

1:10 SCALE

MINI COOPER

ELECTRIC POWERED SCALE MODEL CAR

VW BEETLE

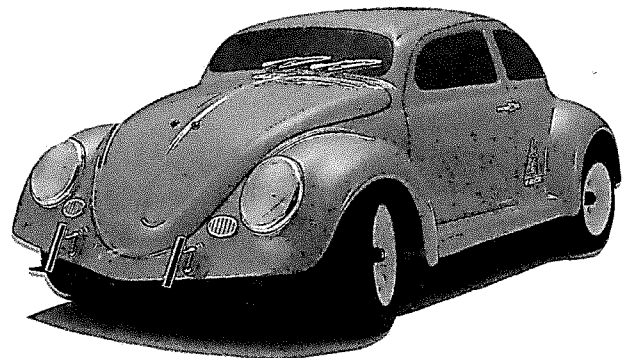
1:12 SCALE

- 1/10~12TH SCALE MODEL OF THIS FAMOUS & EXCITING CAR
 - ACCURATELY MOULDED SCALE BODY
 - MANY CHROME-FINISHED DETAIL PARTS
- FACTORY ASSEMBLED CHASSIS FOR EASE OF CONSTRUCTION
 - GEAR-TYPE DIFFERENTIAL FOR IMPROVED HANDLING
 - HI-SPEED MABUCHI RS-540SH MOTOR-INCLUDED IN KIT
 - SWING ARM FRONT SUSPENSION & DEAD-BEAM REAR AXLE
- SIMPLE CONSTRUCTION AND ADJUSTMENT, IDEAL FOR BEGINNERS

BATTERY : 7.2V-1200~1700mAh

RADIO : 2ch

———— (NOT INCLUDED) ————



NO.3055/NO.3056
NO.3057/NO.3058

KYOSHO®
THE FINEST RADIO CONTROL MODELS

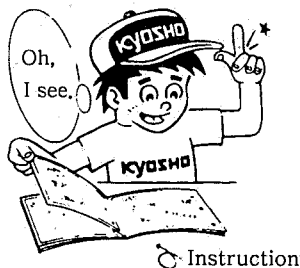
BEFORE ASSEMBLY

○ Read the instructions carefully.

You can assemble the kit more easily if you have grasped the general idea of steps and structure beforehand by reading it through to the end.

○ Check the components in the kit.

Check the components in the kit prior to starting the assembly. Any claims for replacements or refunds for the model in the process of assembly will not be accepted.

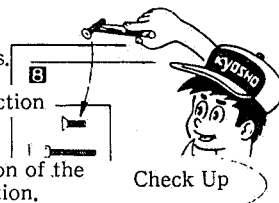


○ Pick up the correct parts and screws.

Compare the shape and size of small parts.

○ Be sure about the location and the direction of the parts to be installed.

Double-check the location and orientation of the parts with the illustration before installation. When necessary, assemble the parts themselves tentatively before proceeding to the next step.



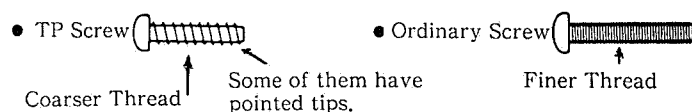
○ Do not over-tighten the TP Screws.

Do not use excessive force when tightening the TP Screws, or you may strip the thread in the plastic. It is recommended to stop tightening it when the thread part on the screw goes into the plastic part and you feel some resistance from the tightening.

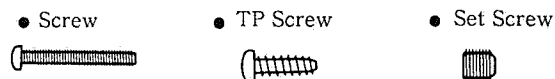


○ Be well aware of the different types of screws.

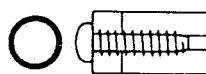
1) The difference between the TP screw and the ordinary screw is ... (TP ... short form of self-tapping)



2) The kinds of screws which will be used in the assembly of this kit.

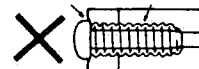


CORRECT



Over tightening may strip the thread in the plastic.

WRONG



THINGS NEEDED BESIDES THE KIT

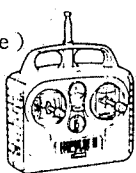
《 2 Channel Radio System 》



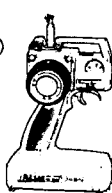
This model is designed to use a BEC system radio. A radio contained in a box with this type of logo is a BEC type radio.

Two types of radio control set are on the market, the stick and the steering wheel type. Choose which ever you prefer.

(Stick Type)



(Steering Wheel Type)



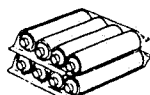
Servos

Receiver

Switch

《 Batteries are required for the Radio System 》

AA size for Transmitter ... 8 pcs.



《 Ni-Cad Battery 》

This model is designed to use a rechargeable 7.2V Ni-Cad Battery Pack.

NO.4400

7.2V Power 1400 Battery



NO.2348

7.2V - 1700mAh SCR Battery



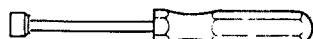
《 Charger 》

Kyosho's Ni-Cad Batteries are high performance types. If charged correctly, they will operate for a considerable period of time. Use one of the chargers listed to suit your needs.

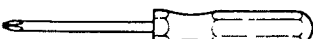
No.	Name	Time	Rate	Features
2358	DC Quick Charger II	20 min.	70 %	For the beginner Built in Timer.
1849	Multi Charger II	20 min.	100 %	Built in Timer, Ammeter
2246	FET Auto Charger	20 min.	100 %	Trickle charging Automatic Cut-off

《 Tools Required 》

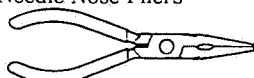
Box Driver



Phillips Screwdriver



Needle Nose Pliers



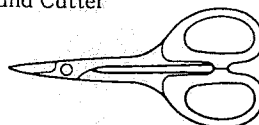
Sharp Hobby Knife



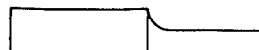
Awl



Round Cutter



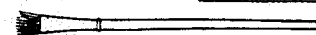
Sander



Polyca Color Paint



Brush



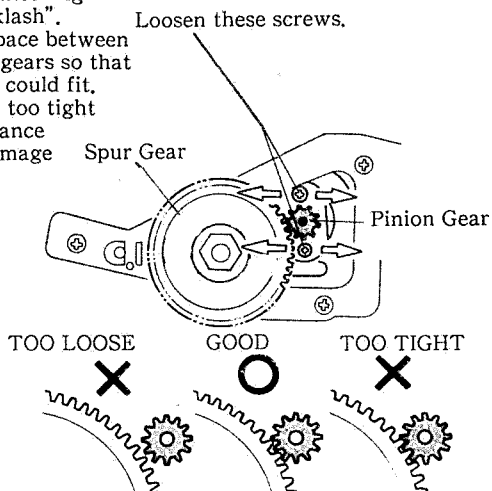
Micron Line Tape



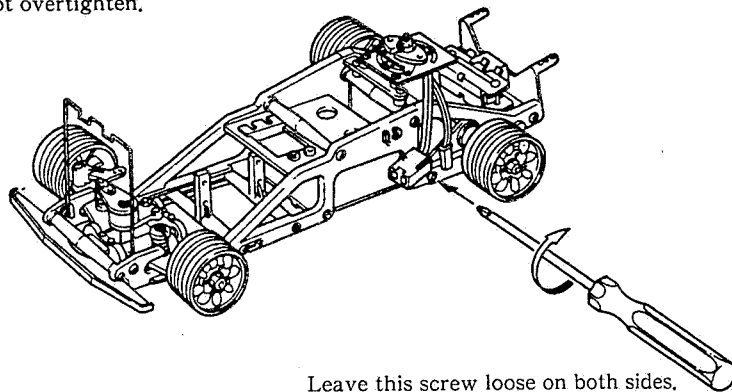
(1) CHASSIS CHECK

This model is factory assembled. Check and re-tighten ALL nuts and screws before operation.
 Note: Many TP Screws are used throughout this kit. Be careful not to overtighten them.
 Overtightening will cause damage to the threads.

Adjust the gear meshing with some "backlash". Allow enough space between the teeth of the gears so that a sheet of paper could fit. Gears which are too tight reduce performance and actually damage the motor.



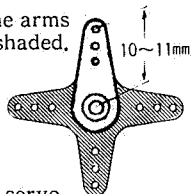
The screw for the servo saver should be just tight enough to allow free, smooth movement. Do not overtighten.



(2) MOUNTING THE STEERING SERVO

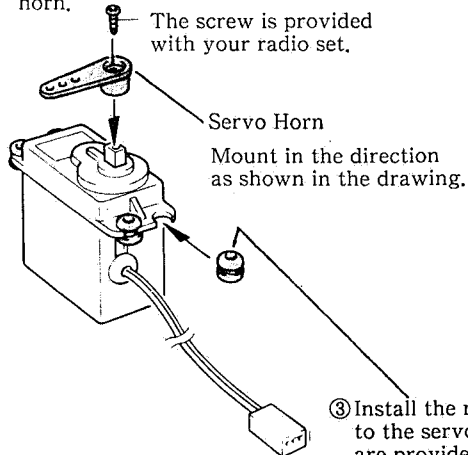
① Select a servo horn like the one shown below.

