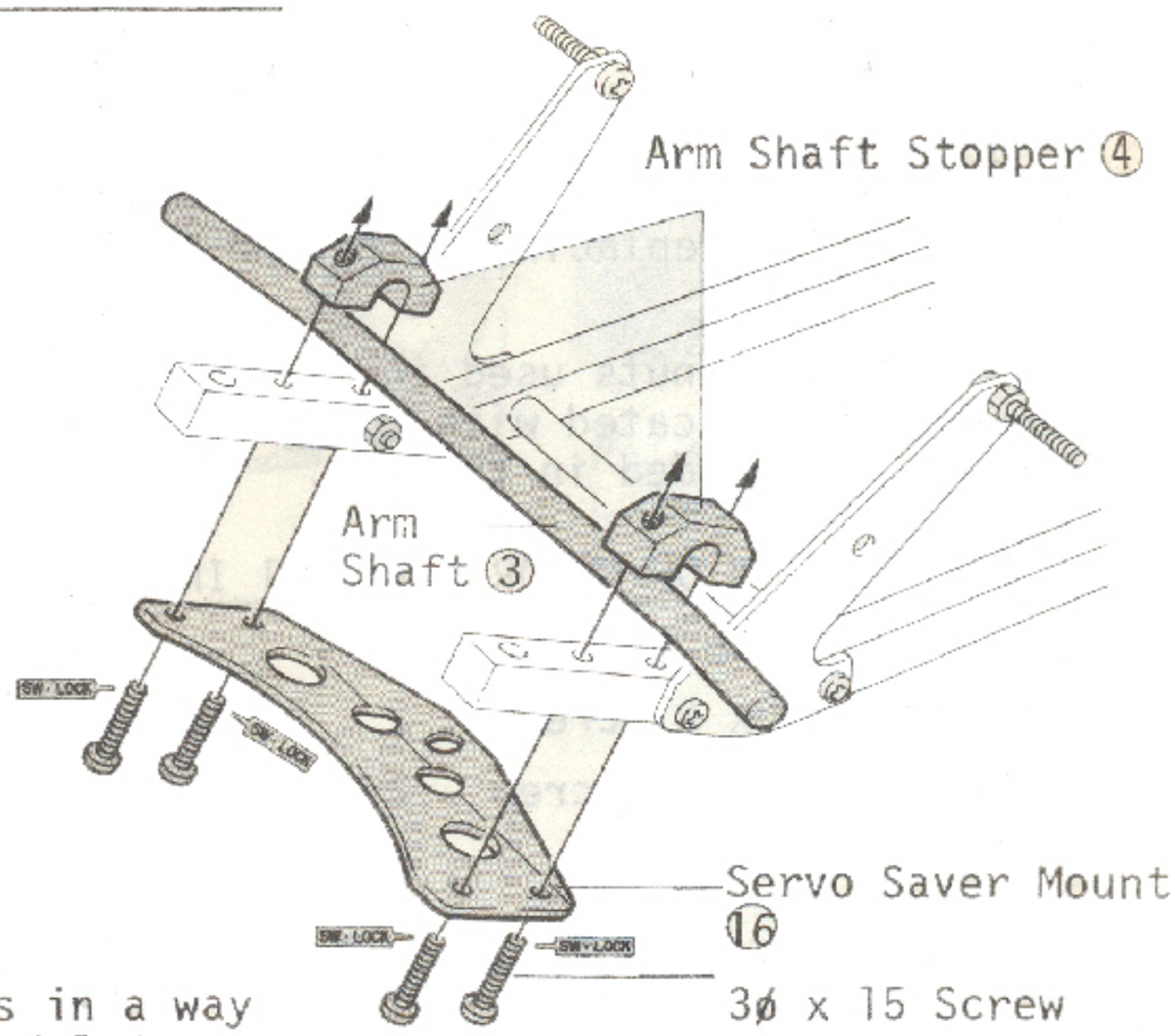


The arm shaft is excessively downward.



Assemble the chassis in a way so that the right and left frames become parallel when looking at them from the flank.

3 INSTALLATION OF ARM SHAFT



4 INSTALLATION OF SERVO SAVER

⑧ Pillow Ball .. 2

67 Linkage Ball . 1

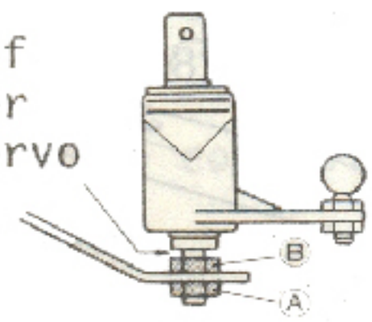
2ø x 10 Screw ... 1

2ø Nut 1

2.6ø Nut 2

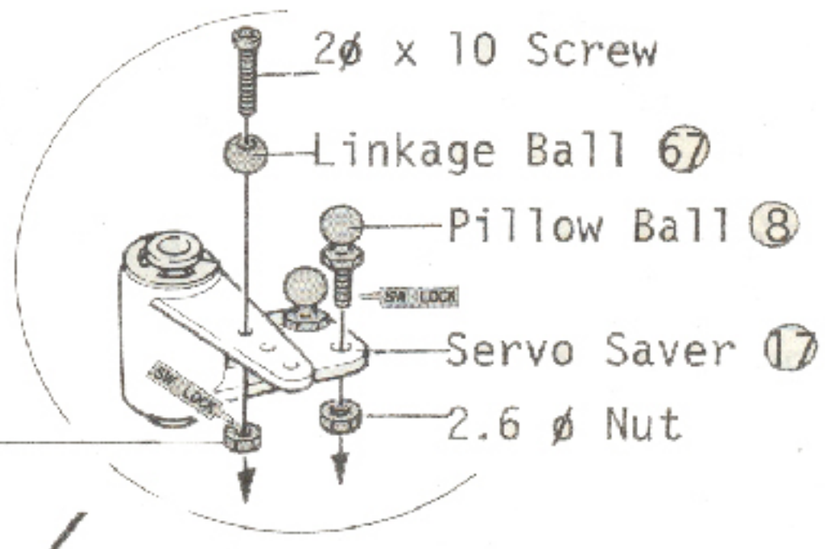
4ø Nut 2

Leave an clearance of 0.5mm in order that the servo saver may swing smoothly.

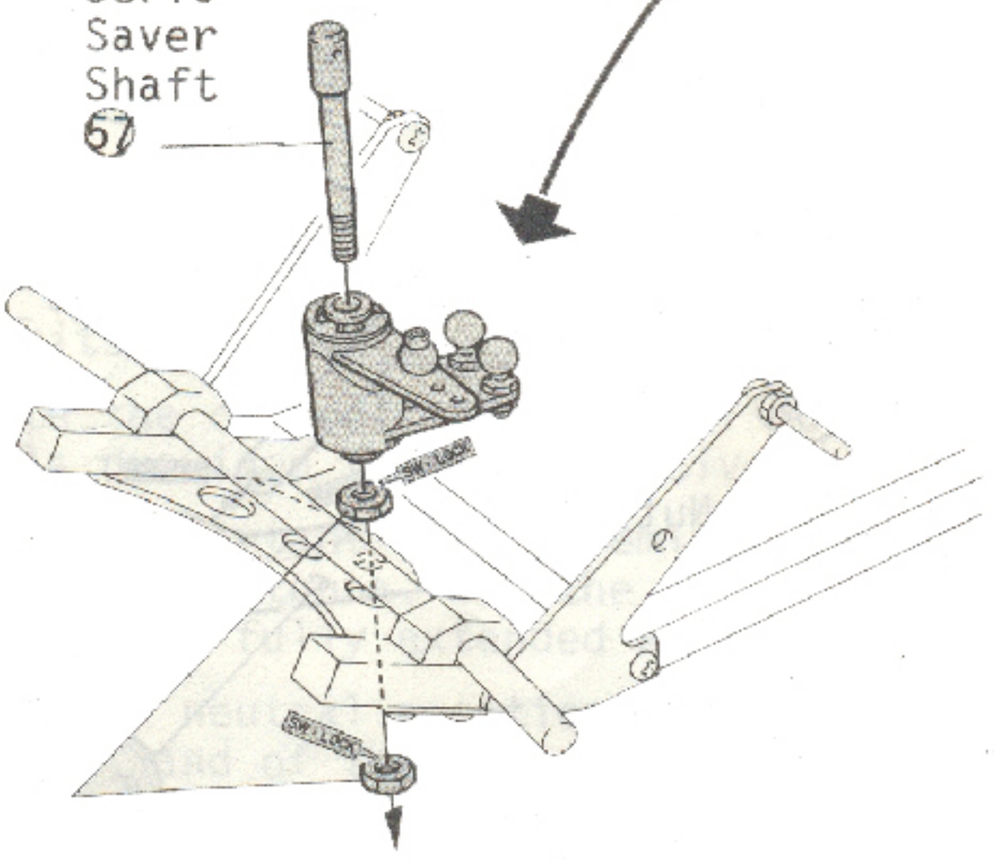


Hold the nut A when tightening B.

4 INSTALLATION OF SERVO SAVER



Servo Saver Shaft 67

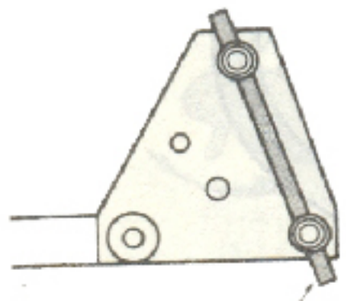


4ø Nut

5 INSTALLATION OF REAR SUS STAY

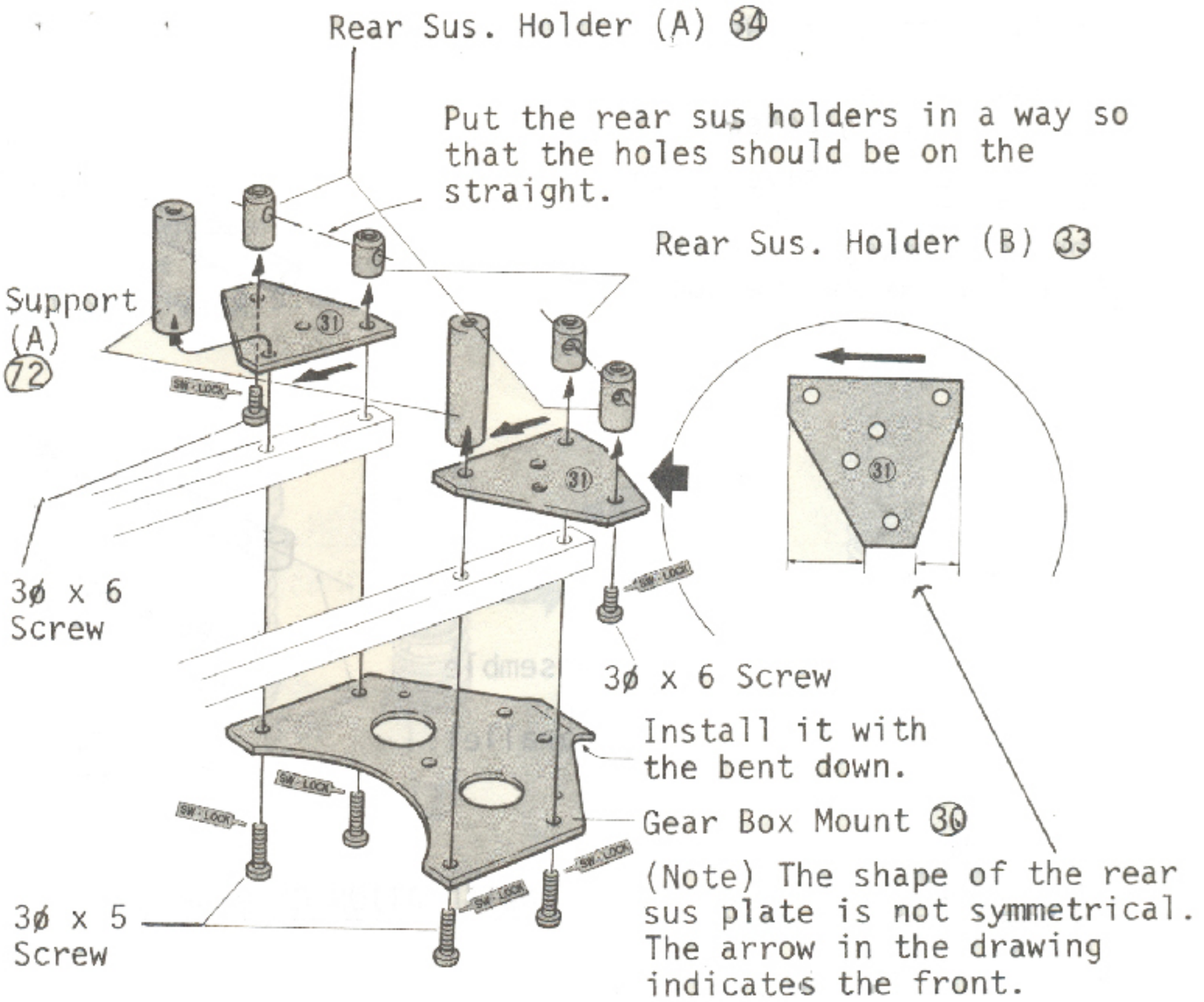
[small parts to be used]

(34) Rear Sus. Holder (A) 2
(33) Rear Sus Holder (B) 2
3ø x 6 Screw ... 2
3ø x 15 Screw .. 4
(72) Support (A) 2



When the rear sus holders are bolted, the shaft (32) may be placed in the position through the holders temporarily for alignment. It should be removed after the installation.

5 INSTALLATION OF REAR SUS STAY

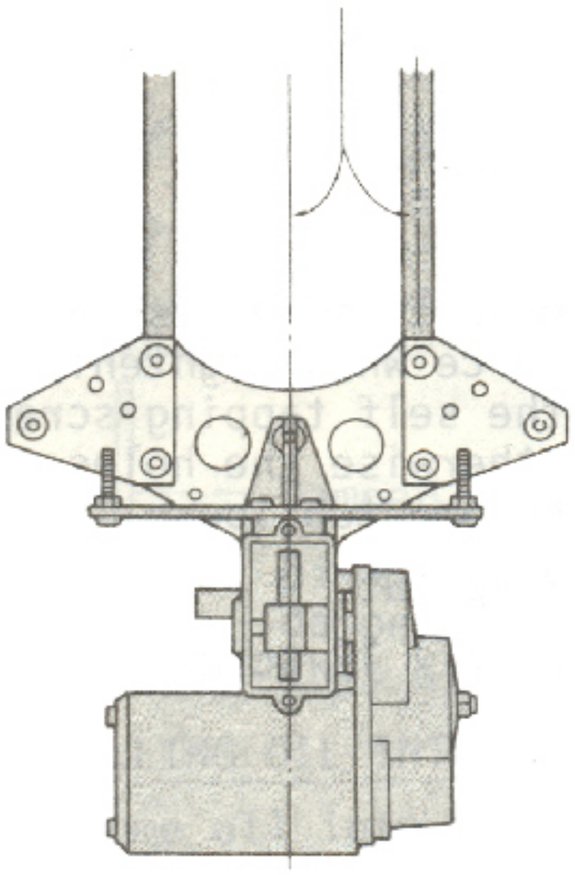


6 INSTALLATION OF GEARBOX

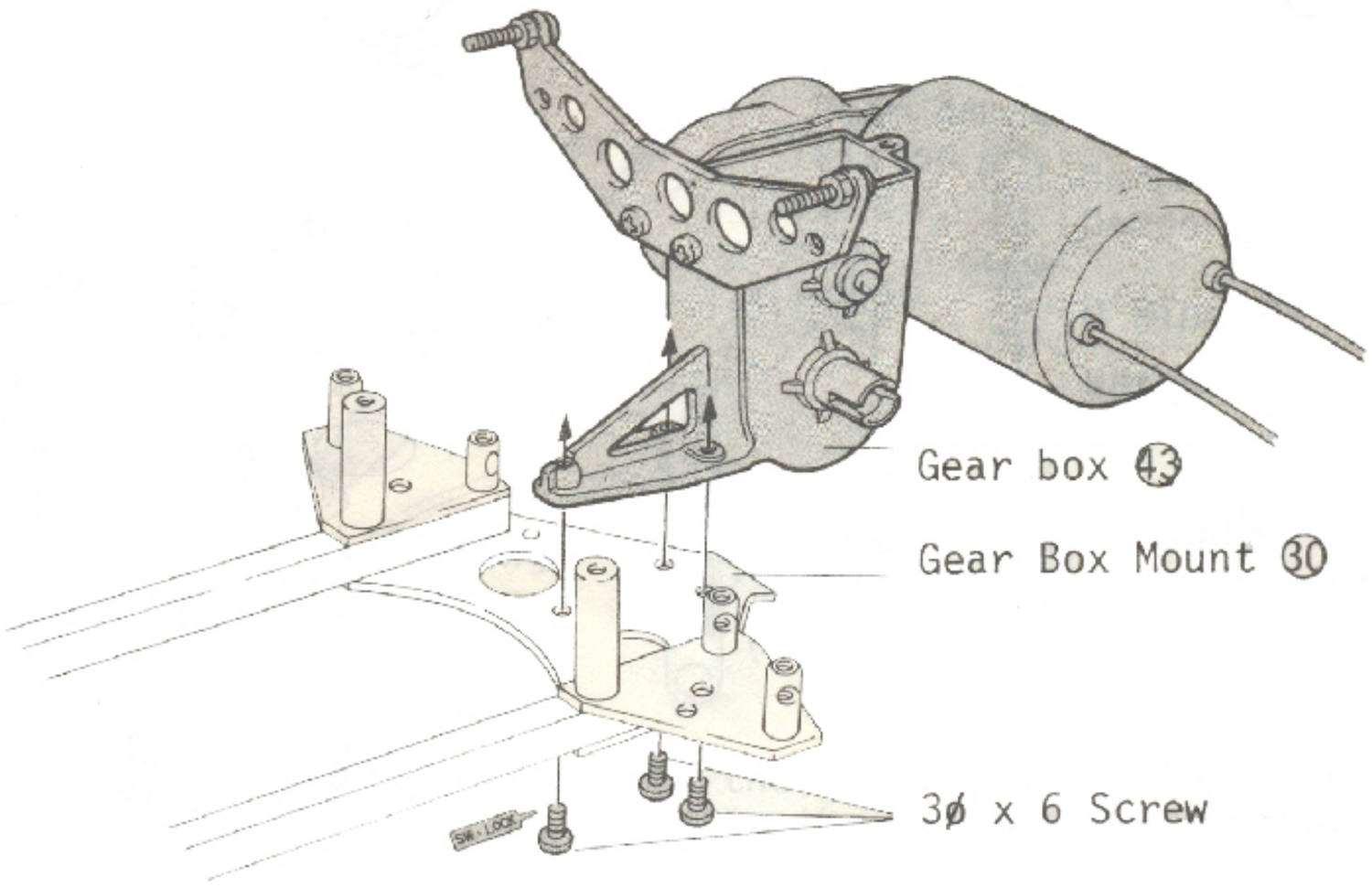
[small parts to be used]

3ø x 6 Screw 3

Fix the gearbox in parallel with the chassis.



6 INSTALLATION OF GEARBOX



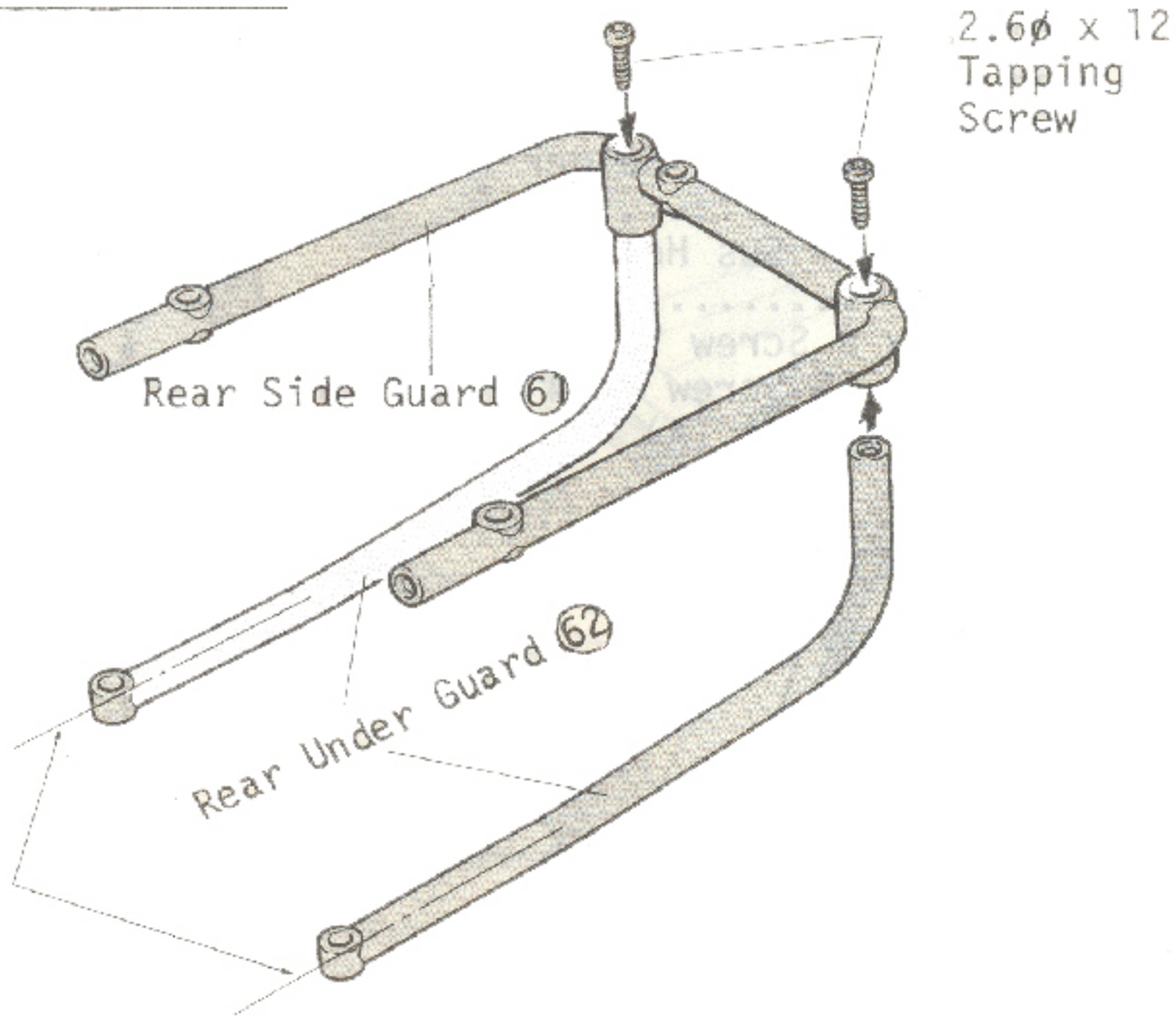
7 ASSEMBLY OF REAR GUARD

[small parts to be used]

2.6ø x 12
Tapping Screw ...2

Do not use excessive force when tightening the self tapping screws, otherwise the holes may become too loose.

7 ASSEMBLY OF REAR GUARD



Assemble in parallel.

