BIG BEAR DATSUN

MARUI PLASTIC MODEL

1/12 RADIO CONTROL CAR

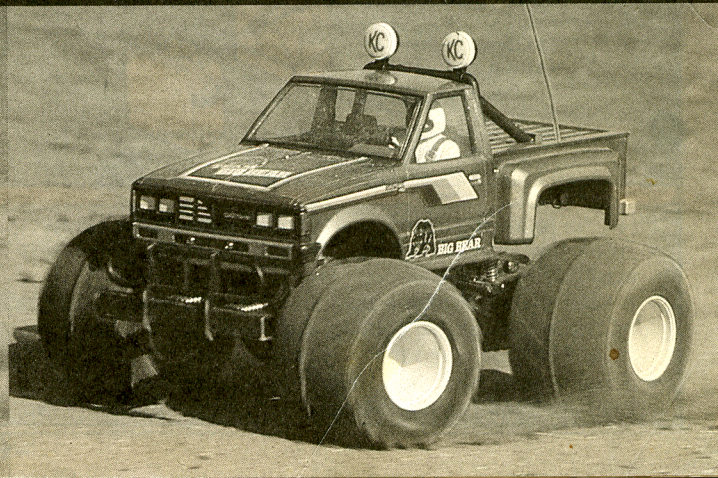
With tuning motor

○ READY TO ASSEMBLE R/C CAR MODEL KIT ○ WITH HIGH POWER BLACK MOTOR

Electrically Powered, Radio Controlled

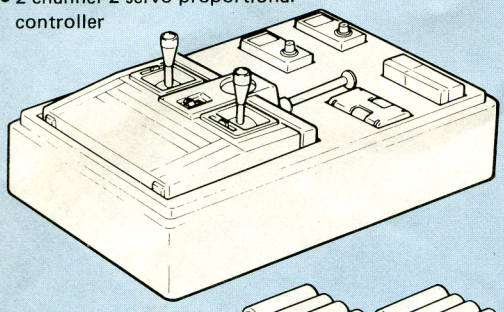
TOKYO MARUI PLASTIC MODEL CO.

HIGH PERFORMANCE SUPER BIG WHEEL R/C CAR

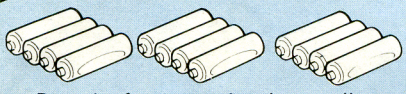


《 Parts not included in the kit 》

• 2-channel 2-servo proportional controller

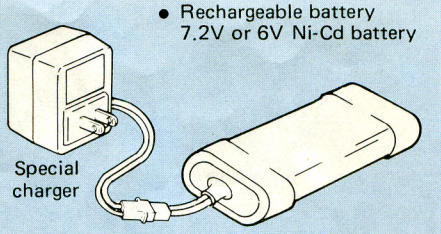


Most regular 2-channel proportional controllers may be used, but always test first. For those who are going to purchase a controller, the following models are recommended:
FUTABA: ATTACK, MAGNUM
K.O.: FX-II, EX-II
J.P.: BEAT 2
SANWA: NEW DASH S



• Batteries for proportional controller

• Rechargeable battery
7.2V or 6V Ni-Cd battery

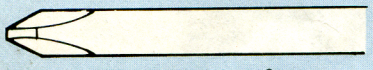


Special charger

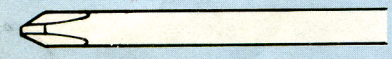
Either 7.2V or 6 V Ni-Cd battery may be used as the power supply for drive motor. A 6 V battery, however, will not deliver the full speed and torque designed into the BIG BEAR model, so we recommend a 7.2 V racing pack for those who are going to purchase a new battery.
A Ni-Cd battery may be recharged up to 300 times. Charging normally requires 15 to 16 hours, but quick-charge models requiring only 15 to 20 minutes are also available.
*Refer to the instructions included with the Ni-Cd battery for details.

《 Tools Required h for Assr for Assembly 》

⊕ Only phillips type screwdrivers are shown in actual sizes.

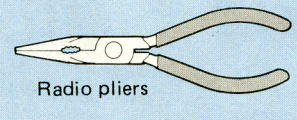


+ Screwdriver (Large) for φ3 screws and φ3 tapping screws

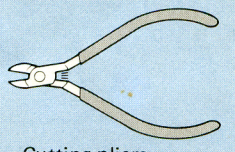


+Screwdriver (Middle) for damper shaft, φ2.6 screws, and φ2.6 tapping screws

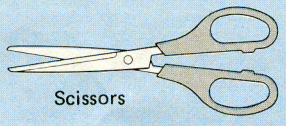
This kit includes many tapping screws. Use the proper screwdriver and the proper tightening torque for each one. Release the turning pressure on the screwdriver when the screw no longer rotates easily. Be careful not to damage screws by applying too much torque.



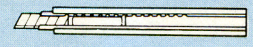
Radio pliers



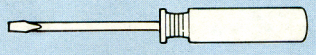
Cutting pliers



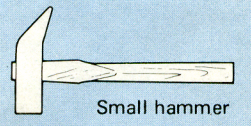
Scissors



Cutter

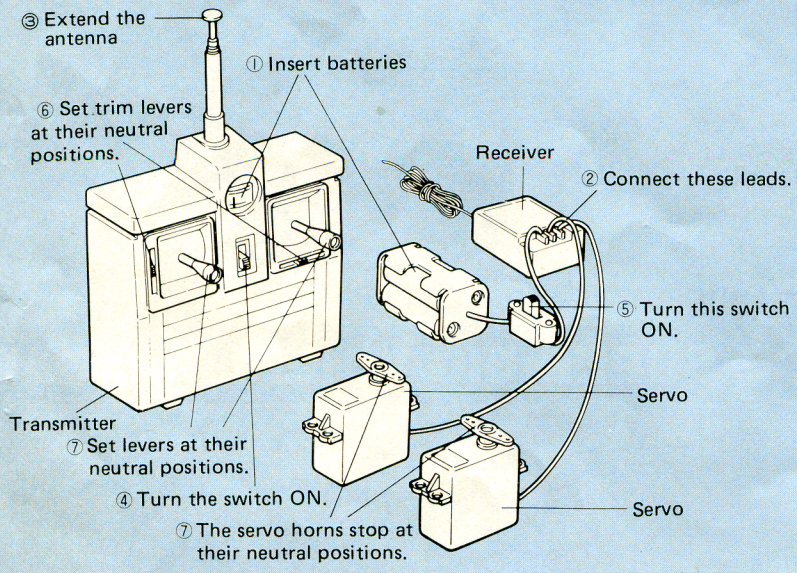


Plain screwdriver (Middle)



Small hammer

《 Radio Control Unit 》



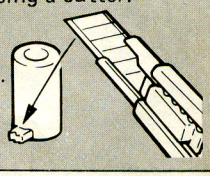
Almost any 2-channel, 2-servo, digital proportional radio controller may be used, but some may not. Units with 3 or more channels are not suitable.

* Check the controller operation

① Insert batteries in the transmitter and receiver.
② Connect the servo and power supply leads to the receiver.
③ Extend the transmitter antenna.
④ Turn ON the transmitter switch. (Always turn ON the transmitter switch first.)
⑤ Turn ON the receiver switch.
⑥ Set the trim levers at their neutral positions.
⑦ Set the levers at their neutral positions. (The servo horns should stop at their neutral positions.)
⑧ Check servoes operation by moving the levers.
⑨ Turn OFF the receiver first and then the transmitter when the test is complete.
Refer to the radio control equipment instructions for further details.