Trim off the arms which are shaded.



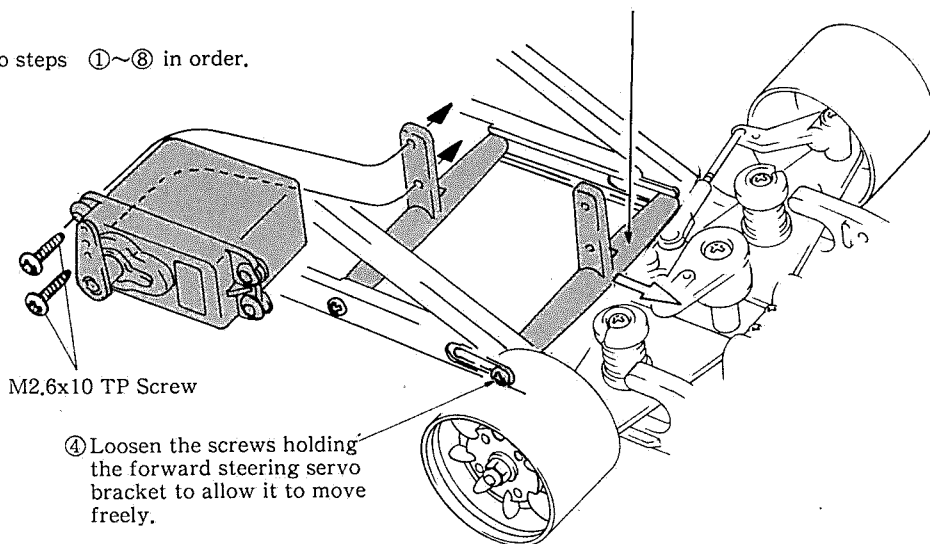
② Mount the servo horn.

The screw is provided with your radio set.



③ Install the rubber grommets to the servo. These grommets are provided with the radio system.

* Do steps ①~⑧ in order.



④ Loosen the screws holding the forward steering servo bracket to allow it to move freely.

⑥ Mount the servo on the rear stationary bracket first as shown using two M2.6x10 TP Screws. Tighten the screws, but do not allow them to crush the grommets.

⑦ Align the front holes of the servo with those in the front bracket and mount the servo.

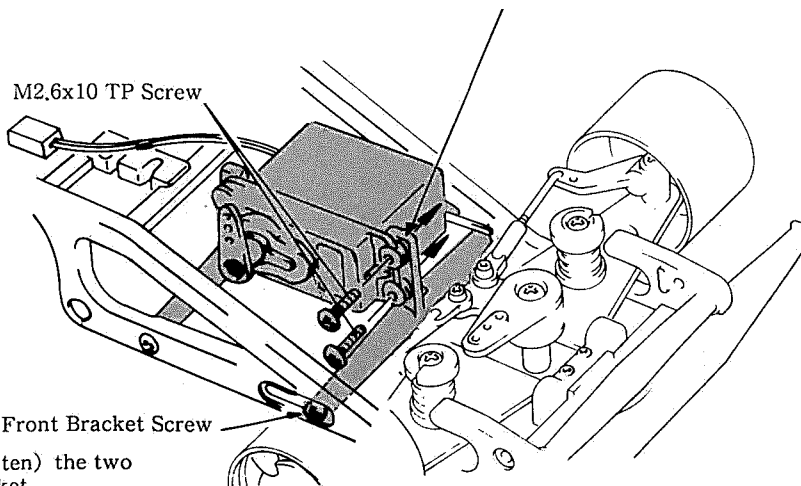
M2.6x10 TP Screw ... 4



M2.6x10 TP Screw

Front Bracket Screw

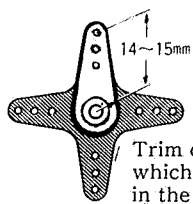
⑧ Now tighten (do not overtighten) the two screws holding the front bracket.



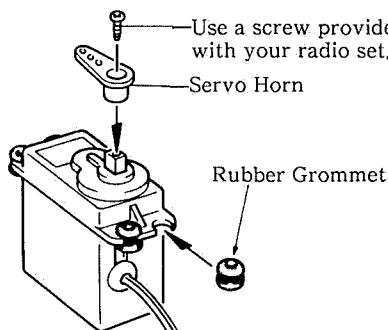
(3) MOUNTING OF SPEED CONTROLLER SERVO

Follow steps ①~⑤ in order.

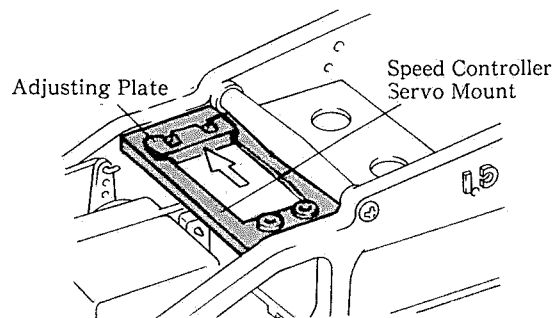
- ① Select a servo horn like the one shown below.



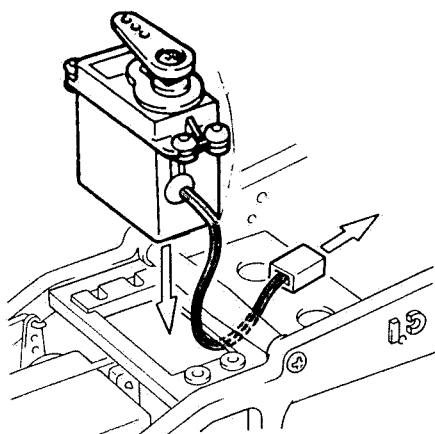
- ② Install the rubber grommets to the servo which are provided with your radio set.



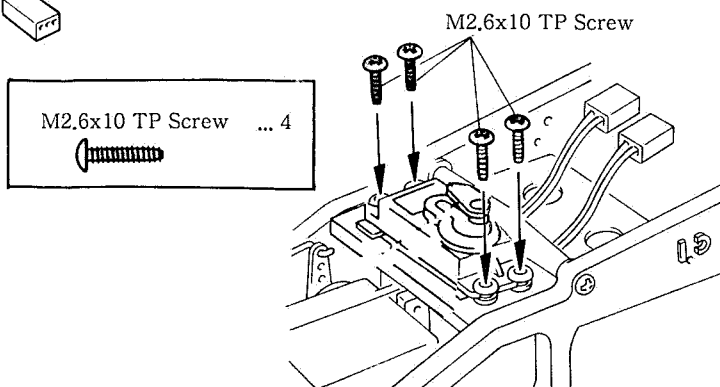
- ③ Move the small amount adjusting plate to the right hand side of the car as indicated by the arrow below.



- ④ Run the servo wire down through the opening first, then place the servo in the mount.

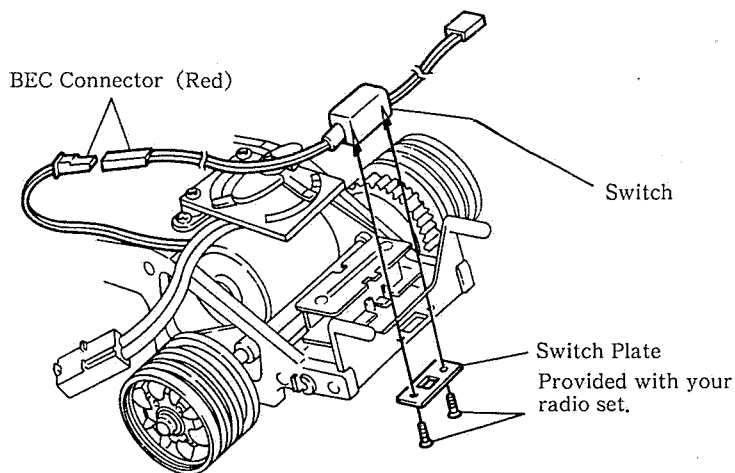


- ⑤ Align the servo and attach it to the adjusting plate first, then to the fixed side of the mount with M2.6 x10 TP Screws.



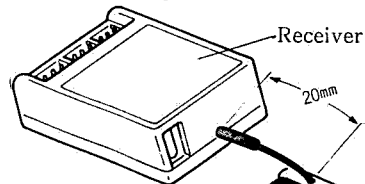
(4) MOUNTING THE SWITCH

Mount the radio switch to the plate provided in the rear of the car. Be sure to install your "on-off" plate in the correct direction.



(5) MOUNTING THE RECEIVER AND ANTENNA

Carefully remove a 10 mm length of the insulation from the tip of the receiver antenna wire.

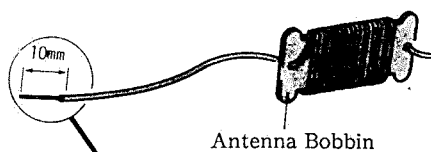


*** CAUTION ***

Do not cut the receiver antenna!