8 INSTALLATION OF REAR GUARD

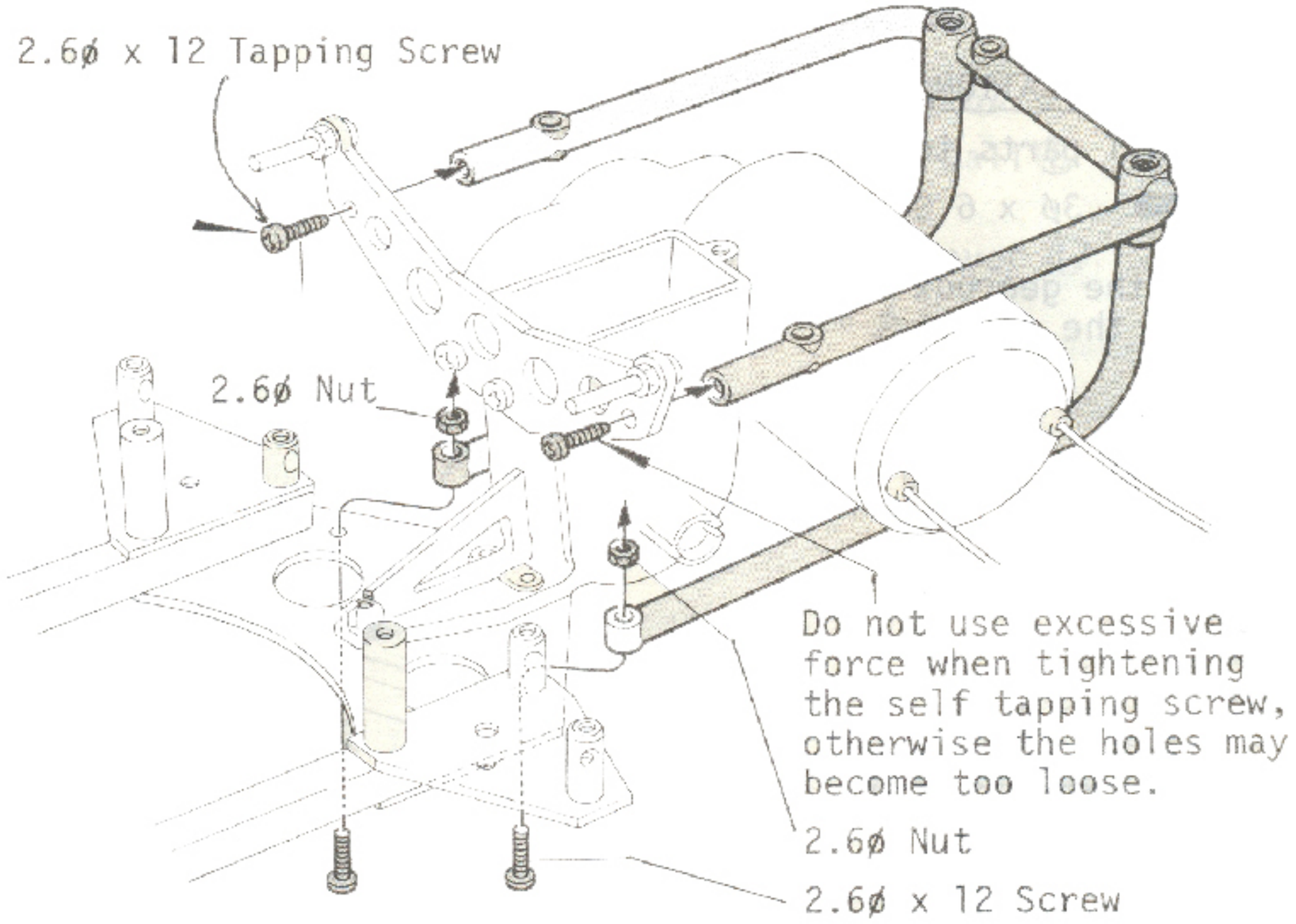
[small parts to be used]

2.6ø x 12
Tapping Screw .. 2

2.6ø x 12 Screw . 2

2.6ø Nut 2

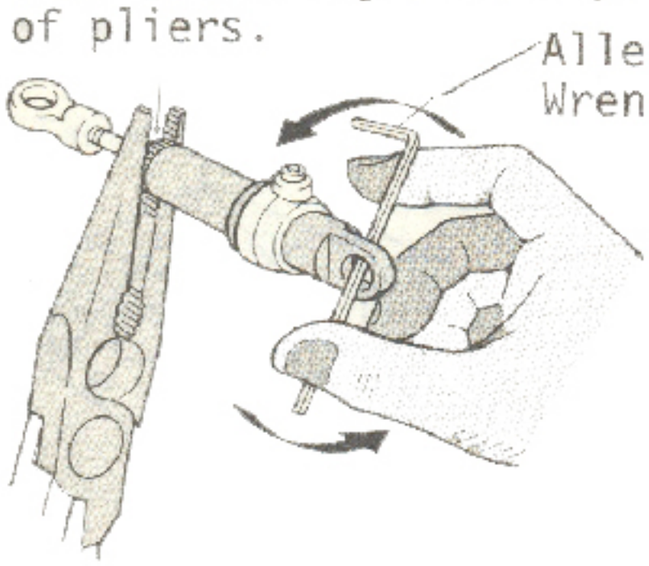
8 INSTALLATION OF REAR GUARD

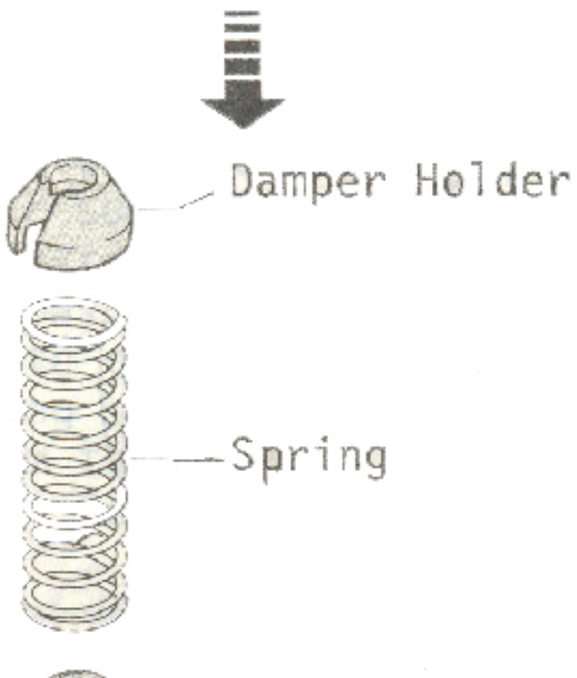


9 DISASSEMBLY OF OIL-DAMPER

Detach the damper and disassemble it as shown in the drawings.

Hold the damper stopper with something like a pair of pliers.

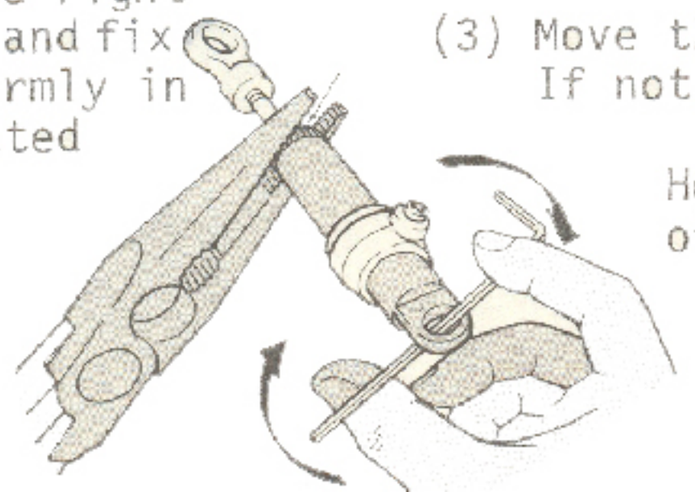




Disassemble the damper down to this stage.

10 FILLING OIL INTO DAMPER

Put some oil into the damper as shown in the right hand drawings and fix the stopper firmly in a way illustrated below.



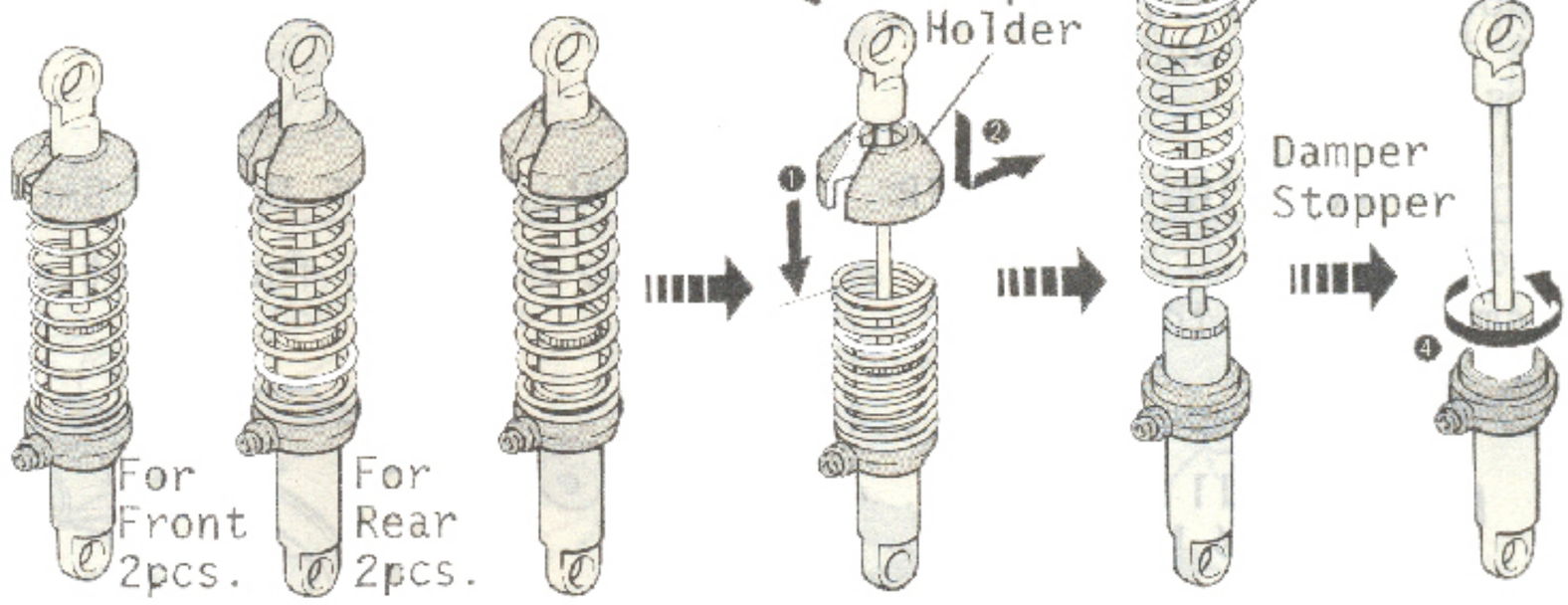
9 DISASSEMBLY OF OIL-DAMPER

The dampers are factory assembled, but disassembly of them is required when filling oil into them. Since different parts employed for the front and rear dampers respectively. The disassembly, filling oil, and reinstallment should be done one by one.

Press down the spring and dismantle the spring receptacle by sliding it sideways.

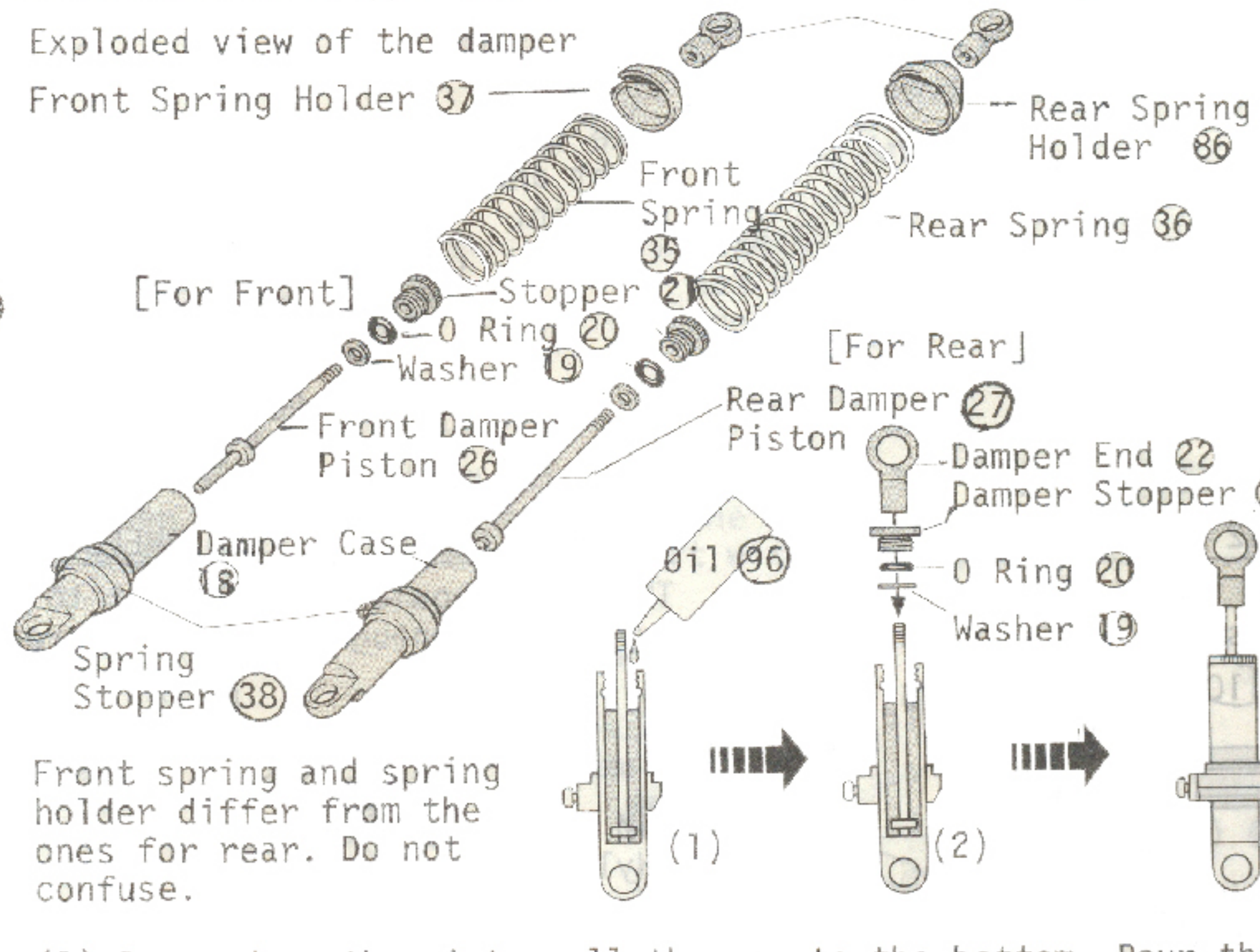
Pull out the spring.

Remove the damper stopper by unscrewing.



10 FILLING OIL INTO DAMPER

Exploded view of the damper



Front spring and spring holder differ from the ones for rear. Do not confuse.

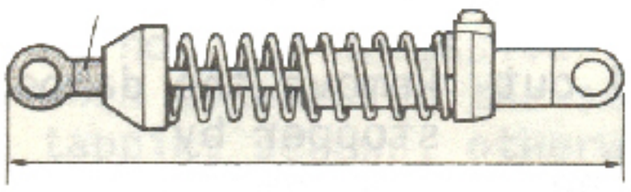
(1) Press down the piston all the way to the bottom. Pour the oil to the point as shown in the diagram. Care should be taken not to get an air bubble in the oil.

(2) Assemble the damper in the sequence as shown in the drawing to completion.

(3) Move the piston up and down to see if it operates smoothly. If not, decrease the amount of oil a little.

Hold the damper stopper with something like a pair of pliers.

After putting oil and assembling the damper, check it as shown below. Adjust the length by screwing the damper end (23) out or in.



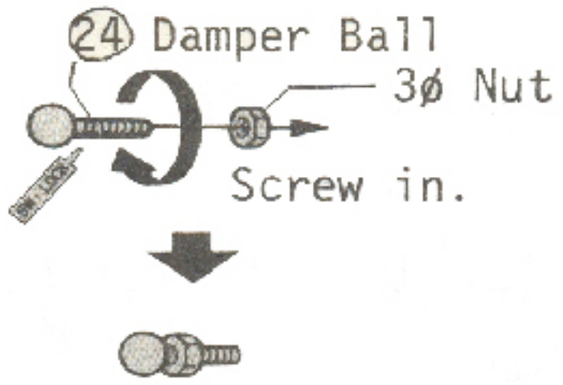
Uniform the length, indicated with an arrow in the drawing above, of the right and left at the front and rear respectively.

11 INSTALLATION OF DAMPER BALL

[small parts to be used]

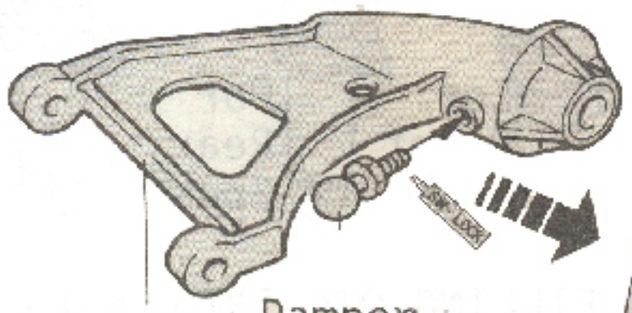
(24) Damper Ball ... 4

(25) Ball Nut 4
(3ø Nut)

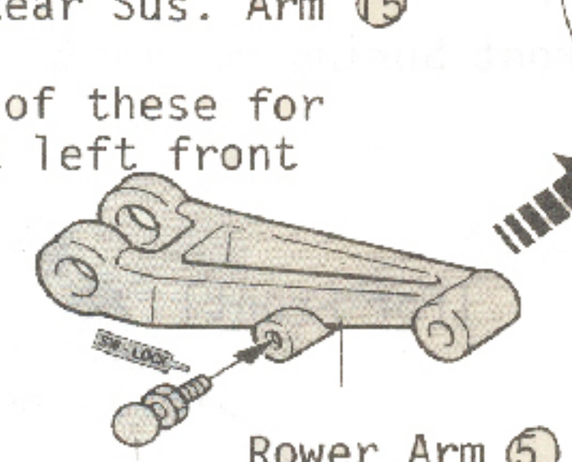


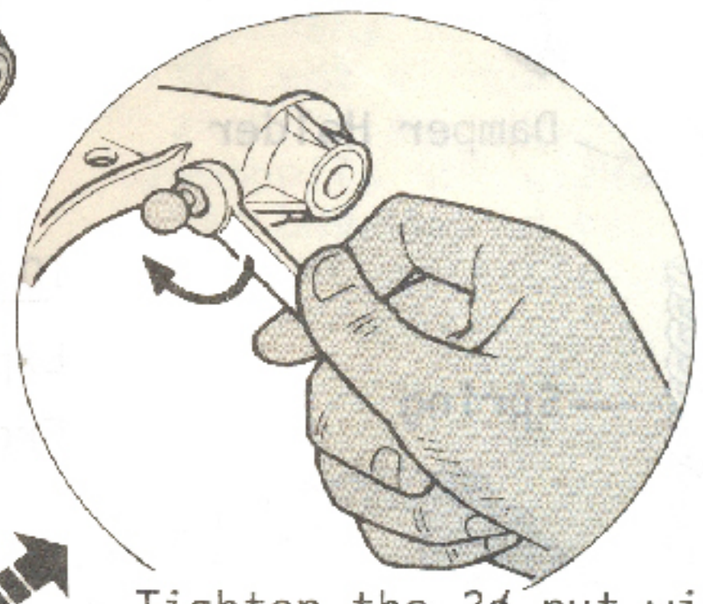
11 INSTALLATION OF DAMPER BALL

Make two of these for right and left rear portion.



Make two of these for Right and left front portion.





Tighten the 3ø nut with a wrench or plier to fix the damper ball.

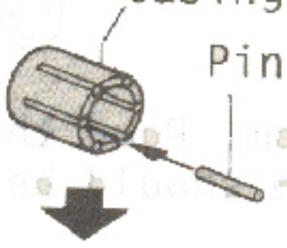
12 INSTALLATION OF REAR WHEEL AXLE

[small parrs to be used]

(110) Roller Bearing

Casing ... 2

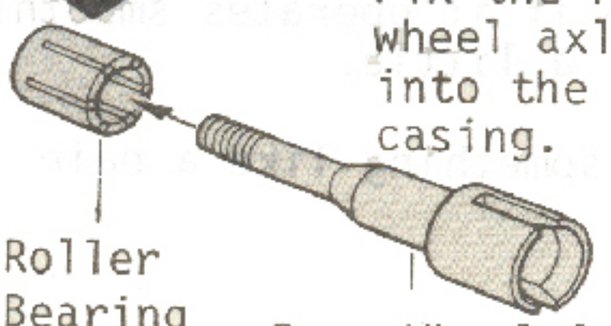
Pin ... 12



Fix six pins into the slits.

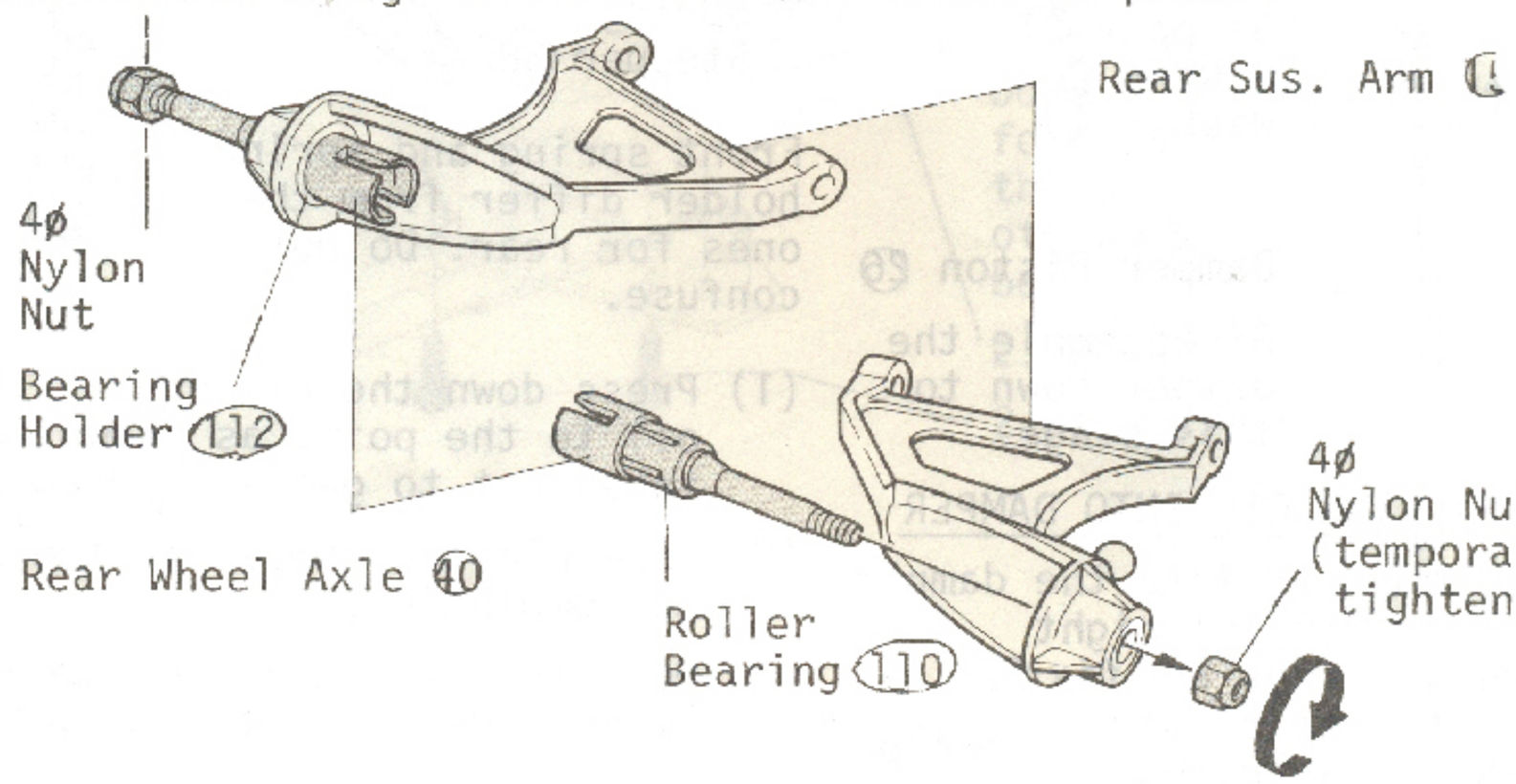
Make two of them.

Fix the rear wheel axle into the casing.



12 INSTALLATION OF REAR WHEEL AXLE

This nut should be tight not to excess, but in such a degree sufficient enough to hold the rear wheel in place.



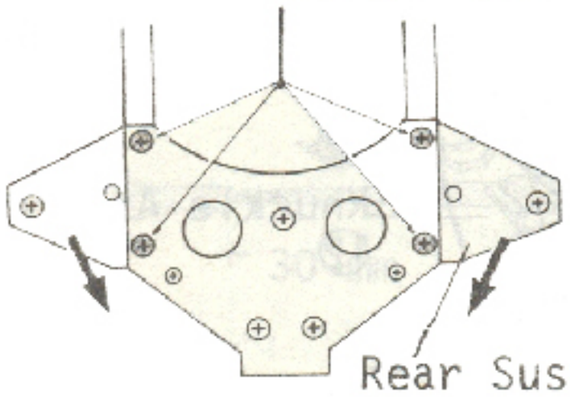
13 INSTALLATION OF REAR SUS ARM

[small parts to be used]

3ø x 4 Screw ... 4

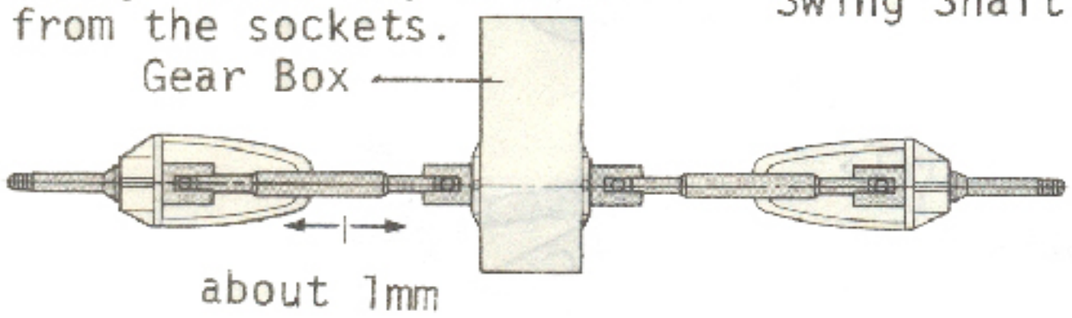
3ø Nylon Nut .. 2

Loosen these screws



Rear Sus Plate

Loosen the 4 screws fastening the rear sus plate, tighten the screws firmly while pushing the rear sus plate toward the direction pointed by the arrows. When the rear sus plate getting loose, the swing shafts may come off from the sockets.



Check whether or not there is play over 1mm in cross-ways when the swing shaft are kept to be horizontal as shown in the drawing. Excessive play may get the swing shafts out of place. It can be adjusted in a way as shown in the below picture.