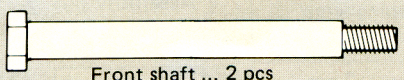
Read the following instructions carefully before assembly

- Read the entire assembly instructions before beginning assembly.
- A グリス mark indicates a portion where the grease included in the kit must be applied. Similarly, a small hammer should be used when the ⊢ mark appears.
- Some screws, nuts, and washers will be left over as more than the required numbers are included in the kit. Keep them for use as spare parts.
- Thoroughly remove plastic part burrs using a cutter.
- Strenghened nylon part burrs must be completely removed as they may impair driving performance. (Be careful not to cut your fingers with the cutter.)



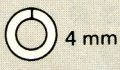
Metallic part actual sizes used on P.3


φ4 x 28 spacer ... 2 pcs

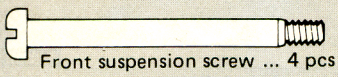

Front shaft ... 2 pcs

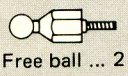

3 mm washer ... 1 pc


2 mm nut ... 2 pcs

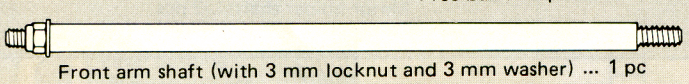

4 mm spring washer ... 4 pcs

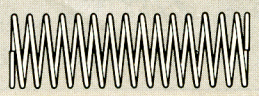

4 mm nut ... 4 pcs


Front suspension screw ... 4 pcs


Free ball ... 2 pcs

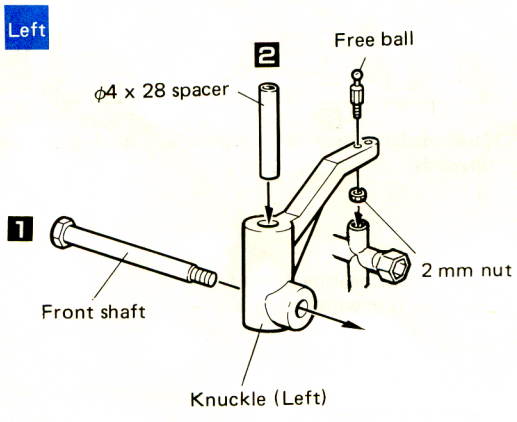

Partially nylone 3 mm locknut ... 1 pc

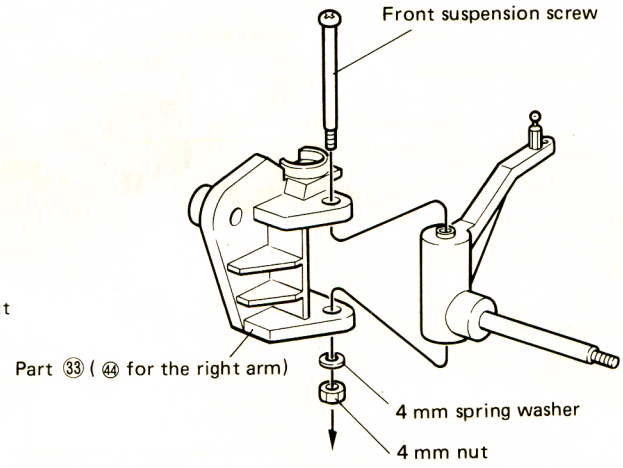

Front arm shaft (with 3 mm locknut and 3 mm washer) ... 1 pc


Front suspension spring ... 2 pcs

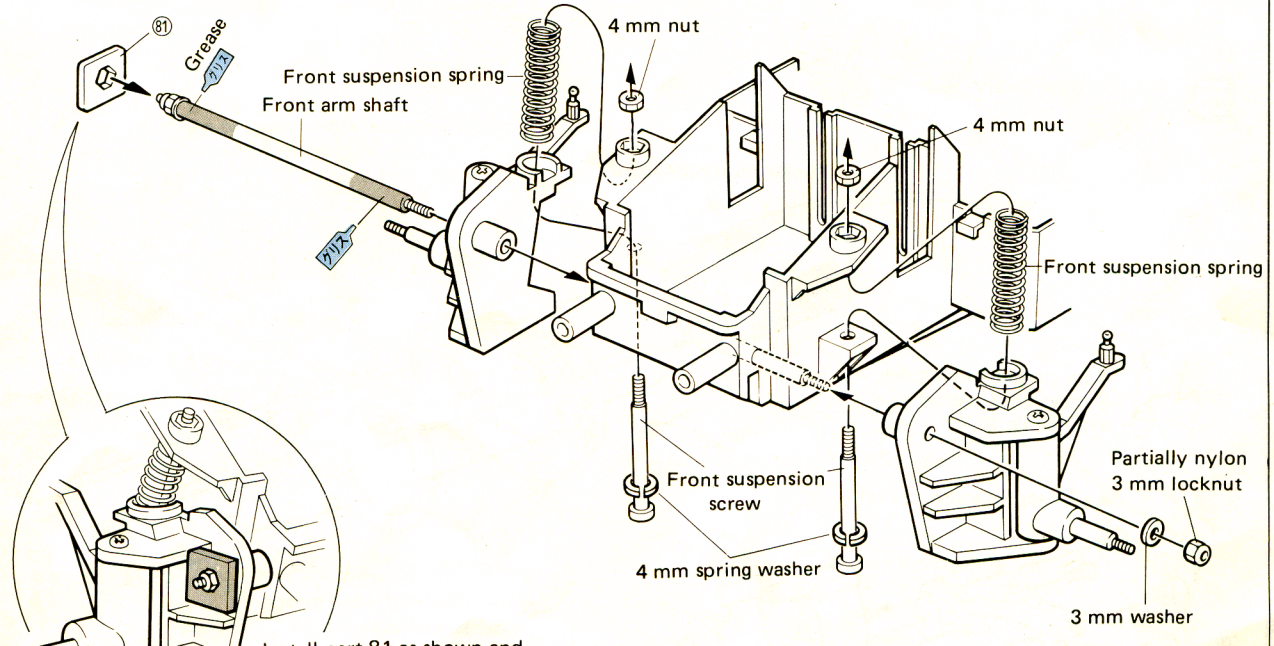
1 Front suspension arm assembly

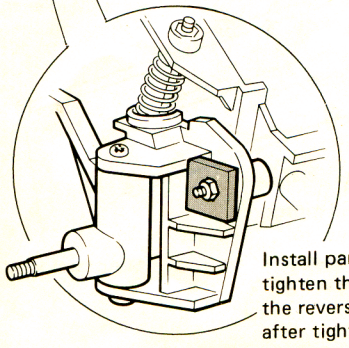
1 2 (Install in the order (1) and (2).)





2 Front suspension arm installation




Install part 81 as shown and tighten the 3 mm locknut on the reverse side. (Remove it after tightening the locknut.)