Antenna Wire

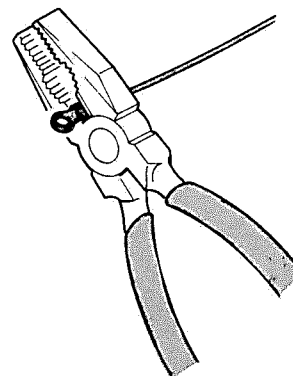
To keep your antenna wire out of the way, wind it around the supplied bobbin.



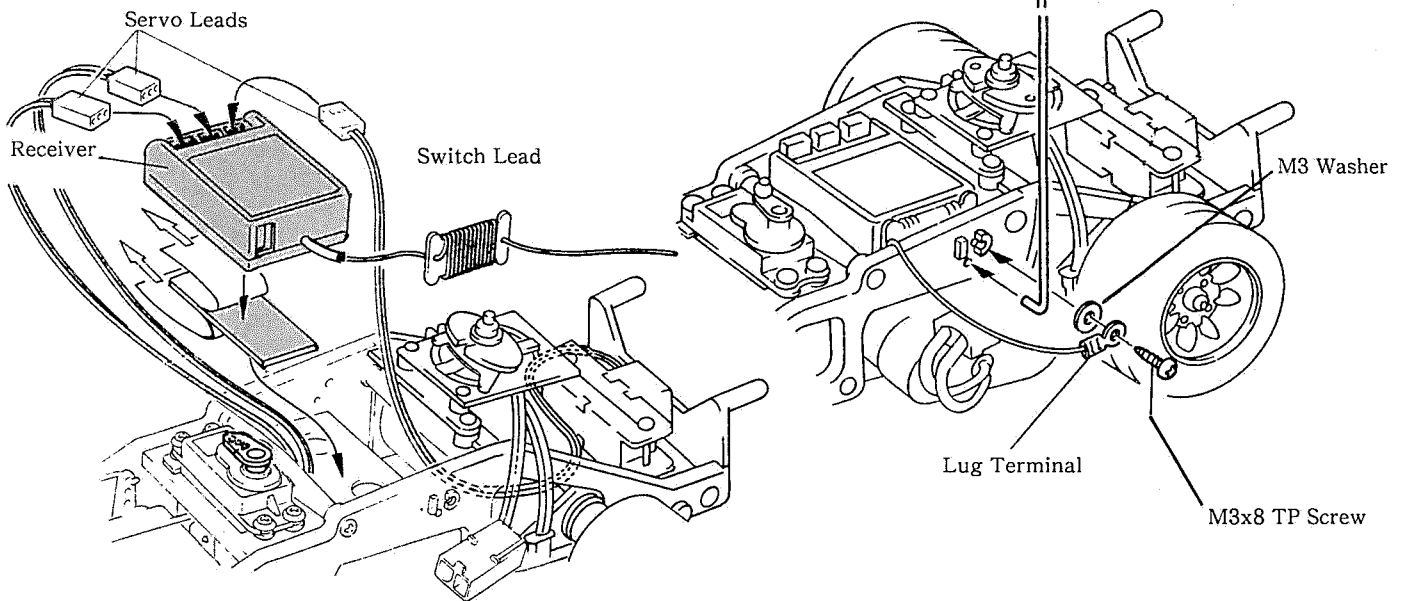
Antenna Bobbin

Bend the exposed wire and insert it into the lug terminal.

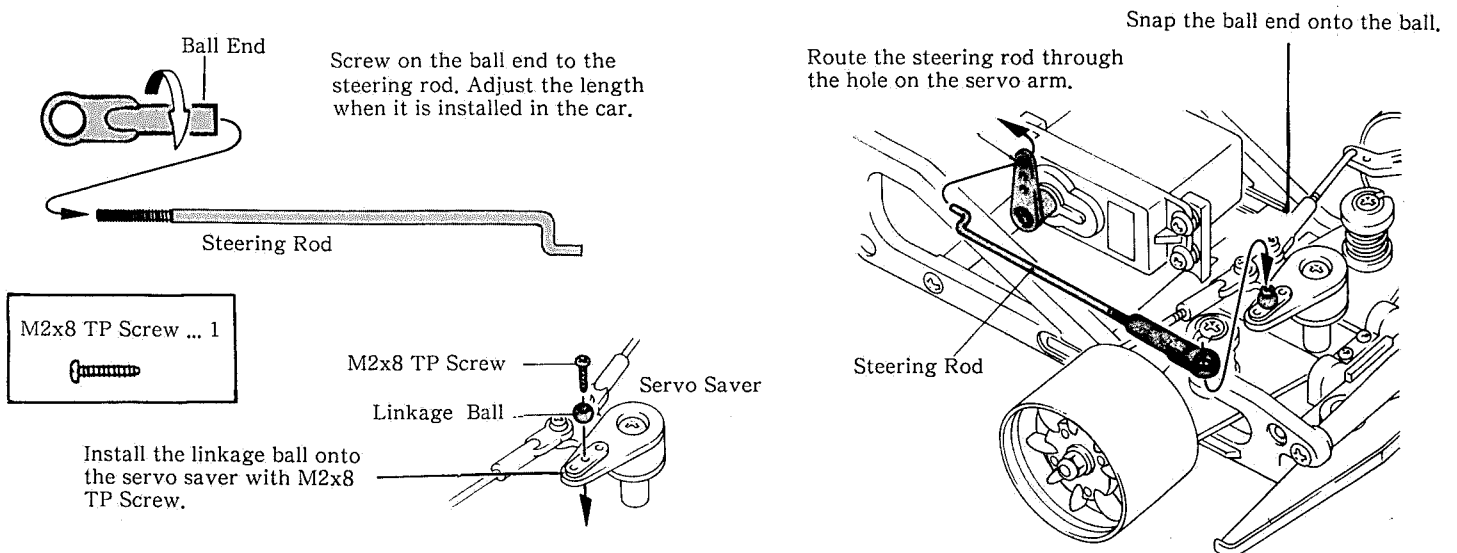
Crimp the lug terminal with a pair of pliers.



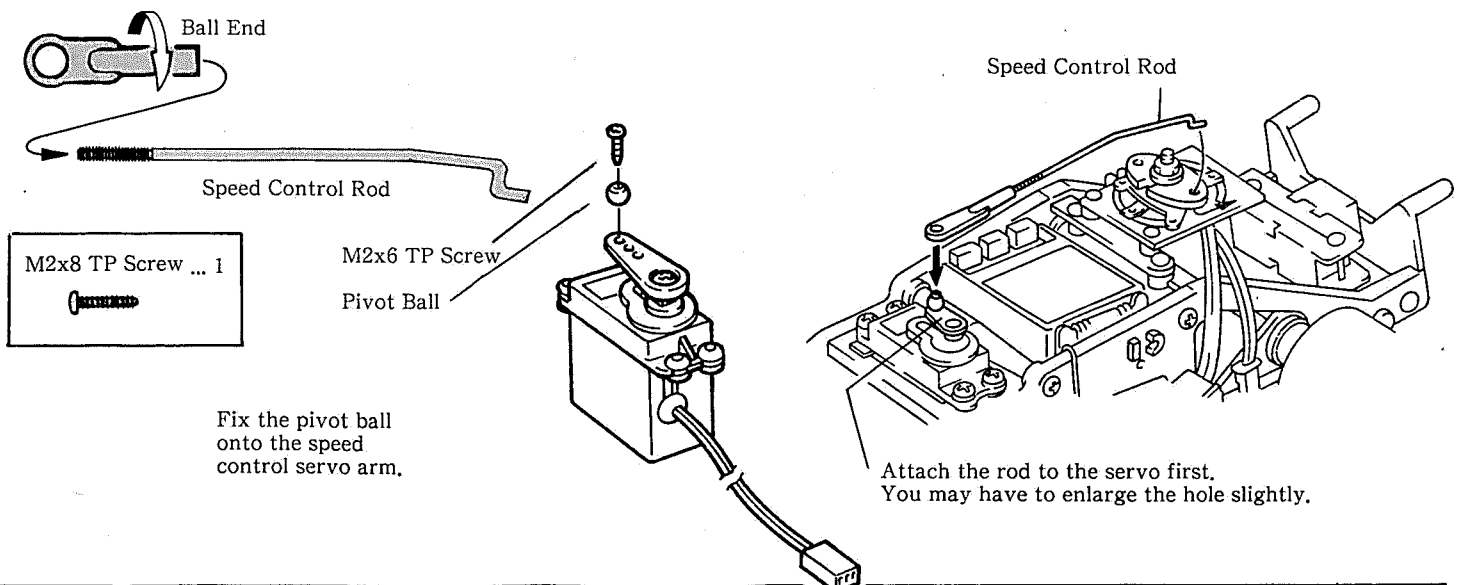
Install the receiver to its mounting plate (the one with two large holes in it) with double sided foam tape and plug in the servo and switch leads.