14 ASSEMBLY OF KNUCKLE ARM

[small parts to be used]

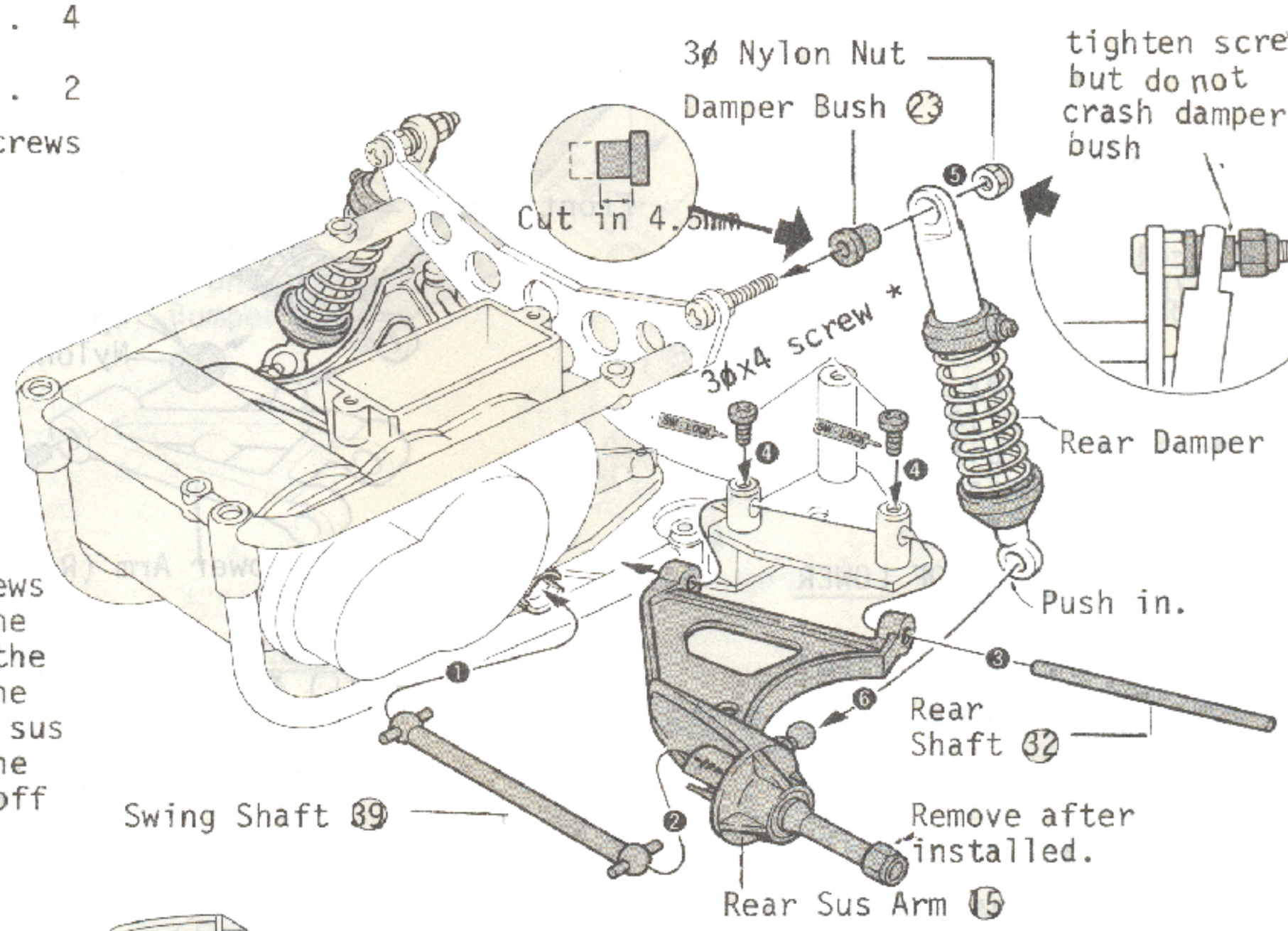
⑧ Pillow Ball..4

6 Pivot(L) 1

6 Pivot(R) 1

13 INSTALLATION OF REAR SUS ARM

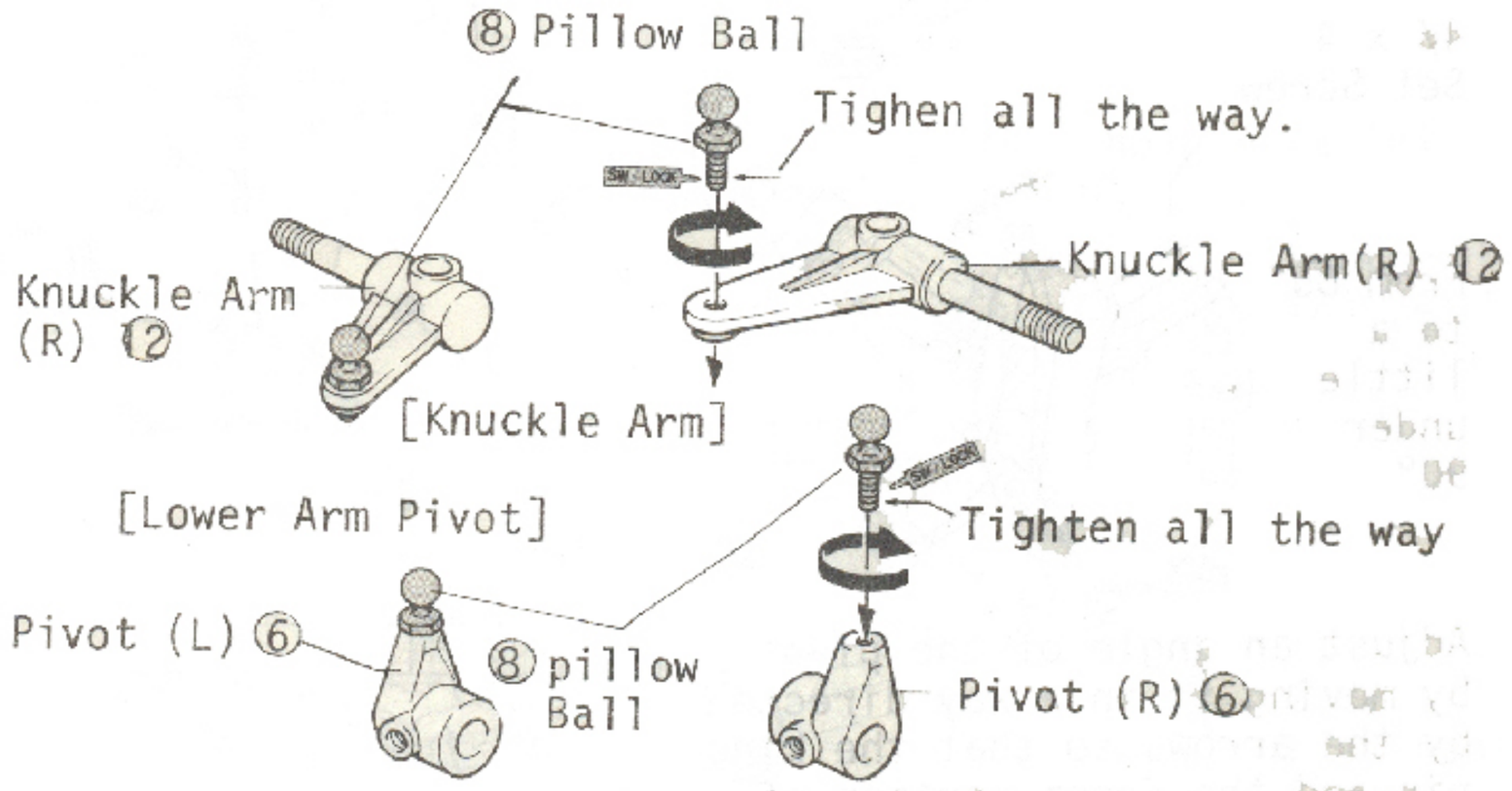
Assemble in order from 1 to 6.



(Note) 3øx4 screw* should not be tightened too tight.

14 ASSEMBLY OF KNUCKLE ARM

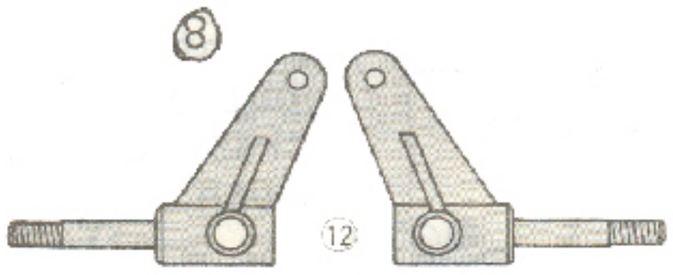
In this instruction, the components on the right side, when looking at the car from the front, are indicated with (R) and those on the left with (L).



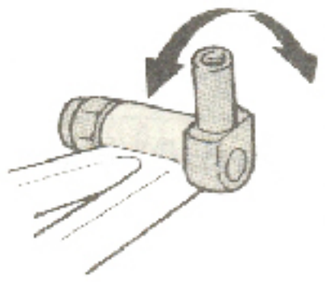
15 INSTALLATION OF KNUCKLE ARM

[small parts to be used]

Pillow Ball ... 2



Knuckle Arm(L)...1 Knuckle Arm(R) ... 1



Set it with some play so that the upright will move a bit in the axial way without binding.

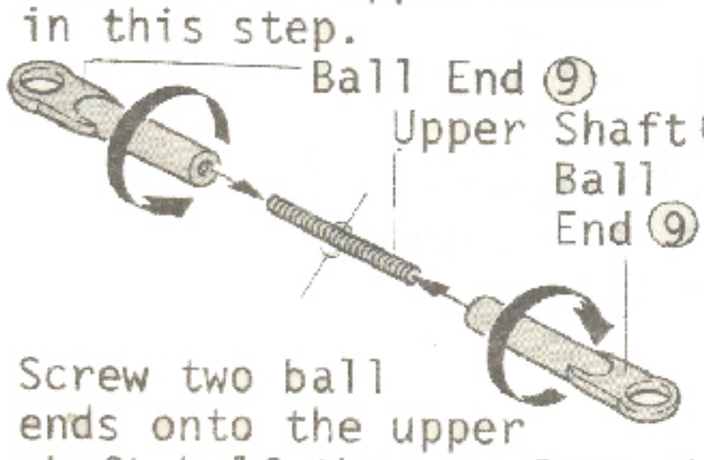
16 INSTALLATION OF LOWER ARM

[Small parts to be used]

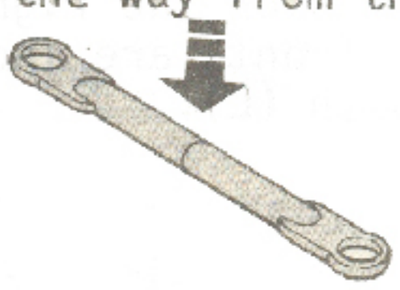
3ø Nylon Nut .. 2

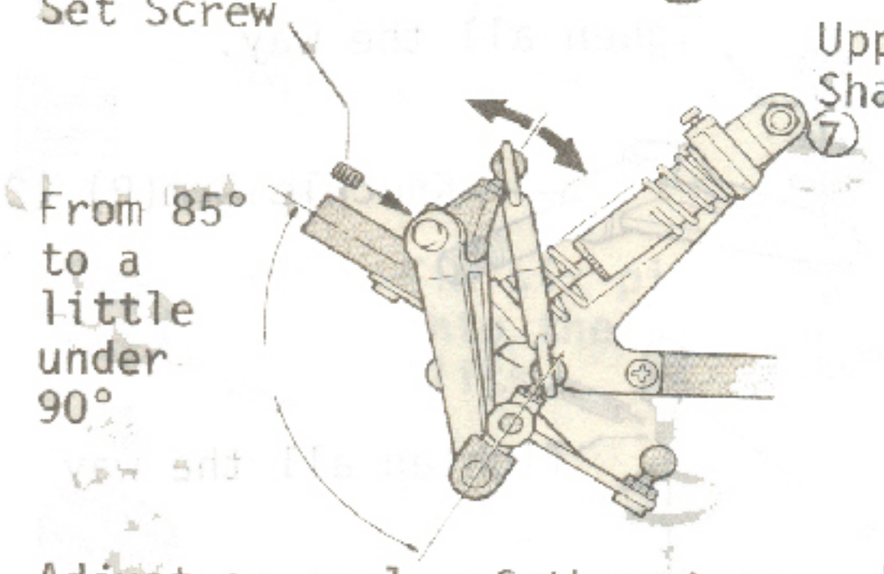
4ø x 4 Set Screw .. 2

Make two of upper shafts in this step.



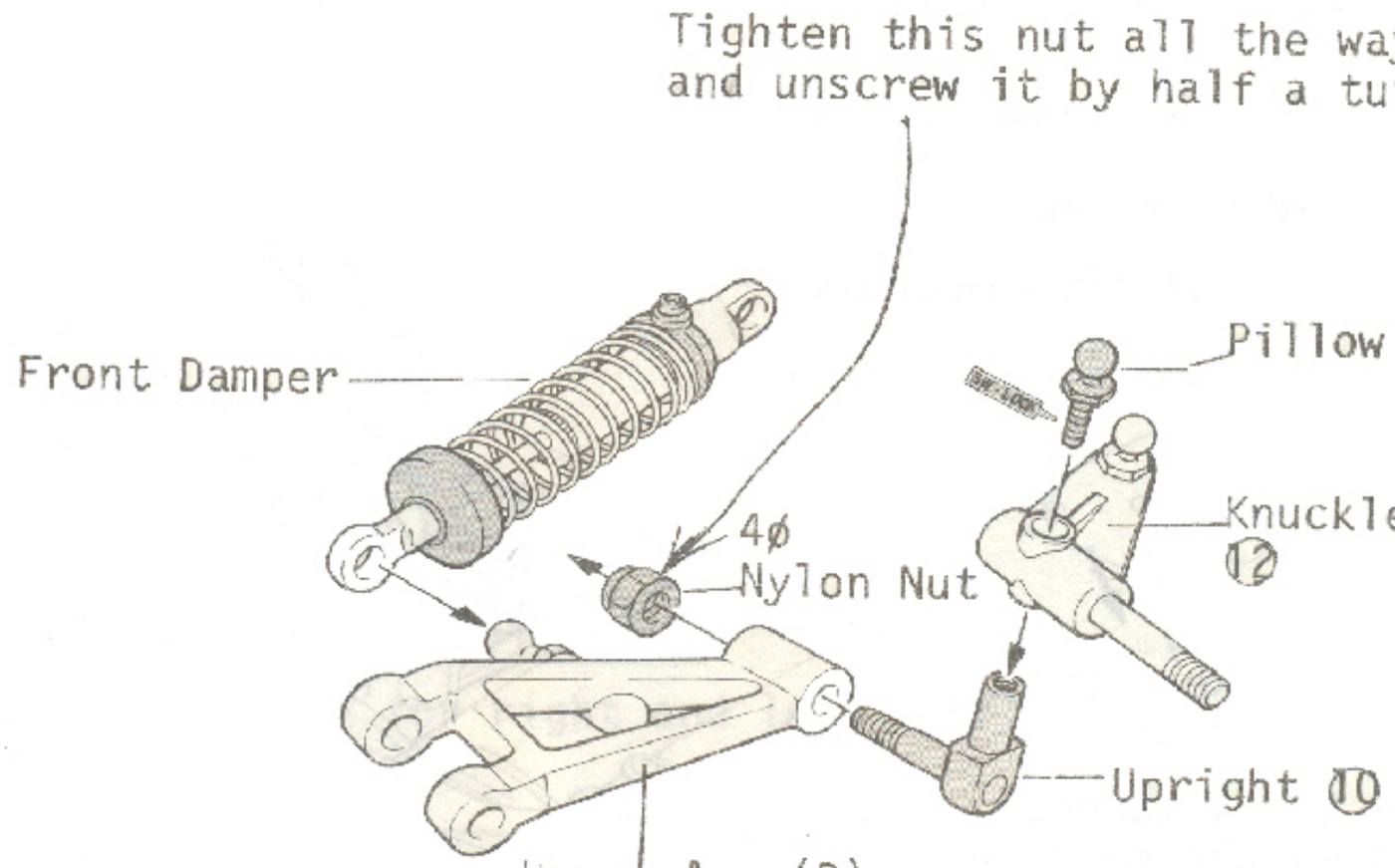
Screw two ball ends onto the upper shaft half the way from the both ends.

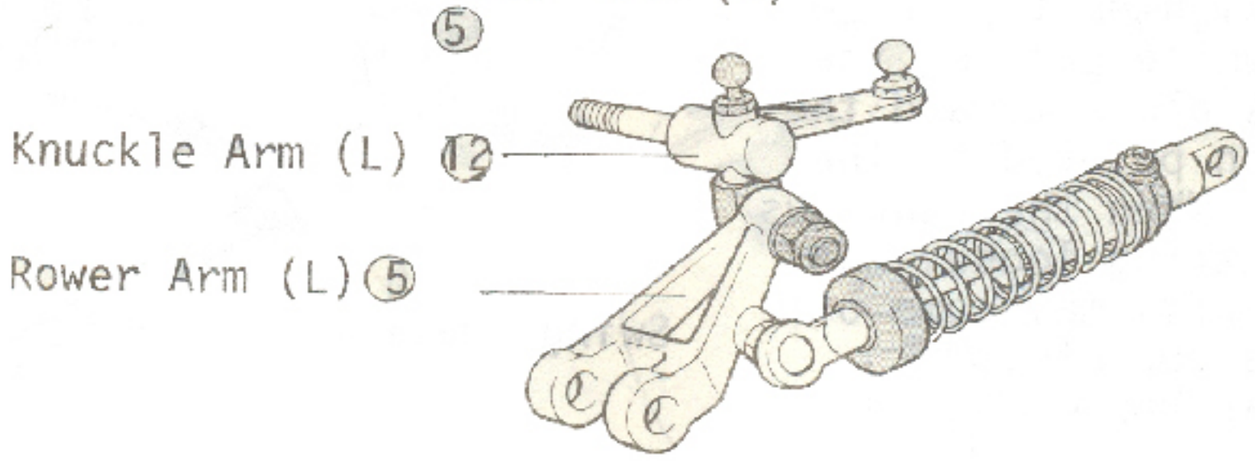




Adjust an angle of the pivot by moving it in a way directed by the arrows so that the king pin and the front portion of the chassis should be placed at an angle of between 85° to a little less than 90° as illustrated above.

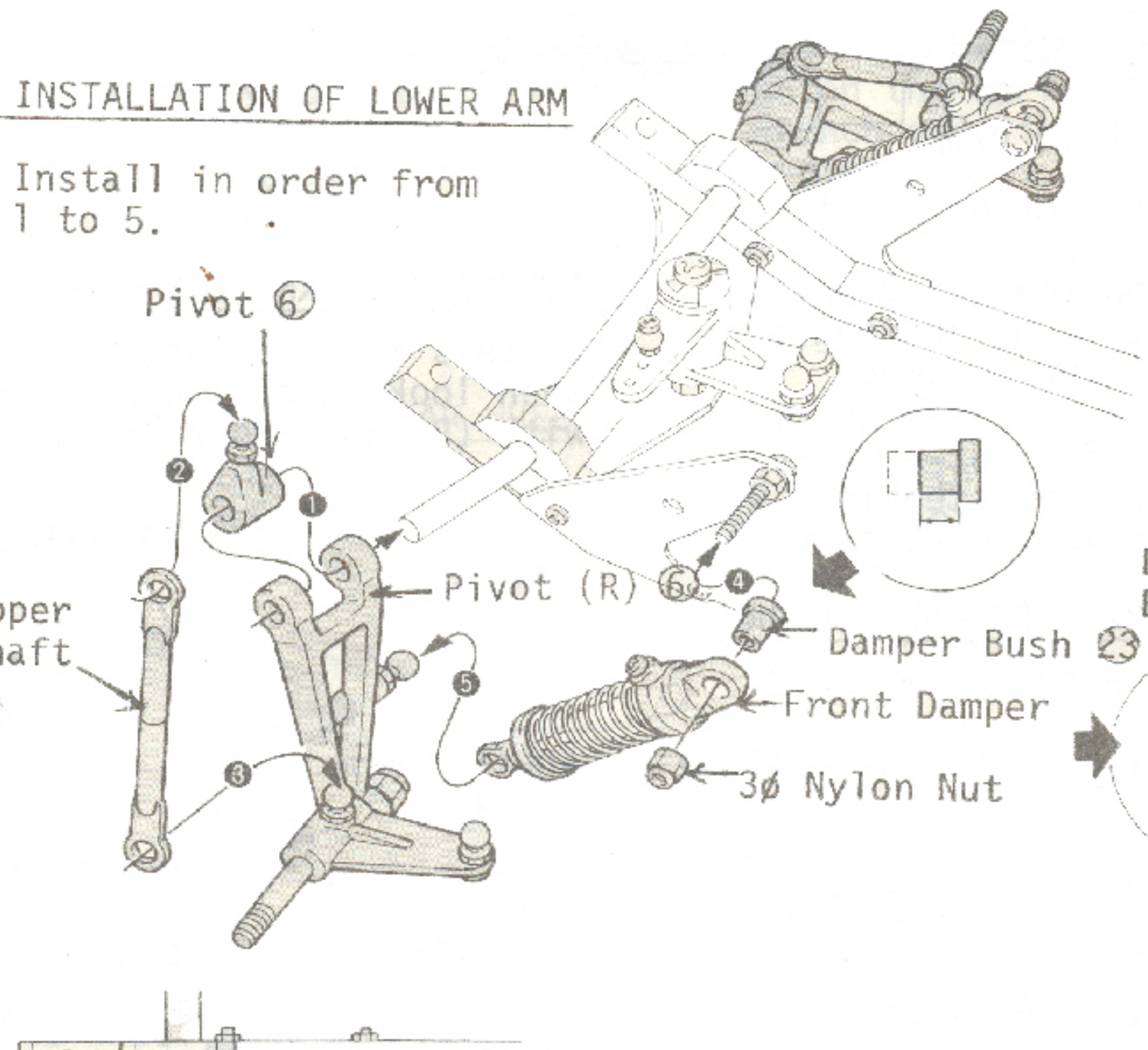
15 INSTALLATION OF KNUCKLE ARM

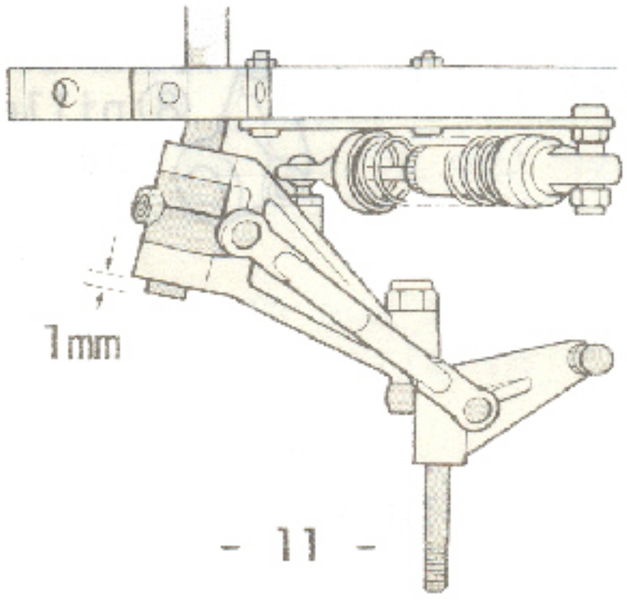




16 INSTALLATION OF LOWER ARM

Install in order from 1 to 5.

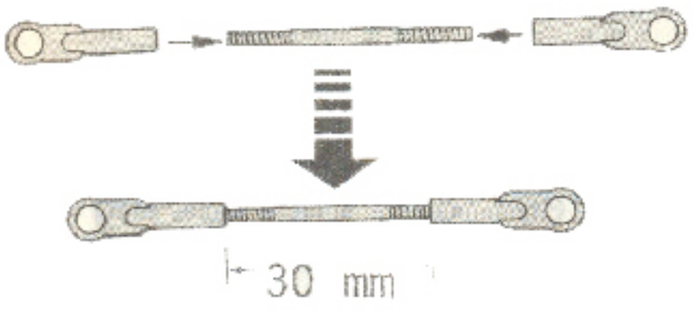




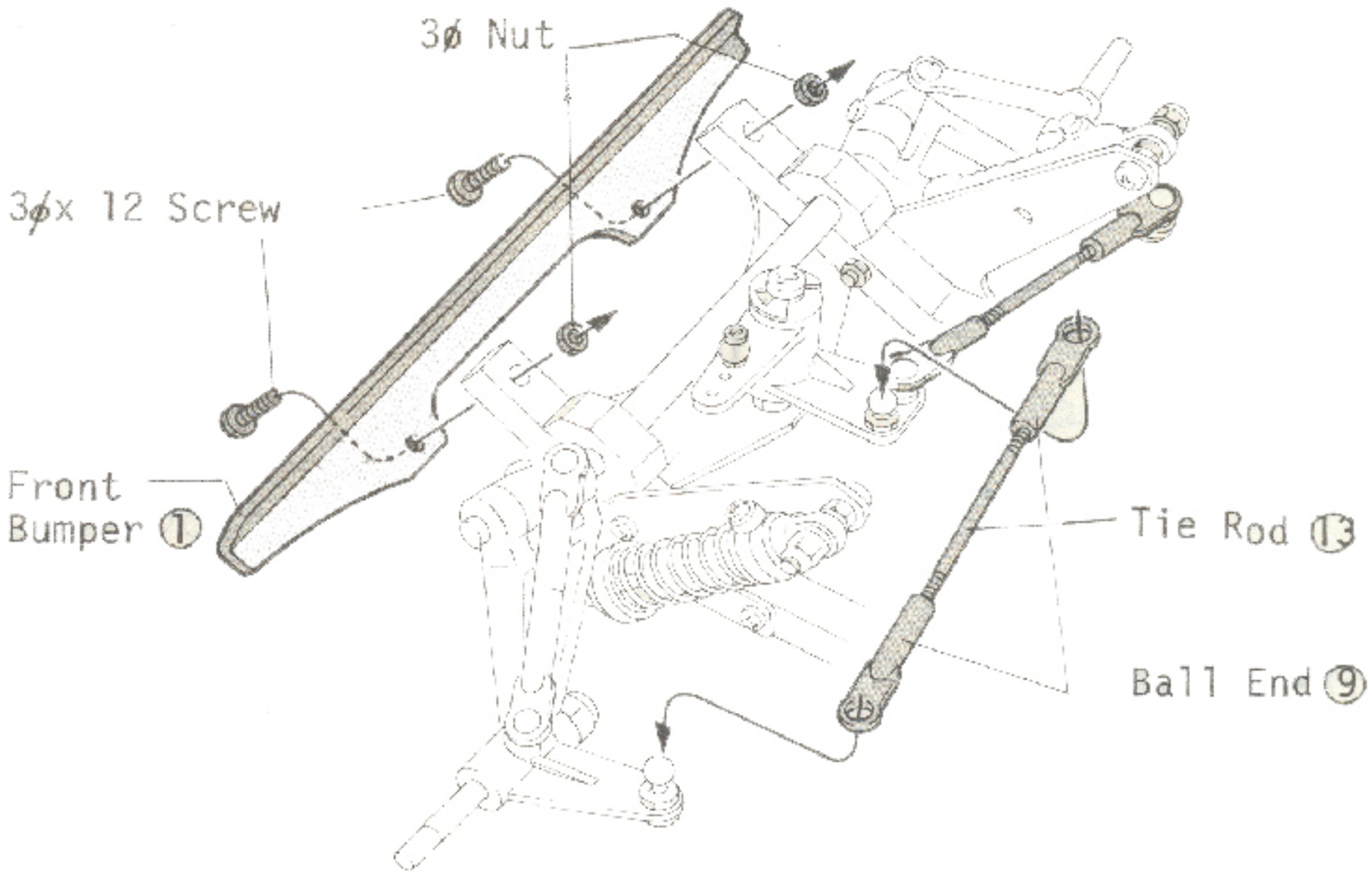
17 INSTALLATION OF TIE ROD

[small parts to be used]

