RADIO CONTROLLED ELECTRIC POWERED FF RACING CAR

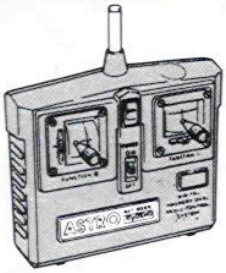
HONDA CR-X
PEUGEOT 205 turbo 16

1:12 SCALE

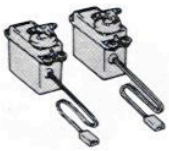
KYOSHO
THE FINEST RADIO CONTROL MODELS ®

2 CHANNEL RADIO SYSTEM

Transmitter

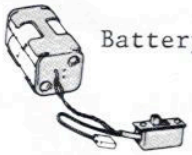


Servo

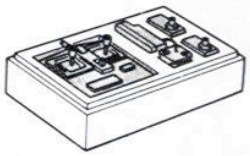


Receiver

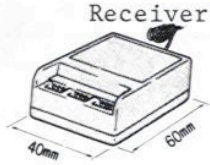
Battery Holder



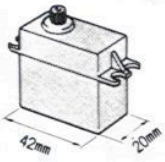
Switch



Receiver



Servo



THINGS NEEDED BESIDES THE KIT

(2 Channel Radio System)

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

Note: The dimensions shown are the maximum sizes which will fit.

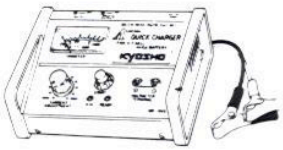
BATTERY PACK

7.2V Power Battery or 7.2V-1200mAh Racing Battery in similar shape to the one shown here is required. The Kyosho #2306 or #2218 are good choice.

CHARGER

You'll need a charger to charge your battery, Kyosho offer one type:

Model	Name	Time	Features
No. 1845	Lambda Quick Charger (DC12V)	20 min.	The best fully automatic operation. Easy to use, suitable for competition.

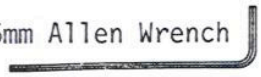


No. 1845
Lambda Quick Charger

REQUIRED TOOLS

These are included with the "Honda CR-X"

1.5mm Allen Wrench



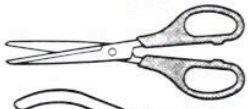
Silicon Grease

Screw locking compound

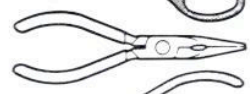
These are not included with the "Honda CR-X"

Phillips (L.M.S.) Screwdriver

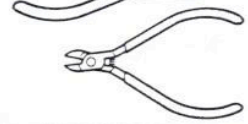
5.5mm & 7mm Box Driver



Scissors



Needle Nose Pliers



Wire Cutters

Awl

Sharp Hobby Knife

Pliers

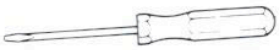
Cyanoacrylic adhesive (Crazy)

Polyca Paint

Micron Line Tape

Brush

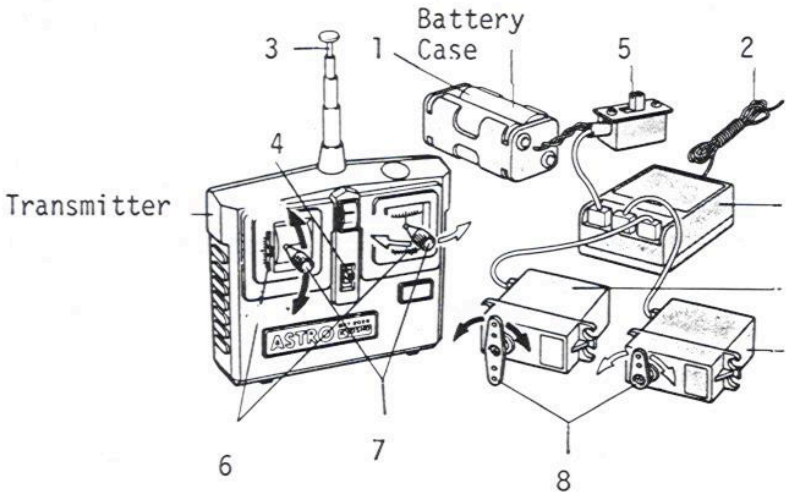
- Screwdriver (M)



HOW TO CHECK YOUR RADIO SYSTEM

Follow steps 1-8.

1. Install the batteries into both the transmitter and receiver. If your radio is a rechargeable system, charge it as outlined in the manual that came with your set.
2. Unravel the receiver antenna and plug the servo and battery connectors into the receiver.
3. Extend the transmitter antenna.
4. Turn On the power switch of the transmitter.
5. Turn On the power switch of the receiver.
6. Set the small trim levers to the center position and make sure that both main control sticks are also centered.
7. Move both main control sticks slowly through their full travel. The servo horns should move in proportion to the movement of your sticks.
8. When trim levers and sticks are at their neutral positions, the servo horns should be centered. You may now turn off the transmitter, then the receiver and unplug the servos and battery from the receiver.



*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.

A 2-channel radio control system is composed of a transmitter, receiver, two servos, and a battery holder (for the receiver).

*Transmitter ..... This is the part of the system that you hold in your hands to control the model. Information is sent to the receiver and servos via radios waves.

*Receiver ..... Receives the radio signals from the transmitter and sends them to the appropriate servo.

*Servos ..... It Can be thought of as the "muscle" of the system. They actually move the controls of the model. The receiver tells them which direction to move and how much.

*Antenna ..... The transmitter antenna broadcasts the radio signal. The receiver antenna (which is no more than a small wire tuned to a precise length) picks up the signals so that the receiver can decode them.

*Trim Levers ..... Adjust the neutral position of the servos from the transmitter. Trim levers provide fine tuning of the steering and speed control.

*Battery Meter ... Allows you to see the condition of your transmitter batteries.

*Servo Horn ..... A small arm or wheel on a servo that transfers the movement of the servo.

BEFORE ASSEMBLY

Please read through these instructions before assembly. Your thorough understanding of the assembly will enable you to build the kit without difficulty. Check the components in the kit prior to your startings the assembly. Any claims for replacements or refunds for the model in the process of assembly will not be accepted.

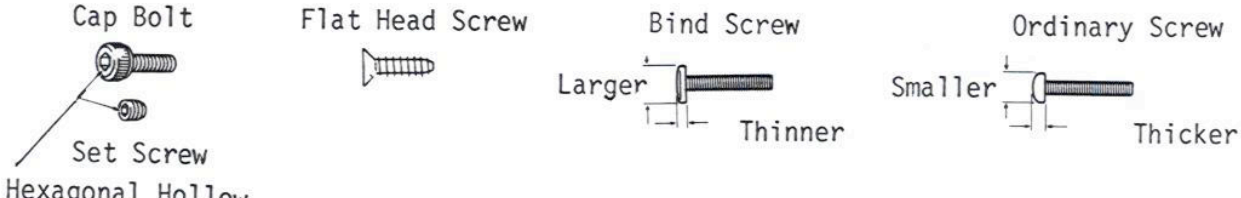
[Please understand the following points before assembly]

1. Places where grease and "locktire" should be applied;
   Apply some grease, which is included in the kit, to the spots indicated with mark GR, and "locktite" with LOCK.

2. Small Parts
   The small parts to be used such as screws, nuts, washers are illustrated in the actual size on the attached sheet "The List of Small Parts". Pick up the correct ones referring the size, shape, and the assembly number.

3. Some Hints when screwing in a self-tapping-screw, (hereinafter referred to as TP Screw).
   *This model uses a lot of plastic parts, and many TP screws will be used for assembling.
   *Do not use excessive force when tightening the self-tapping screws, or you may strip the thread in the plastic. It is recommended to stop tightening it when the threaded part on the screw goes into the plastic part and you feel some resistance from the tightening.

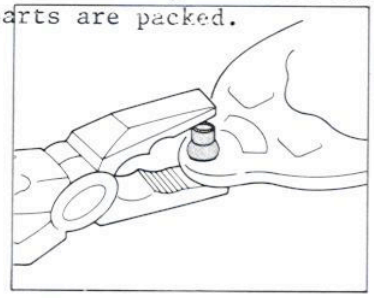
4. Shape of Screw
   *You can distinguish the ordinary screw form the self-tapping one by the shape of points and thread.



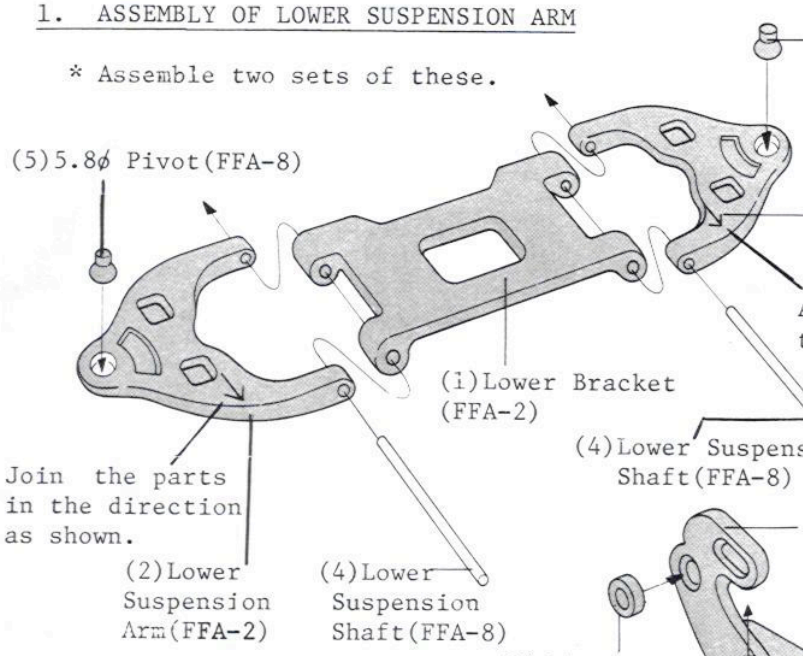
1. ASSEMBLY OF LOWER SUSPENSION ARM

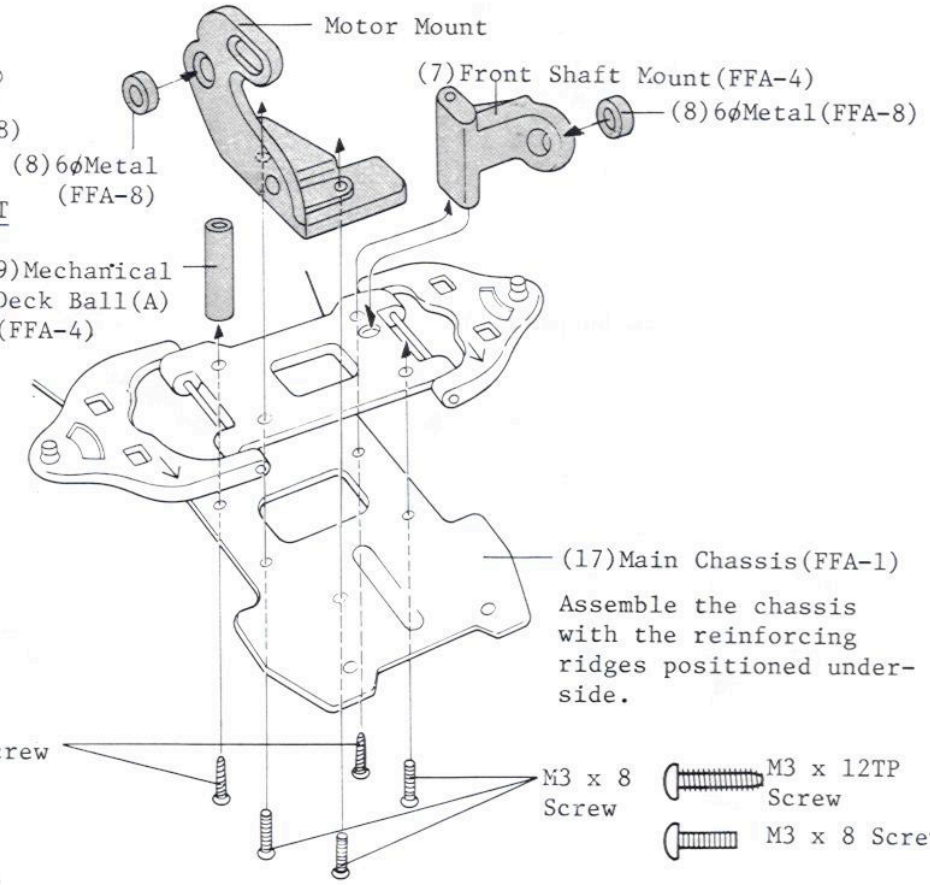
* Assemble two sets of these.

The letters and a number in the parenthesis indicate the number of bag in which the parts are packed.