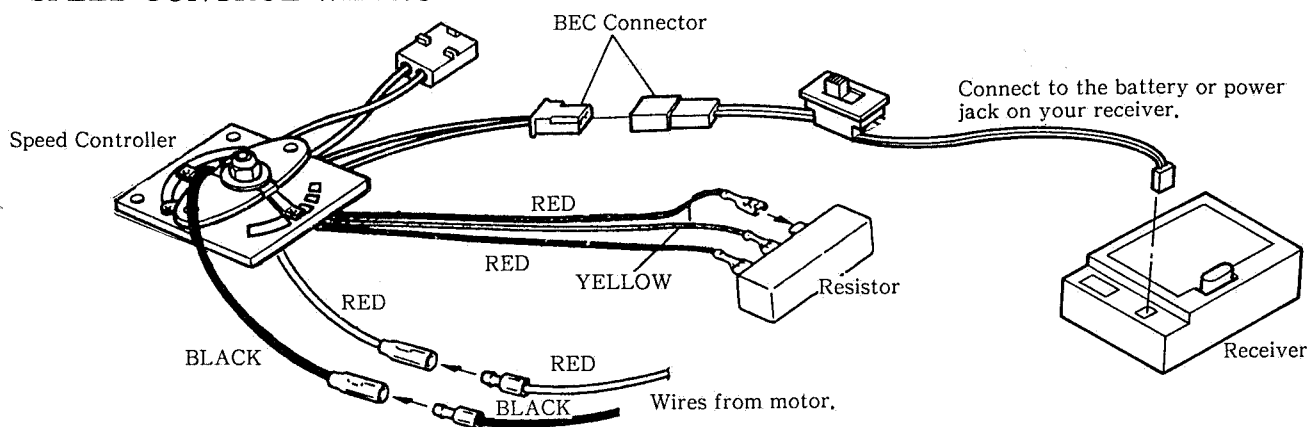
(6) STEERING CONTROL LINKAGE



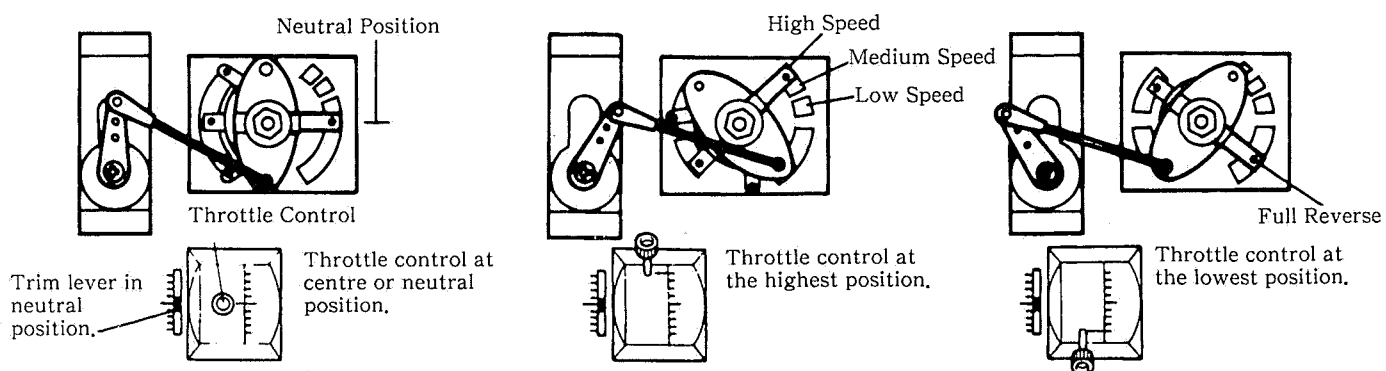
(7) SPEED CONTROL LINKAGE



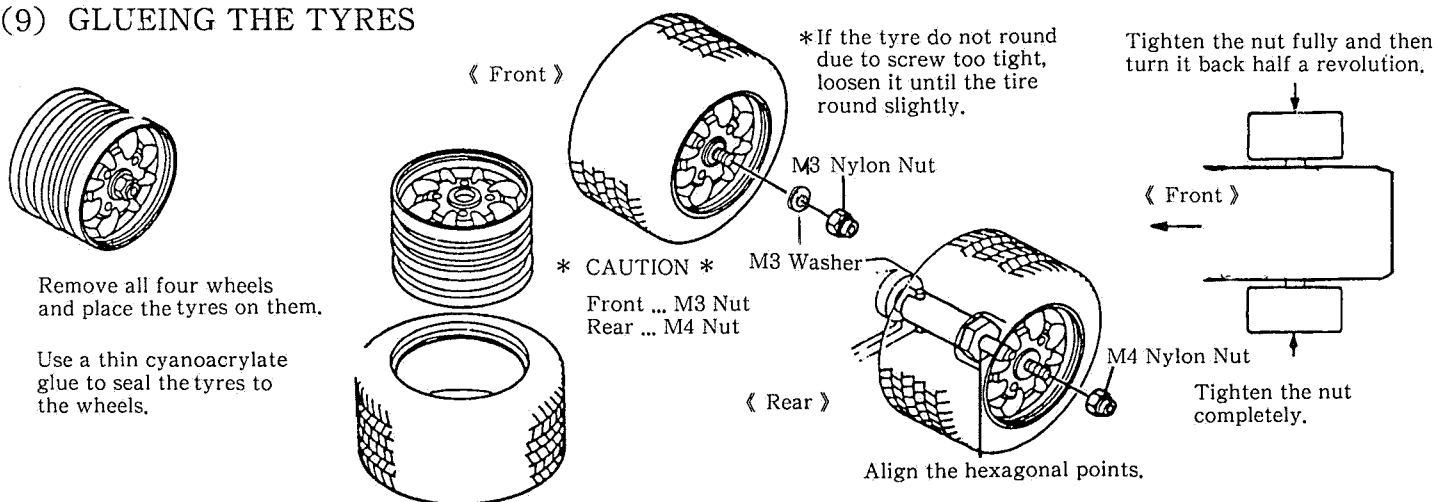
(8) SPEED CONTROL WIRING



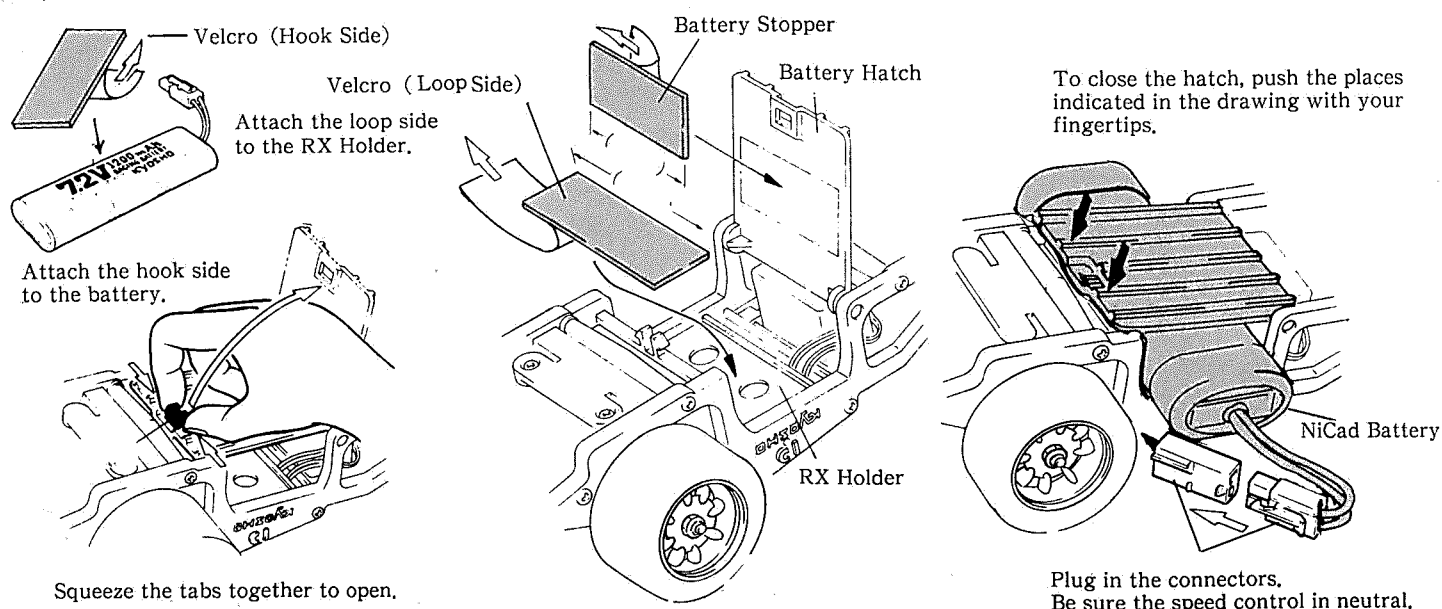
《 Adjustment of Speed Controller 》