Metallic part actual sizes used on P.4

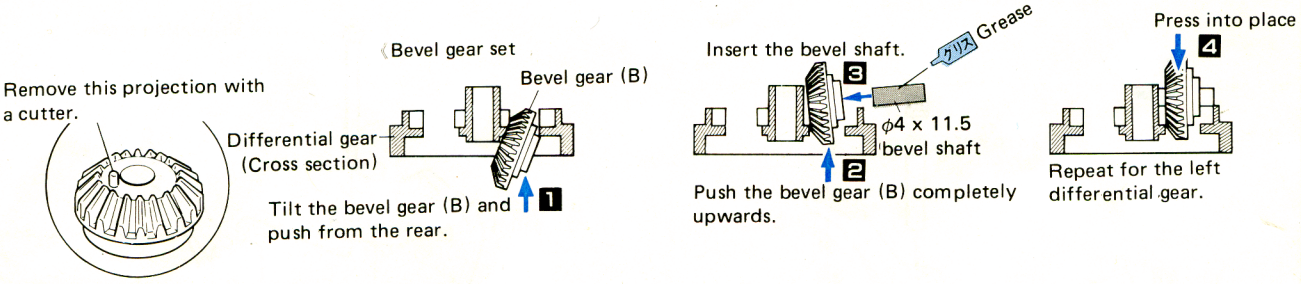
- φ4 x 11.5 bevel shaft ... 2 pcs
- φ3 x 8 tapping screw ... 2 pcs
- φ3 x 6 screw ... 2 pcs
- Oilless bearing ... 2 pcs
- Bevel gear (B) (Plastic) ... 2 pcs

《 Assembly jigs 》

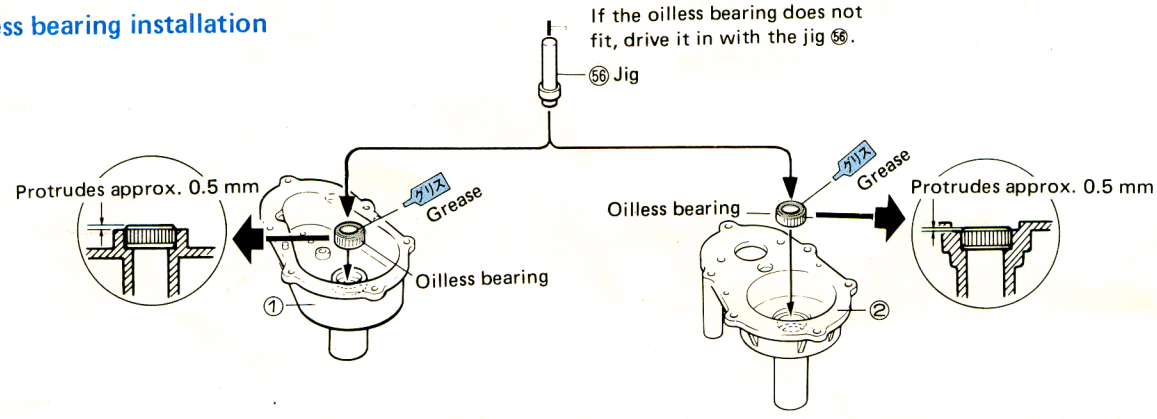
- φ3 x 20 idler shaft ... 1pc
- Motor holder shaft ... 2 pcs

3 Gear assembly

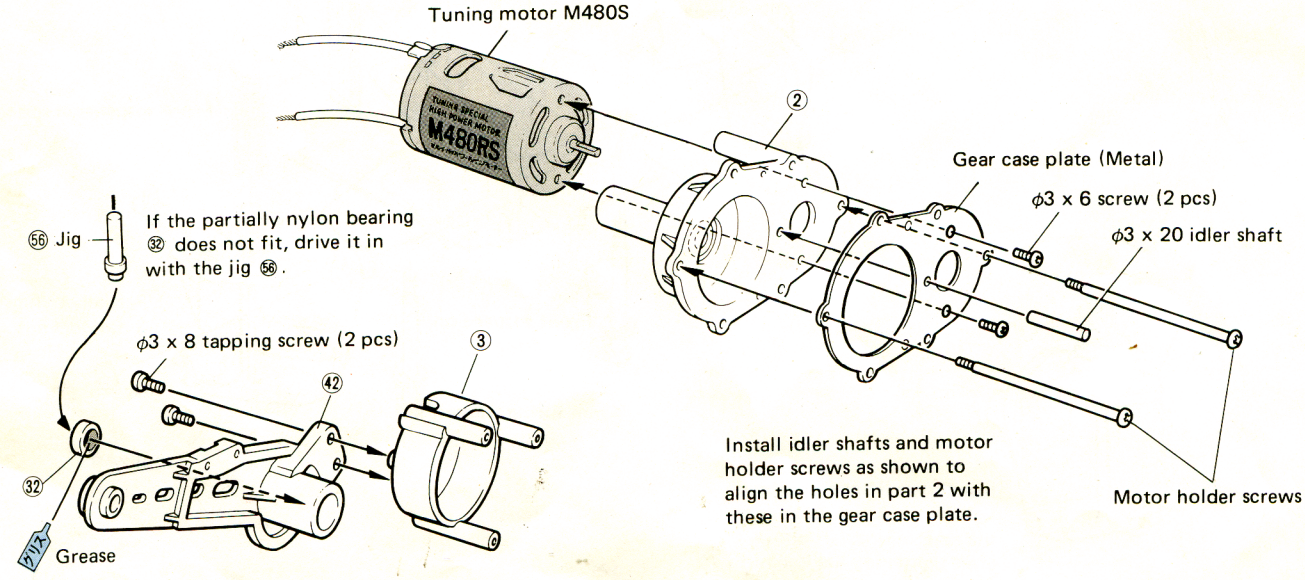
1 ~ 4 (Assemble in the order (1) through (4).)