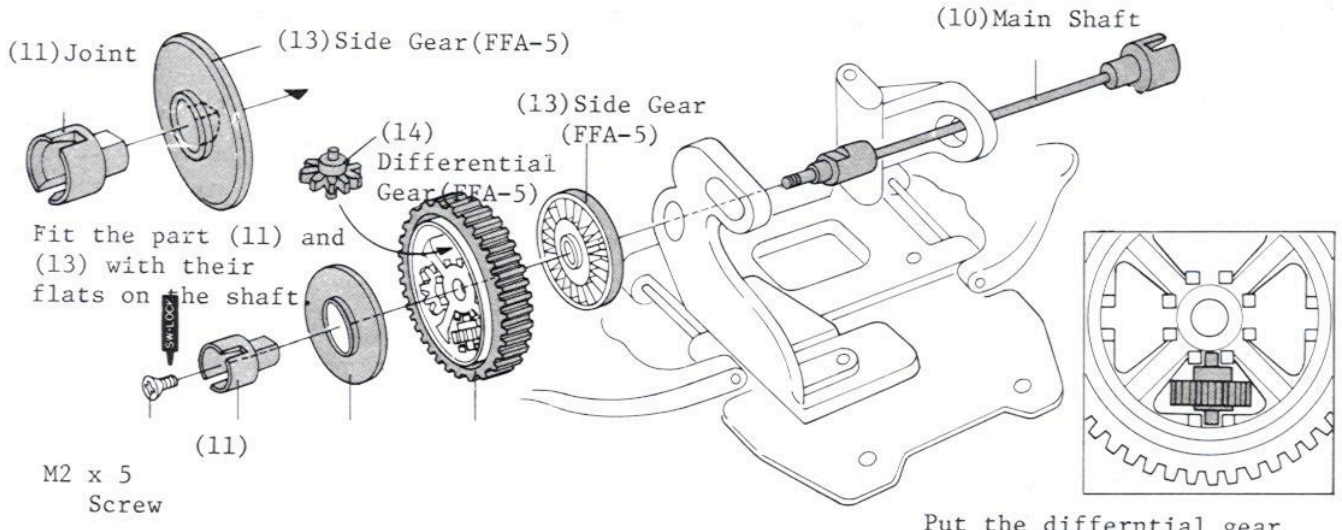


Press in the ball portion into the socket with pliers.

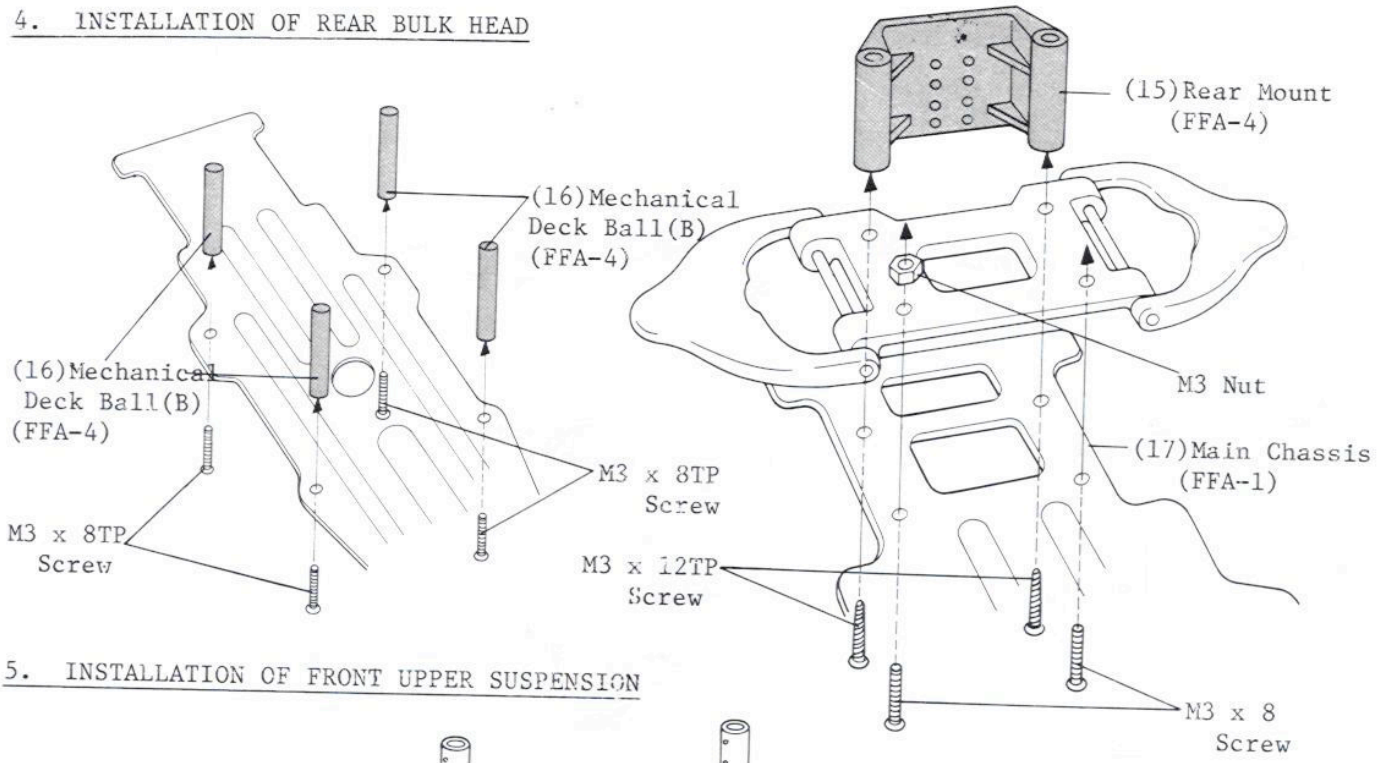




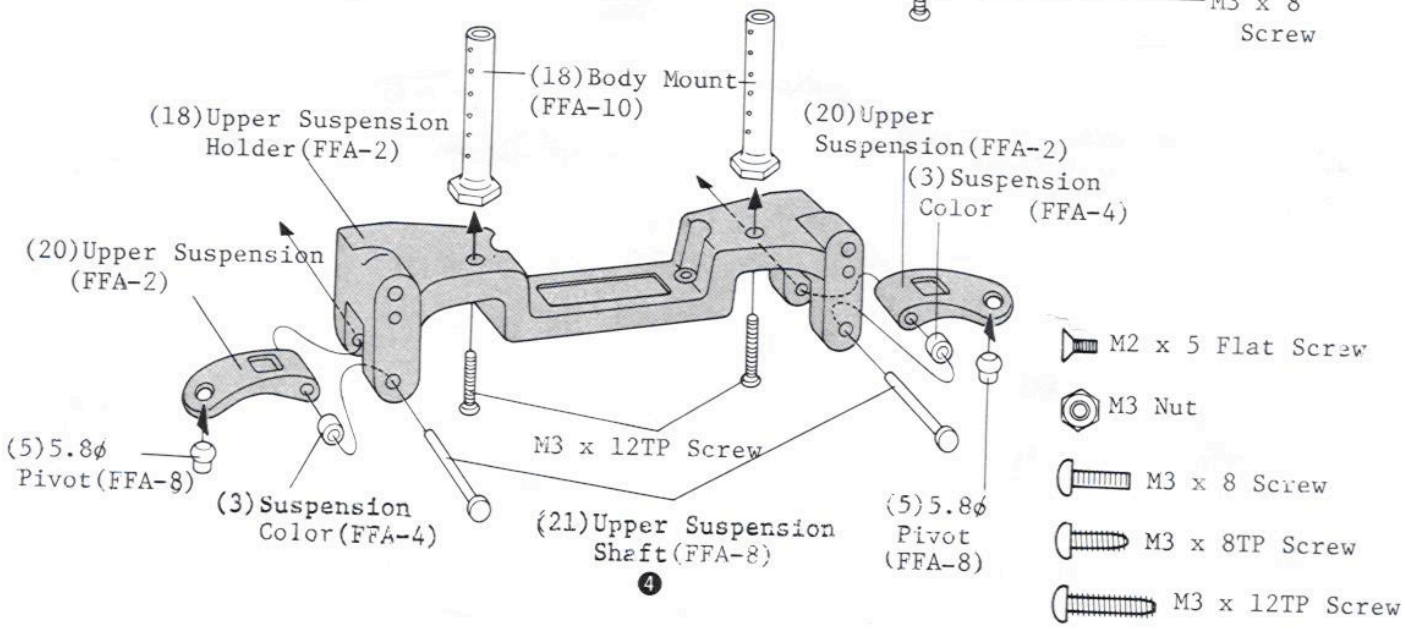
3. INSTALLATION OF DIFFERENTIAL GEAR



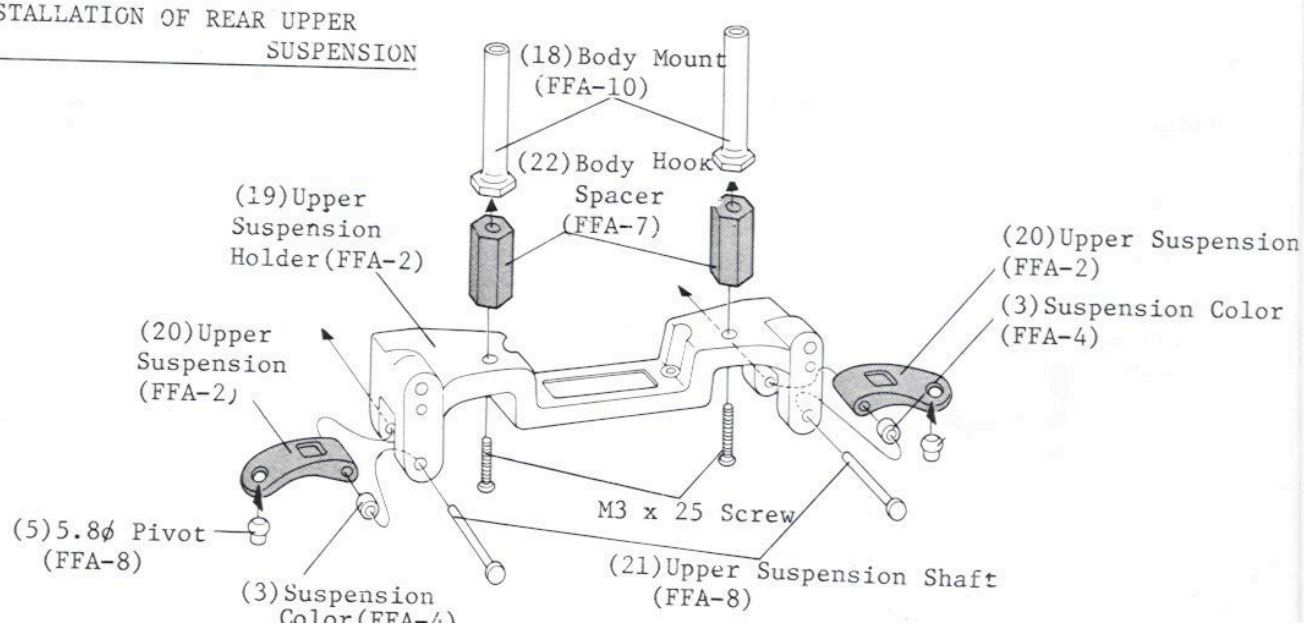
4. INSTALLATION OF REAR BULK HEAD



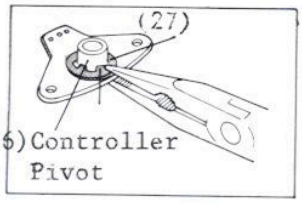
5. INSTALLATION OF FRONT UPPER SUSPENSION



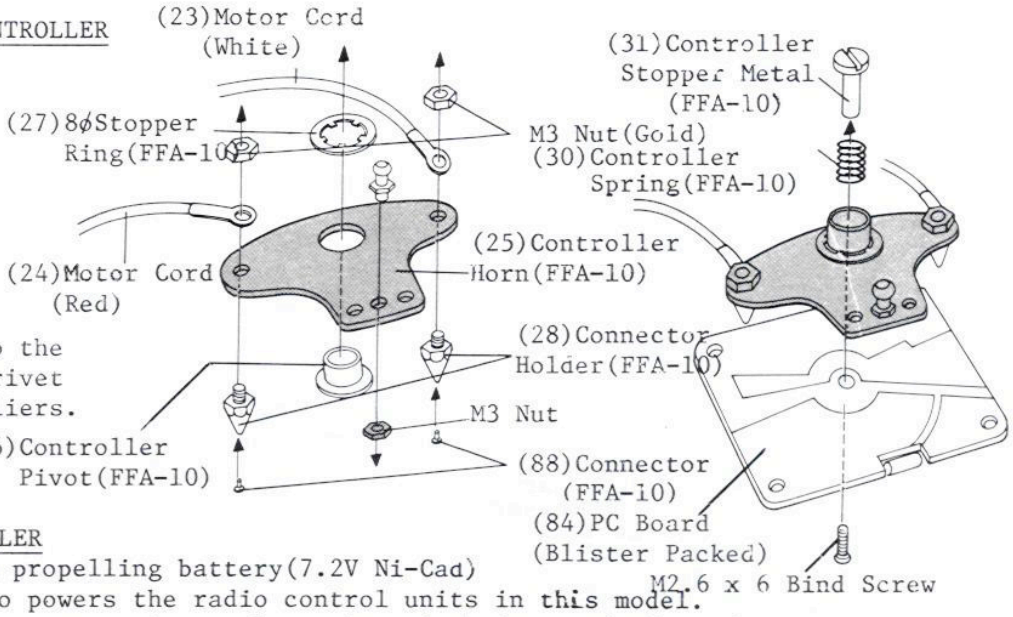
6. INSTALLATION OF REAR UPPER SUSPENSION



7. INSTALLATION OF CONTROLLER

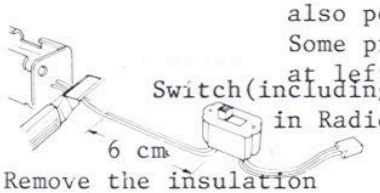


Press in the horn onto the controller pivot and rivet down the claws with pliers.