(9) GLUEING THE TYRES

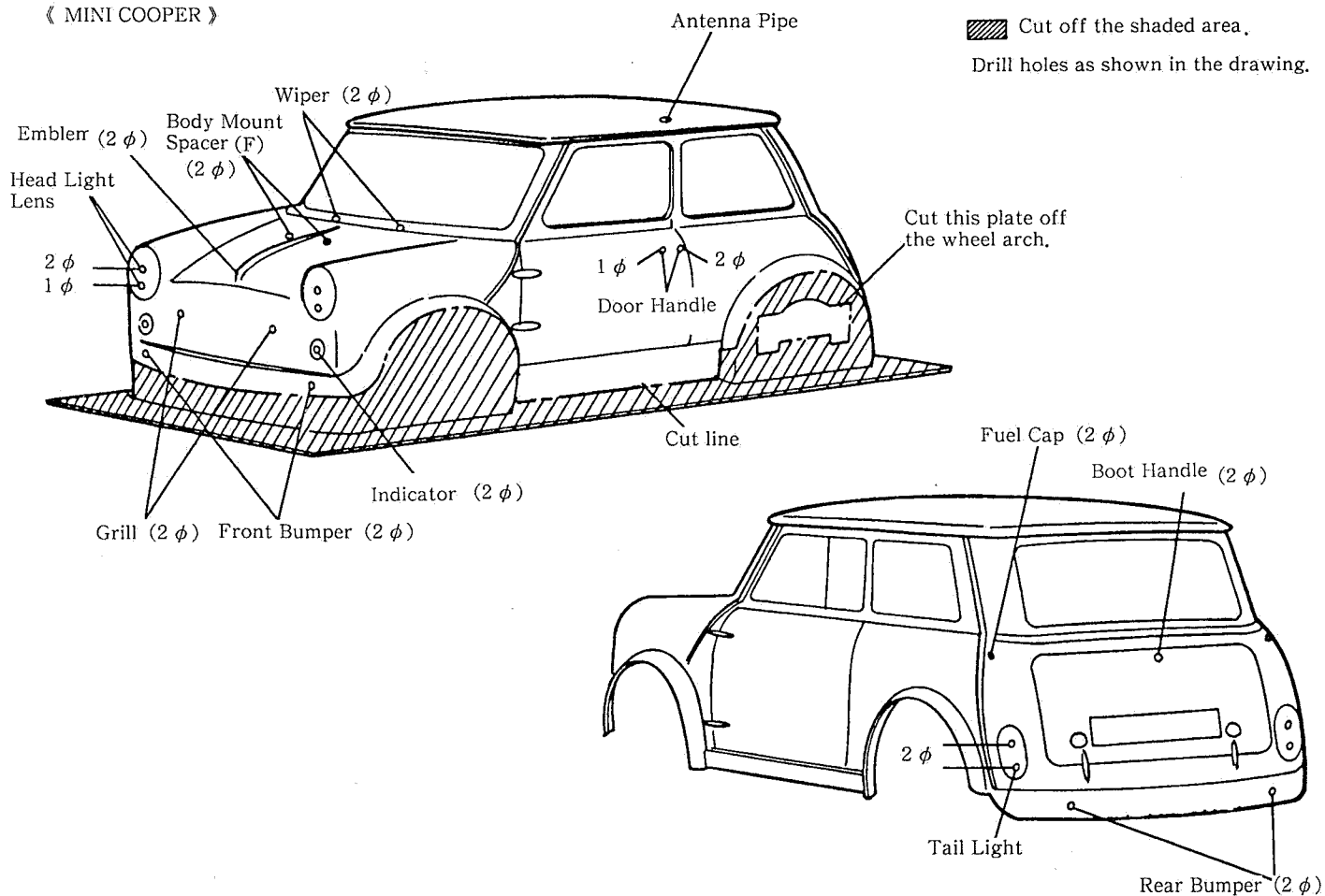


(10) MOUNTING OF NICAD BATTERY

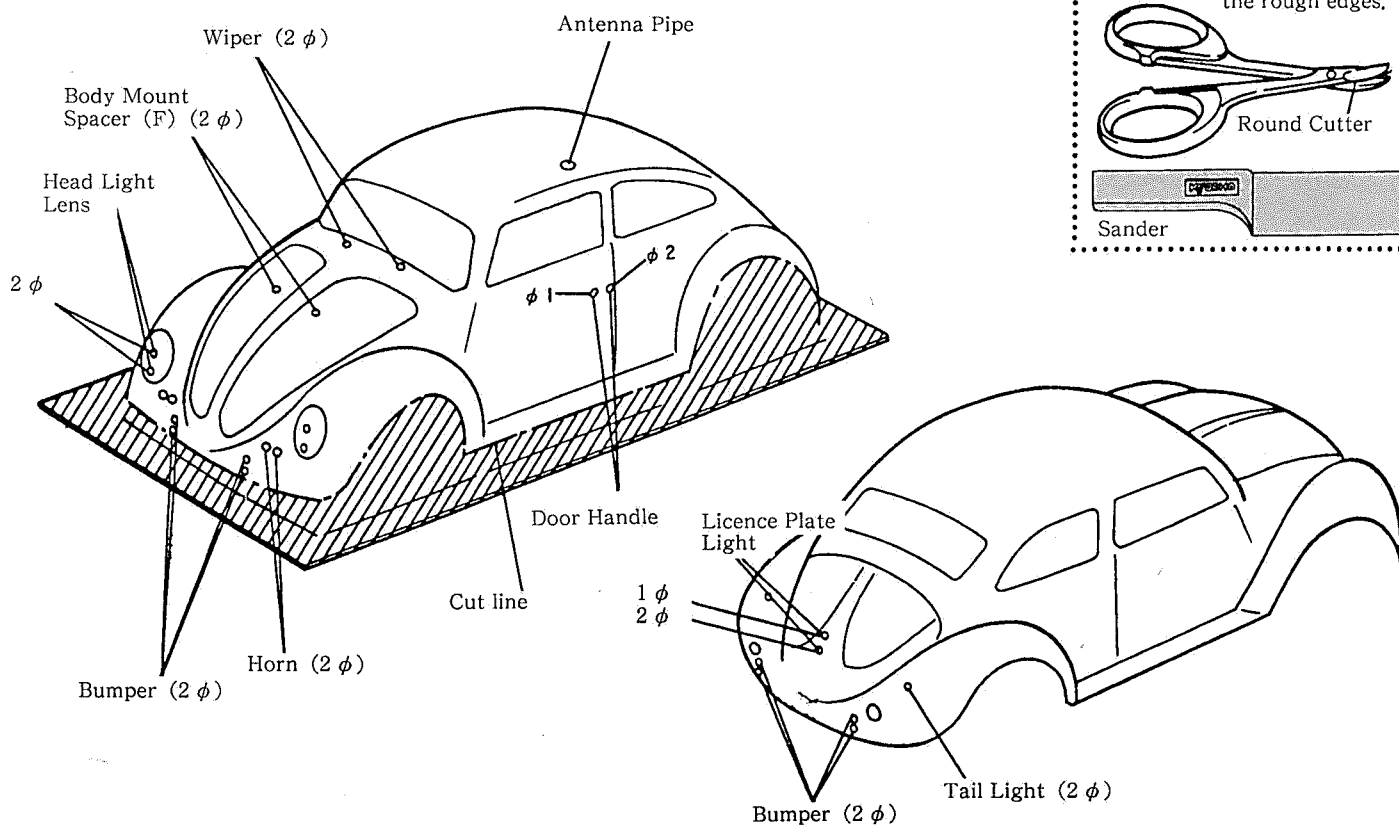


(11) CUTTING THE BODY

《 MINI COOPER 》



《 VW BEETLE 》

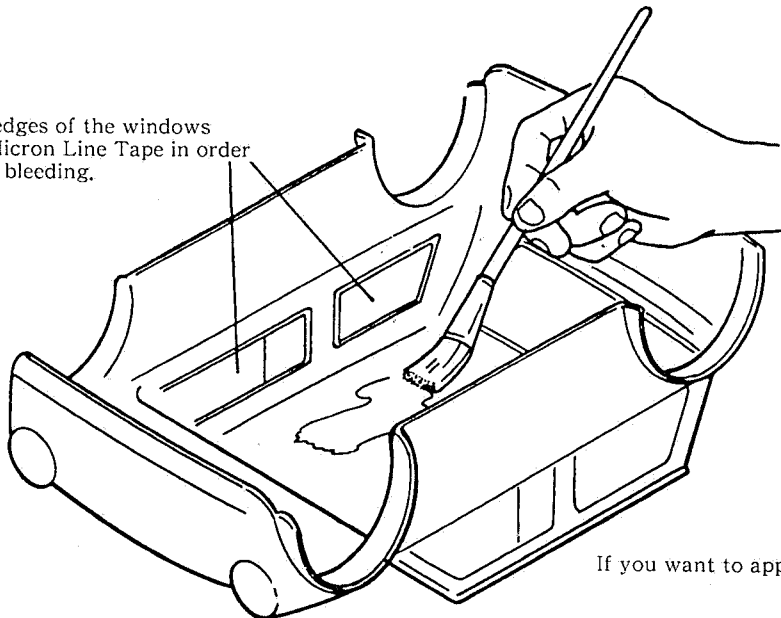


(12) PAINTING THE BODY

Follow steps ①~③.