4 Oilless bearing installation

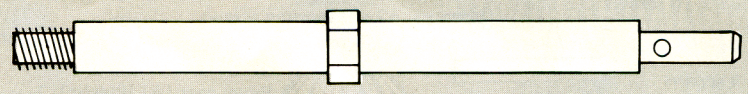


5 Motor assembly



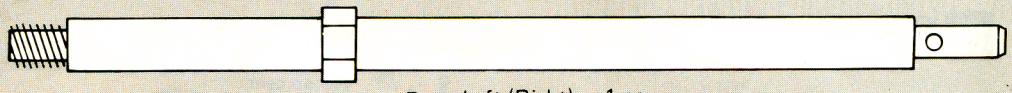
《Metallic part actual sizes used on P.5

φ2 x 10.5 bushing pin ... 2 pcs



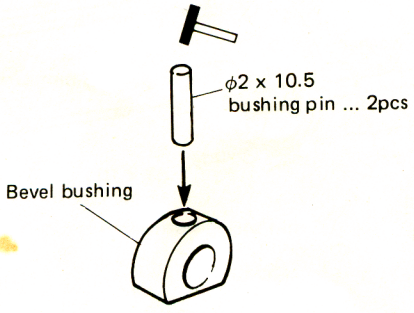
Rear shaft (Left) ... 1 pc

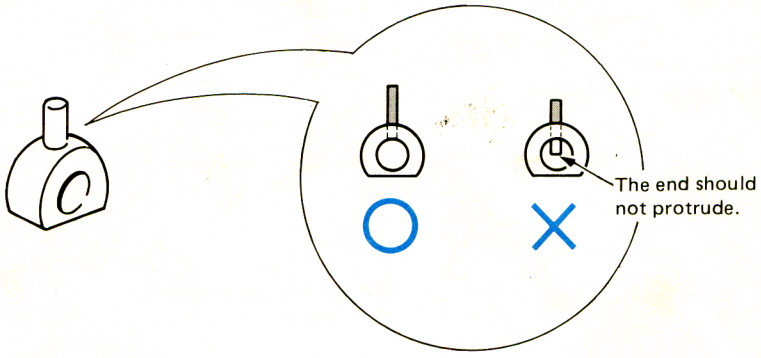
Bevel bushing
(Plastic) ... 2 pcs



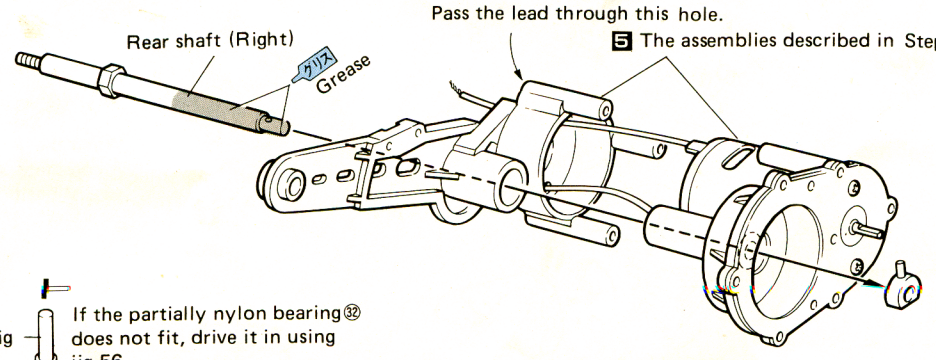
Rear shaft (Right) ... 1 pc

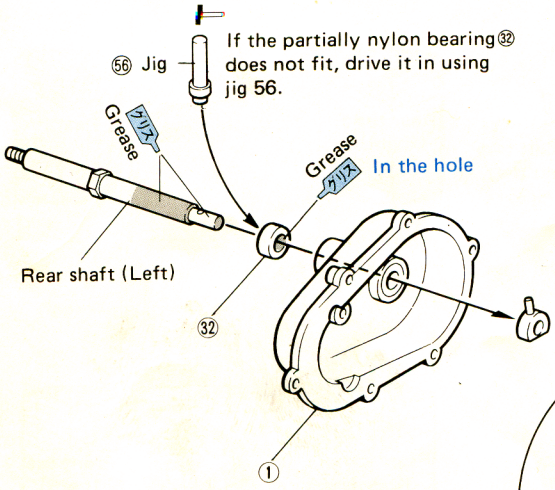
6 Temporary setting of bevel bushing

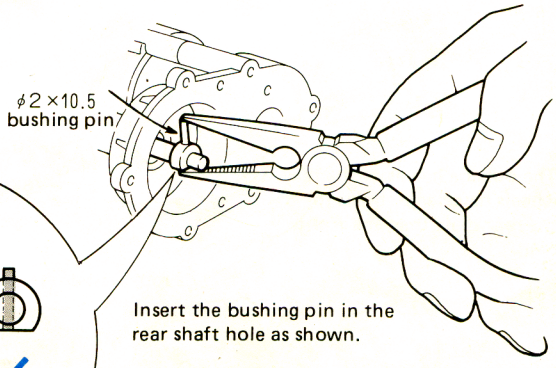


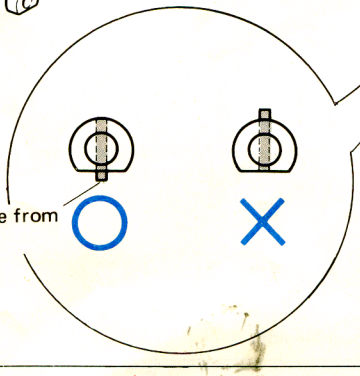


7 Rear shaft assembly





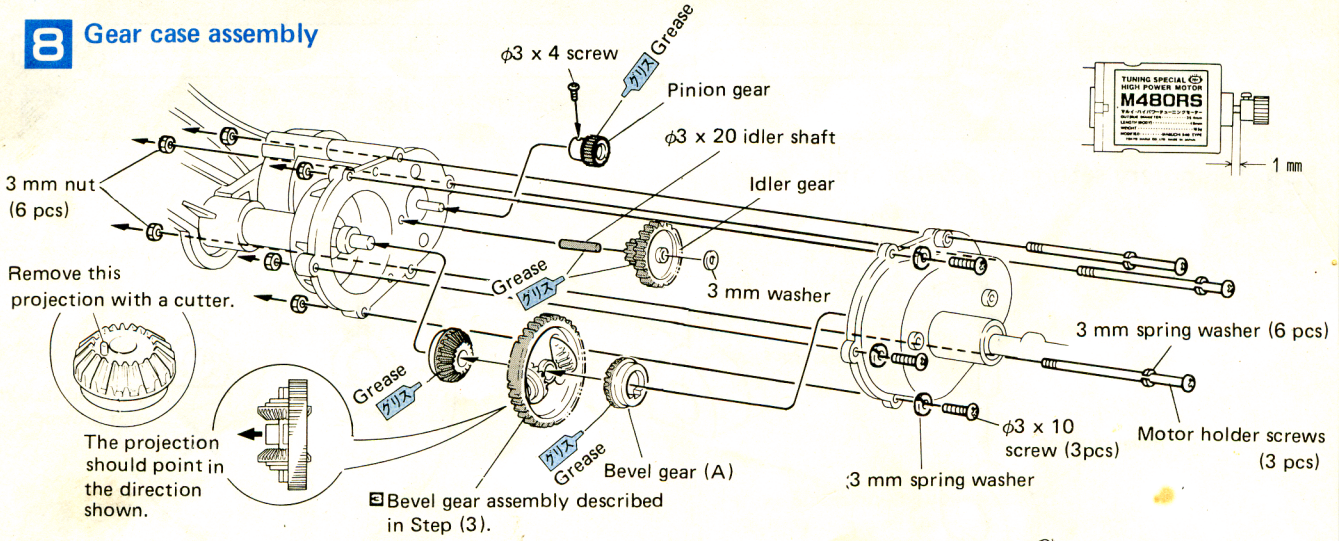


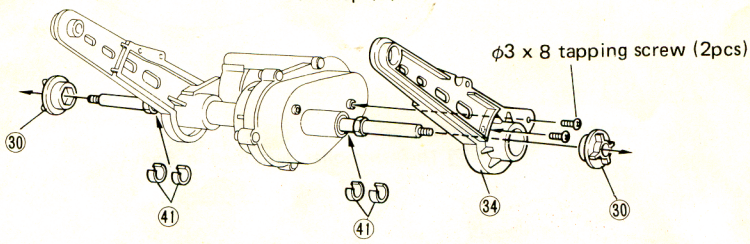


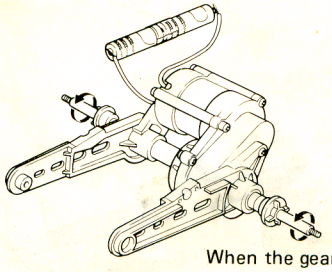
Metallic part actual sizes used on P.6

- φ3 x 10 screws ... 3 pcs
- φ3 x 8 tapping screw ... 2 pcs
- φ2 x 9 tapping screws ... 16 pcs
- φ3 x 4 screws ... 1 pc
- φ3 x 20 idler shaft ... 1 pc
- Bevel gear (A) (Plastic) .. 2 pcs
- 2 mm washer ... 16 pcs
- 3 mm spring washer ... 6 pcs
- 3 mm washer ... 1 pc
- 3 mm nut ... 6 pcs
- Motor holder ... 3 pcs