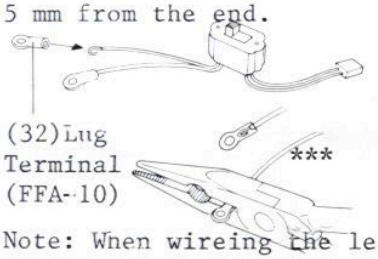


8. ASSEMBLY OF CONTROLLER

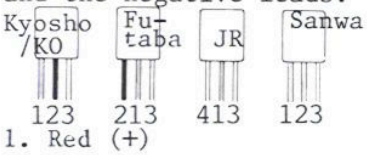
* The propelling battery(7.2V Ni-Cad) also powers the radio control units in this model. Some preparation work on the switch is required as shown in the drawing at left. * Those who use a BEC type radio, please see page 14.



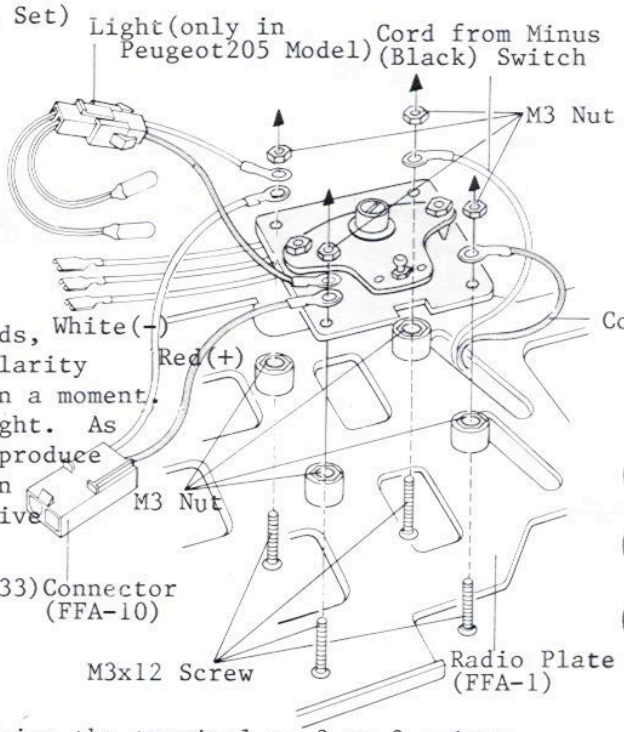
Remove the insulation 5 mm from the end.

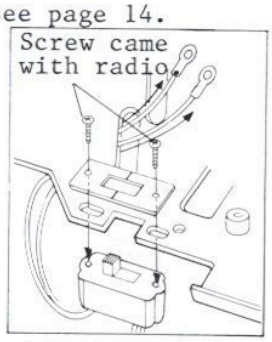


Note: When wireing the leads, erroneous connection of polarity may destroy the receiver in a moment. Refer to the diagram at right. As shown below, radio makers produce their radios with their own color system for the positive and the negative leads.

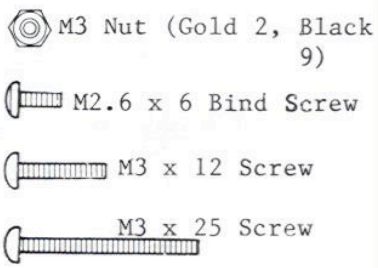


1. Red (+)
2. Black (-)
3. Not used
4. Brown (-)



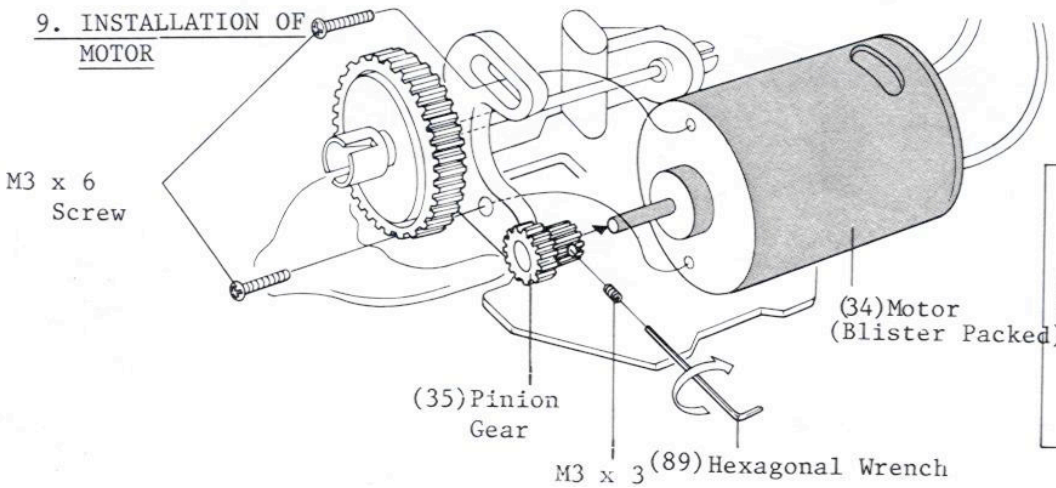


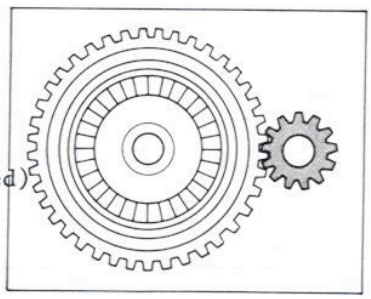
Cord from Plus(Red) Switch



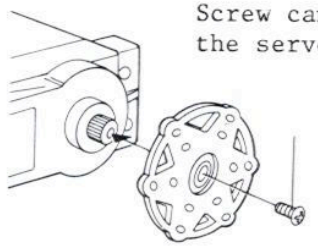
*** Crimp the terminal on 2 or 3 points with the cutting blades of pliers.

9. INSTALLATION OF MOTOR

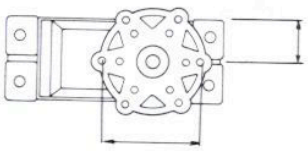




10. INSTALLATION OF SERVO HORN



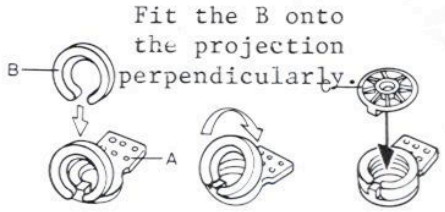
Screw came with the servo



Use a servo disc which has holes 13 mm to 16 mm apart to each other.

Adjust it in such a way that, when the servo is kept in neutral, an imaginary line drawn on the holes on the servo horn should be parallel to the edge of servo.

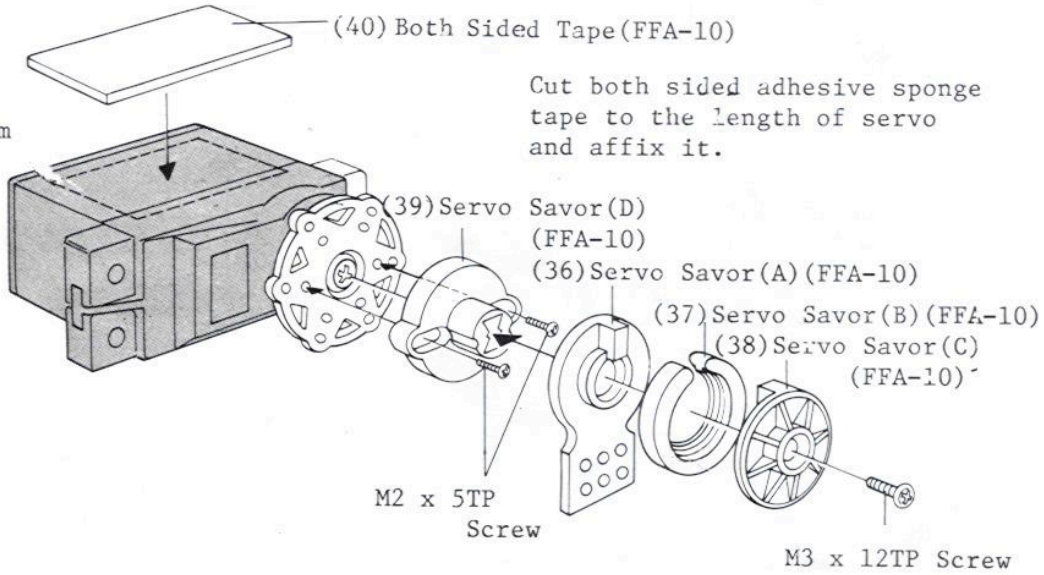
Assembling Way of Servo Savor



Fit the B onto the projection perpendicularly.

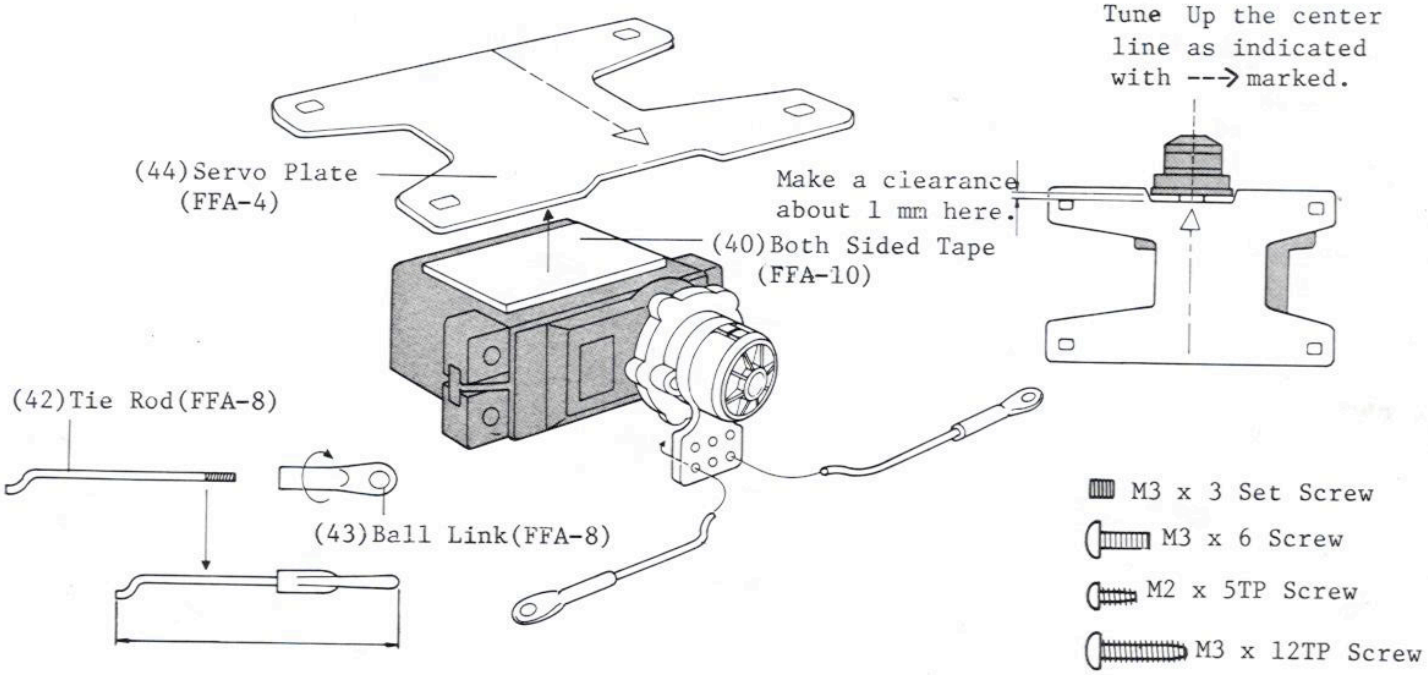
Put the C Cover it.

Lay the B down with consideration of not dislocating from the projection.



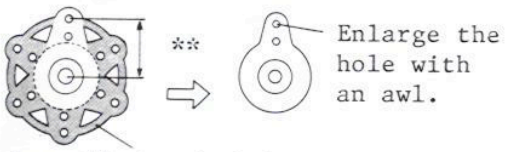
Cut both sided adhesive sponge tape to the length of servo and affix it.