- ⑨ Ball End ... 4
- ⑬ Tie Rod .. 2
- 3ø×12 Screw . 2
- 3ø Nut 2



17 INSTALLATION OF TIE ROD

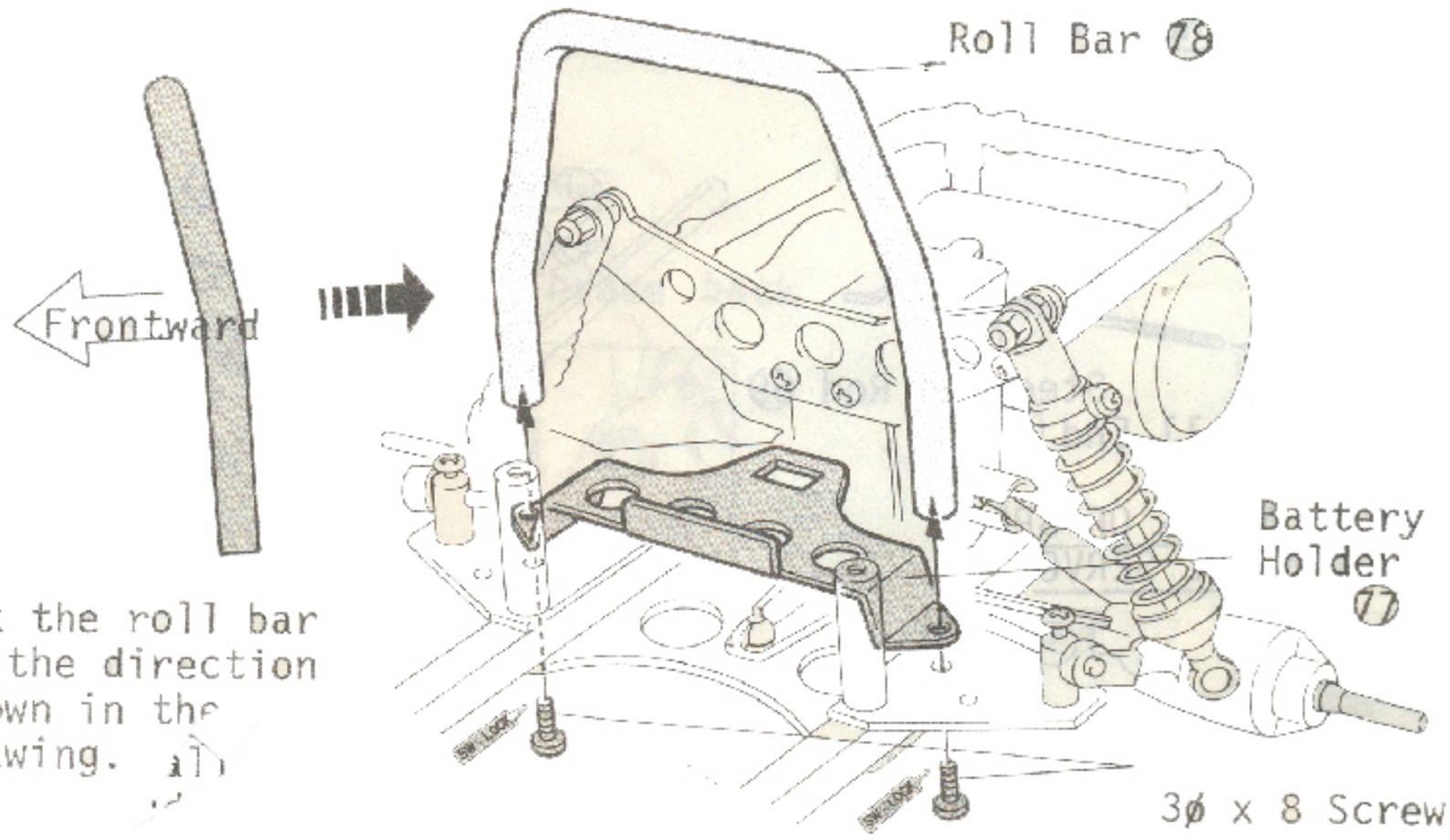


18 INSTALLATION OF ROLL BAR

[small parts to be used]

- 3ø x 8 Screw .. . 2

18 INSTALLATION OF ROLL BAR

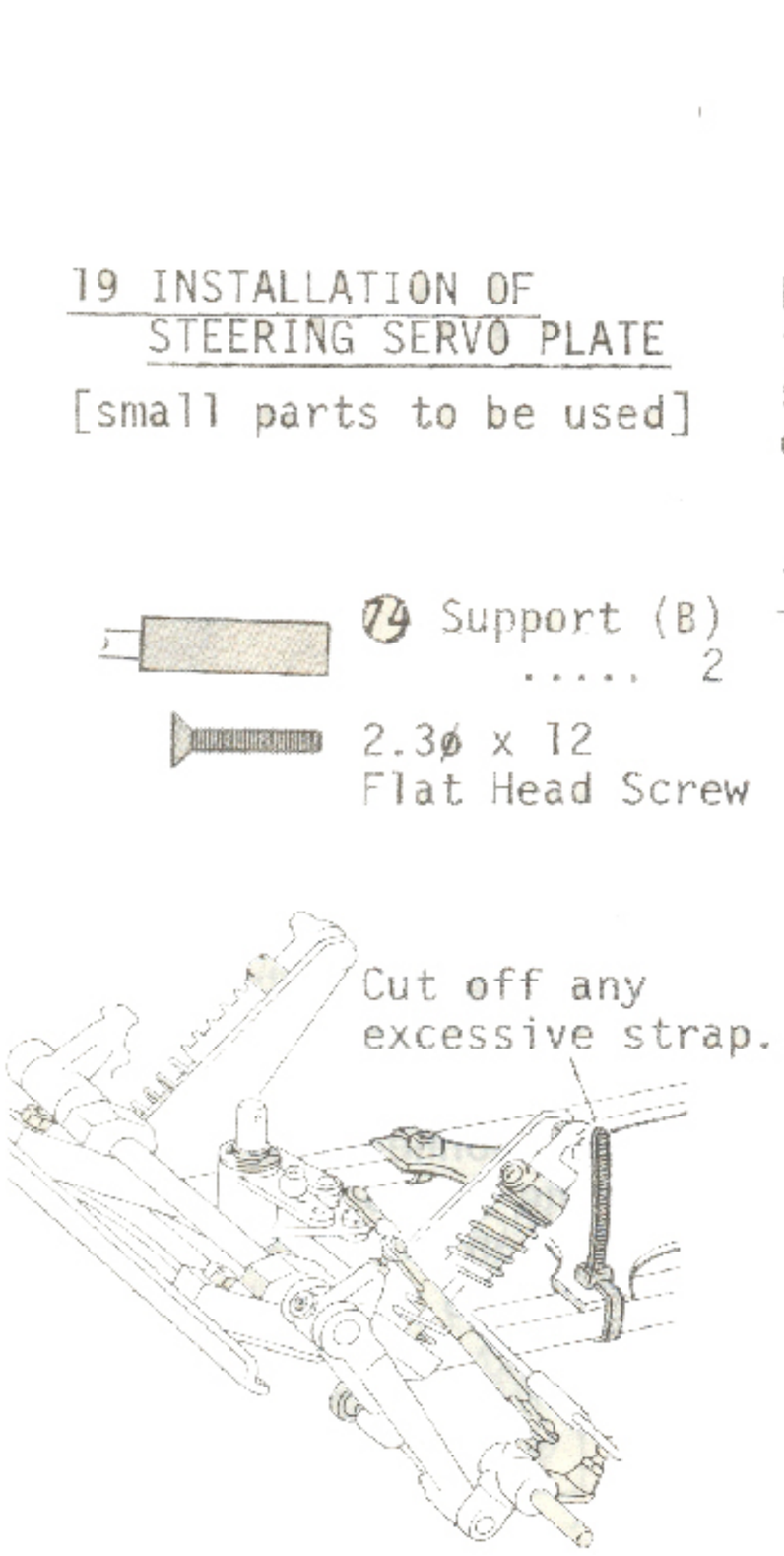


Fix the roll bar in the direction shown in the drawing.

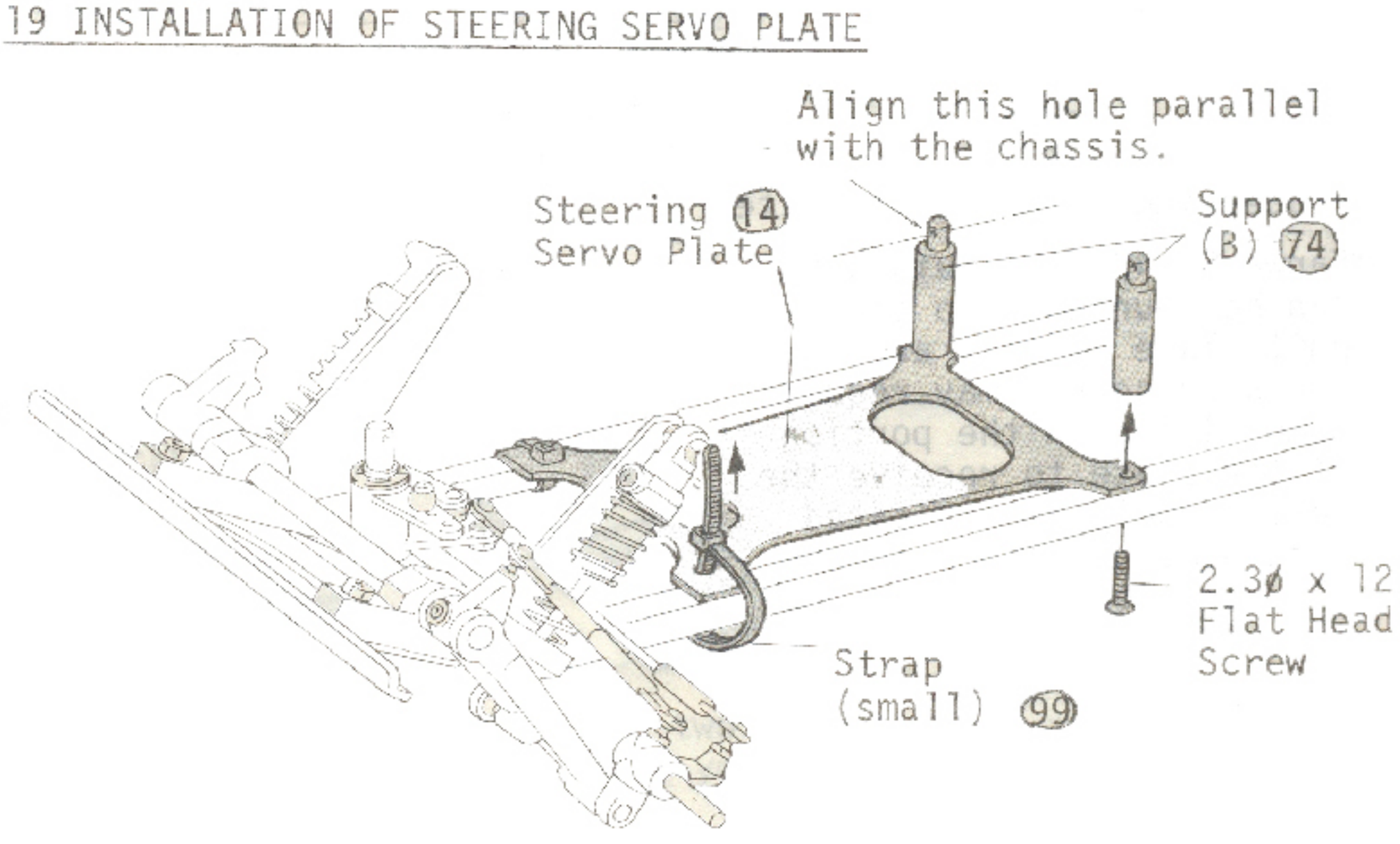
19 INSTALLATION OF STEERING SERVO PLATE

[small parts to be used]

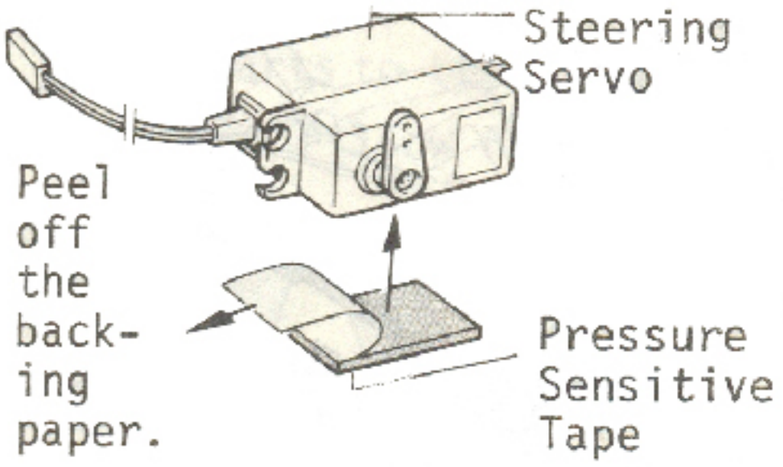
- ⑭ Support (B) 2
- 2.3ø x 12 Flat Head Screw



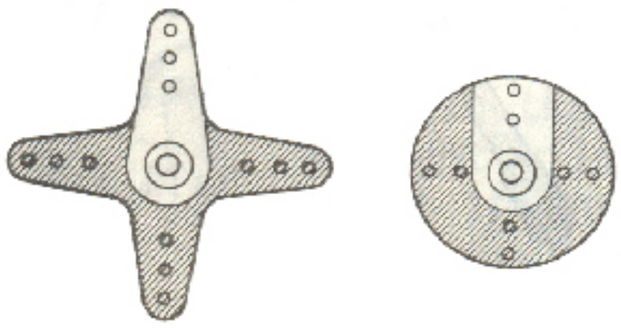
19 INSTALLATION OF STEERING SERVO PLATE



20 MOUNTING OF STEERING SERVO



Affix pressure sensitive tape on the bottom of the servo.



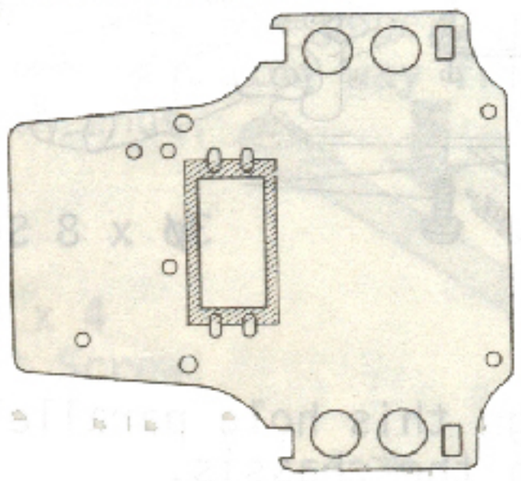
Cut off the part of the servo horns as shown in the illustration.

21 STEERING CONTROL LINKAGE

[small parts to be used]

Ball End ... 1

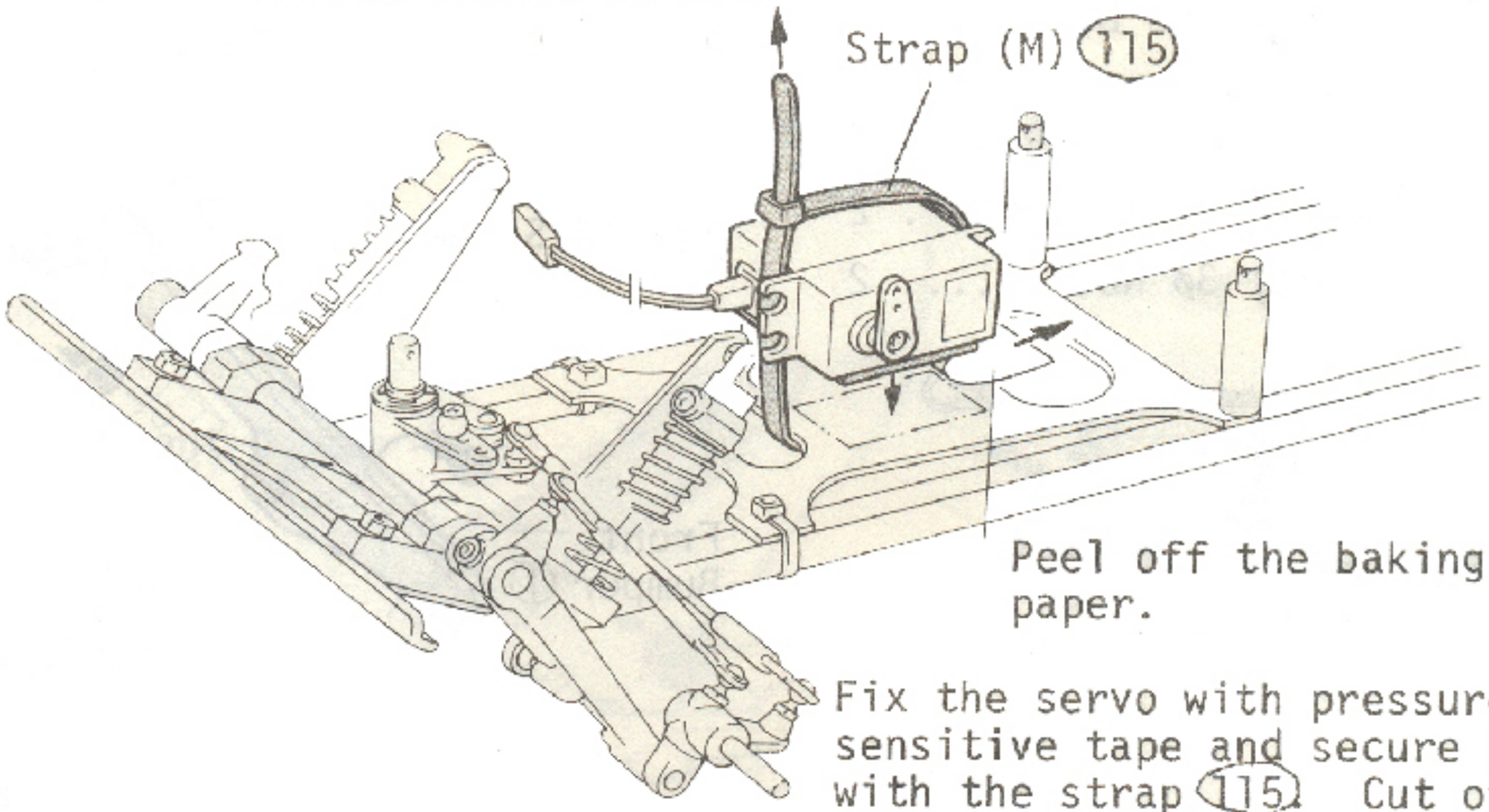
22 MOUNTING OF SPEED CONTROL SERVO



[Processing of R/C Unit Plate]

*Sanwa SM-401 and Futaba S20 can be mounted onto the R/C unit plate as they are. Other types of servos may require some filing on the portion of the plate to receive the servo snugly as indicated with diagonal lines in the illustration.

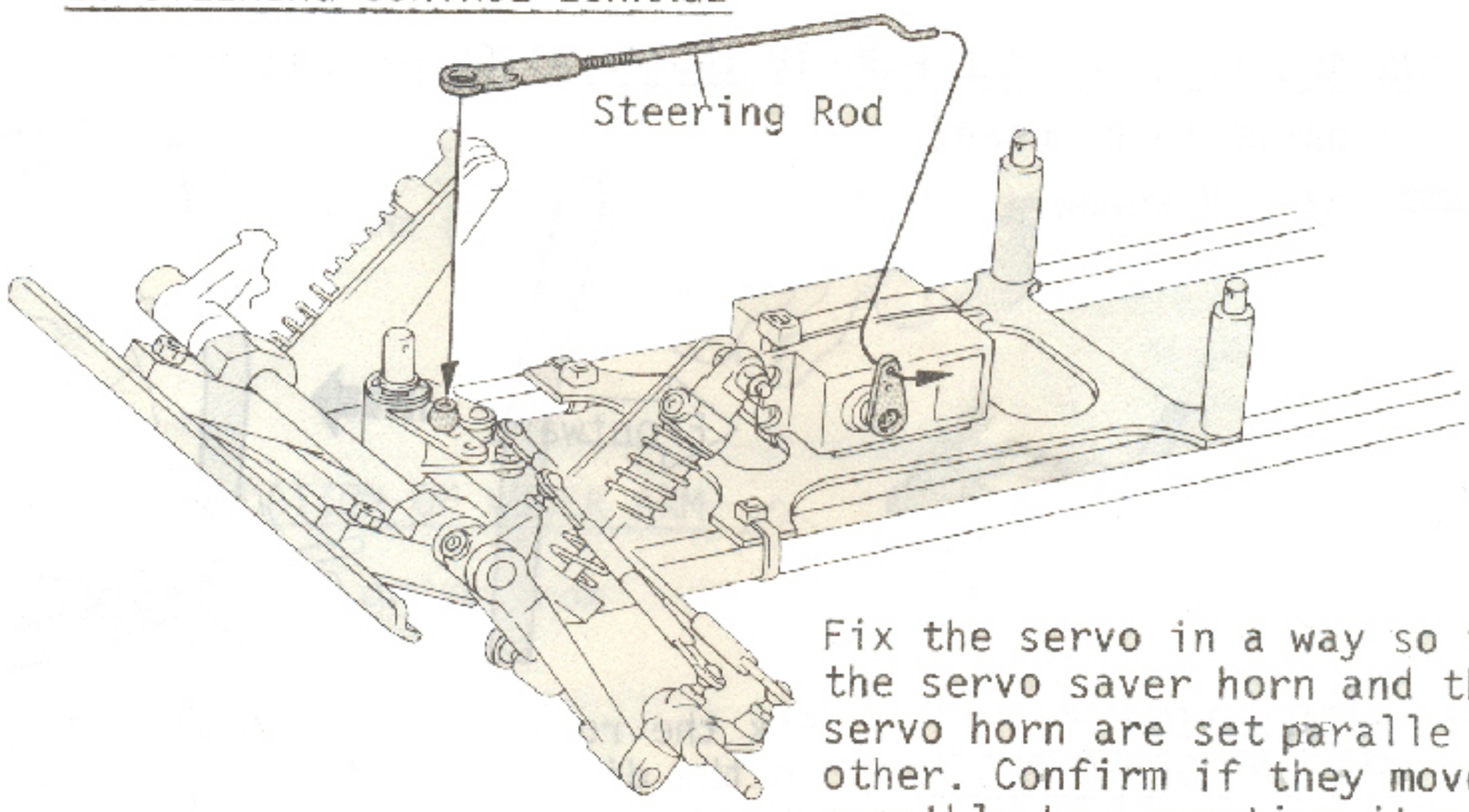
20 MOUNTING OF STEERING SERVO



Peel off the baking paper.

Fix the servo with pressure sensitive tape and secure it with the strap 115. Cut off the excessive part of the strap.

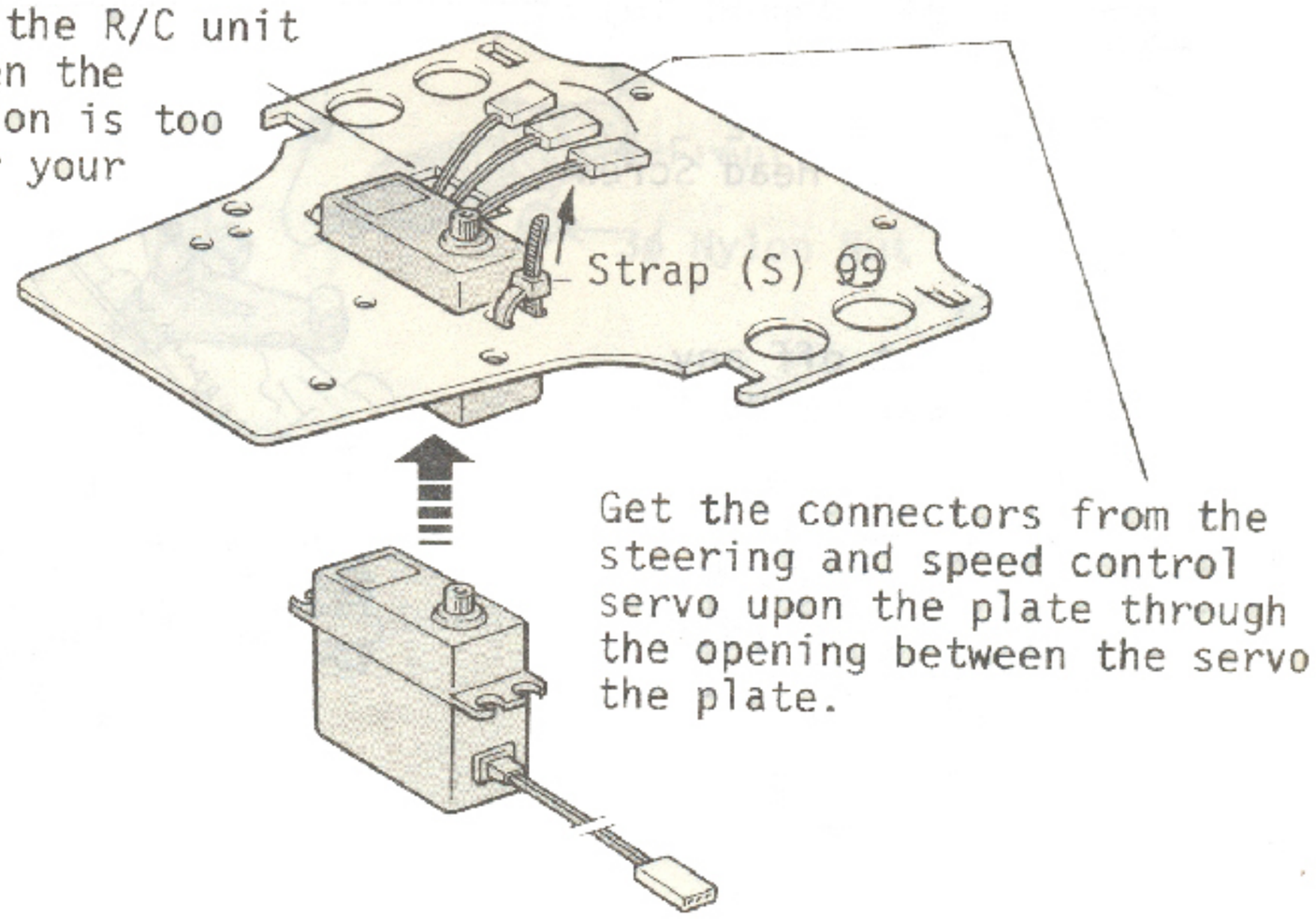
21 STEERING CONTROL LINKAGE



Fix the servo in a way so that the servo saver horn and the servo horn are set paralle each other. Confirm if they move smoothly by operating it with the steering control stick on your transmitter.