8 Gear case assembly



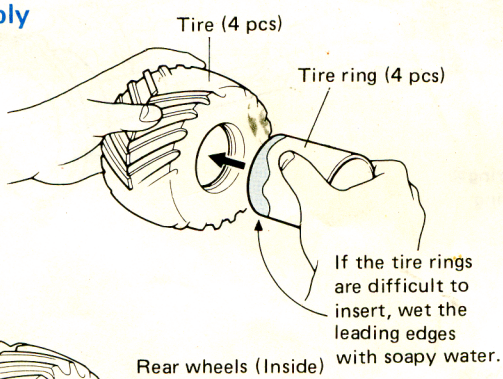


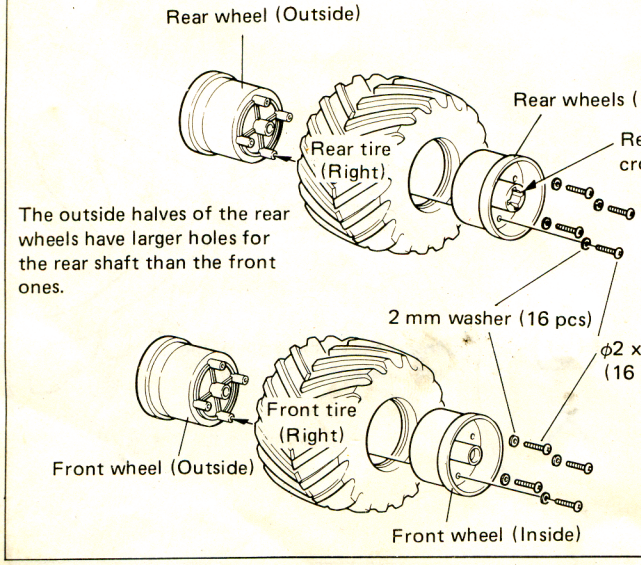


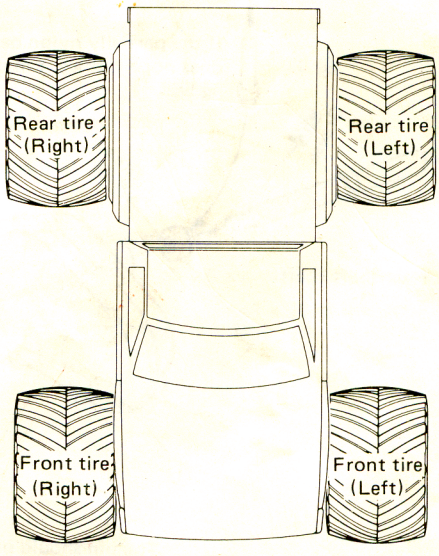
When the gear case assembly is complete, test with an 1.5V to 3 V battery.

9 Tire and wheel assembly

Be sure to install tires with the V-patterns pointing in the correct direction.





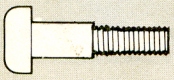


Make sure that the V-shaped tread patterns point forward as shown above. (If they are reversed, the car will not reach its full speed.)