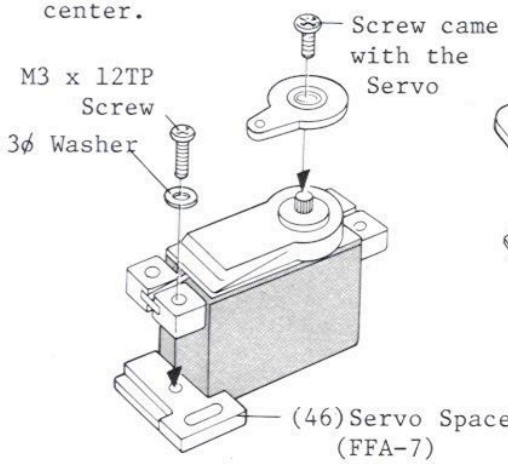
11. INSTALLATION OF TIE ROD

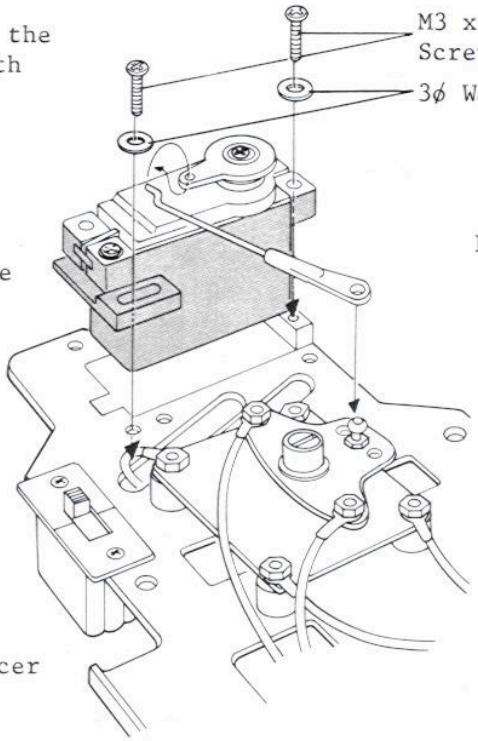


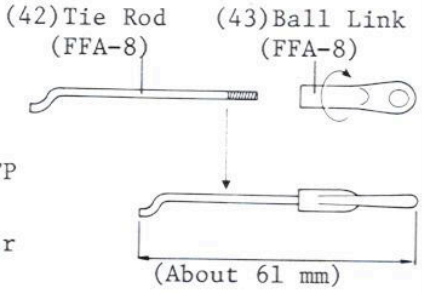
12. INSTALLATAION OF CONTROLLER SERVO

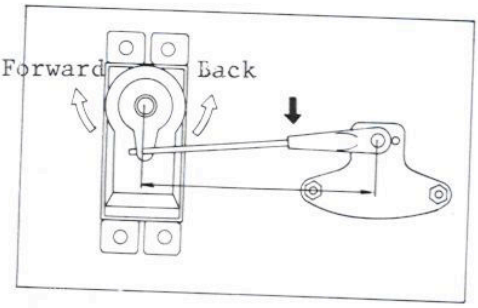
Preparation of Servo Horn





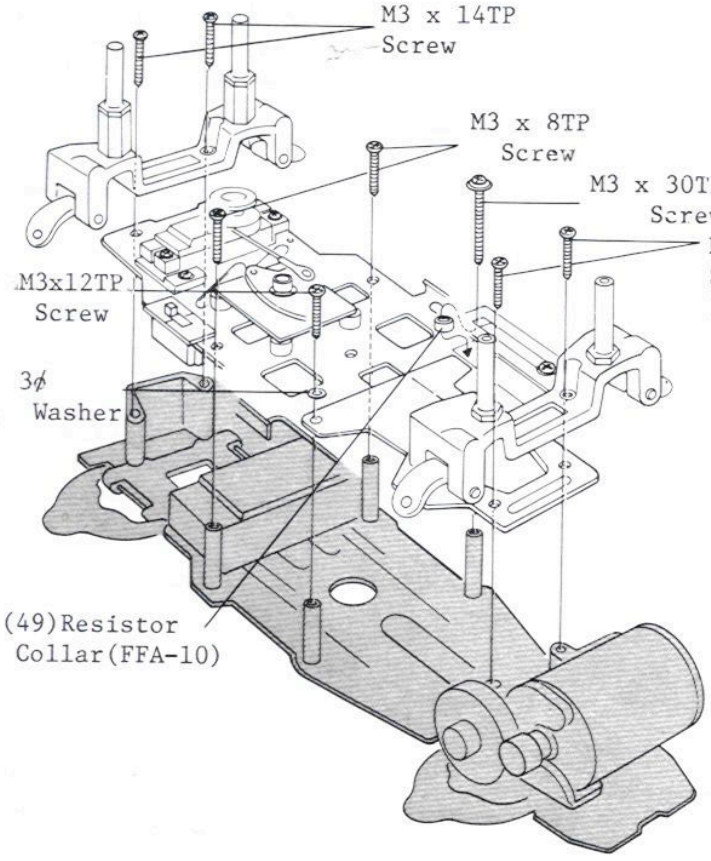




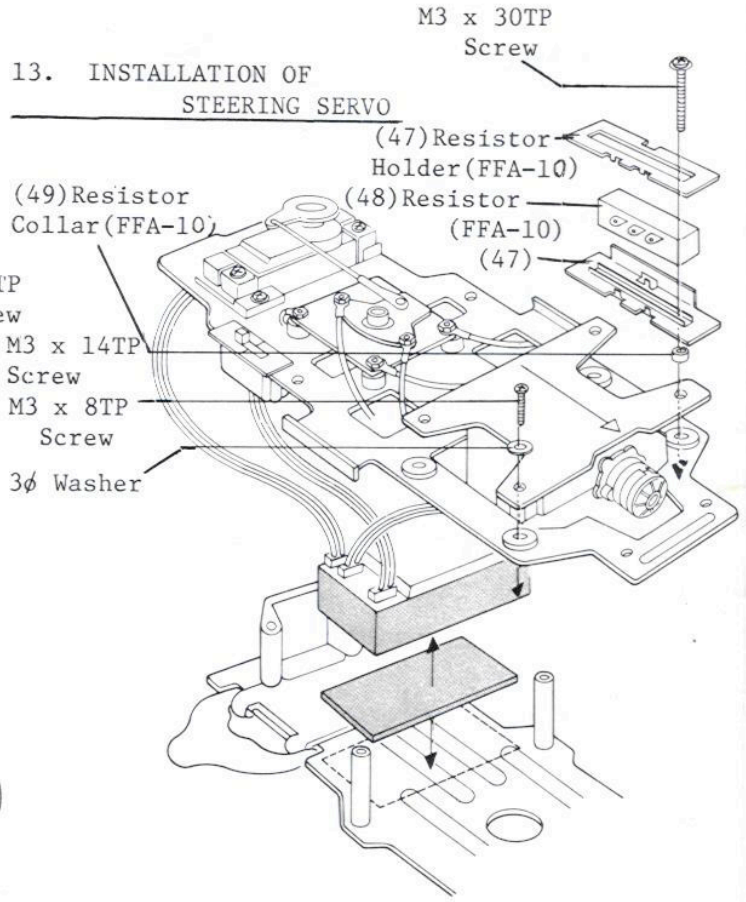


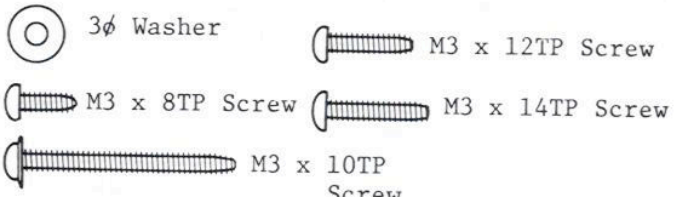
Adjust the length marked with → so that the lines drawn in the illustration will be parallel each other.

14. INSTALLATION OF MECHANICAL DECK

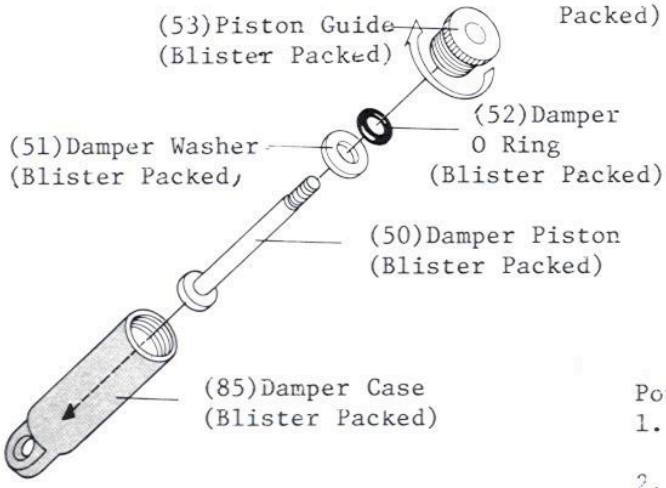


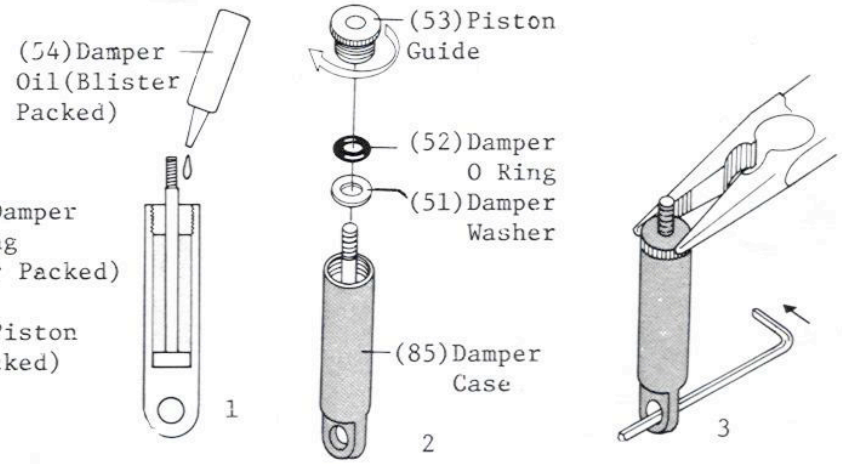
13. INSTALLATION OF STEERING SERVO





15. ASSEMBLY OF DAMPER

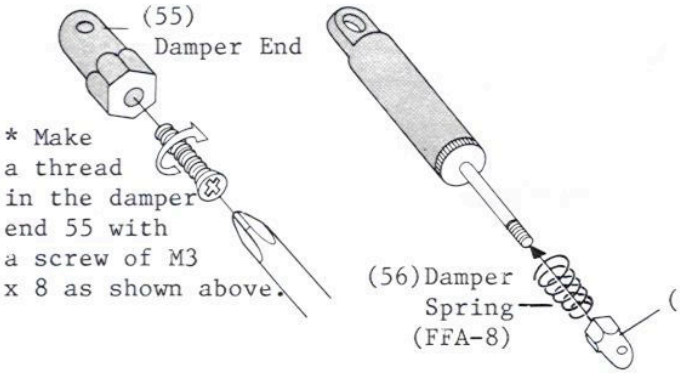


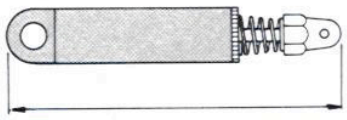


Pouring Oil

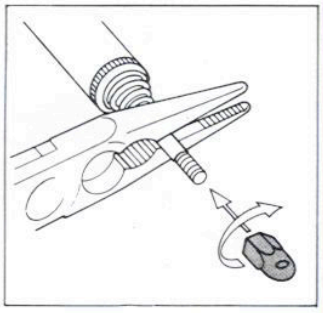
1. Push down the piston to the bottom and pour oil to the point as shown.
2. Set the parts in order as shown.
3. Completed.

16. INSTALLATION OF DAMPER END



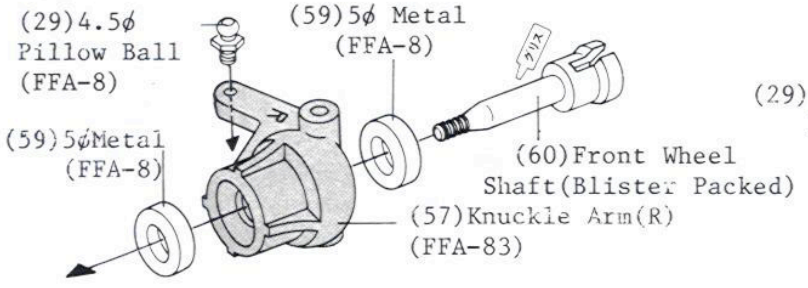


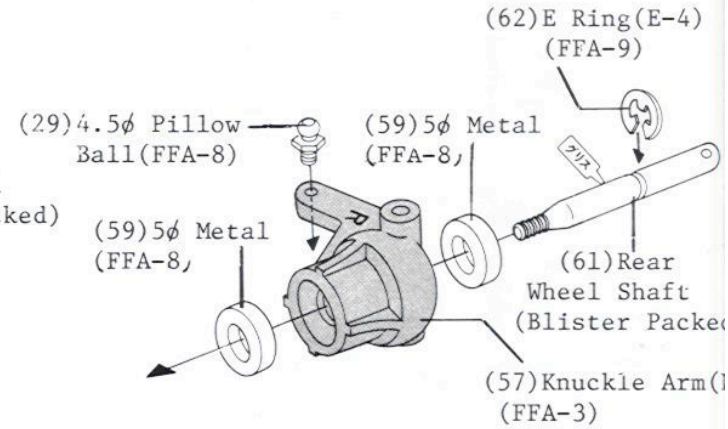
Adjust the length of the damper 50 mm for the front ones and 52 mm for the rear by varying the amount of tightening the damper end. Assemble two each of differently sized ones.