- ① Wash the inside of the body with neutral detergent and dry it thoroughly.
- ② Use masking tape to protect the areas where you do not want paint to go—such as the windows. Rub the tape well to avoid the colour bleeding.
- ③ Apply the paint to the inside of the body. If you are using more than one colour, apply the darkest colours first.

Mask the edges of the windows with the Micron Line Tape in order to prevent bleeding.



Micron Line Tape

KYOSHO

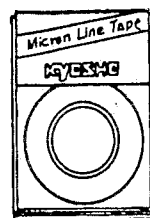
No.1841...1mm
No.1842...1.5mm
No.1843...2.5mm

Color: White, Red, Blue
Green, Yellow
Black

No.1859...0.4mm

No.1860...0.7mm

Color: Black



Polyca Color Paint

KYOSHO

No.2230

Color:
White, Red, Yellow, Blue
Sky Blue, Violet, Green
Orange, Black, F.Orange
F.Pink, Yellow Green
Calsonic Blue



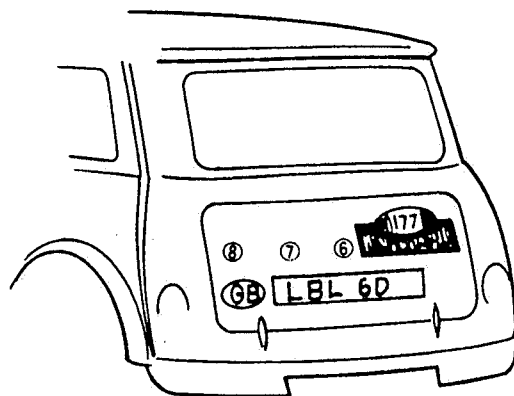
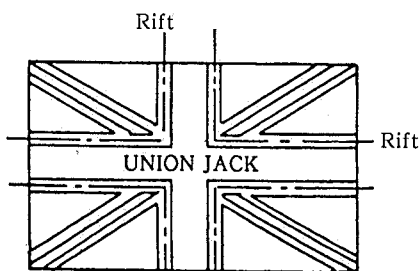
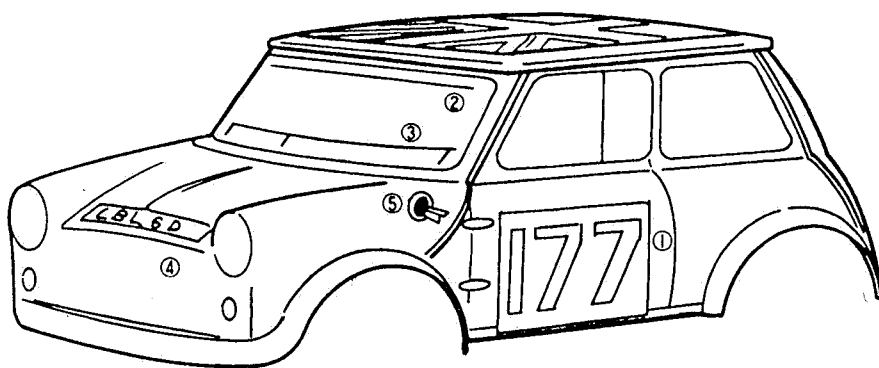
Polyca Color
Paint



If you want to apply the Union Jack Decal, paint the roof white.

(13) APPLYING THE DECALS

《 MINI COOPER 》



* When applying the Union Jack Decal, eliminate the creasing by cutting.

*** VW BEETLE ***

Apply the decals to your own preference.

(14) INSTALLATION OF ACCESSORIES

《 MINI COOPER 》

Stopper Ring ...20



M2x8 TP Screw ...2

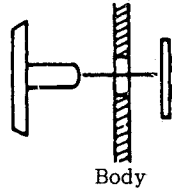


*Use a cyanoacrylate glue to fix accessories strongly.

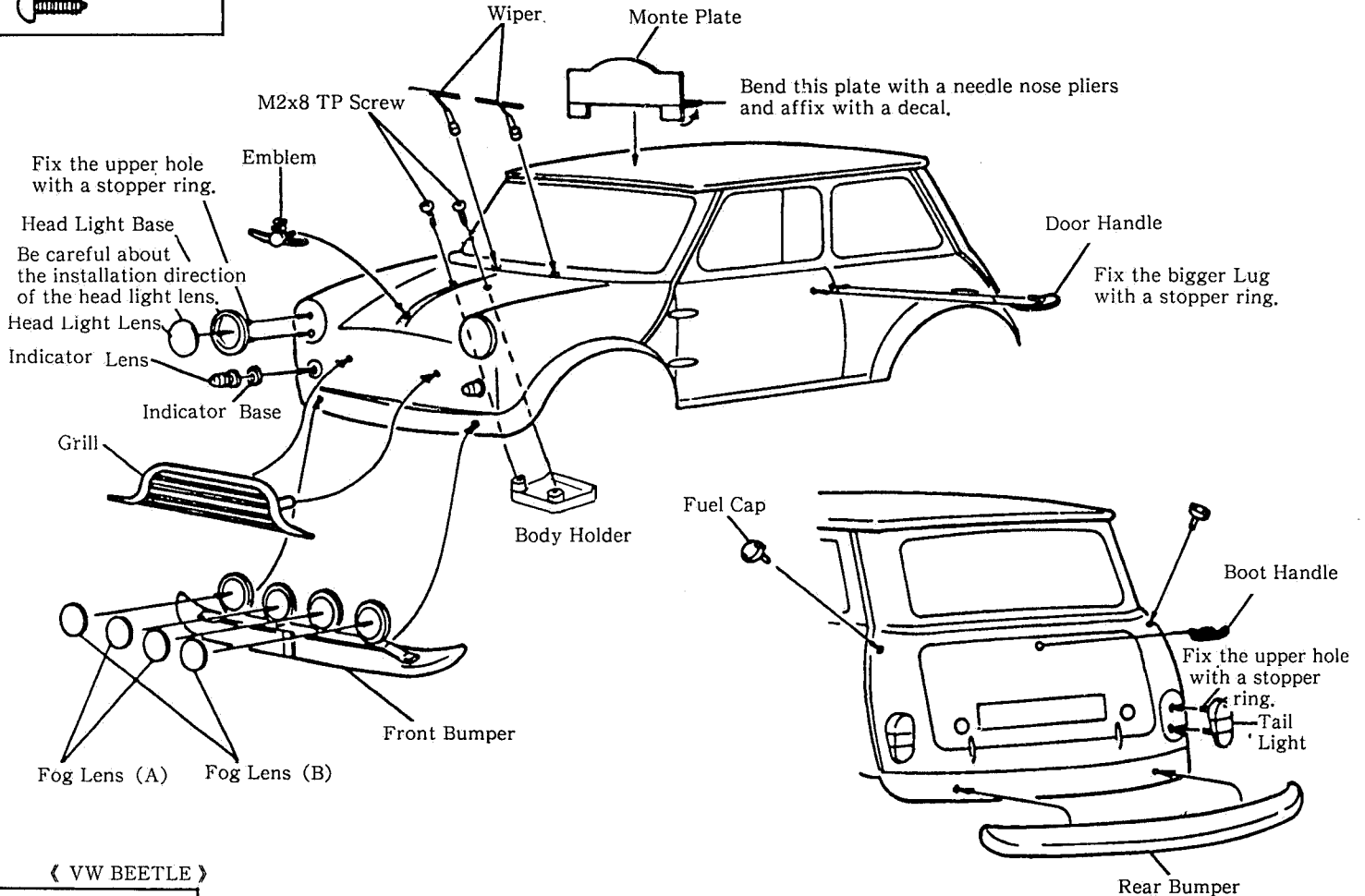
The correct direction of each lens, is shown below.



《 How to fix the stopper ring 》



Be careful to ensure that the flat side of the stopper ring is placed against the body.