Metallic part actual sizes used on P.7


φ3 x 8 tapping screws ... 4 pcs

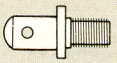

4 mm washer ... 4 pcs

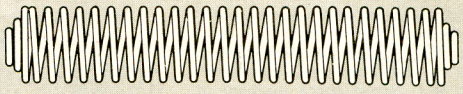

Rear arm screw ... 2 pcs

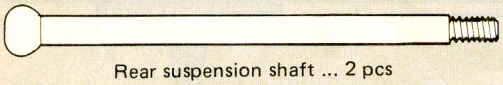

Bumper spring ... 2 pcs


Partially nylon 4 mm locknut ... 8 pcs


5 mm washer ... 2 pcs


Body mount ... 2 pcs

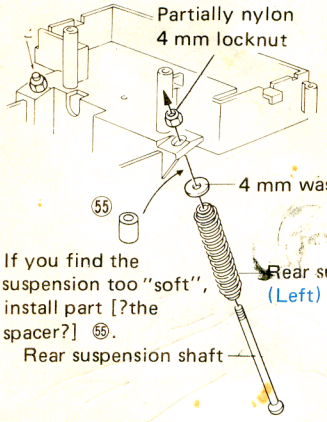

Rear suspension spring ... 2 pcs

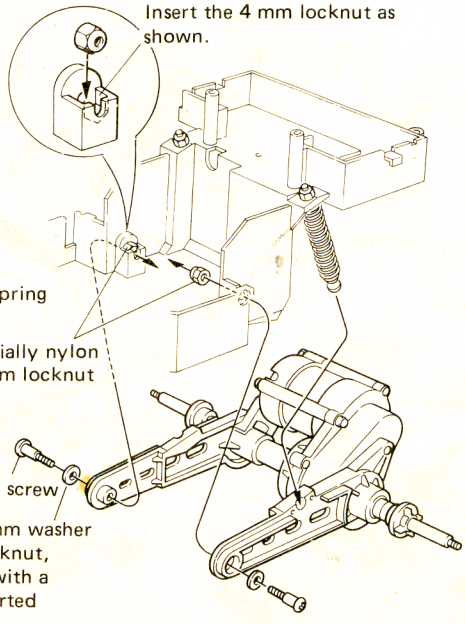

Rear suspension shaft ... 2 pcs

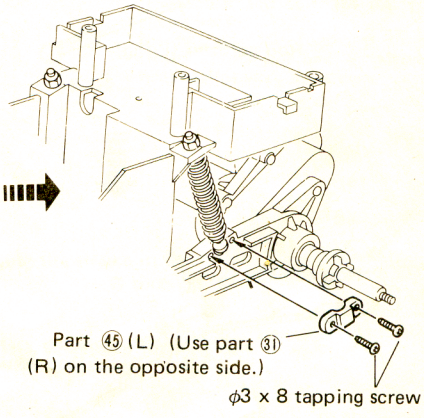

Ring ... 2 pcs

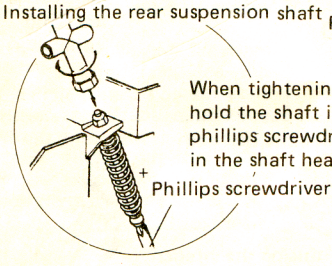
1.2 x 75 piano wire ... 1 pc

10 Rear suspension arm assembly

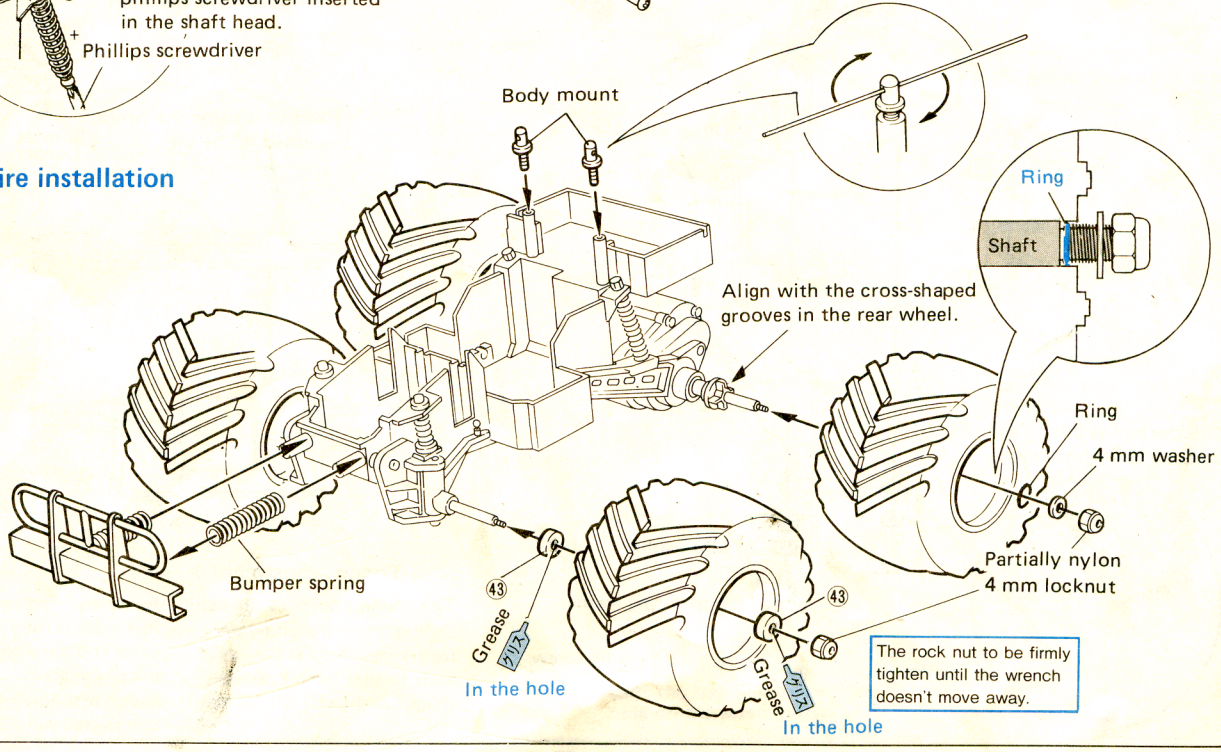








11 Tire installation

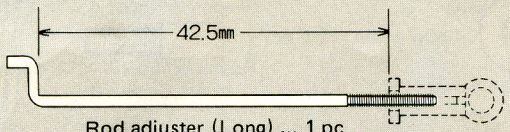


Metallic part actual sizes used on P.8

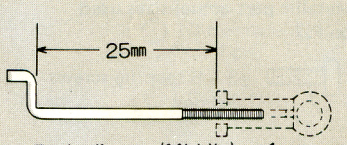
φ2.6 x 11 tapping screw ... 1 pc

φ3 x 10 tapping screw ... 3 pcs

φ3 x 10 screws ... 4 pcs



Rod adjuster (Long) ... 1 pc



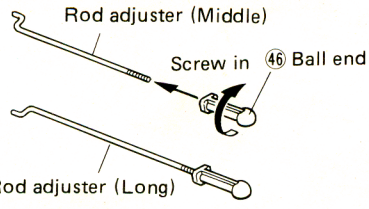
Rod adjuster (Middle) ... 1pc

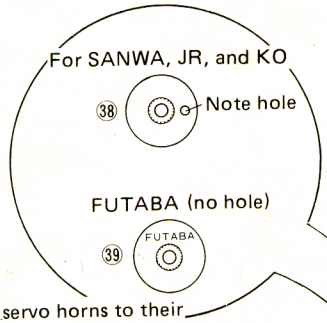
3 mm nut ... 4 pcs

3 mm spring washer ... 2 pcs

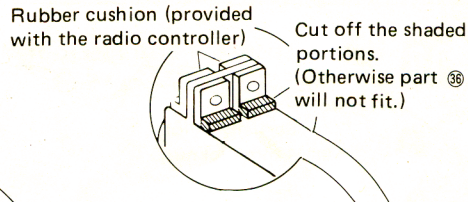
3 mm washer ... 6 pcs

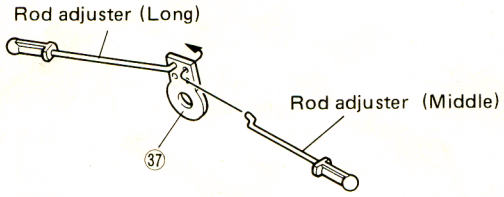
12 Steering servo assembly

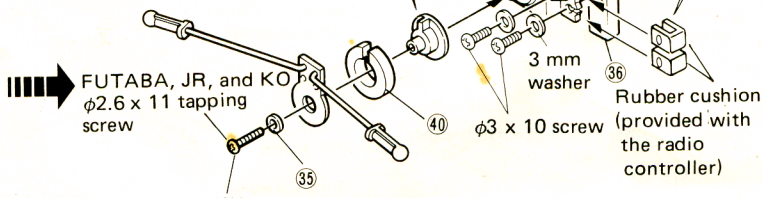


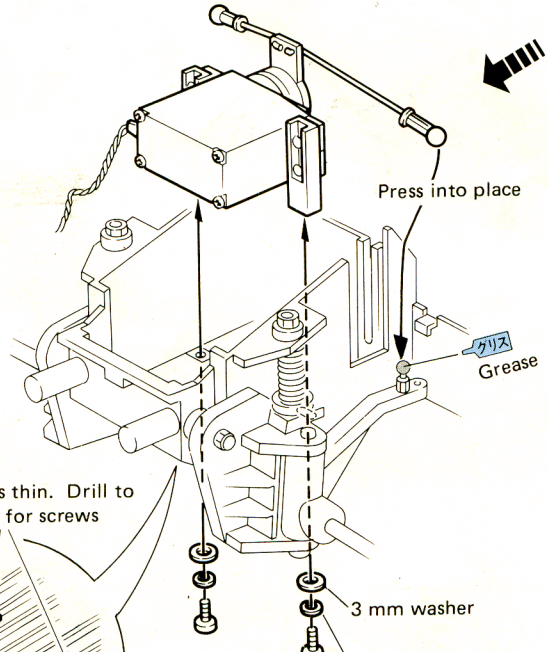


Set the servo horns to their neutral positions before installing part ㊳ or ㊴. (See page 2)

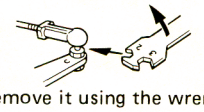






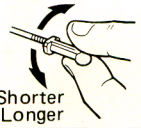


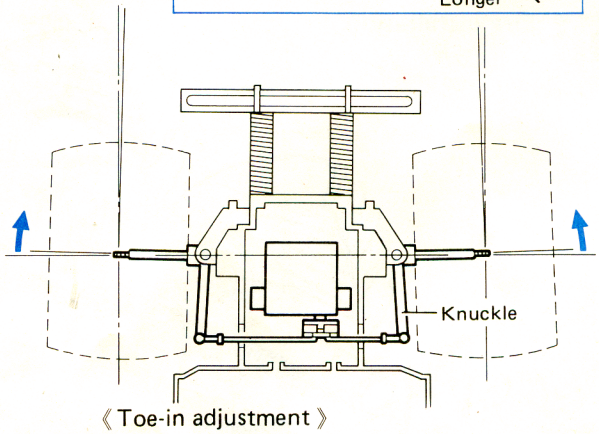
《Removing the ball end》



Remove it using the wrench included in the kit.

Adjusting the length





《Toe-in adjustment》

Tire toe-in improves the vehicle's straight travelling performance. Adjust the ball ends so that both knuckles (Right and Left) tilt slightly forwards. The length shown in Figure is only for reference since it differs with proportional servo. Adjust the toe-in after giving the completed model a test run.

13 Speed controller assembly

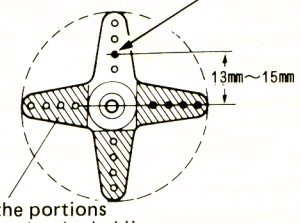
Connect the two servoes with the receiver during this assembly.
(See P. 2 for details.)

Metal parts used on P. 9

- 2 mm nut .... 1 pc
- Free ball .... 1 pc
- Rod adjuster (short) .... 1 pc

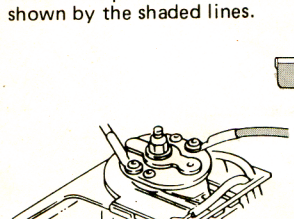
Servo horn (included with the radio controller)

Insert the freenball in this hole.