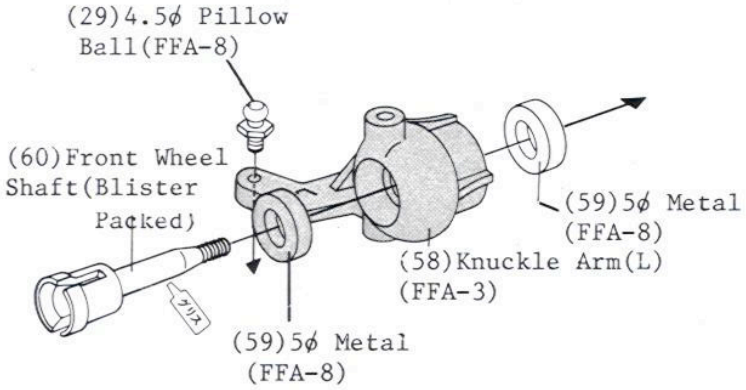


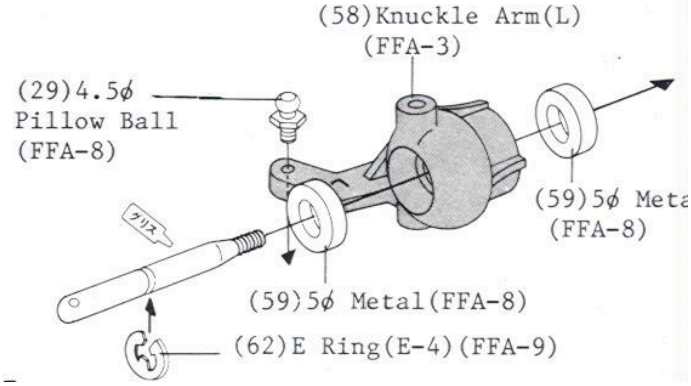
Compress the spring with pliers as shown and screw in the damper end.

17. INSTALLATION OF WHEEL SHAFT

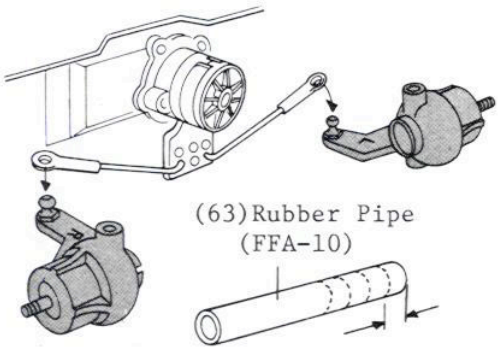






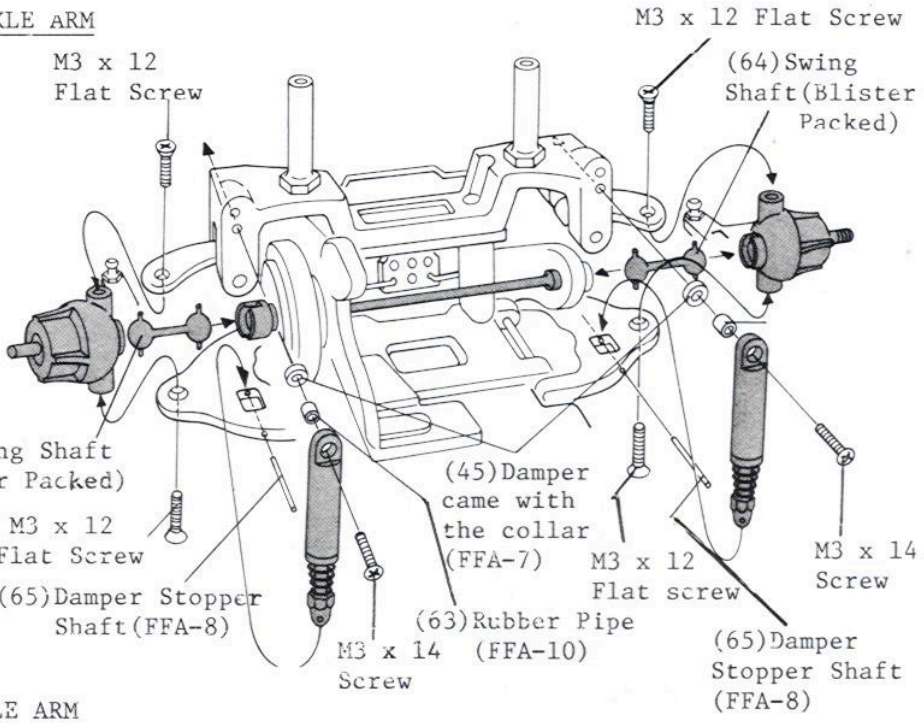


18. INSTALLATION OF FRONT KNUCKLE ARM

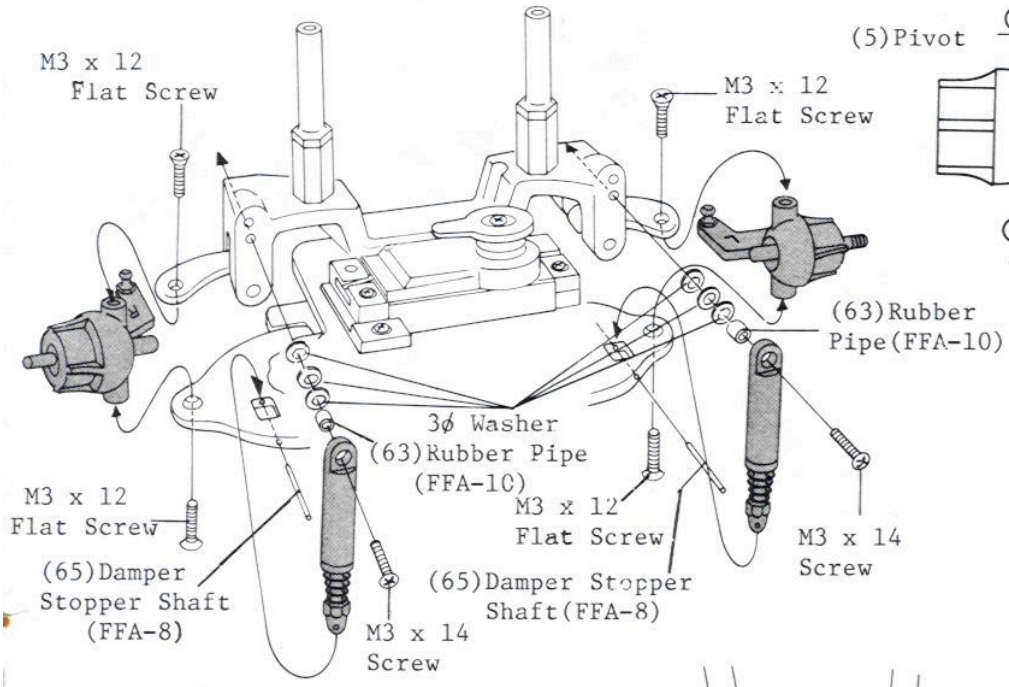


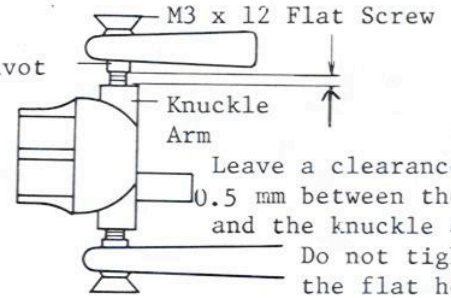
(63)Rubber Pipe (FFA-10)

Cut off four pieces of rubber pipe to the length of 6 mm.



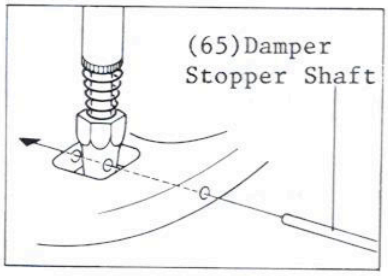
19. INSTALLATION OF REAR KNUCKLE ARM



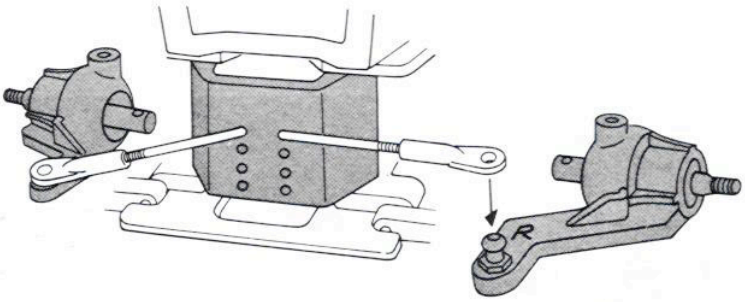


Leave a clearance of 0.5 mm between the pivot and the knuckle arm.

Do not tighten the flat headed M3 x 12 screw excessively.

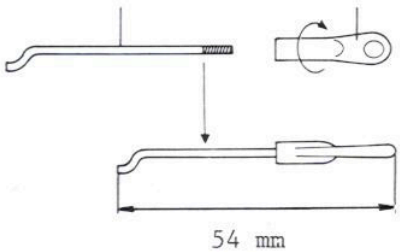


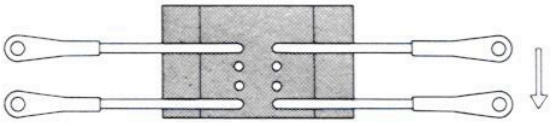
20. INSTALLATION OF REAR TIE RODS

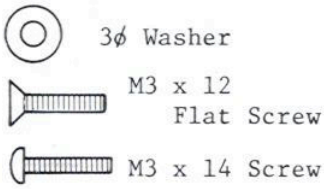


(42)Rear Tie Rod(FFA-8)

(43)Ball Link (FFA-8)

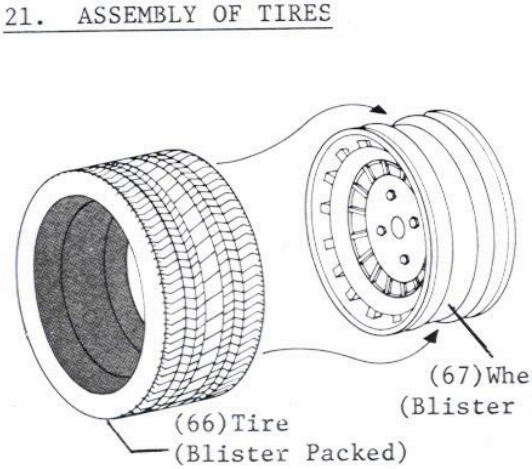


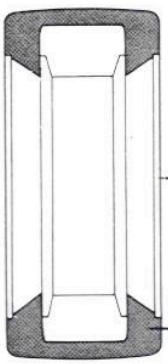




By installing the tie rods at upper position, the model will have under steering trait; reversely at lower position, over steering tendancy.