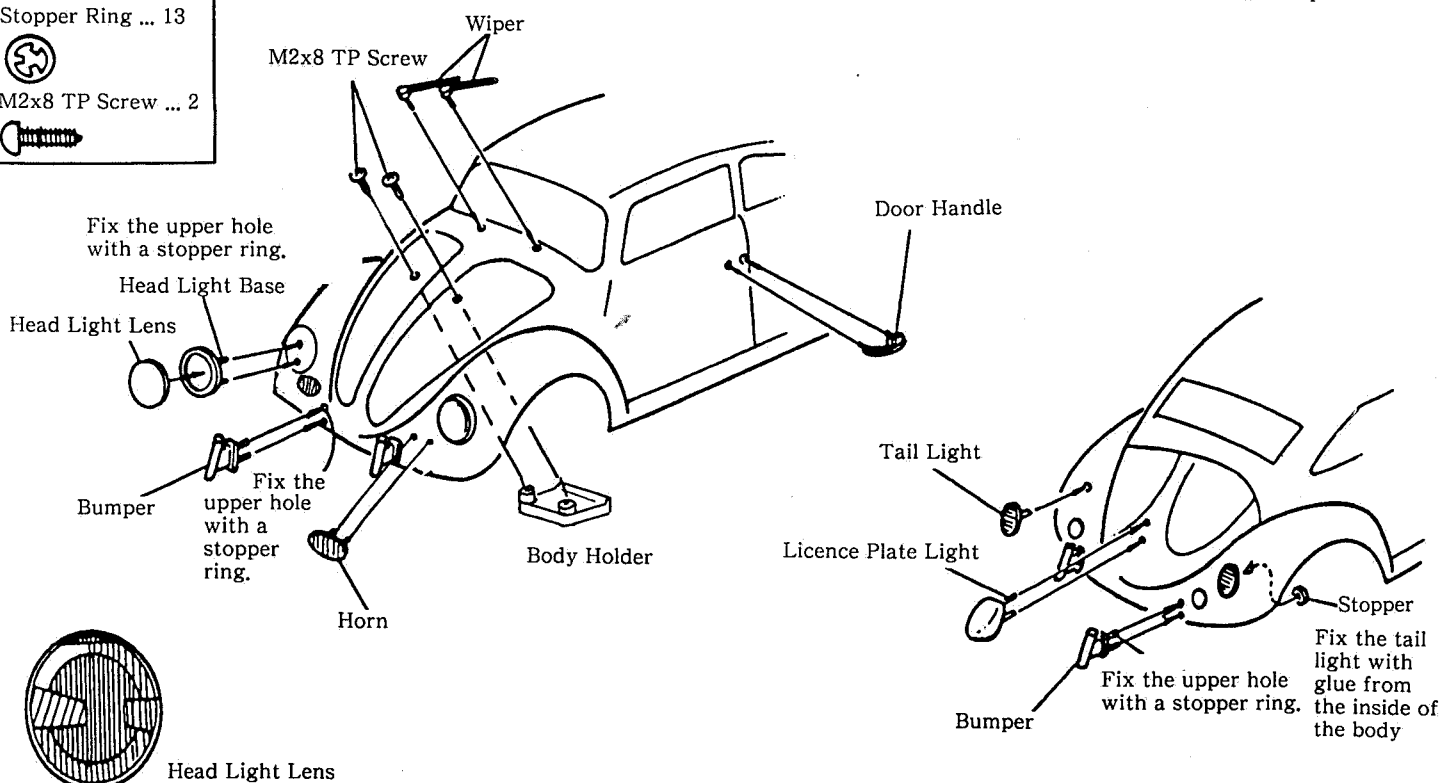


《 VW BEETLE 》

Stopper Ring ... 13



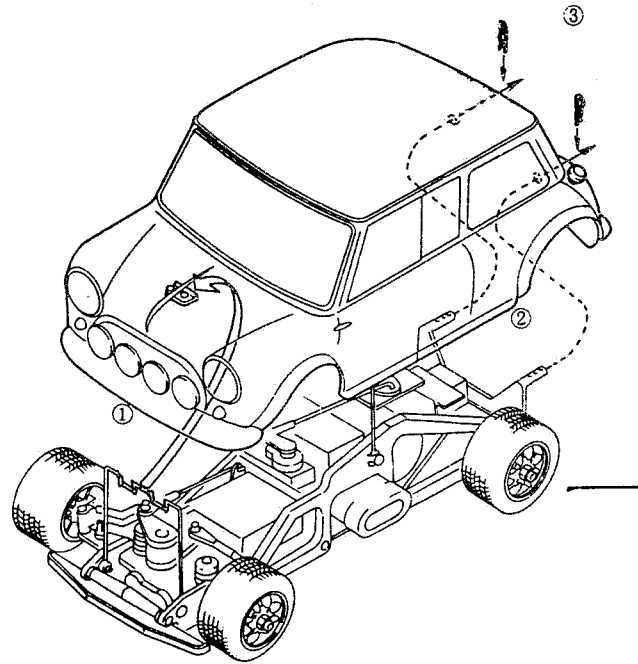
M2x8 TP Screw ... 2



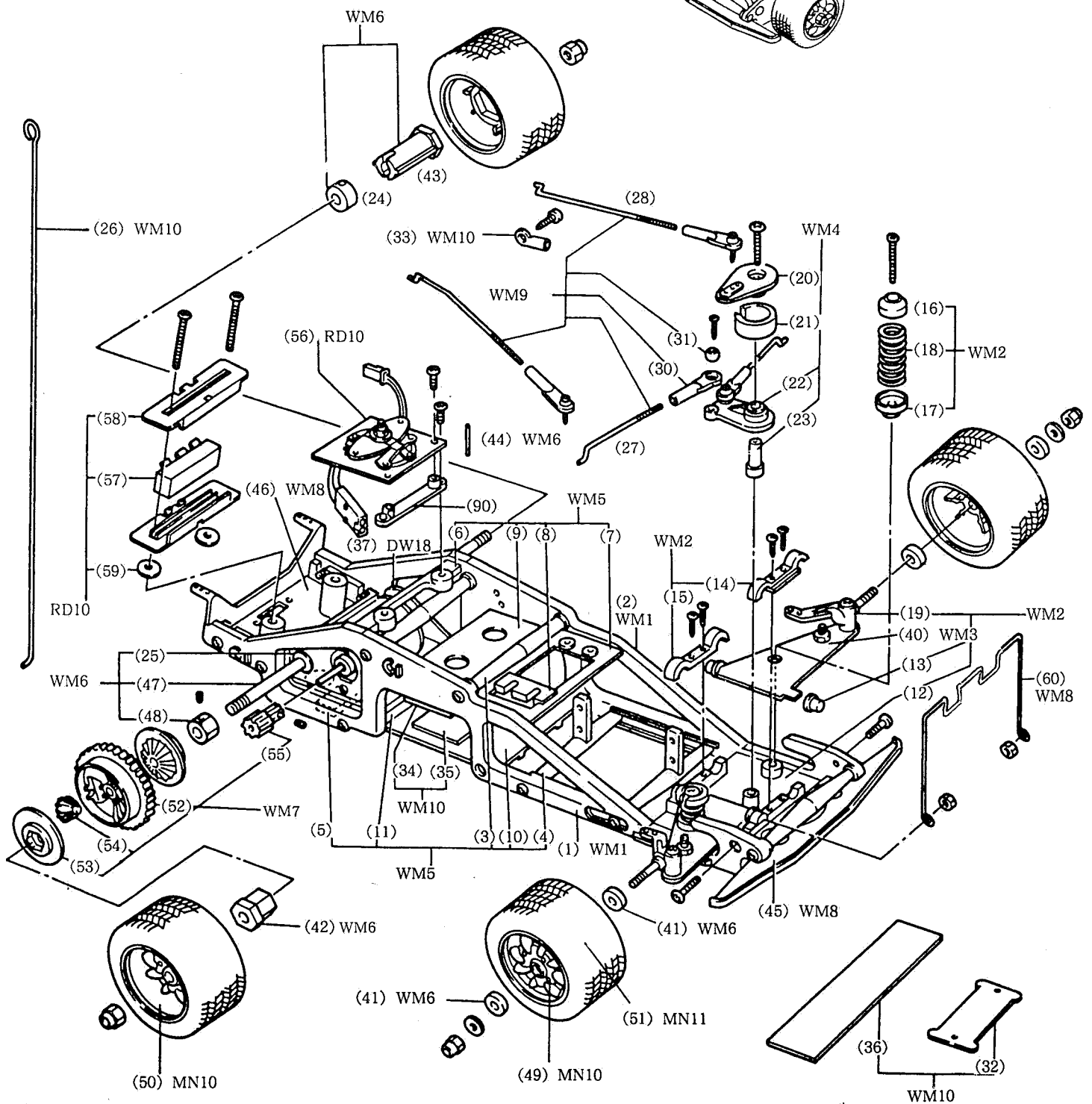
(15) MOUNTING THE BODY

Follow steps ①~③ in order.

- ① Slide the body onto the front mount.
- ② Slide the body onto the rear mounts.
- ③ Install the body pins.