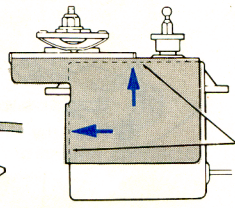


Use a servo horn hole 13 to 15 mm from the center.

Cut off the portions shown by the shaded lines.



Press the servo in the direction indicated by the arrows until it completely contacts the metal fittings.



Heat-resistant double-faced tape

Use a 35 mm long strip.

Screw included with the radio controller

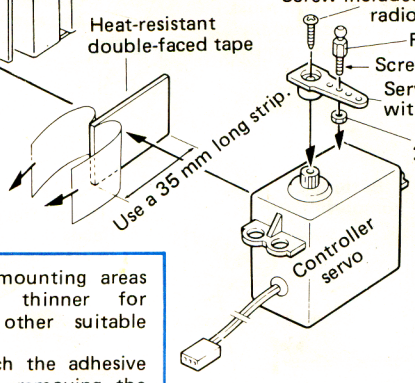
Free ball

Screw in

Servo horn included with the radio controller

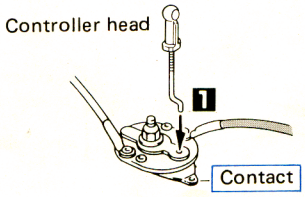
2 mm nut

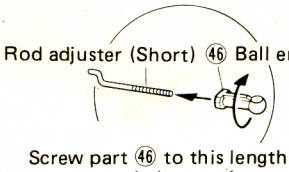
Controller servo



* Clean tape mounting areas with paint thinner for plastics or other suitable solvent.
* Do not touch the adhesive surface after removing the backing paper. (Oil on your fingers may reduce bonding strength).
* Press firmly on the controller component to ensure complete bonding.

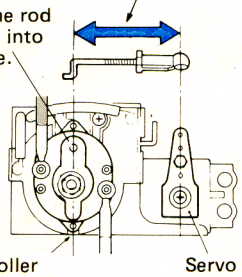
1 ~ 4 Assemble in the order [1] through [4].





Screw part 46 to this length.

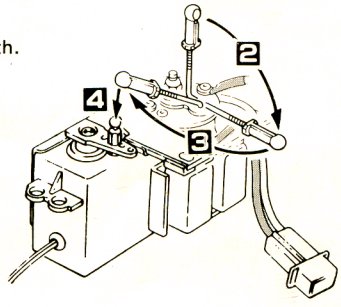
Insert the rod adjuster into this hole.

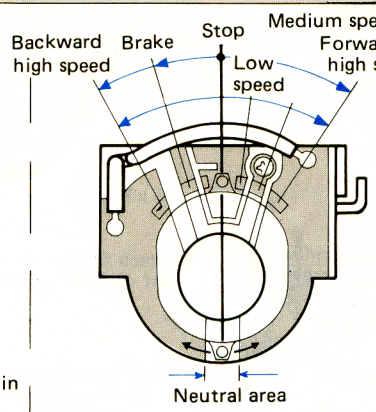


Controller neutral position.

Servo neutral position

(Setting the controller head contact in the neutral area places the servo horns to their neutral positions.)

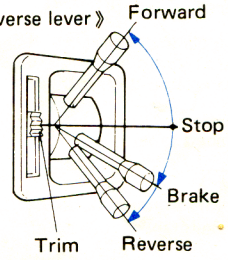




《 Switch positions 》

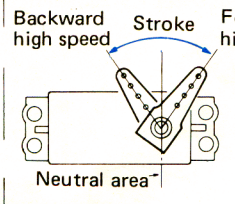
* The controller may be damaged if it is used incorrectly. The built-in resistors may overheat or burn out if the vehicle is used only at low to medium speed ranges. Use the high-speed setting as much as possible.
* The controller switches large electric currents. Please consider it a consumable part.
* Do not touch the controller soon after operation as the resistors may be quite hot.
* Faulty controller installation or switch incorrect switch head location or wire placement which prevents switching into full speed forward may cause the resistors to overheat and burn the printed circuit board.
* Do not use the controller in a closed mechanical box as it contains heat generating resistors.

《Forward-reverse lever》

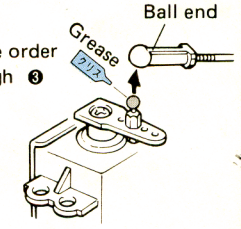


Stroke adjustment

Servo horn stroke differs by servo type. Test to see if the switch arm moves all the way to its forward (high-speed) and reverse (high-speed) positions by moving the lover up and down. If necessary adjust the stroke as shown on the right.

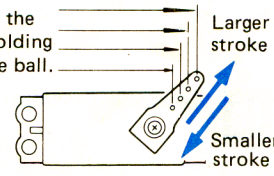


Adjust the stroke in the order ❶ through ❸

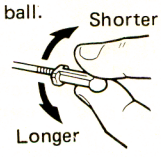


❶Remove the ball end.

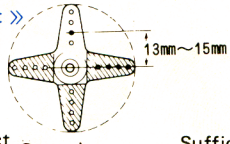
❷Change the hole holding the free ball.



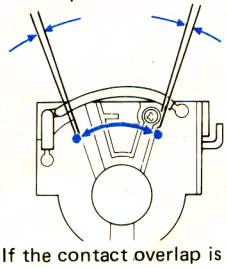
❸Adjust the rod adjuster length and attach to the free ball.



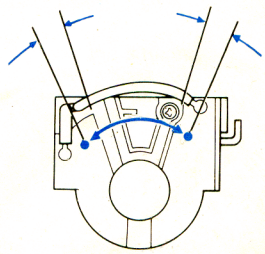
《Contact point placement》



Readjust if the contact overlap is insufficient.



Sufficient contact overlap

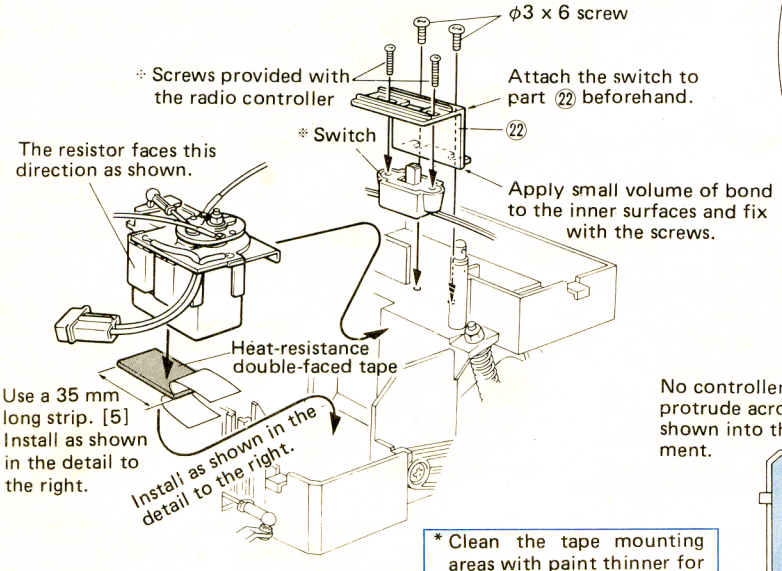


If the contact overlap is insufficient, shift the free ball toward the 15 mm hole on the servo horn.