22 MOUNTING OF SPEED CONTROL SERVO

File off the R/C unit plate when the perforation is too small for your servo.

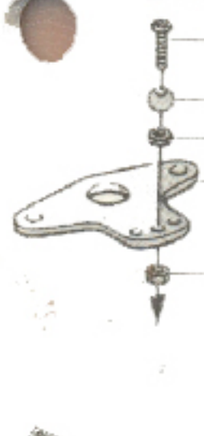


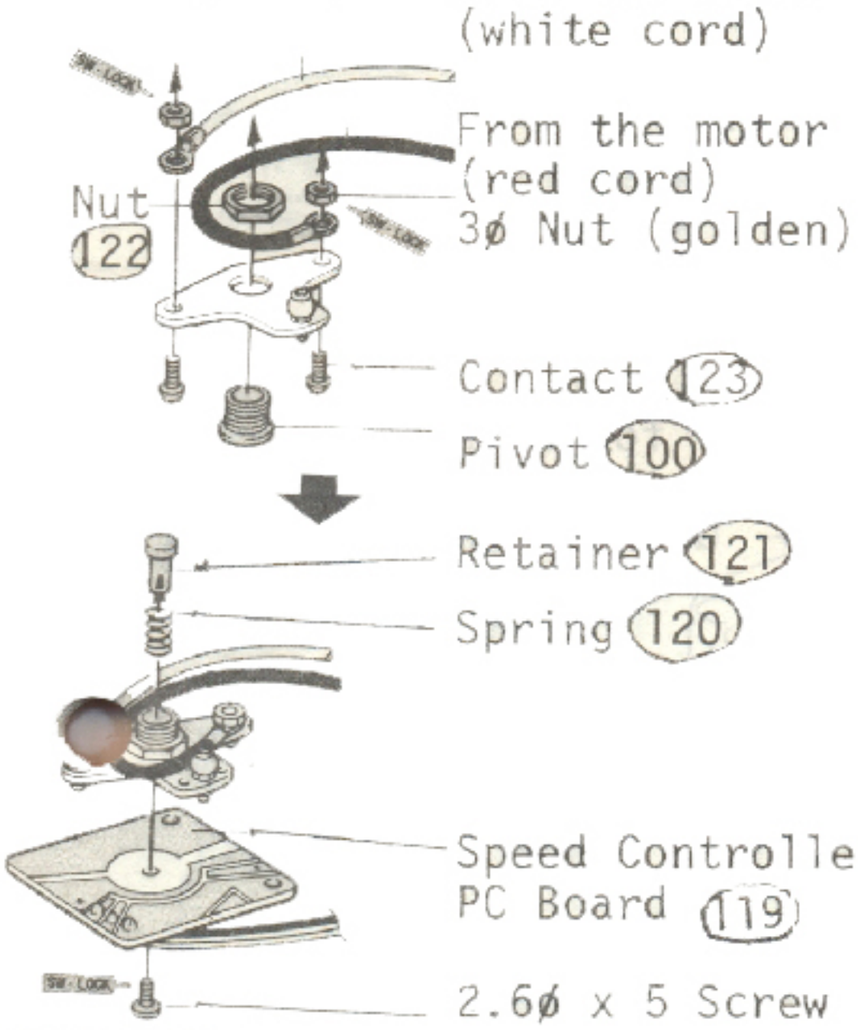
Get the connectors from the steering and speed control servo upon the plate through the opening between the servo the plate.

23 INSTALLATION OF SPEED CONTROLLER

[small parts to be used]

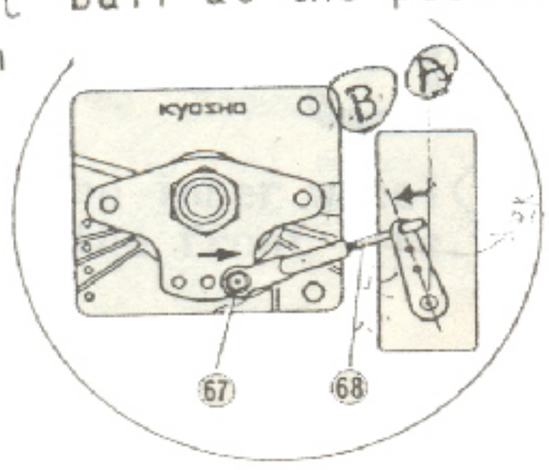
67	Ball	1
100	Speed Controller Pivot	2
109	Speed Controller Fixing Collar	2
120	Speed Controller Spring	1
121	Speed Controller Retainer	1
122	Speed Controller Nut	1
123	Speed Controller Contact	2
	2ø x 10 Screw	1
	3ø x 10 Screw (golden colored)	2
	2ø Nut	2
	3ø Nut (golden)	4
	2.6ø x 5 Screw	1



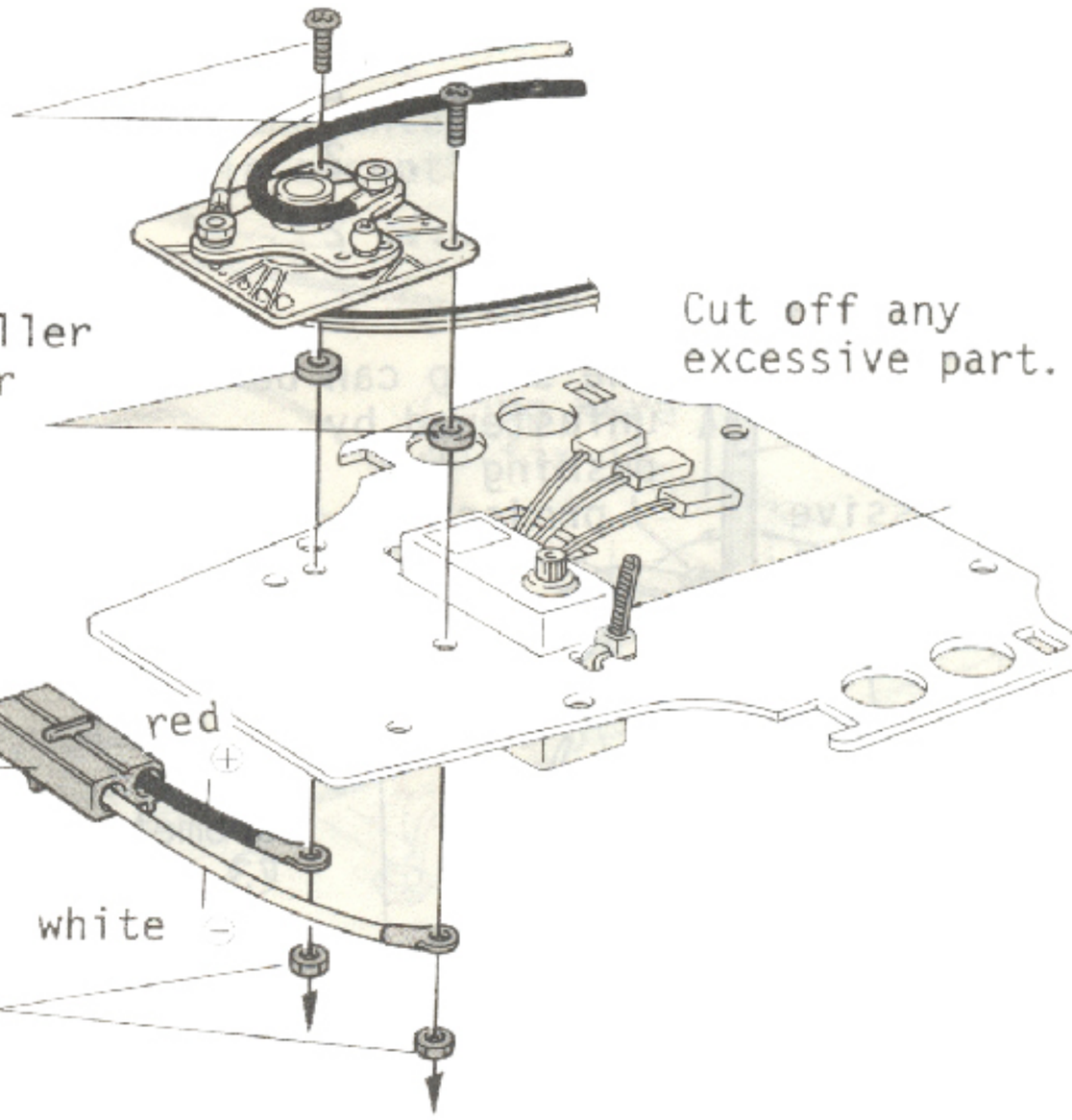


(Note) shorten rod 68 by twisting ball when stroke of rod is not enough for forward/backward.

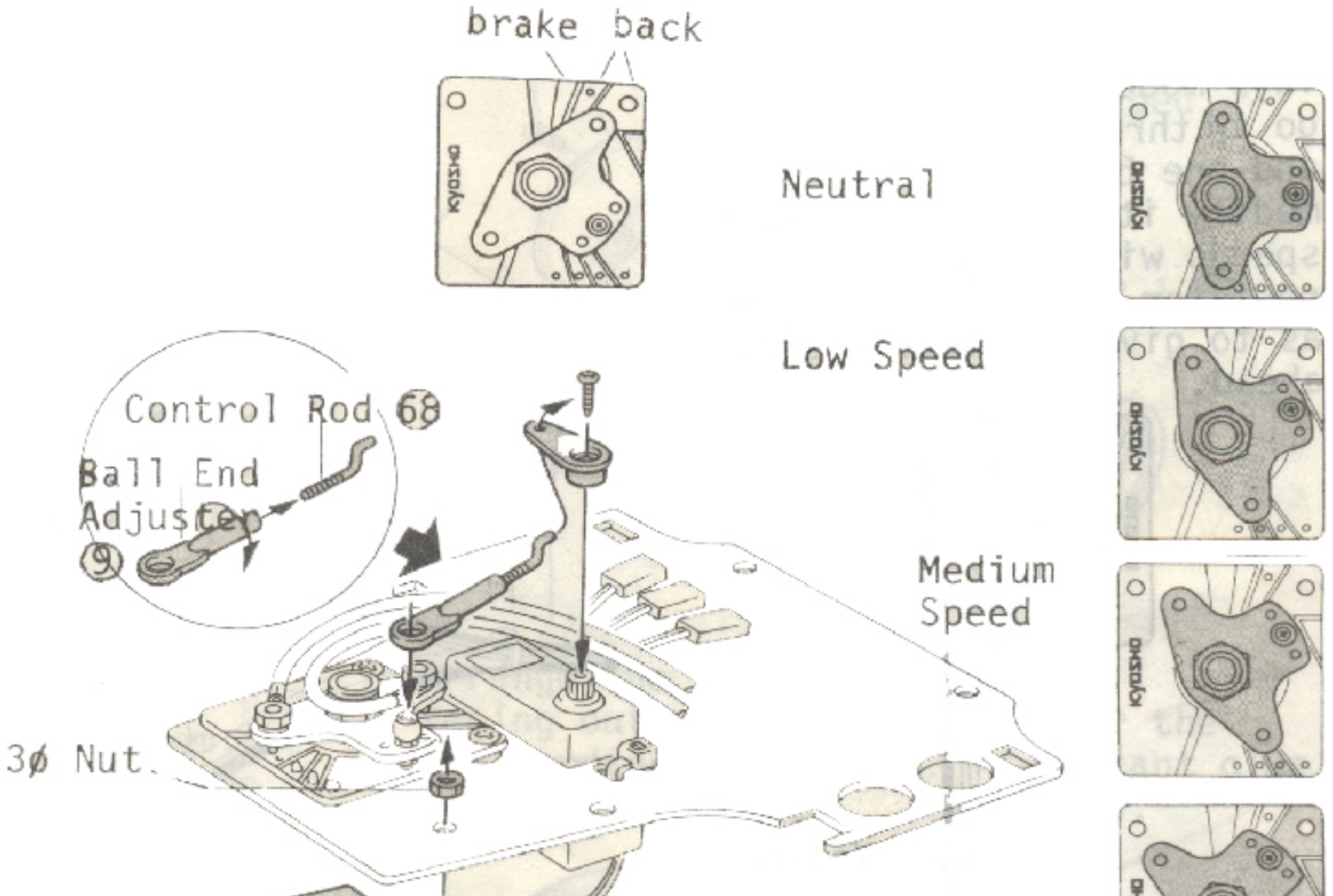
Set ball at the position as shown



23 INSTALLATION OF SPEED CONTROLLER



24 SPEED CONTROLLER LINKAGE

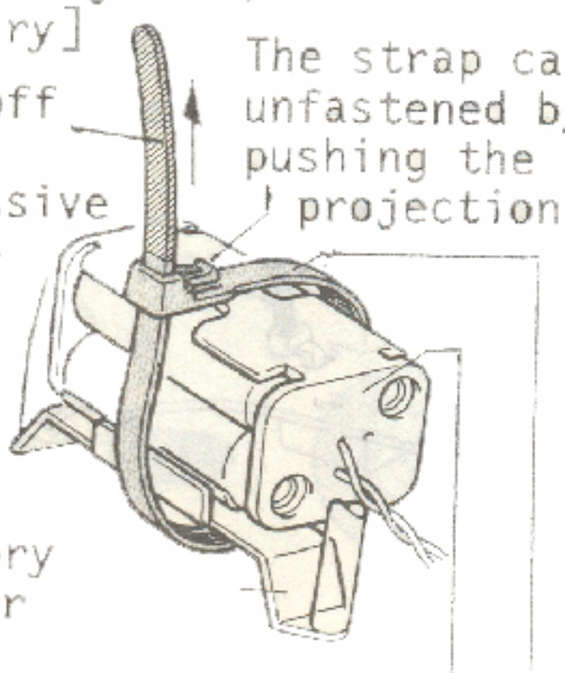


25 FIXING OF R/C UNIT PLATE

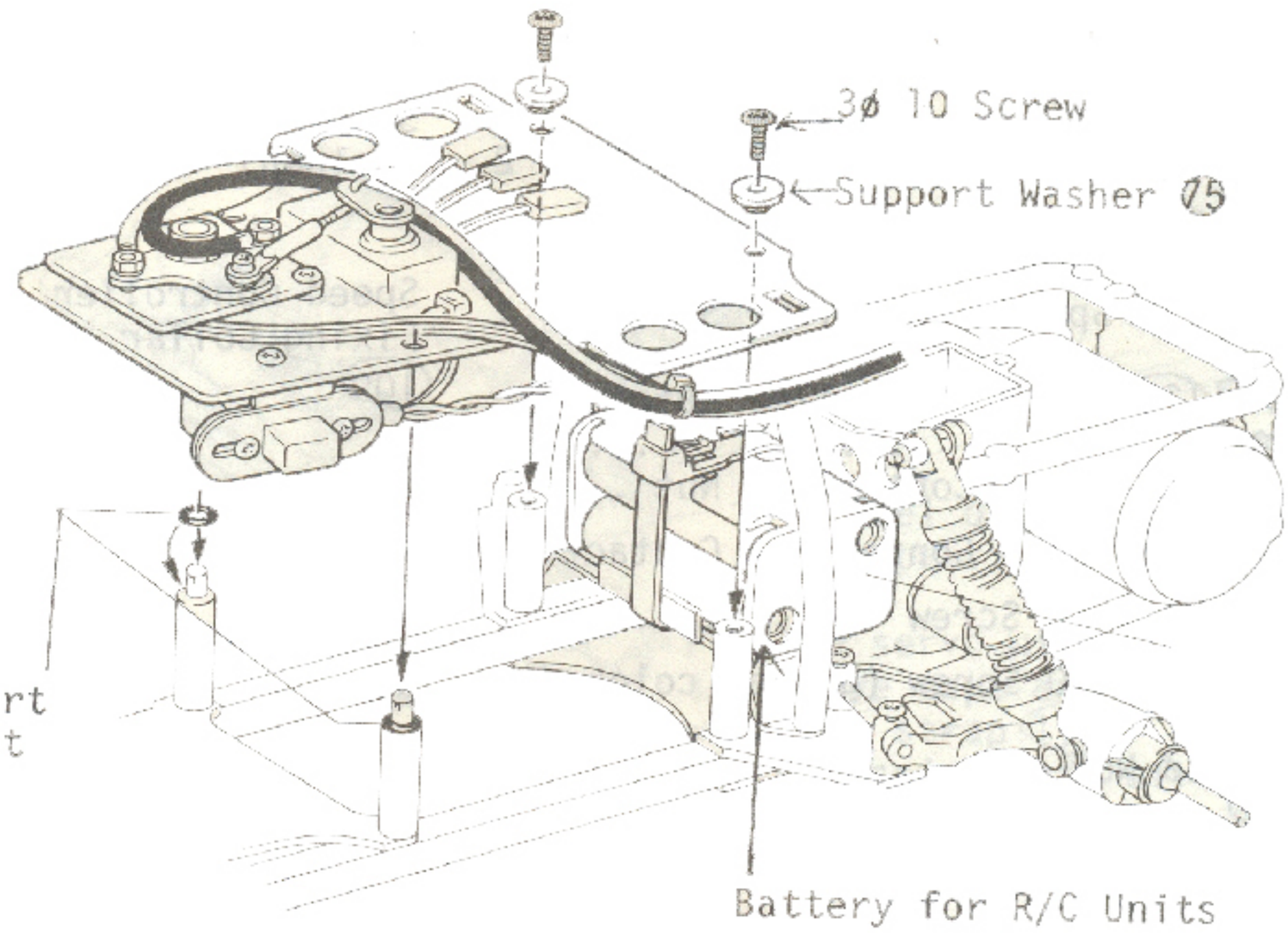
[small parts to be used]

- ⑬ Support Gromet .. 2
- ⑮ Support Washer .. 2
- 3ø x 10 Screw 2

[Mounting of R/C Unit Battery]



25 FIXING OF R/C UNIT PLATE



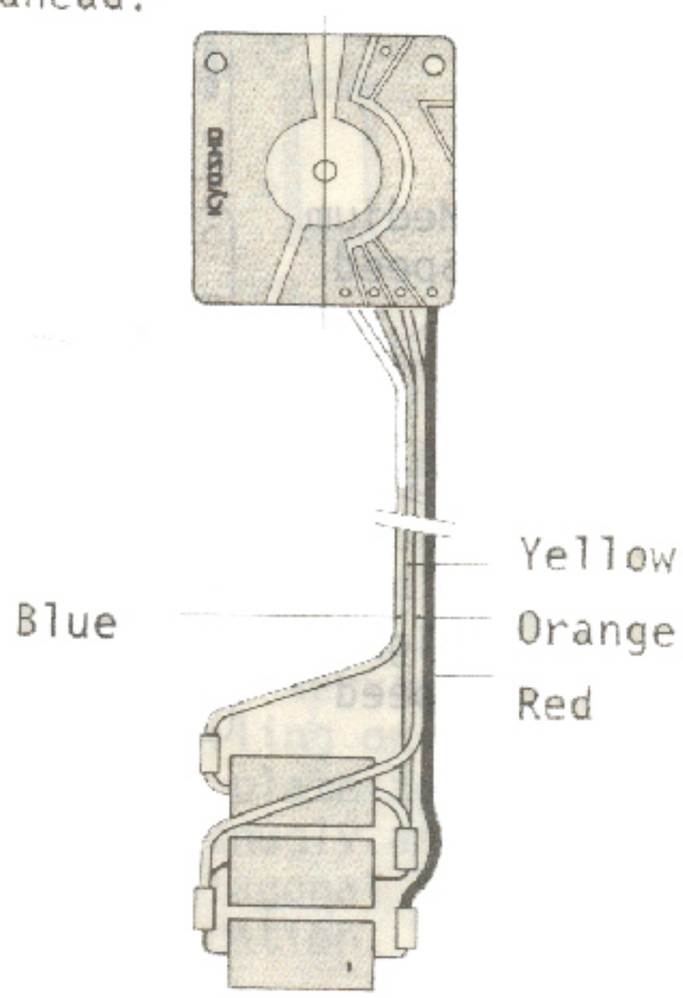
26 FIXING OF RESISTER

[small parts to be used]

3ø x 8 Screw 2

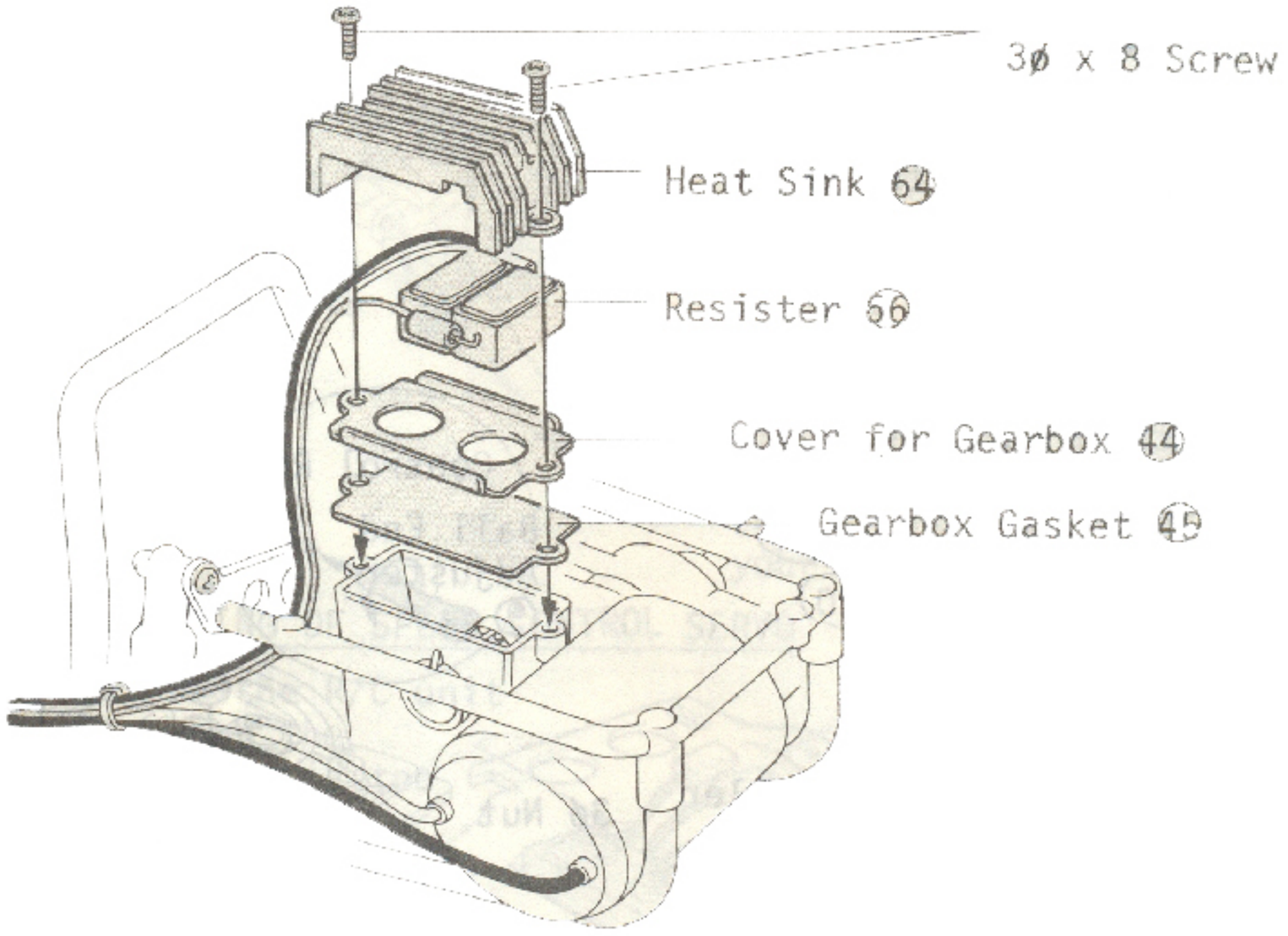
[How to convert into 4 Speed]

This model is designed to go in three speeds forward and one backward. You can modify it into four forward speeds with an optional resister which is so rigged as to give the fourth speed ahead.



Solder the optional resister (5W-0.15 ohm x 3) as shown in the illustration.

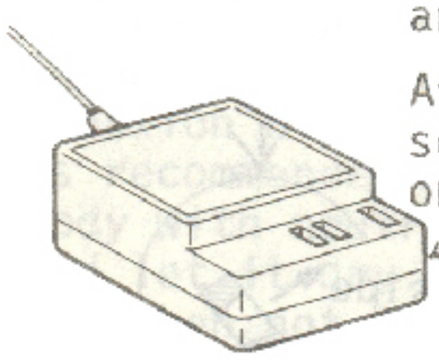
26 FIXING OF RESISTER



27 MOUNTING OF RECEIVER

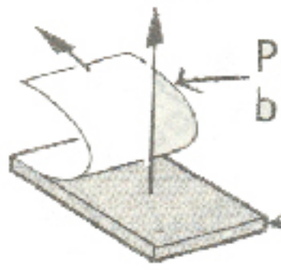
[Small parts to be used]

Lug .. 1 (95) one of antenna parts



Affix pressure sensitive tape onto the receiver.