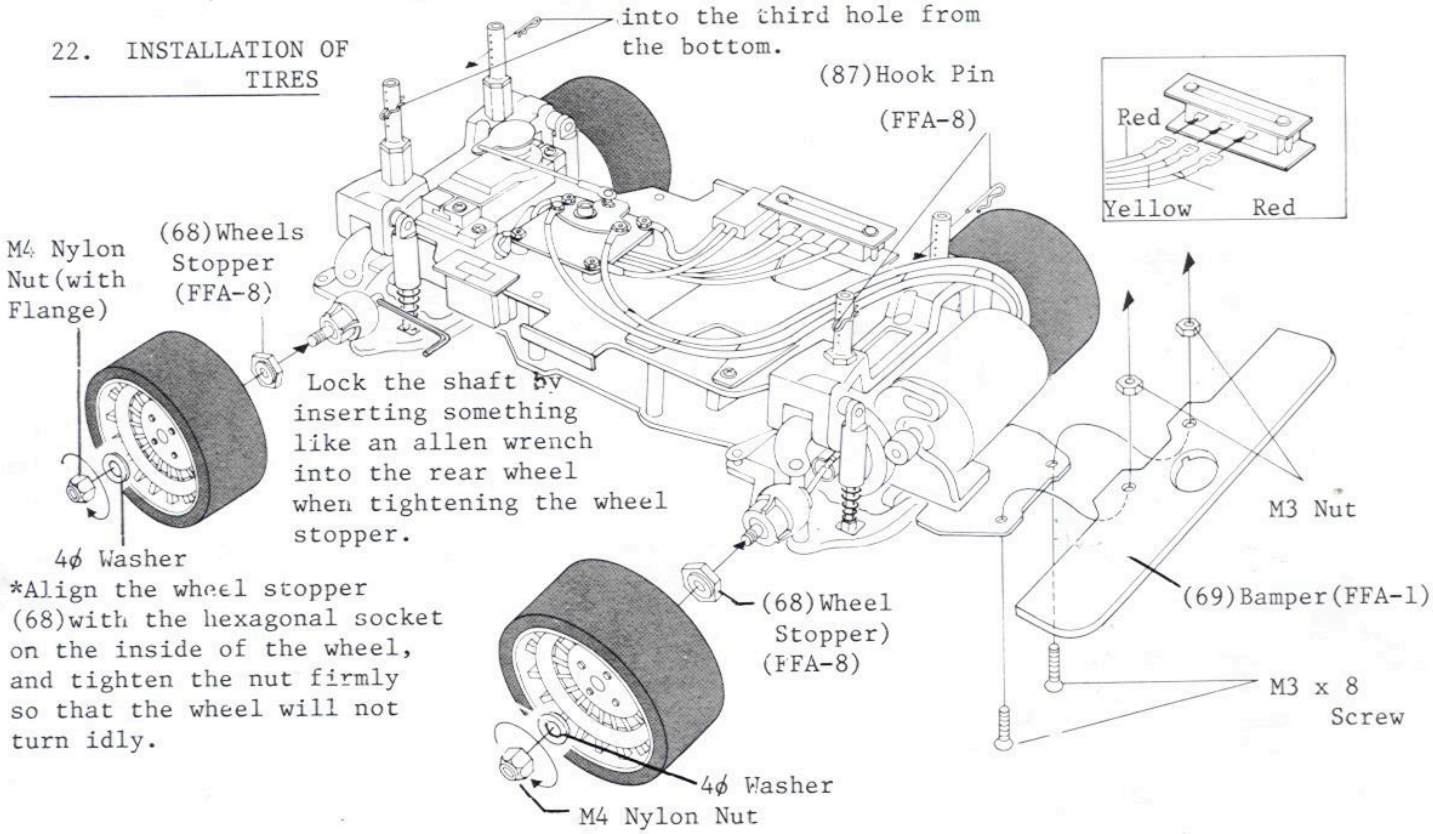
21. ASSEMBLY OF TIRES



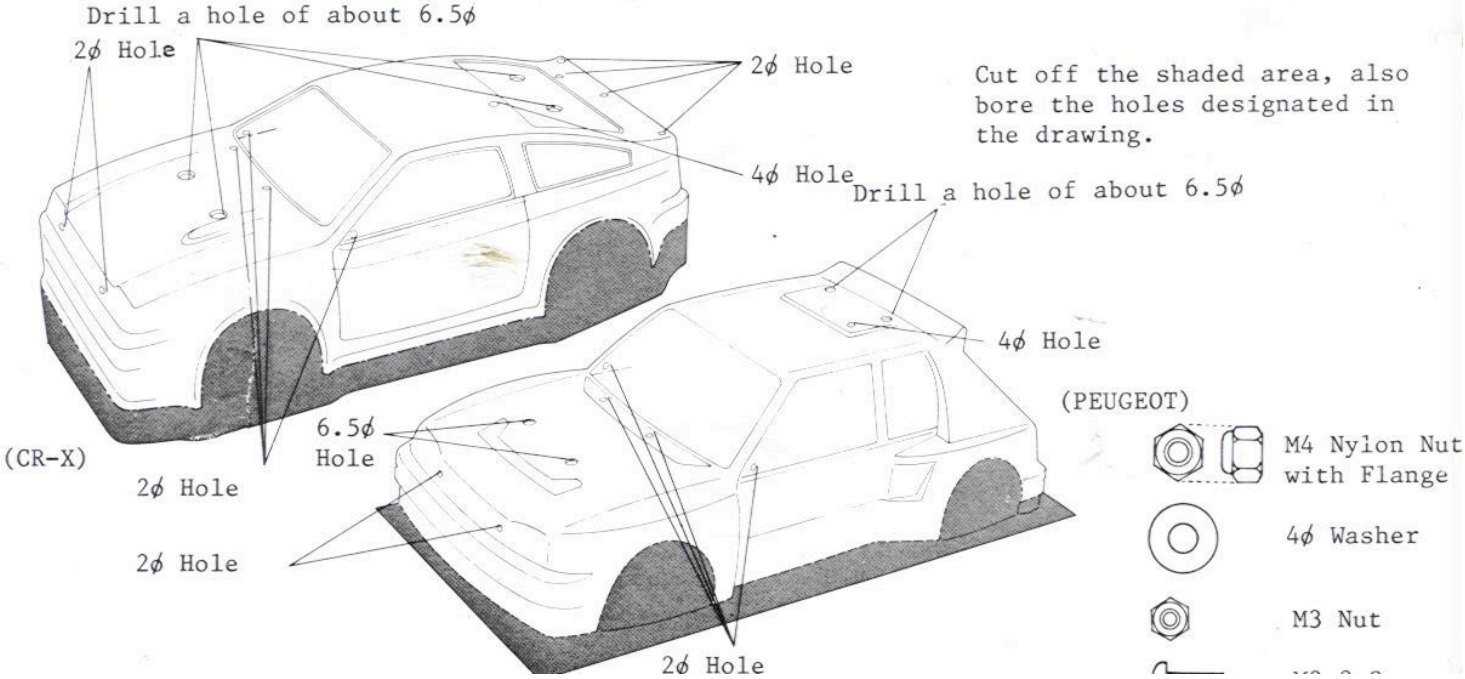


Cement the tire to the wheel with cyanoacrylate adhesive.

22. INSTALLATION OF TIRES



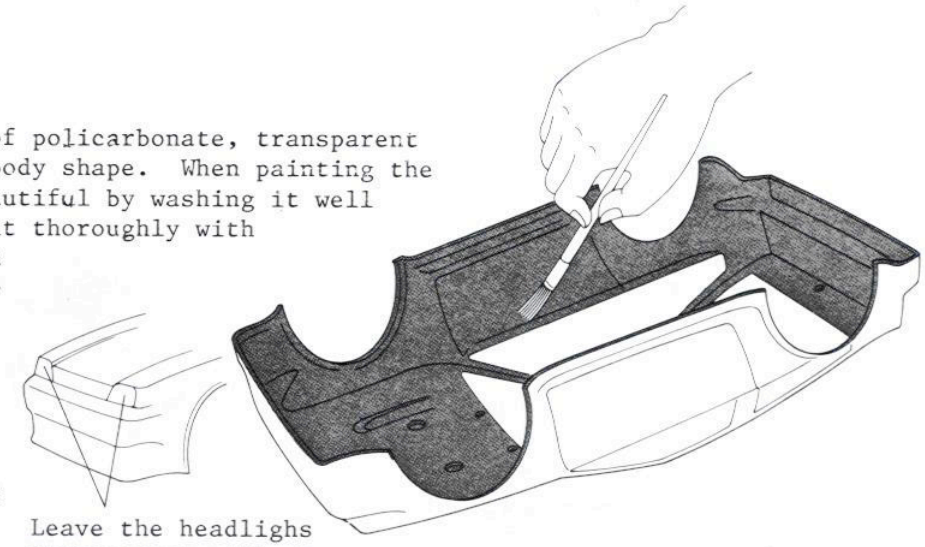
23. PROCESSING ON BODY



Cut off the shaded area, also bore the holes designated in the drawing.

24. PAINTING OF BODY

The body of this model is made of policarbonate, transparent plastic resin, formed into the body shape. When painting the body, you can finish it more beautiful by washing it well with neutral detergent, drying it thoroughly with care not to put any fat or stain on the surface, and painting inside the body. When finishing it in one color, two or three coats of the color all over the inside are enough. When you would apply some color scheme, use masking tape such as the Micron Tape to separate areas of different color, and apply the darkest color first, and lastly the lightest color all over.



Leave the headlighs transparent without painting them.

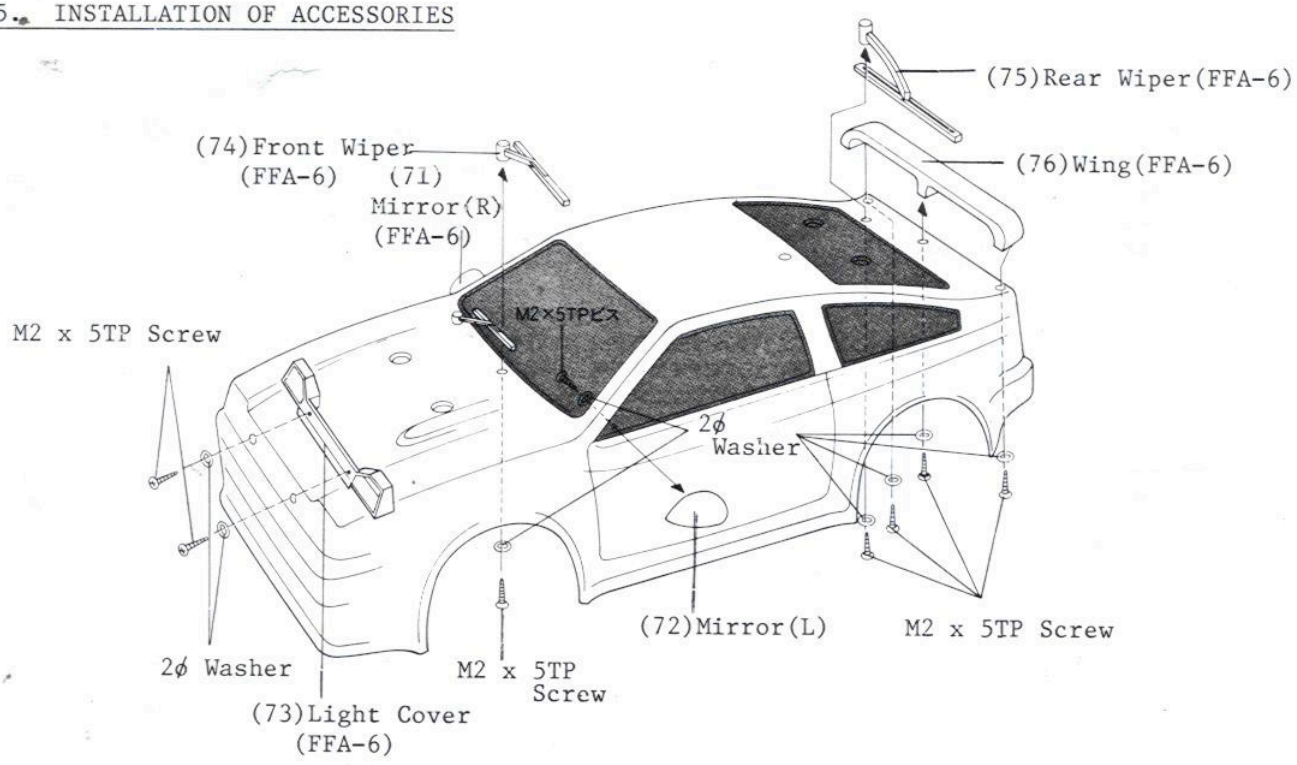
KYOSHO

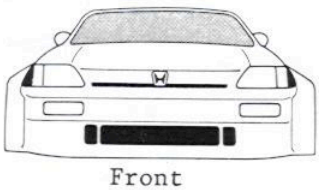
The Micron Line Tape can be used as masking tape and as a material to drawn patterns. They are available in 6 different colors and 3 widths.

KYOSHO

The Polyca Colors are paints composed exclusively for painting polycarbonate resin. It is very easy to use. There are 12 different colors.