《 EXPLODED VIEW 》



** PARTS LIST **

Key #	Parts Name	Q'ty
1	Frame (R)	1
2	Frame (L)	1
3	Joint	4
4	Steering Servo Mount	2
5	Rear Suspension Plate	1
6	Stay	2
7	Speed Control Servo Mount	1
8	Adjust Plate	1
9	Receiver Holder	1
10	Battery Hatch	1
11	Battery Hatch Hook	1
12	Front Chassis	1
13	Suspension Arm Bushing	4
14	Suspension Arm Holder (A)	1
15	Suspension Arm Holder (B)	1
16	Spring Holder (A)	2
17	Spring Holder (B)	2
18	Suspension Spring	2
19	Knuckle Arm	2
20	Servo Saver (A)	1
21	Servo Saver (B)	1
22	Servo Saver (C)	1
23	Servo Saver Spacer	1
24	Stopper	1
25	Metal Bushing	2
26	Antenna	1
27	Tie Rod	2
28	Steering Rod	1
29	Speed Control Rod	1
30	Ball Link	4

Key #	Parts Name	Q'ty
31	Linkage Ball	4
32	Antenna Bobbin	1
33	Lug Terminal	1
34	Battery Stopper (A)	1
35	Velcro (Hook & Loop)	1
36	Double Sided Tape	1
37	Motor Mount	1
38	Motor	1
39	Body Pin	5
40	Front Suspension Arm	2
41	Plastic Bushing	4
42	Rear Wheel Hub (R)	1
43	Rear Wheel Hub (L)	1
44	Wheel Hub Pin	1
45	Front Bumper	1
46	Rear Body Mount	1
47	Rear Axle Shaft	1
48	Differential Gear Stopper	1
49	Front Wheel	2
50	Rear Wheel	2
51	Tyre	
52	Spur Gear	
53	Differential Gear (A)	
54	Differential Gear (B)	
55	Pinion Gear	
56	Speed Controller	
57	Resistor	
58	Resistor Cover	
59	Bakelite Washer	
60	Front Body Mount	

Key #	Parts Name	Q'ty
61	Front Body Hook	1
62	Body ●	1
63	Decal ●	1
64	Grill ●	1
65	Front Bumper ●	1
66	Rear Bumper ●	1
67	Head Light Lens ●	2
68	Fog Light Lens (A) ●	2
69	Fog Light Lens (B) ●	2
70	Indicator Lens ●	2
71	Tail Light ●	2
72	Head Light Base ●	2
73	Indicator Base ●	2
74	Emblem ●	1
75	Wiper ●	2
76	Door Handle ●	2
77	Fuel Cap ●	2
78	Boot Handle ●	1
79	Body ◎	1
80	Decal ◎	1
81	Head Light Lens ◎	2
82	Tail Light ◎	2
83	Stopper ◎	2
84	Bumper ◎	4
85	Rear License Plate Light ◎	1
86	Door Handle ◎	2
87	Head Light Base ◎	2
88	Horn ◎	2
89	Wiper ◎	2
90	Resistor Bracket	1

● marked parts are used for Mini Cooper, ◎ marked parts are used for VW Beetle.

PURCHASABLE PARTS FOR YOUR KIT

No.	Parts Bag Name	Key No. & Q'ty	No.	Parts Bag Name	Key No. & Q'ty
WM 1	Frame Set	1, 2x1	VW 1	Body VW Beetle	
WM 2	Front Suspension Parts	12,14,15x1 16,17,18,19x2 13x4	VW 2	Decal VW Beetle	80x1
WM3	Front Suspension Arm	40x2	VW 3	Accessories VW Beetle	
WM 4	Servo Saver	20,21,22,23x1			
WM 5	Joint Servo Mount Set	5,7,8,9,10,11x1 4,6x2 3x4			
WM 6	Axle Set	24,42,43,44,47,48x1 25x2 41x4			
WM 7	Gear Set	52,55x1 53x2 54x3			
WM 8	Bumper Body Mount	45,46,60,61,90x1	SS27	5 φ Ball Bearing Set	2 pcs.
WM 9	Rod Set	28,29x1 27x2 30,31x4	1840	Double Sided Tape	
WM10	Antenna, Tape Set	26,32,33,34,35,36x1	1878	ScrewLockingCompound	
DW18	Motor Mount	37x1			
1889	Body Pin.	39x5			
MN10	Wheel Set	49,50x2			
MN11	Tyre Set	51x4			
RD10	Speed Controller	56,57x1 58,59x2			
MN19	Body Mini Cooper				
MN20	Decal Mini Cooper	63 x1			
MN21	Accessories Mini Cooper				

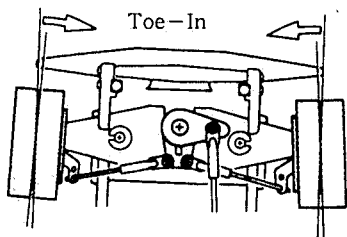
《 CHECK BEFORE RUNNING 》

Before running the car, check the following parts.

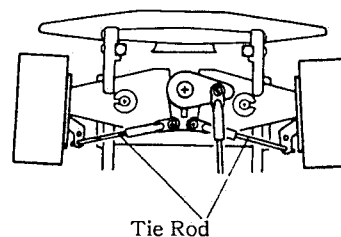
- ① Check to see that all screws and nuts are tightened properly.
- ② Check to see if the batteries for the radio system and the car are fully charged.
- ③ Check to see if the front wheels steer in proportionally to your control of the transmitter.
- ④ Check to see if the forward and reverse movement of the car responds properly to your control.
- ⑤ Check to see that all wiring is properly insulated with vinyl tape or heat shrink tubing.
- ⑥ Check to see that the rear wheels are free to turn.

《 ADJUSTMENT GUIDE 》

(Adjustment of Toe Angle)

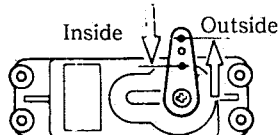


Adjust the amount of toe-in by changing the length of the tie rods (making the rods longer results in more toe-in.) Both rods should be the same length.



(Adjustment of Turning Radius)

Inside Hole ... The steering radius is decreased.
Outside Hole ... The turning radius is increased.



《 OPERATING PROCEDURE 》

- ① Install the batteries into the radio system transmitter. Make sure the speed controller in the car is in its neutral position. Install the NiCad battery pack.
- ② Turn the transmitter on.
- ③ Turn the receiver on.
- ④ It is important to always switch the transmitter on first then the receiver. When turning off the system, turn off the receiver first and then the transmitter.

《 MAINTENACE AFTER RUNNING 》

- ① Remove the NiCad battery.
- ② Clean any dust or dirt away from all the moving parts.
- ③ Tighten any loose screws and nuts.
- ④ Always keep the contacts on the speed controller clean. If the wiper become dirty, use a soft cloth and rubbing alcohol to clean them. In extreme cases you may have to use 240 grit sandpaper to gently polish them.

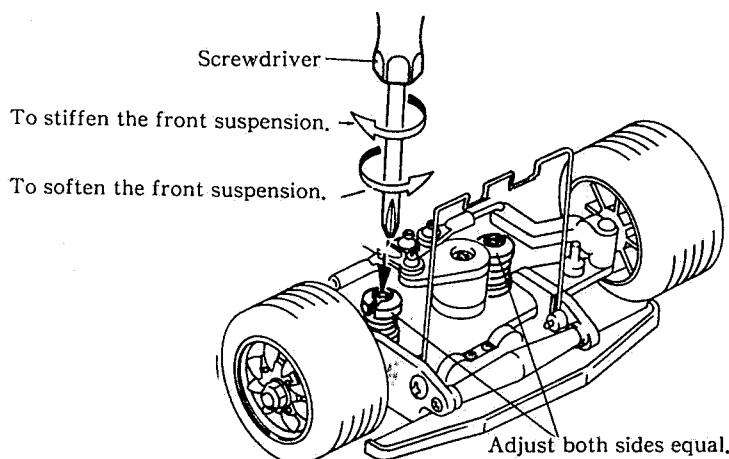
(Adjustment of Differential Gear)

The differential can be adjusted to be stiff or loose by turning the M4 nut on the right rear axle. Tightening the nut causes the differential to tighten resulting in more rear end "sliding" during cornering. Loosening the nut will make the differential "drive" the rear wheels through corners to a greater degree.

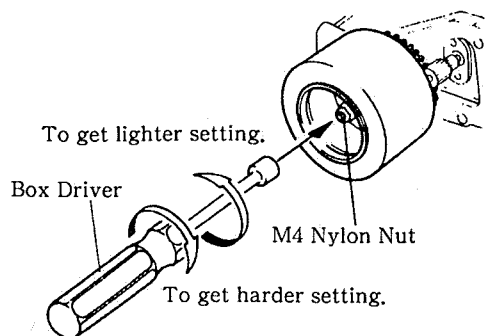
Note: Do not loosen the nut too much as the differential may run idle causing damage.

(Adjustment of the Front Suspension)

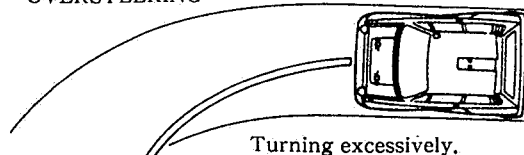
This model is designed so that you can adjust the stiffness of the front suspension. A stiff front suspension will usually result in oversteering where a looser setting may cause understeering.



If the steering is too sensitive, it may be that the steering radius is too great. The total "throw" can be increased (made more sensitive) by using the outermost hole of the steering servo arm. It can be decreased (made less sensitive) by using an inside hole.

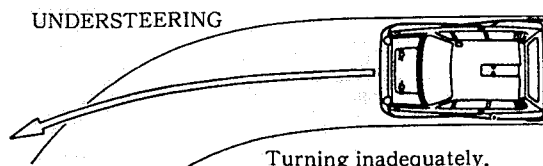


OVERSTEERING



Turning excessively.

UNDERSTEERING



Turning inadequately.