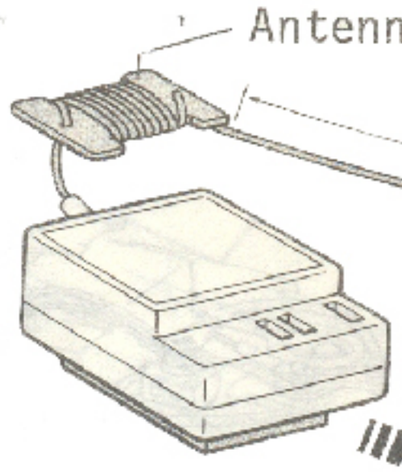
Receiver



Peel off the backing paper.

Pressure Sensitive Tape

27 MOUNTING OF RECEIVER



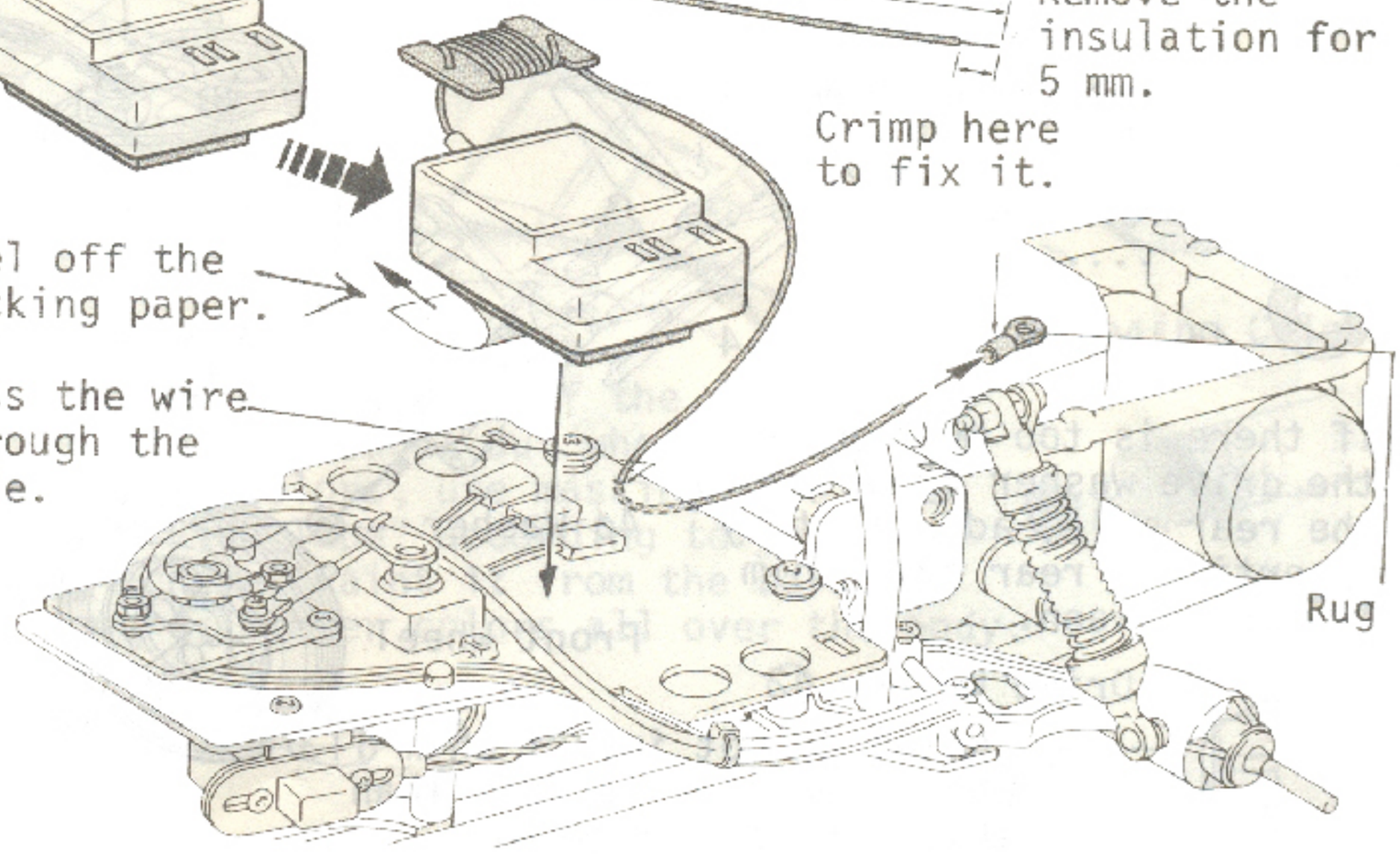
Antenna Bobbin

Wind the antenna wire around the bobbin except the last 200 mm length.

200mm

Remove the insulation for 5 mm.

Crimp here to fix it.



Peel off the backing paper.

Pass the wire through the hole.

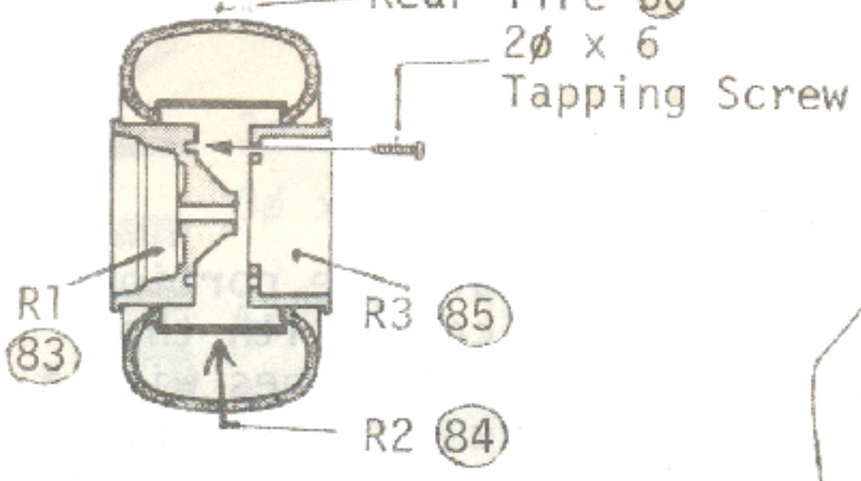
Rug

28 ASSEMBLY OF TIRE

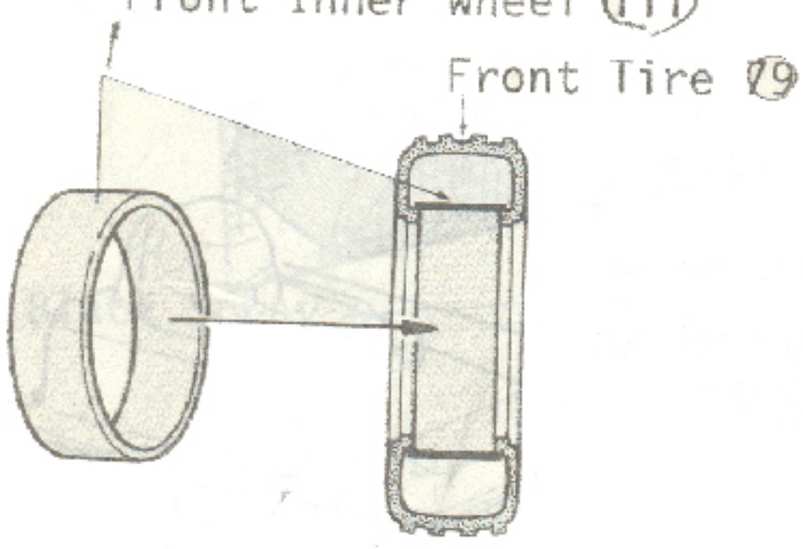
[small parts to be used]

2ø x 6 Tappin Screw 10

[Cross-Sectional View of Rear Wheel]



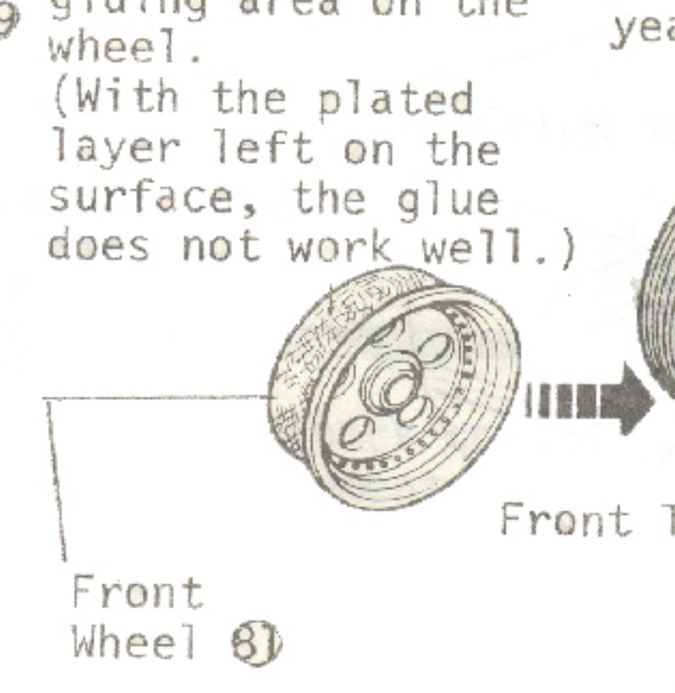
[Cross-Sectional View of Front Tire]



Put the inner wheel (117) into the front tire.

28 ASSEMBLY OF TIRE

It is recommended to insert (84) by pressing it as shown in the drawing.



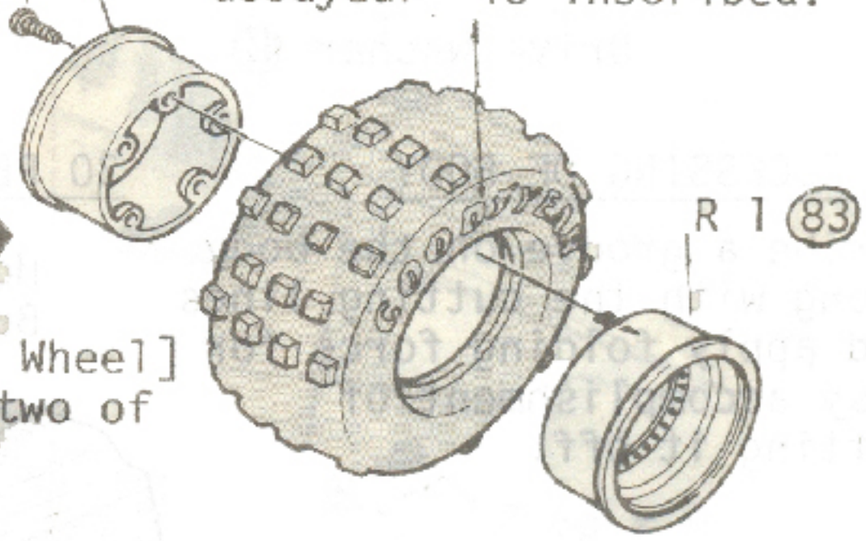
File off the plated surface from the gluing area on the wheel. (With the plated layer left on the surface, the glue does not work well.)

Front Wheel (81)

2ø x 6 Tapping Screw 5 pcs.

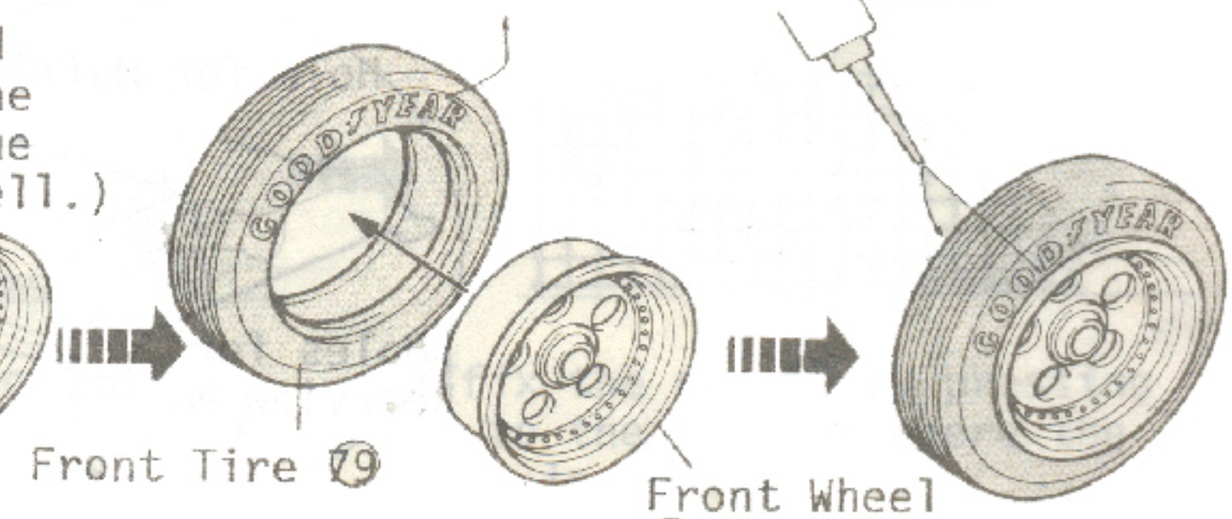
R3 (85)

Arrange the side facing outward where the wording of "Goodyear" is inscribed.



[Rear Wheel] Make two of them.

Arrange the side facing outward were the wording of "Goodyear" is inscribed.



Pour the instant glue here.

Front Tire (79)

Front Wheel (81)

[Front Wheel] Make two of them.

29 MOUNTING OF TIRES

[small parts to be used]

42 Drive Washer... 2

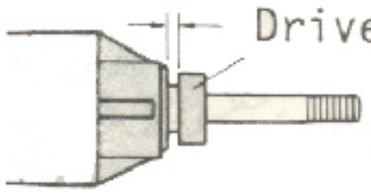
82 Front Wheel Bearing ... 2

113 Rear Axle Shim . 4

4ø Nylon Nut 4

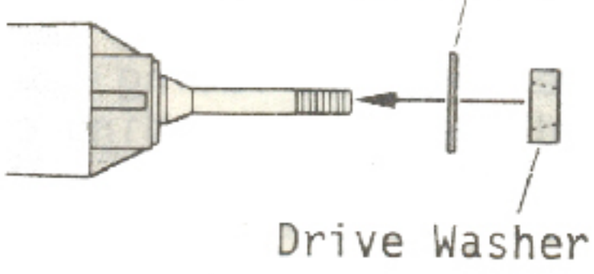
4ø Washer 4

If there is too much play on the drive washer 42 set onto the rear axle, adjust it by inserting a rear axle shim 113 in between.

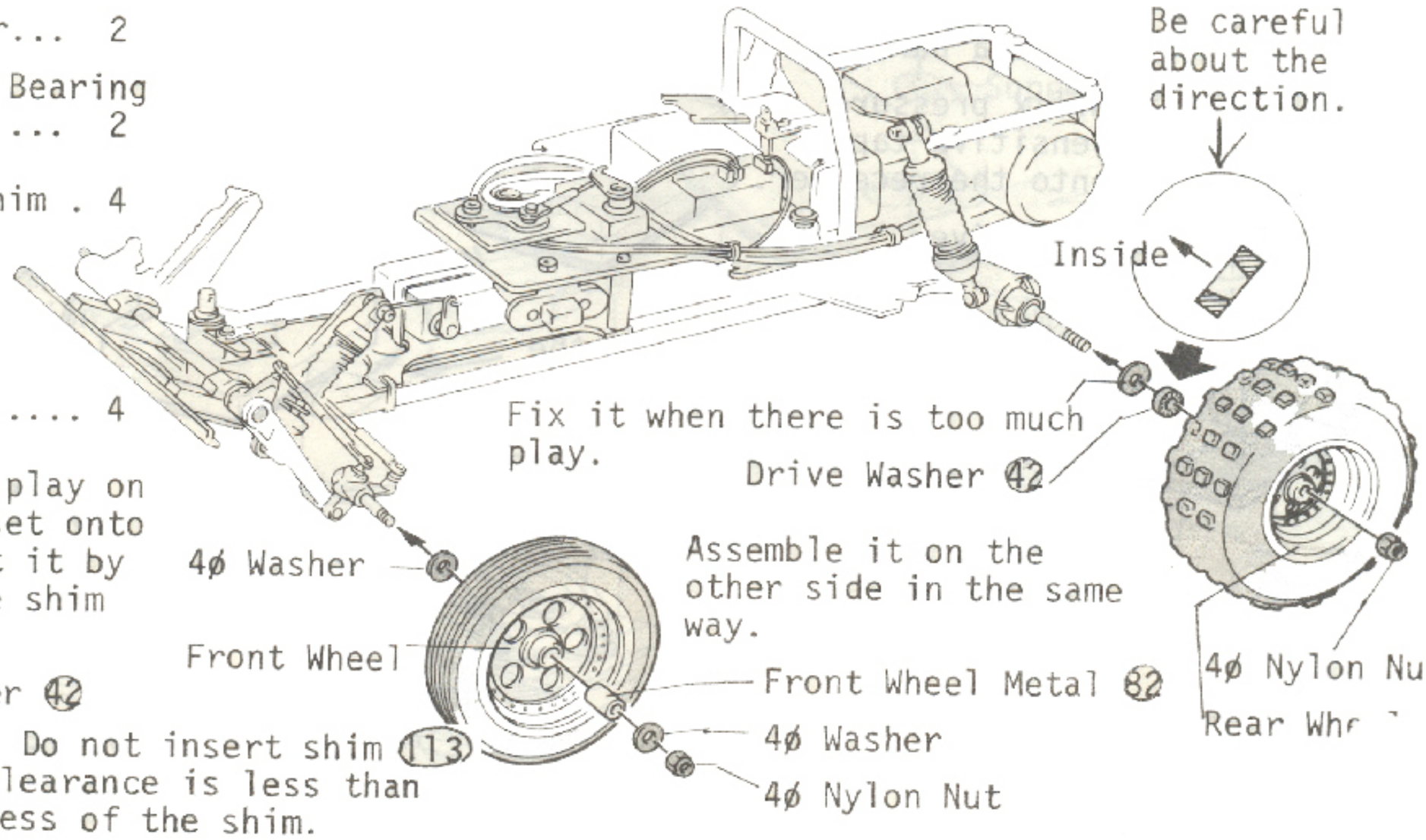


(Note) Do not insert shim 113 when clearance is less than thickness of the shim.

Rear Axle Shim 113 1pc.



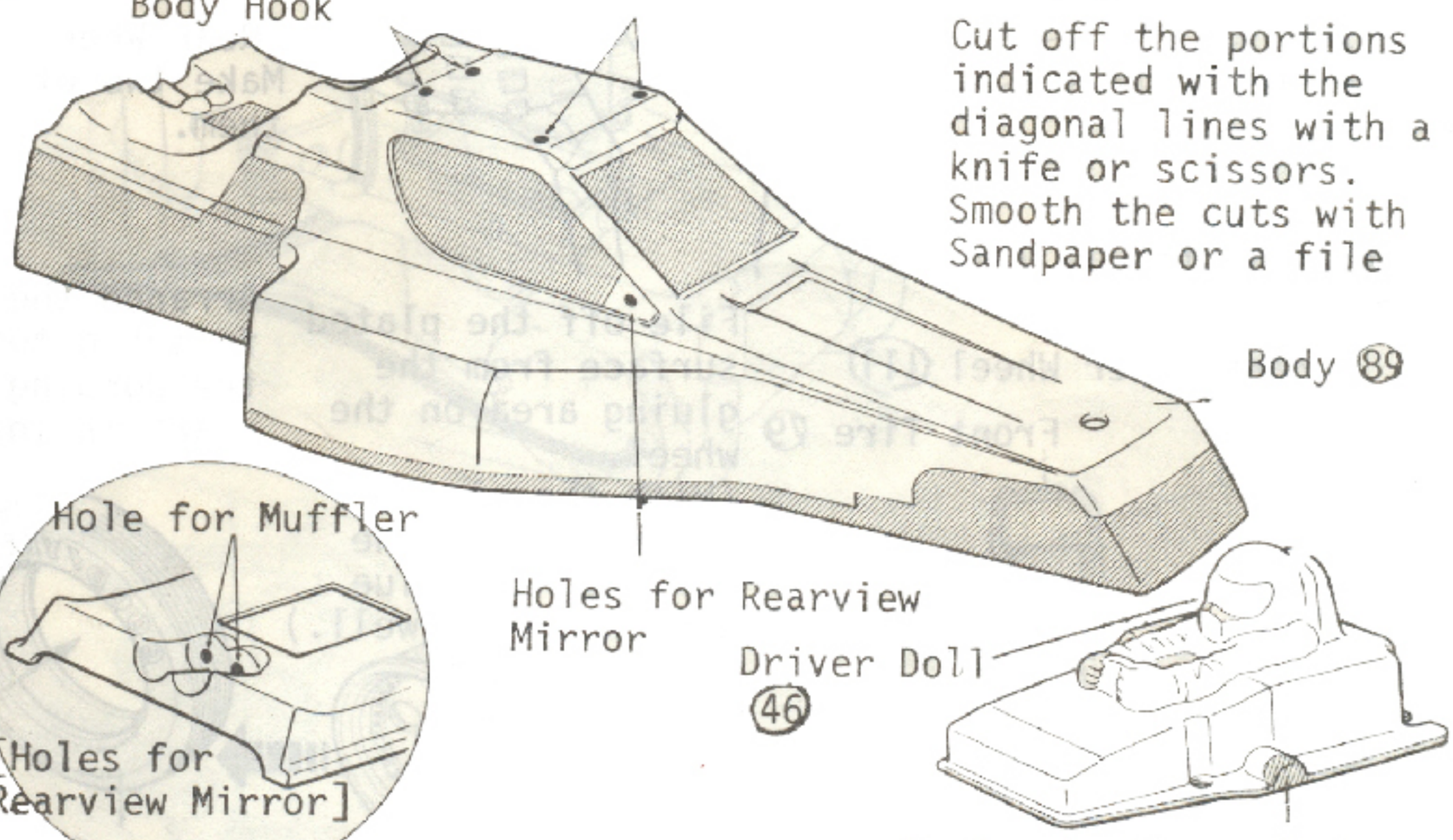
29 MOUNTING OF TIRES



30 PECESSING OF BODY

Scribe a groove on the body along with the cutting lines and apply folding force for easy accomplishment of cutting it off.

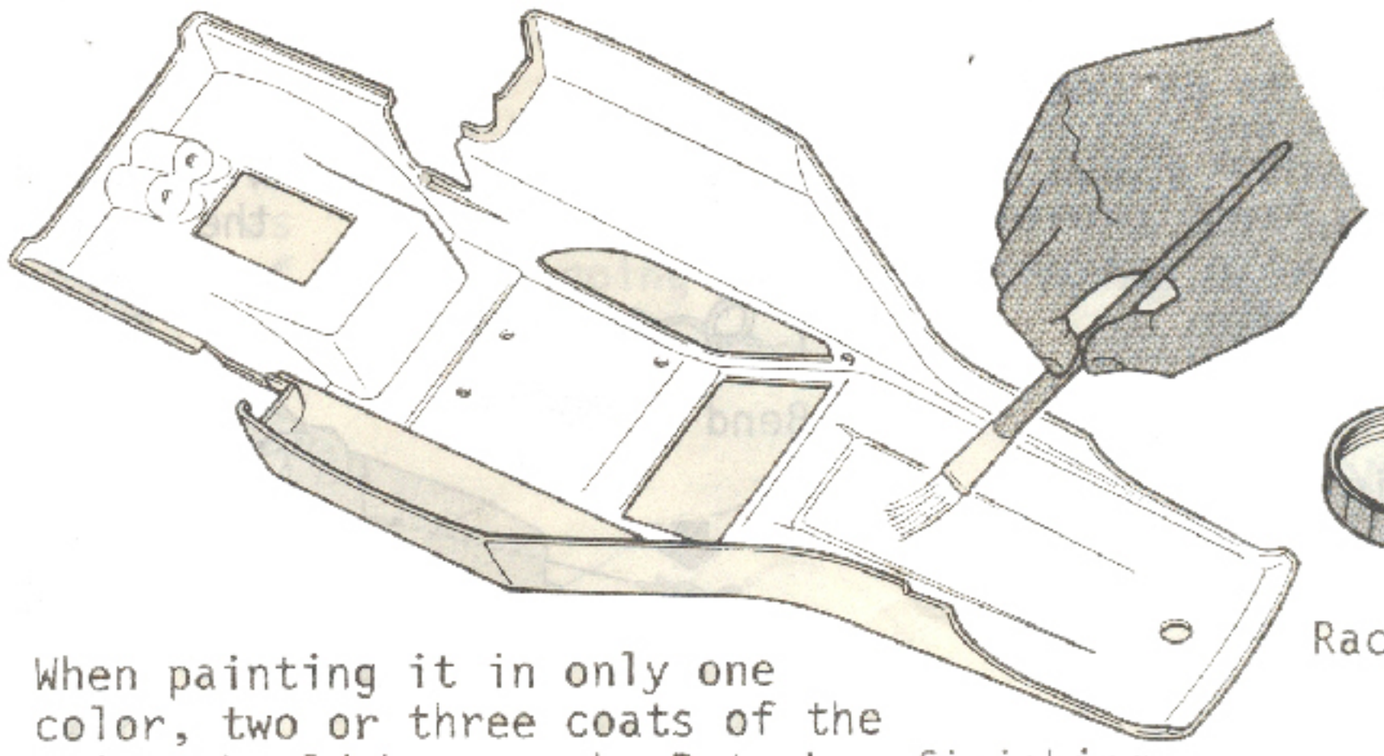
30 PECESSING OF BODY



31 PAINTING ON BODY

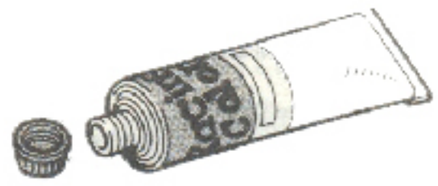
The Tomahawk's body is made of clear plastic, polycabonate; which can be finished better by painting the inside. For better adhesion of the paint, it is recommended to wash the body with neutral detergent and let it dry. Care should be taken not to touch the surface with fingers, or not to let any fat or oil stick to kit.