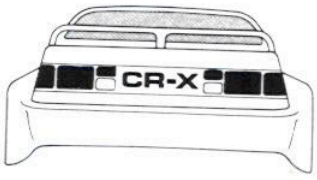
25. INSTALLATION OF ACCESSORIES





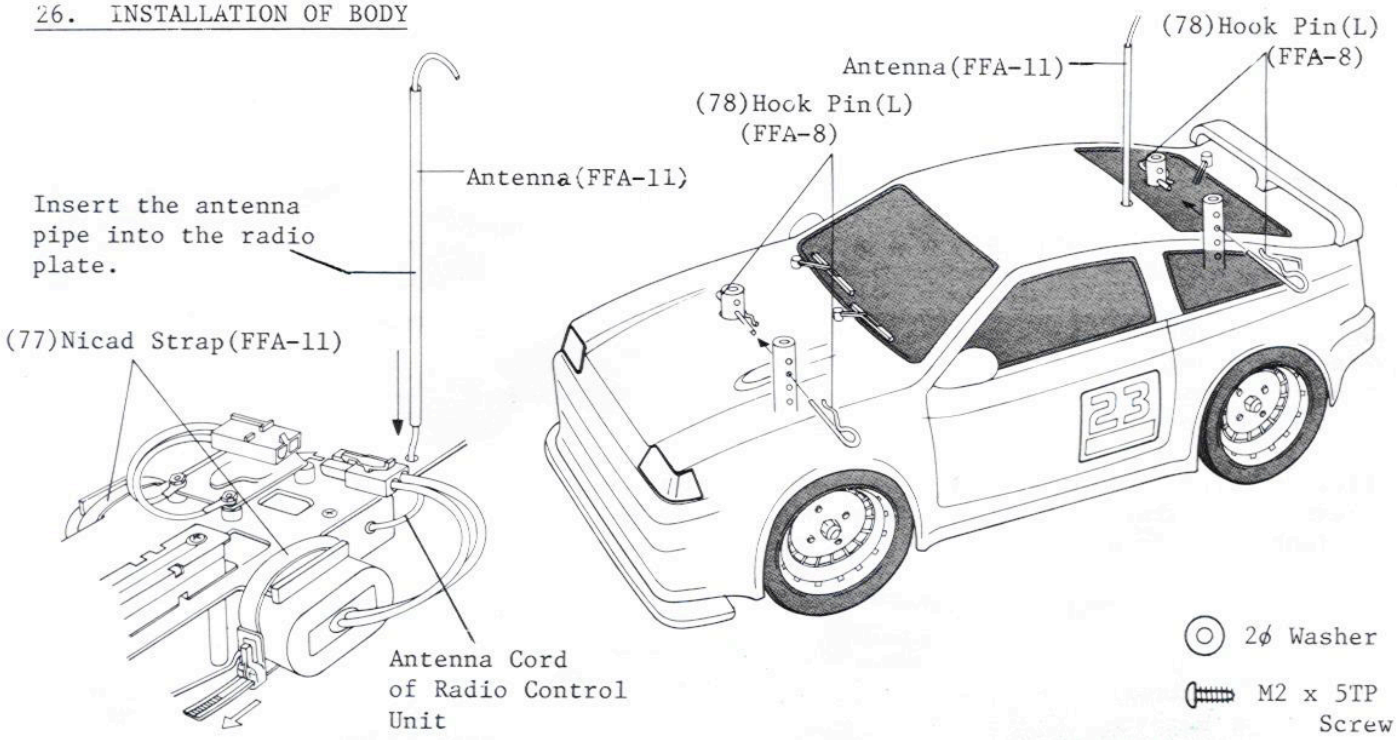
Front

Apply decals referring to the pictures on the model box or the drawing at left.



Rear

26. INSTALLATION OF BODY



* *

OPERATING THE BEC TYPE RADIO

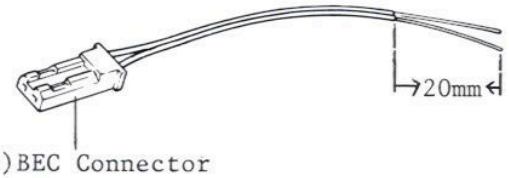
* *

What is the BEC type? . . . It is a radio control system which has connectors for powering the receiver and servos from the propelling power source, 7.2V 1200mAh Ni-Cad battery pack. By just plugging in the connectors (female on the model and male BEC connector on the switch harness,) you can arrange the motor and the radio control units ready to operate.

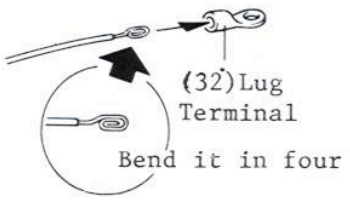
* When applying the BEC type radio, fix the lug terminals, which were used in step 8, to the BEC connector on the model and bolt them down to the speed controller PC board.

(Fixing Lug Terminal)

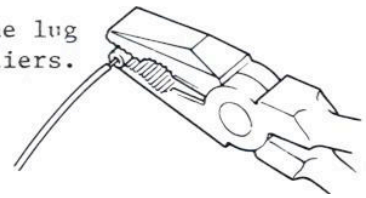
1. Remove the vinyl insulation from the BEC connector cord.



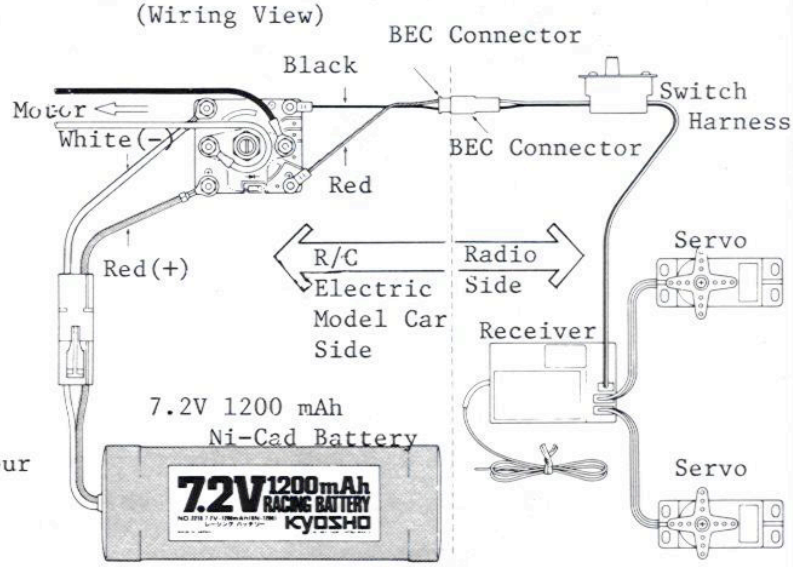
2. Insert the wire into the lug terminal.



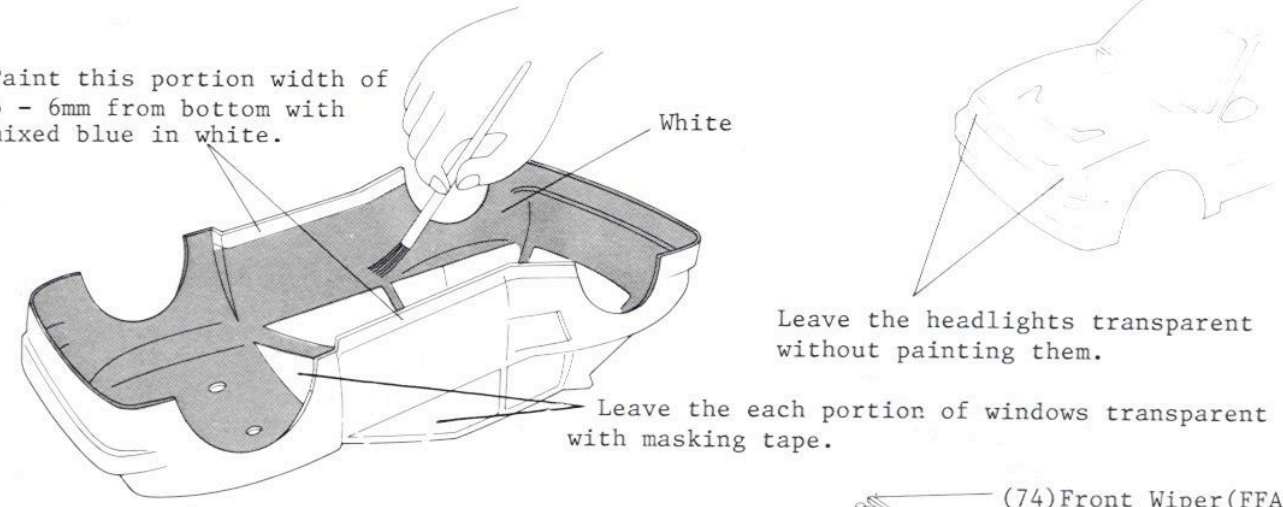
3. Crimp the lug with pliers.



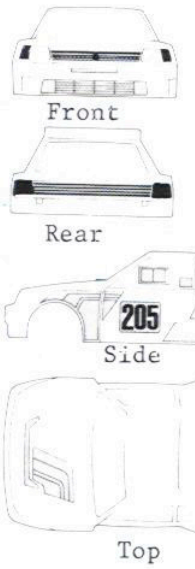
(Wiring View)



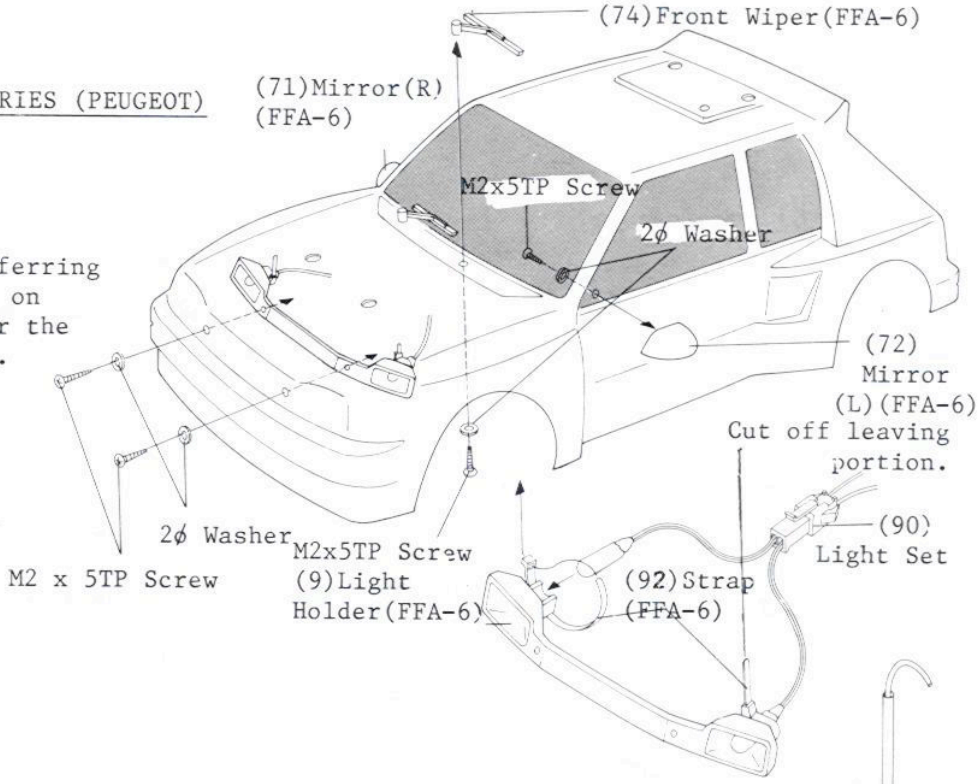
27. PAINTING OF BODY (PEUGEOT)



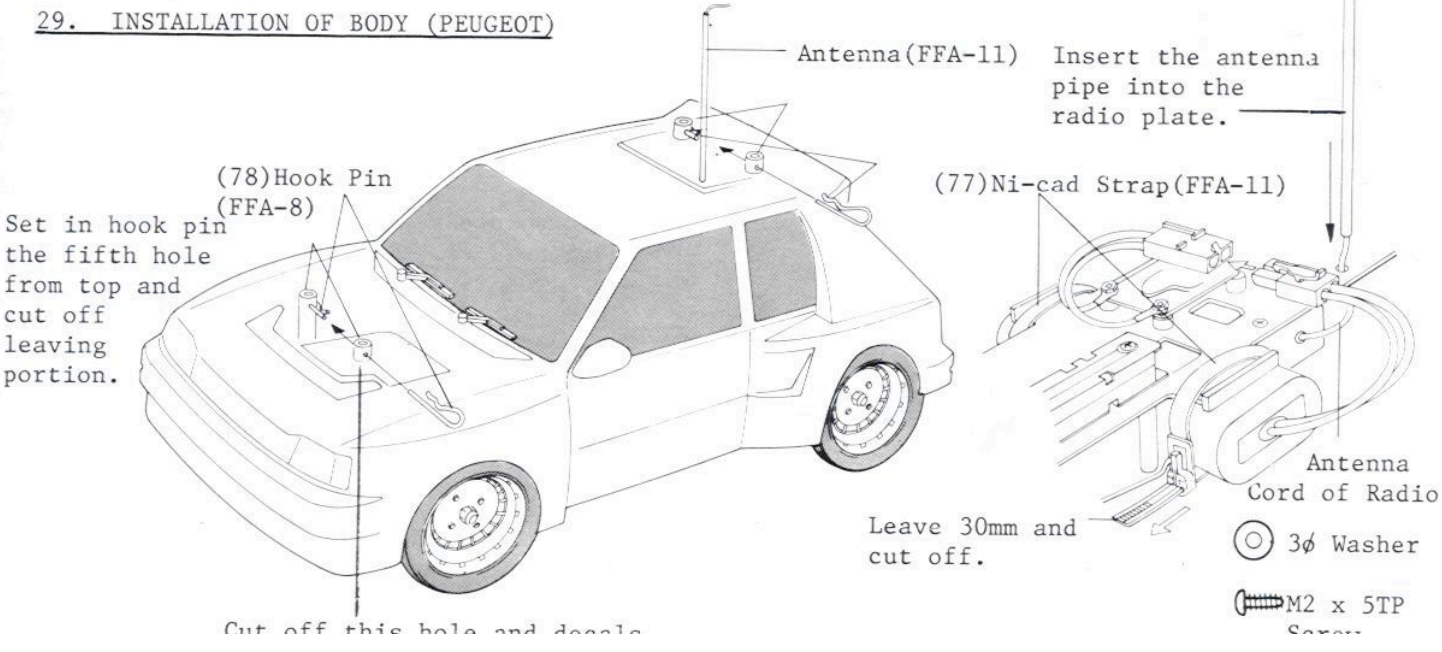
28. INSTALLATION OF ACCESSORIES (PEUGEOT)



Apply decals referring to the pictures on the model box or the drawing at left.

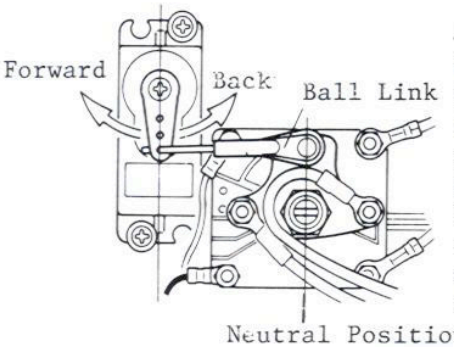


29. INSTALLATION OF BODY (PEUGEOT)



(Adjustment of Speed Controller)

Plug in the 7.2V Ni-Cad battery to the connector from the speed controller and manipulate your transmitter. While adjusting the model, put it on the box or something like that in order to keep it aloof from the ground since the wheels will turn.

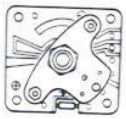


Adjust the ball link adjuster in such a way that the speed controller is positioned as shown in the drawing at left when both the controller stick and the trim lever are kept in neutral.

Neutral Position (This is the motor halting position.)

1. Adjustment for High Speed

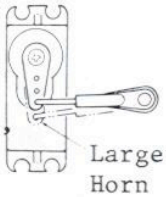
Push the speed controller stick forward. If you see the controller horn swing to the direction as shown and the motor run fast, it is adjusted right. You can tell RPM ratio by the motor sound.



2. Adjustment for Reverse Running

Pull the stick backward. If you see the motor run when the controller horn is positioned as shown below, everythng is in order.

When the speed controller is not controlled correctly as shown in 1 & 2, change the servo horn.



Larger Servo Horn

* *

RUNNING THE HONDA CR-X

* *

The same battery powers the radio and motor. As soon as the car starts to slow down, recharge the battery. Otherwise you will quickly lose control.


After running, always remove the battery from the car.

(Check Before Every Run)

1. Check to see if all bolts and nuts are tightened firmly.
2. Check to see Ni-Cad battery is fully charged.
3. Check to see if the steering and speed control is in proportion to your control of the transmitter.
4. Check to see that all wiring is properly insulated.
5. Check to see if parts are moving smootyly.

(Operating Procedures)

1. Turn transmitter switch on.
2. Switch on the receiver.
3. Check to see if the radio system is workin properly.

Note: When turning off the switches, turn off the receiver first then transmitter. Otherwise, the servos may be left in a position other than neutral.

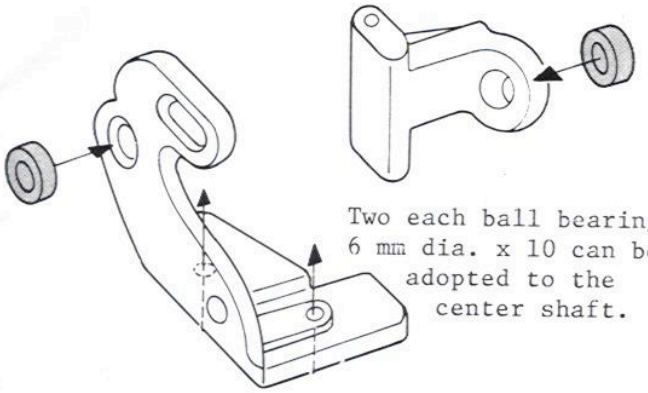
(Trouble shooting if the car does not start)

1. Poor contact of connectors of batteries, connector, and speed control.
2. Check to see if the Ni-Cad battery is full charged.
3. Check to see shortage of battery power for the transmitter.
4. Signal jamming from other radios.

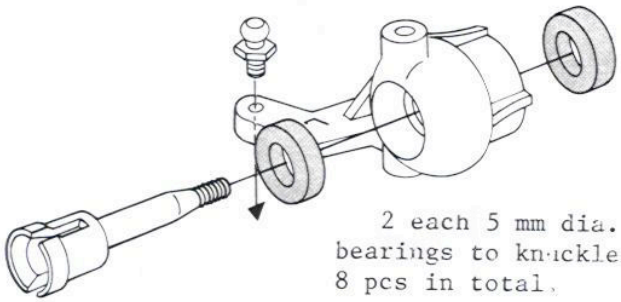
OPTIONAL PARTS

(Cptional Bearing)

These ball bearing will make the model run faster smoothly and prolong the running duration.



Two each ball bearings 6 mm dia. x 10 can be adopted to the center shaft.



2 each 5 mm dia. x 10 bearings to knuckle arms, 8 pcs in total.

(Pinion Gear)

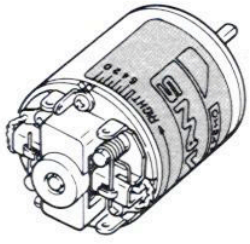
15 teethed pinion gear is included in the kit. 13 and 14 teethed ones are available optionally.

	Gear Ratio	Parts NO.
15Z	3.8 : 1	
14Z	4.07: 1	FF-24
13Z	4.38: 1	FF-25

(Motor)

The standard motor in the kit is the Le Mans Stock 05 motor. Other types of Le Mans motors are serviceable separately.

480G	High Speed for 8 min.	Gold	1897
480S	High Speed for 8 min.	Blue	1891
480T	High Torque for 8 min.	Green	1892
600E	High Torque for 10 min.	Black	1894

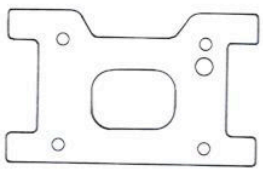


(Oil)

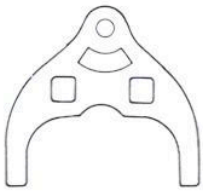
Assorment of 3 kind (S,M, and H) of the 1951 damper oil.

Spare Parts - Price List

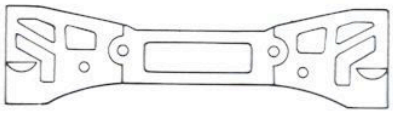
FF-1 Bracket Set



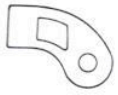
(1) Lower Bracket ... 2



(2)Lower Suspension Arm 4

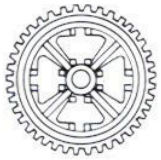


(19) Upper Suspension Holder 2



(20) Upper Suspension ... 4

FF-2 Gear Set

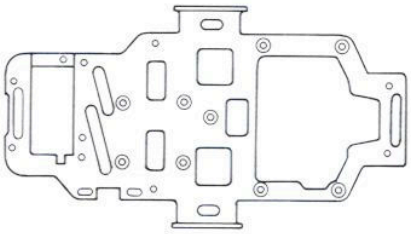


(12)Spur Gear ... 1

(13) Side Gear 2

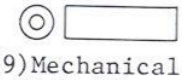
(14)Differencial Gear 4

FF-3 Mechanical Deck

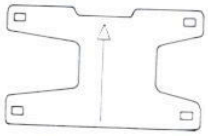


(41)Mechanical Deck 1

FF-4 Chassis Collar Set

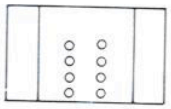


(9)Mechanical Deck Ball(A) 1

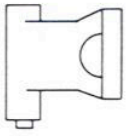


(44)Servo Plate 1 1

(16)Mechanical Deck Ball(B) 4



(15)Rear Mount 1



(7)Front Shaft Mount ... 1

(3)Suspension Collar .. 4

FF-5 Shaft Set

(4)Lower Suspension Shaft ... 4

(21)Upper Suspension Shaft 4

(65)Damper Stopper Shaft ... 4

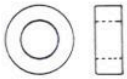
FF-6 Motor Mount

(6)Motor Mount ... 1

FF-7 Metal Set
(Actual Size)

(8)6ø Metal 2

(59)5ø Metal ... 8

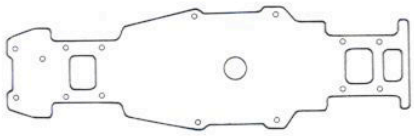


FF-8 Joint Set

(10)Main Shaft 1

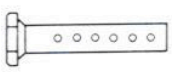
(11)Joint ... 1

FF-9 Main Chassis



(17)Main Chassis 1

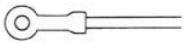
FF-10 Body Mount



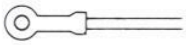
(18)Body Mount 4

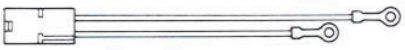
FF-11 Connector Set

(23)Motor Cord (Red) ... 1



(24)Motor Cord (White) .. 1





(33)Connector 1

FF-12 Pinion Gear

(35)Pinion Gear 15T 1

1840 Both Sided Tape

(40)Both Sided Tape ... 1

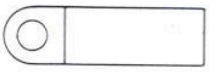
FF-13 Tie Rods Set

(42)Tie Rod 4

(43)Ball Link 4

(29)4.5ø Pillow Ball 4

FF-14 Damper Set
(Actual Size)



(85)Damper Case 2

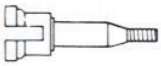
(50)Damper Piston 2

(52)Damper O Ring ... 2

(53)Piston Guide 2

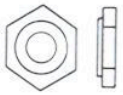
(56)Damper Spring 2

FF-15 Wheel Shaft Set



(60)Front Wheel Shaft ... 2

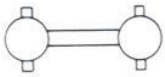
(61)Rear Wheel Shaft ... 2



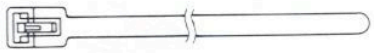
(68)Wheel Stopper 4

FF-16 Swing Shaft
(Actual Size)

(64)Swing Shaft 2



EF-39 Ni-Cad Strap



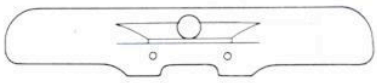
(77)Ni-Cad Strap 6

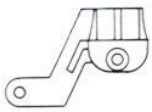
SD-79 Antenna Pipe

(81)Antenna Pipe 5

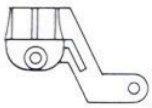
FF-17 Knuckle Arm Set

(69)Bumper 1





(58)Knucle Arm(L) 2



(57)Knuckle Arm(R 2

FF-18 Accessory Set

(73)Light 1

(76)Wing 1

(71)Mirror (R)

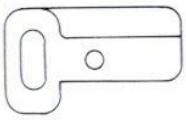
(72)Mirror (L)

(74)Front Wiper ... 2

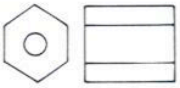
FF-19 Servo Holder

(55)Damper End 4

(45)Collar for setting Damper 2



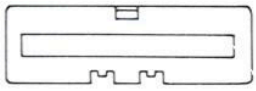
(46)Servo Spacer 1

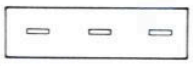


(22)Body Hook Spacer ... 2

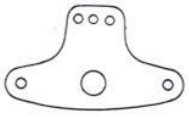
BB-10 Controller Set

(47)Resistor Stopper ... 2





(48)Resistor 1



(25)Controller Horn ... 1

(26)Controller Pivot 1

(28)Connector Holder 2

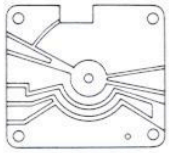
(27)8ø Stopper Ring 1

(30)Controller Spring 1

(31)Stopper Metal for Controller 1

(29)4.5ø Pillow Ball 1

(88)Connector 2



(84)Controller PC Board 1

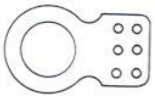
(86)BEC Connector 1

(32)Lug Terminal 2

FF-20 5.8ø Pivot

(5)Pivot ... 8

RK-28 Servo Savor Set



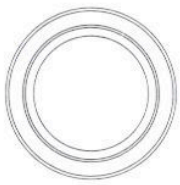
(36)Servo Savor(A) 1

(37)Servo Savor(B) 1

(38)Servo Savor(C) 1

(39)Servo Savor(D) 1

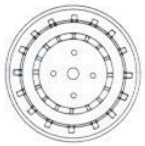
FF-21 Tires



(46)Tire ... 2

FF-22 Wheels

(67)Wheel ... 2



FF-23 Body(CRX)

(70)Body 1

FF-24 Decal(CRX)

(82)Decal 1

1889 Body Pin

(78)Hook Pin 4

EP-22 Hook Pin

(87)Hook Pin(S) 5

FF-25 Resistor Collar

(49)Resistor Collar ... 2

FF-26 Screw Nut Set

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