31 PAINTING ON BODY



Polyca Colors

Racing Colors



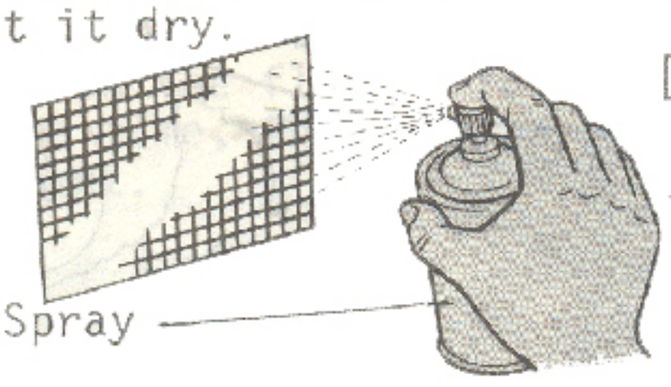
When painting it in only one color, two or three coats of the paint should be enough. But when finishing it in several colors, use masking tape or the "Micro Line Tape" according to your coloring scheme. Paint it from the darkest paint toward lighter colors all over the body.

? FIXING OF ACCESSORIES

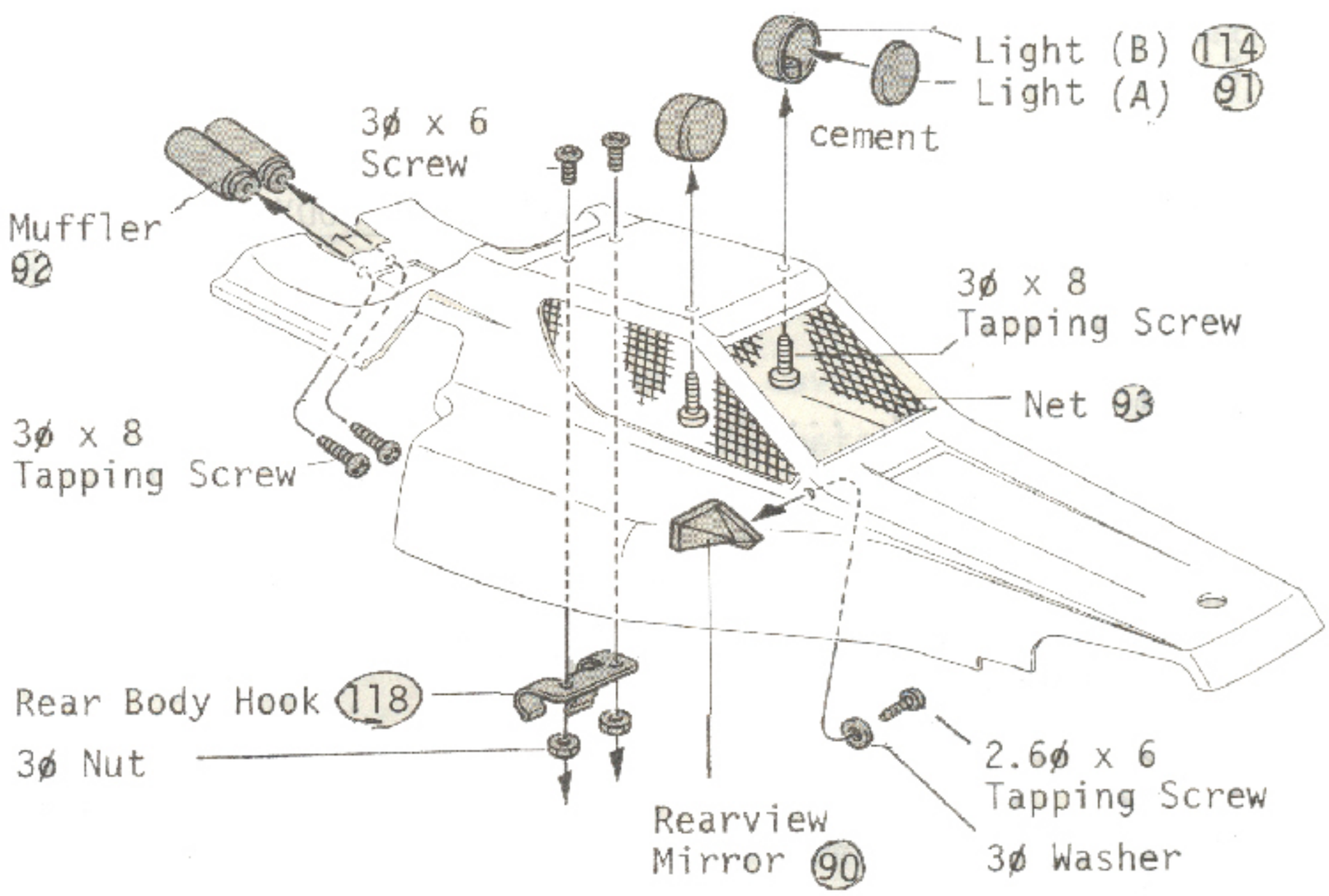
[small parts to be used]

- 90 Rearview Mirror 1
- 91 Headlight 2
- 92 Muffler 2
- 114 Light (B) 2
- 3ø x 6 Screw 2
- 3ø x 8 Tapping Screw 4
- 2.6ø x 6 Tapping Screw ... 1
- 3ø Nut 2
- 3ø Washer 1

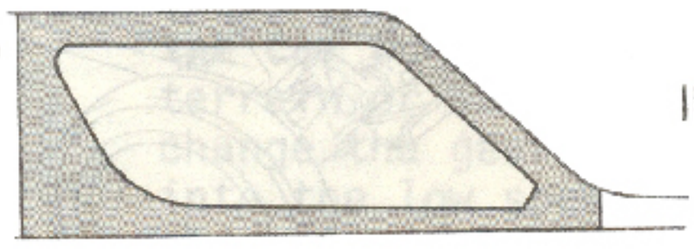
Spray black paint on the both sides of the net 93 and let it dry.



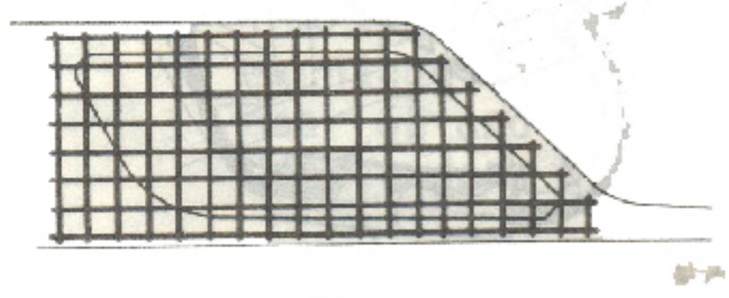
32 FIXING OF ACCESSORIES



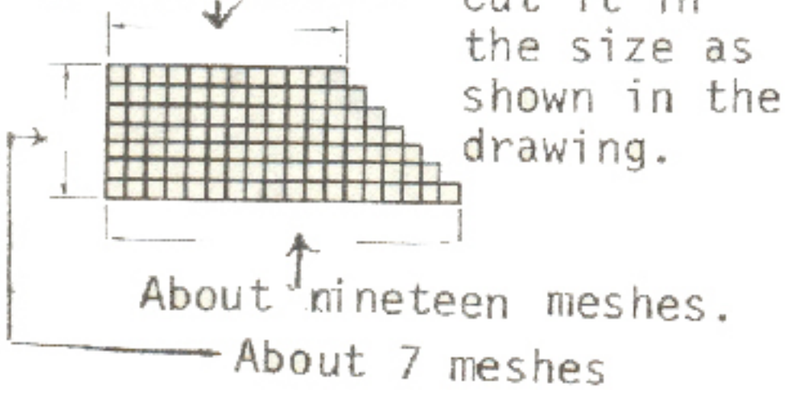
[How to Fix Net]



Apply a thick coat of contact cement on the inside of the window and leave it till it hardens.



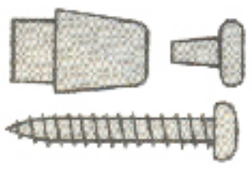
Affix the net 93 by pressing it to the surface where the glue is applied.



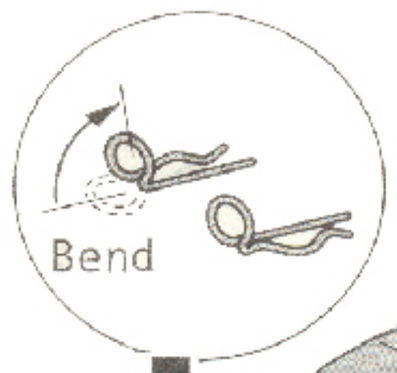
33 MOUNTING OF DRIVER DOLL AND ANTENNA

[small parts to be used]

(1) Hook Pin ... 2
(95) Parts provided with antenna. 1



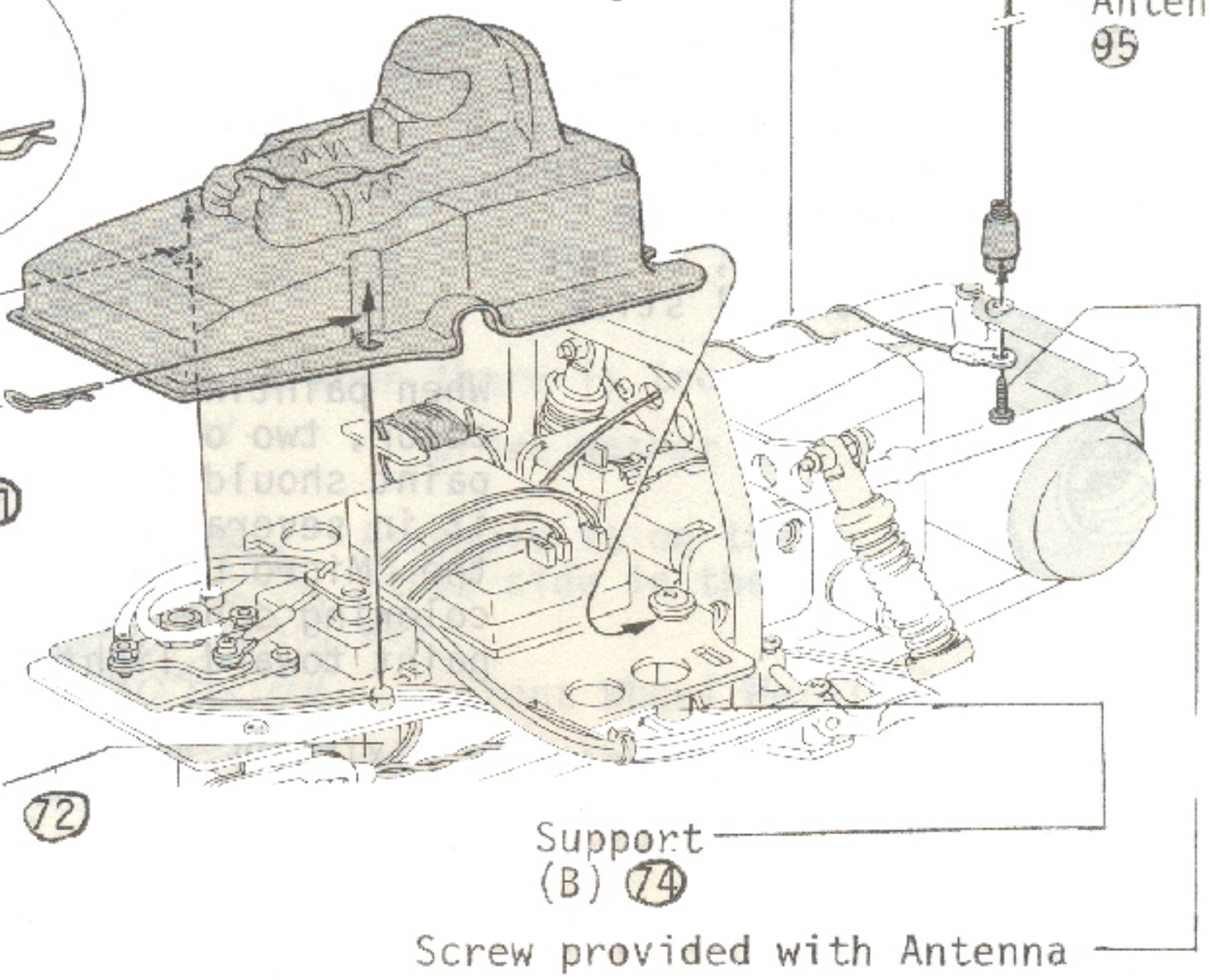
33 MOUNTING OF DRIVER DOLL AND ANTENNA



Hook Pin (1)

Wind the antenna wire around the rear side guard.

Antenna (95)



Support (A) (72)

Support (B) (74)

Screw provided with Antenna

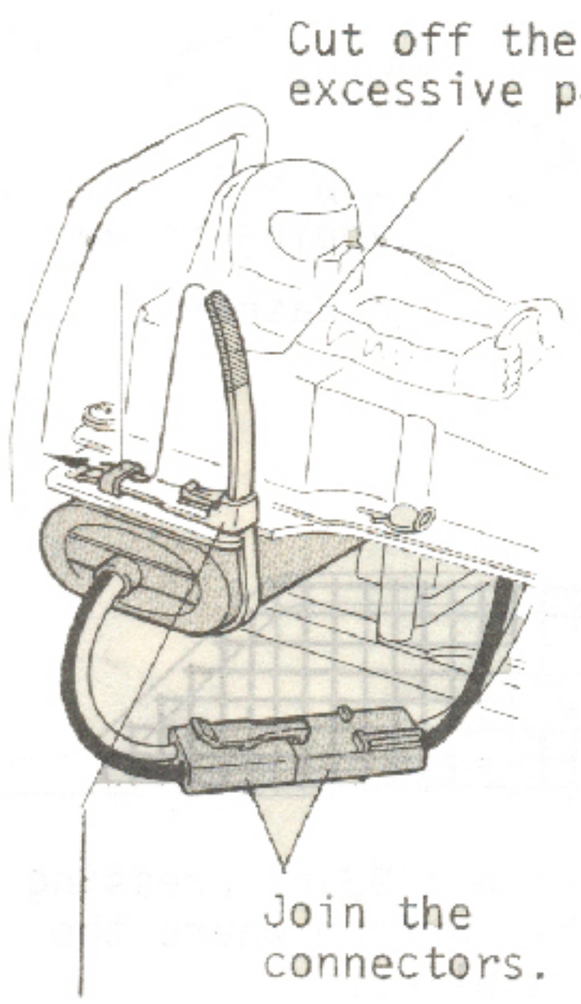
34 MOUNTING OF BODY

[small parts to be used]

(1) Hook Pin 1

(41) Strap Loop ... 2

[Mounting of Nicad Battery]



Strap for Nicad battery (98)

34 MOUNTING OF BODY

Roll Bar (78)

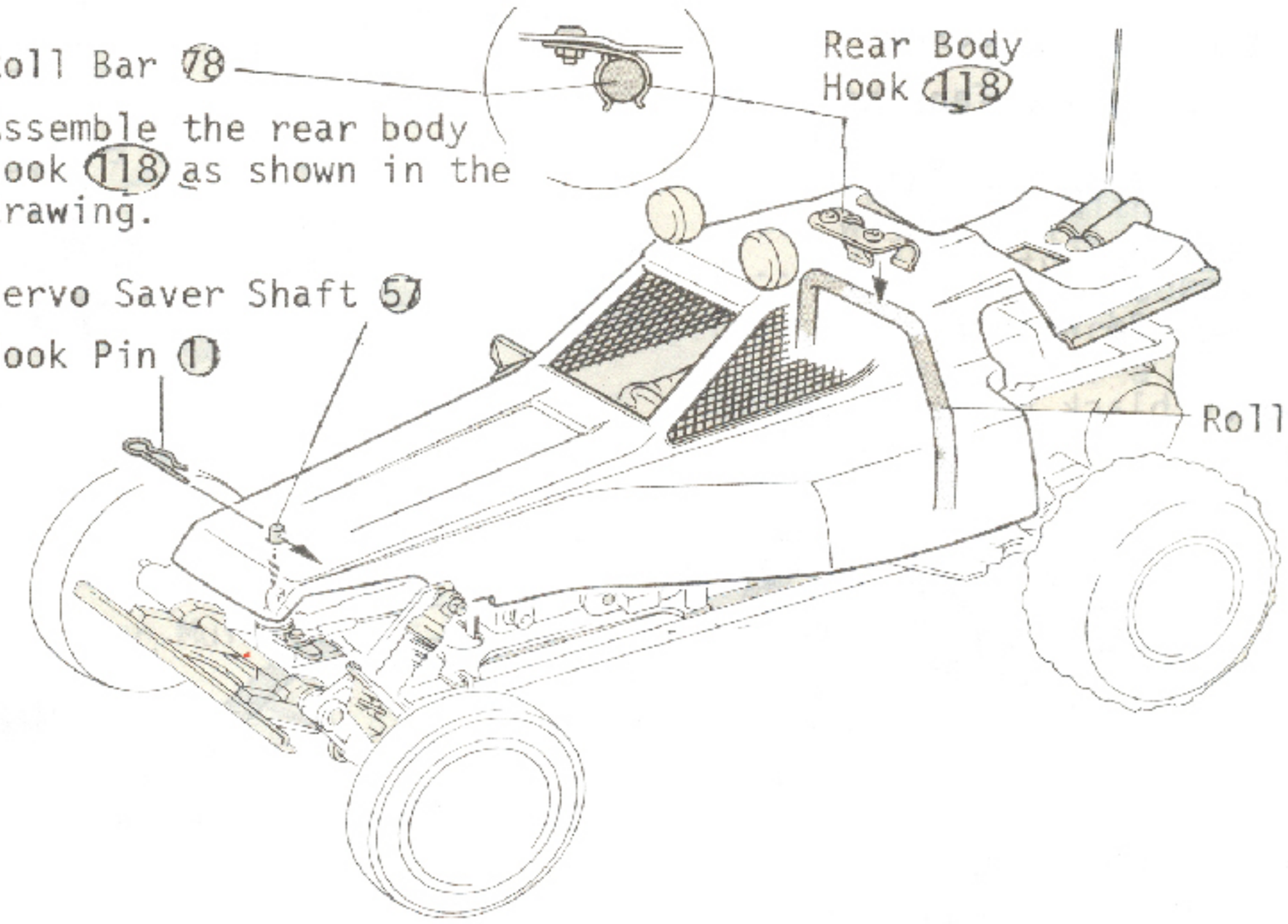
Assemble the rear body hook (118) as shown in the drawing.

Servo Saver Shaft (57)

Hook Pin (1)

Rear Body Hook (118)

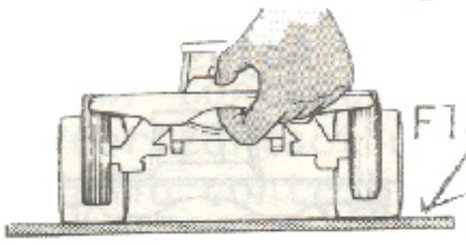
Roll Bar (78)



ADJUSTMENT BEFORE RUNNING

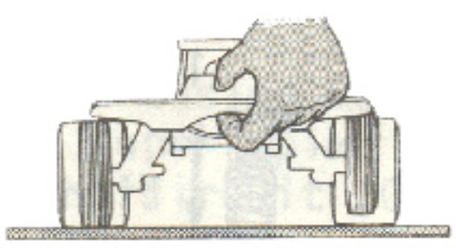
[Adjustment of Tire Pressure]

1 The right and left tires should be equally loaded in order to assure the balanced steerage. Arrange it so that the both front tires are put upon the same pressure in a way as shown in the following drawings.



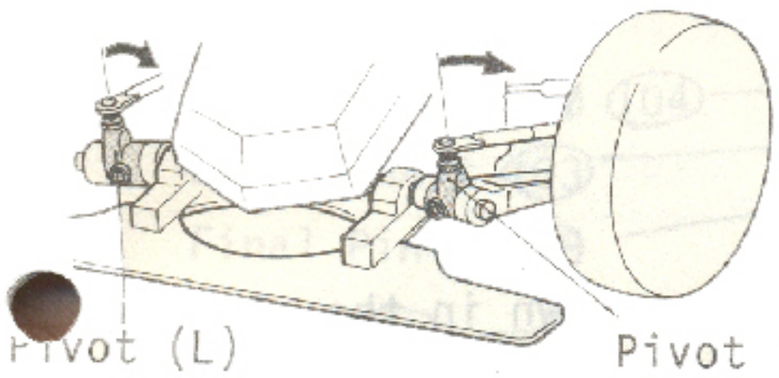
Raise the front bumper with your finger.

2 Then lower the bumper gently to see if the both tires touch the surface at the same time. If not, more adjustment is required.

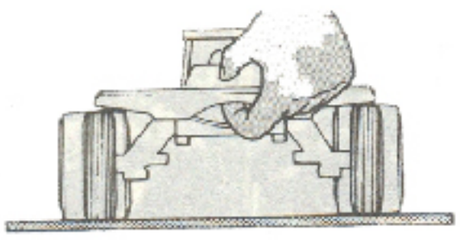


3 As shown in the picture 2 where the right tire is still afloat in the air, move the pivot (R) toward the rear end of the car little at a time. When the left tire does not touch the ground, shift the pivot (L) rearward.

(When the left tire is lifted.) (When the right tire is lifted.)

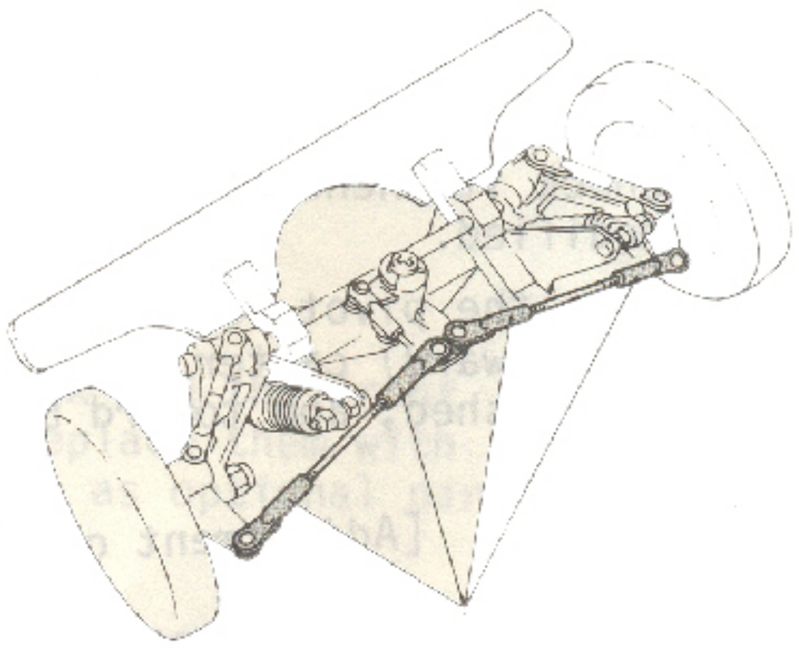


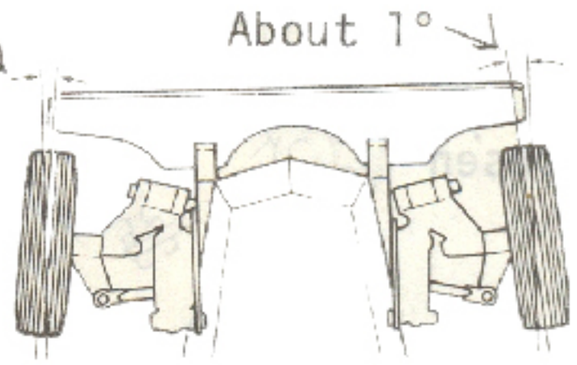
4 When the both front tires are in touch with the flat surface at the same time, they are in good adjustment.



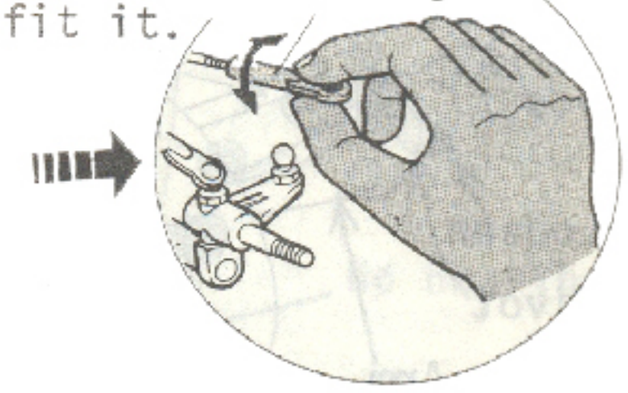
[Adjustment of Steering System]

This is a very important system for the car. Set the front wheels toe-in slightly. This setting is called as "toe-in", it is useful for insuring characteristics of straight going and for improving capabilities of taking corners.



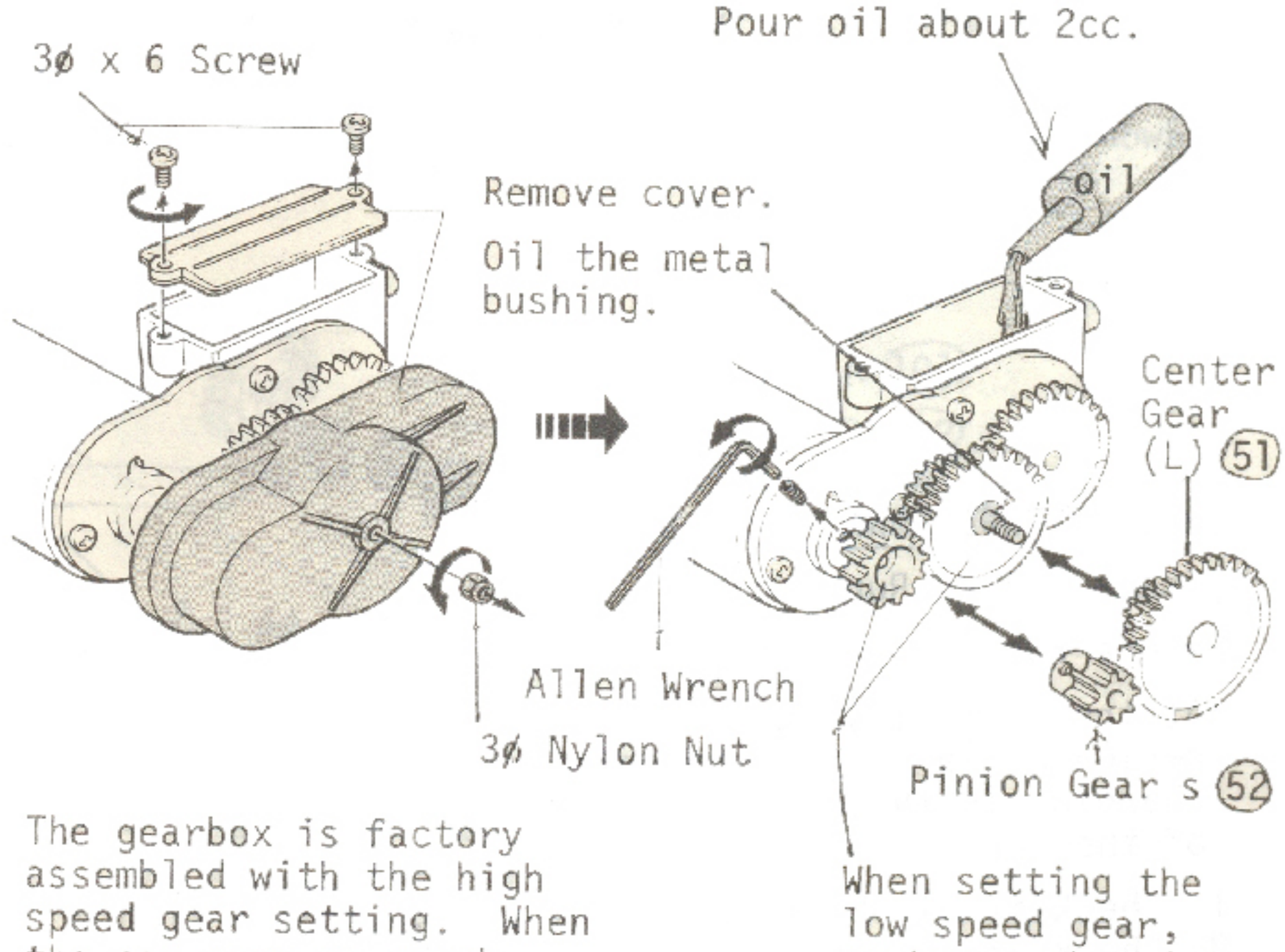


Regulate the length and fit it.



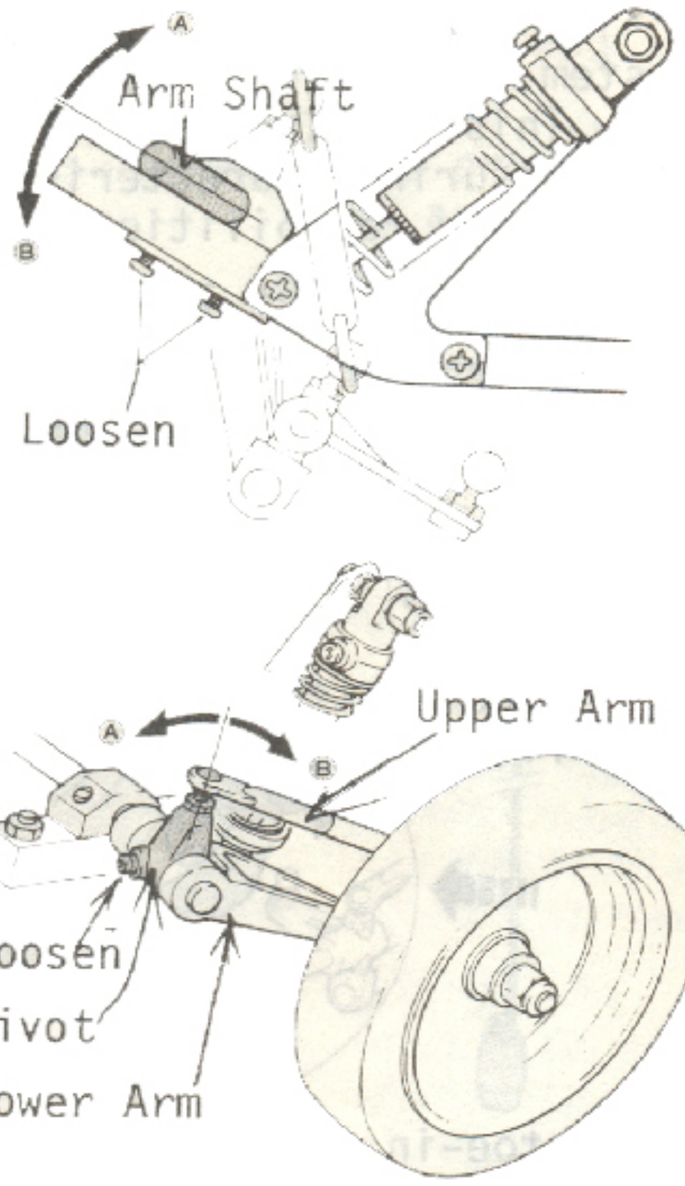
Adjust the neutral and toe-in setting with four ball fitted adjusters of the control rods.

[Exchange of Gears and Oiling]



The gearbox is factory assembled with the high speed gear setting. When the car runs on rough terrain or sandy field, change the gear setting into the low speed gear which is included in the kit contained in a plastic bag.

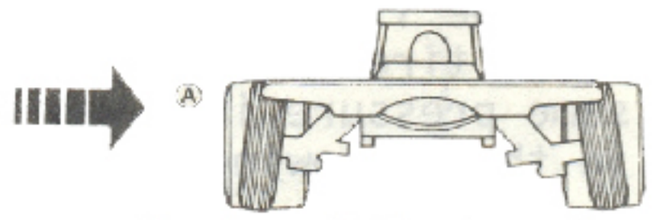
When setting the low speed gear, exchange the pinion gear 52 and the center gear 51.



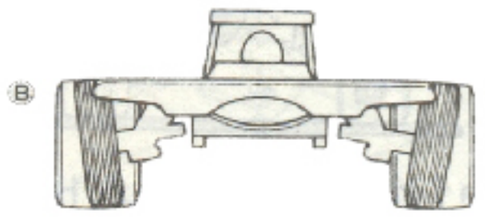
*The model is designed to run well enough when fabricated according to the steps of the assembly instruction. Still it is recommended to apprehend how to adjust the front suspension system for setting the model in your own way.

[Way of Adjustment]

1. More camber adjustment is given by raising the arm axle toward the direction indicated by the arrow A. Toward B inversed camber is provided.
(Note) Since camber adjustment will affect the toe-in setting, check it whenever camber is modified.



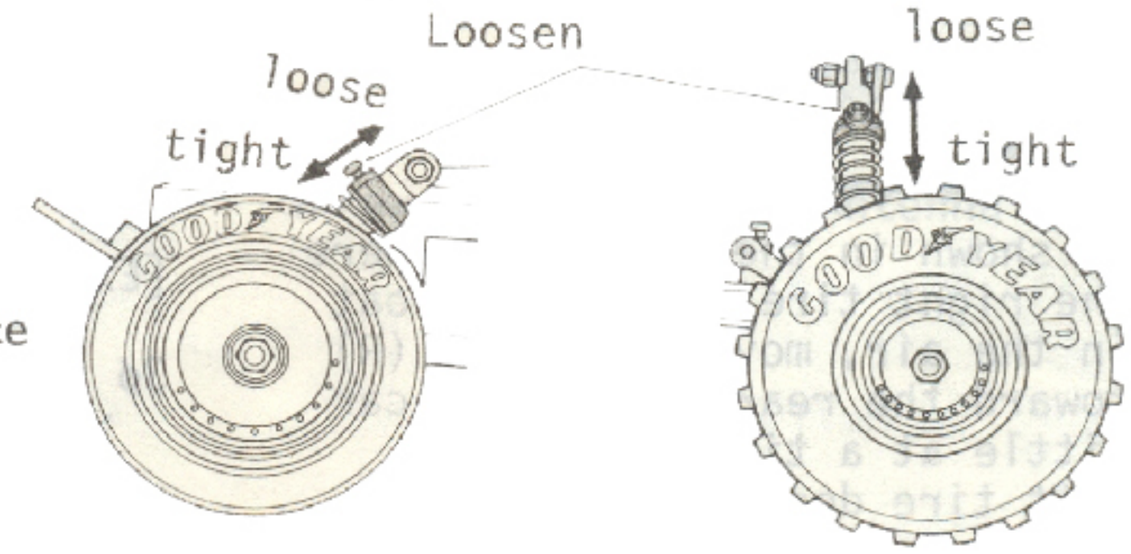
Camber Adjustment



Inversed Camber Adjustment

2. When the pivot is tilted toward A (frontward) caster adjustment is diminished, and toward B augmented.

[Adjustment of Spring]



Do not use excessive force when tightening plastic screw, otherwise it may become too loose.

Set front/rear springs a little bit softer, so that springs will absorb more cushion.

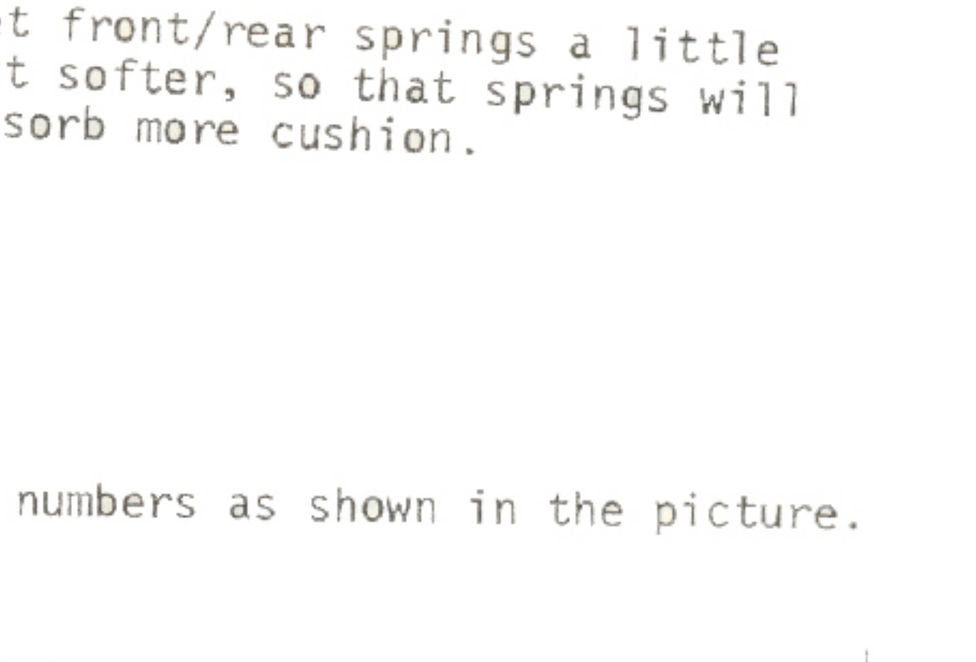
CHECK BEFORE RUNNING

[Check before Running]

Before running the car, check the parts in order of the numbers as shown in the picture.

*At the very first operation, drive the slowly for a period while it consumes electricity of one cycle of charging in the battery and check all the moving portions of the car.

1. Check if all bolts and nuts are tightened firmly.
2. Check if batteries for radio control units and the motor are charged fully.
3. Check if the front tires are steered in proportion to your control of the transmitter.
4. Check to see if the forward and reverse movement of the car responds accurately to your control.
5. Check if all wiring are insulated with vinyl tape properly.
6. Check if the rear tires are binded or not turning them by hand.



[Steps of Operation]

1. Put batteries into radio control units and power plant.
2. Turn on switch of your transmitter.
3. Switch on the receiver.
4. Check to see that the sticks of your transmitter are in good operation, right and left, up and down.

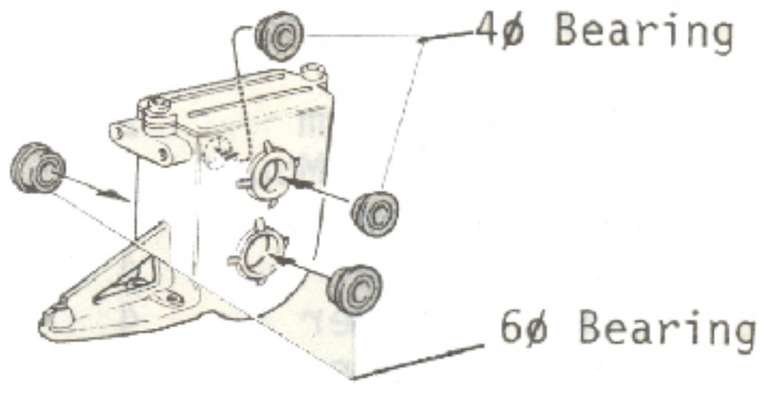
*When turning off the switches, the receiver first then transmitter. Otherwise, the car may run haphazardly.

[Trouble Shooting when the Car does not Start]

1. Poor contact of connectors of driving systems or of electric wiring.
2. Poor contact of the speed controller wiper blade.
3. Radio control units are out order.
4. Signal jamming from other radios.

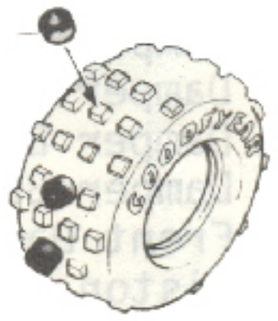
OPTION PARTS

Plain bearings are set in the gear box and the front wheels. For more smooth rotation, replace them with the ball bearings which are available as optional parts.



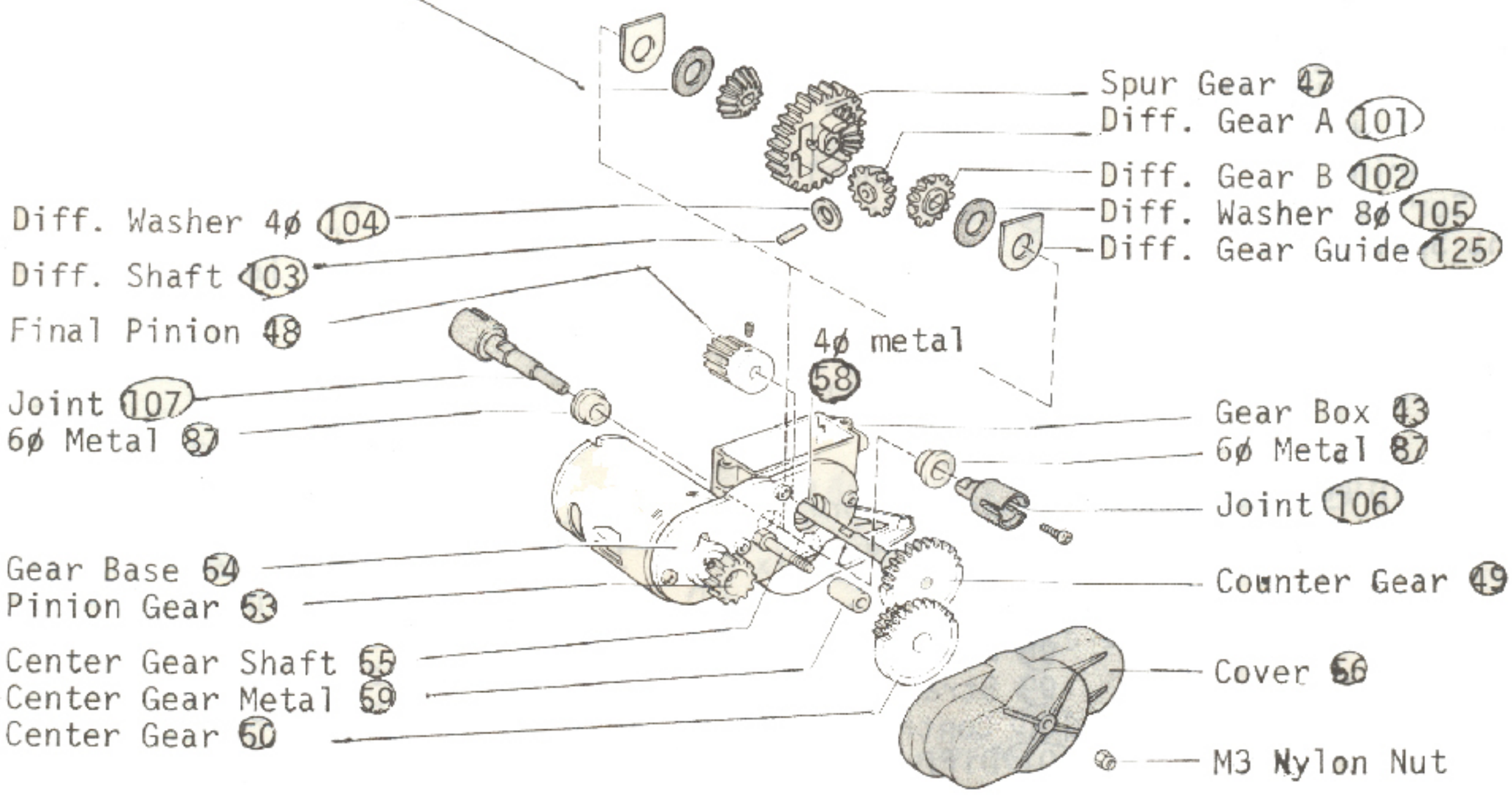
For increasing maneuverability on sandy course, use the nylon super spike tire which is optionally available for the Circuit 20 (CB-86).

Glue with instant glue cement.



EXPLODED VIEW OF GEAR BOX

(Note) Diff washer 8ø (105) is not built in. If each gears had too much play, set as shown in illustration.



PARTS LIST

No.	Parts Name	Q'ty
1	Front Bumper	1
2	Main Chassis	2
3	Arm Shaft	1
4	Arm Shaft Stopper	2
5	Lower Arm (L.R)	1 set
6	Pivot (L.R)	1 set
7	Upper Shaft	2
8	Pillow Ball	9
9	Ball End	10
10	Upright	2
11	Hook Pin	3
12	Knuckle Arm (L.R)	1 set
13	Tie Rod	2
14	Steering Servo plate	1
15	Rear Sus. Arm	2
16	Servo Saver Mount	1
17	Servo Saver	1 set
18	Damper Case	4
19	Damper Washer	4
20	Damper O Ring	4
21	Damper Stopper	4
22	Damper End	4
23	Damper Bush	4
24	Damper Ball	4
25	Damper Ball Nut	4
26	Front Damper Piston	2
27	Rear Damper Piston	2
28	Front Damper Stay	2
29	Rear Damper Stay	1
30	Gear Box Mount	1
31	Rear Sus. Plate	2
32	Rear Sus. Shaft	2
33	Rear Sus. Holder(S)	2
34	Rear Sus. Holder(L)	2
35	Front Spring	2
36	Rear Spring	2
37	Front Spring Holder	2
38	Spring Stopper	4
39	Swing Shaft	2
40	Rear Wheel Shaft	2
42	Drive Washer	2
43	Gear Box	1
44	Gear Box Cover	1
45	Gear Box Seal	1
46	Driver	1
47	Spur Gear	1
48	Final Pinion	1
49	Counter Gear (w/shaft)	1
50	Center Gear (S) (for High speed)	1
51	Center Gear (L) (for Low speed)	1
52	Pinion Gear(S) (for Low Speed)	1
53	Pinion Gear(L) (for High Speed)	1
54	Gear Base	1
55	Center Gear Shaft	1
56	Gear Cover	1
57	Servo Saver Shaft	1
58	4ø Metal	2
59	Center Gear Metal	1
60	Motor Cover	1
61	Rear Side Guard	1
62	Rear Under Guard	2
63	R/C Unit Plate	1
64	Heat Sink	1
65	Controller Horn	1
66	Resister	2
67	Linkage Ball	2
68	Controller Rod	1
69	Steering Rod	1
70	Switch Plate	1
71	Switch Cover	1
72	Support (A)	2
73	Support Gromet	2
74	Support (B)	2
75	Support Washer	2
76	Pressure Sensitive Tape	1
77	Battery Holder	1
78	Roll Bar	1
79	Front Tire	2
80	Rear Tire	2
81	Front Wheel	2
82	Front Wheel Metal	2
83	Rear Wheel (R-1)	2
84	Rear Wheel (R-2)	2
85	Rear Wheel (R-3)	2
86	Rear Spring Holder	2
87	6ø Metal	2
88	Decal	1
89	Body	1
90	Rearview Mirror	1
91	Light (A)	2
92	Muffler	2
93	Net	1
94	Connector	1
95	Antenna	1 set
96	Oil	1
97	Motor (RS-540)	1
98	Nicad Strap (L)	3
99	Strap (S)	4
100	Controller Pivot	1
101	Diff. Gear (A)	2
102	Diff. Gear (B)	2
103	Diff. Shaft	2
104	Diff. Washer (4ø)	2
105	Diff. Washer (8ø)	2
106	Joint (A)	1
107	Joint (B)	1
108	Front Joint	1
109	Speed Controller Fixing Collar	2
110	Speed Controller Bearing	2 set
112	Roller Bearing Holder	2
113	Rear Shaft Shim	4
114	Light (B)	2
115	Strap (Medium)	1
116	Switch Fixing Plate	1
117	Front Inner Wheel	2
118	Rear Body Hook	1
119	Speed Controller PC Board	1
120	Speed Controller Spring	1
121	Speed Controller Retainer	1
122	Speed Controller Nut	1
123	Speed Controller Contact	2
124	Speed Controller Pivot	1
125	Diff. Gear Guide	2

SPARE PARTS LIST FOR NO. 3065 TOMAHAWK

PART NO.	PARTS NAME	CONTENTS	FOB PRICE/SET
SC-2	Main Chassis	② x2	
SC-3	Arm Axle Set	③ x1, ④ x2	
SC-4	Lower Arm Set	⑤⑥ x1set	
SC-5	Upper Arm Set	⑦⑧⑨ x2	
SC-6	Uplight Set	⑧⑩ x2	
SC-7	Knuckle Arm	⑫ x1set	
SC-8	Tie Rod	⑬ x2, ⑧⑨ x4	
SC-9	Servo Saver Mount	⑯ x1	
SC-10	Front Damper Set	⑱ ⑲ ⑳ ㉑ ㉒ ㉓ ㉔ ㉖ x2	
SC-11	Rear Damper Set	⑱ ⑲ ⑳ ㉑ ㉒ ㉓ ㉔ ㉗ x2	
SC-12	Front Damper Stay	㉘ x2	
SC-13	Rear Damper Stay	㉙ x1	
SC-14	Gear Box Mount	㉚ x1	
SC-15	Rear Sus Plate Set	㉛ ㉜ ㉝ ㉞ x2	
SC-16	Spring Set	㉟ ㊱ ㊲ ㊱ x2, ㊳ x4	
SC-17	Swing Shaft	㊴ x2	
SC-18	Rear Wheel Shaft	㊵ x2	
SC-20	Drive Washer	㊷ x2	
SC-21	Rear Guard Set	㊶ x1, ㊷ x2	
SC-26	Front Tire	㊾ x2	
SC-27	Rear Tire	㊿ x2	
SC-28	Front Wheel	(81) x2, (117) x2	
SC-29	Rear Wheel	(83) (84) (85) x2	
SC-36	Gear Base Cover	(54) (55) (56) x1	
SC-37	Gear Box Metal Set	(59) x1, (87) (58) x2	
SC-39	Gear Set, B	(50) (51) (52) (53) x1	
SC-40	Motor Cover	(60) x1	
SC-41	Servo Saver	(17) x1	
SC-42	Rear Sus Arm	(15) x2, (SC-65 includes #(112) roller bearing)	
SC-46	Both Side Tape	(76) x1	
SC-63	Front Wheel Metal	(82) x2	
RS-16	Gear Set, A	(48) (49) x1	
RS-13	Gear Case	(43) (45) x1	
EP-22	Hook Pin	(11) x5	
SC-83	Final Pinion Gear	(48) x1, steel	
SC-78	P.C. Plate	(119) x1	
SC-79	Connecting Point	(123) x2	
SC-56	Rear Deff Gear Set	(47) (106) (107) x1, (125) (101) (102) (103) (104) (105) x2	
SC-59	Joint Set for deff gear	(106) (107) x1	
SC-60	Deff Gears	(47) x1, (101) (102) (103) (104) (105) x2	
SC-64	Front Bumper	(1) x1	
SC-65	Rear Wheel Shaft Bearing	(110) (112) x2, (w/12pcs pin)	
SC-66	Mecha Plate	(14) (63) x1	
SC-67	Controller Set	1 set	
SC-68	Linkage Set	(67) (68) (69) x1, (9) x2	
SC-69	Roll Bar	(78) x1	
SC-70	Driver Doll	(46) x1	
SC-71	Body, Tomahawk	(89) x1	
SC-72	Accessory Set	(90) (93) x1, (91) (92) (114) x2	
SC-73	Plate Set	(77) (108) (116) x1	

SC-74	Heat Sink	(44) (64) x1
SC-75	Connector	(94) x1
SC-76	Mecha Post Set	(72) (73) (74) (75) x2
SC-77	Screw Set	screw, wrench 1set
CB-124	Linkage Boots	(70) (71) x1
EF-37	Strap, small	(99) x6
EF-38	Strap, medium	(115) x6
EF-39	Nicad Strap	(98) x6
SC-81	Decal	(88) x1
SC-82	Body Hook Set	(57) (118) x1
1885	Antenna Set	(95) x1set

(OPTION PARTS)

CB-86	Nylon Spike	for rear tire
CK-63	4ø Ball Bearing	2pcs for gear box
MS-26	6ø Ball Bearing	2pcs for gear box
SC-57	Side Guard	
SC-58	Heat Sink	for motor
SC-61	Second Gear	for ratio 8.4:1
SC-80	Resister, 4 steps speed	4 step speed for forward