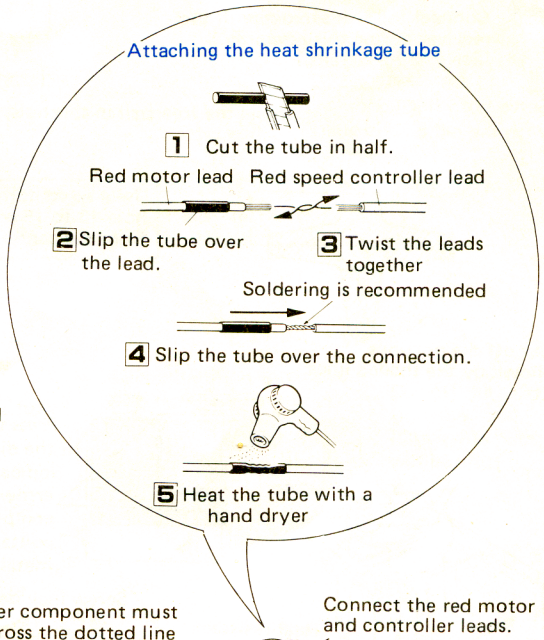
(Metal part actual sizes used on P. 10)

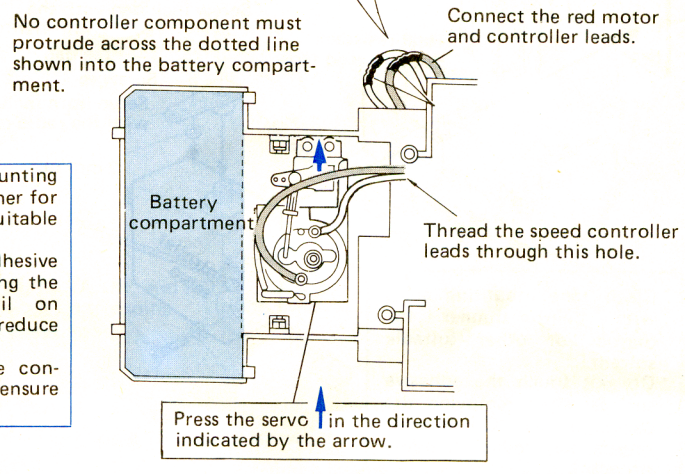
φ3 x 6 screw .... 2 pcs

14 Controller installation



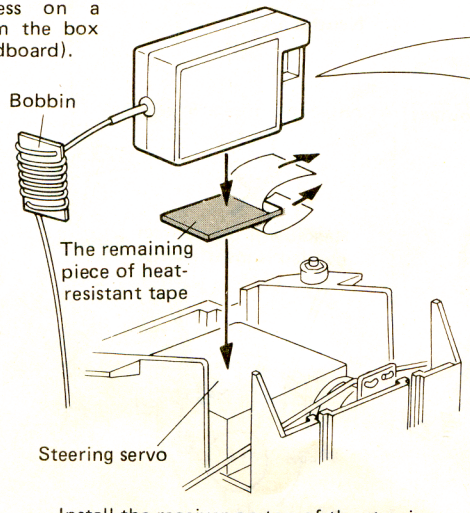
* Clean the tape mounting areas with paint thinner for plastics or other suitable solvent.
* Do not touch the adhesive surface after removing the backing paper. (Oil on your fingers may reduce bonding strength).
* Press firmly on the controller servo to ensure complete bonding.



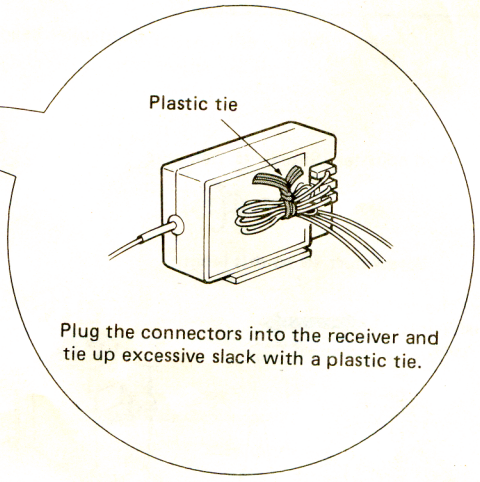


15 Receiver installation

If the antenna is too long, wind the excess on a bobbin cut from the box or a piece of cardboard).



Install the receiver on top of the steering servo.



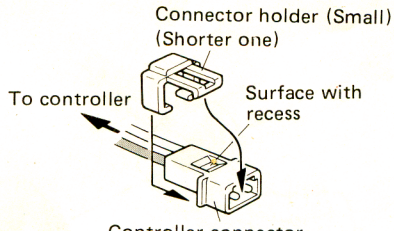
16 Ni-Cd battery installation

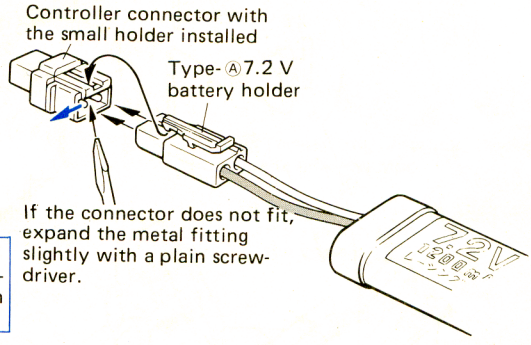
(Metal part actual sizes used on P. 11)

- ϕ2 x 6.7 tapping screw .... 1 pc
- ϕ2 x 20 joint pipe .... 2 pcs

Before installing the connector to a 7.2V battery (this does not apply to a 6 V battery)
The connectors on the 7.2 V battery come in the two shapes shown below.
Choose the controller connector to match.

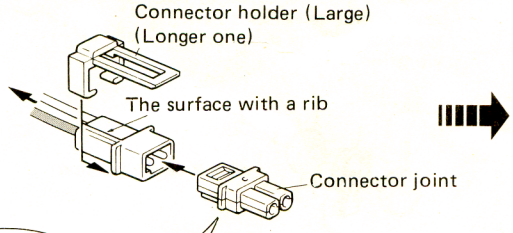
● Type-Ⓐ

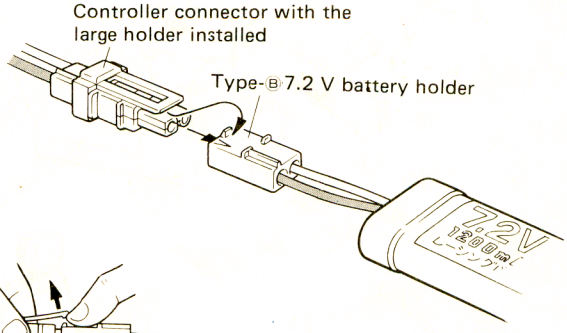


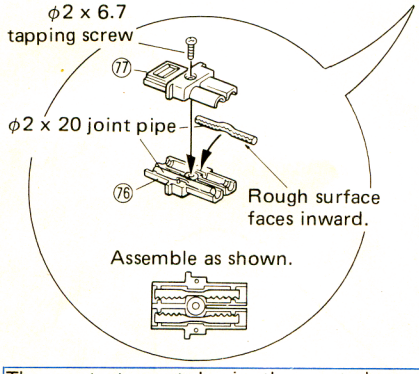


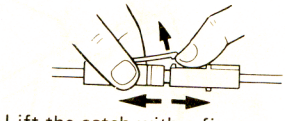
Always align the red leads on the two sides. Otherwise, the car will run in reverse.

● Type-Ⓑ



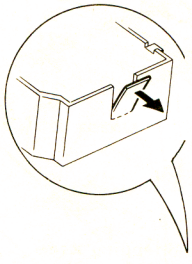




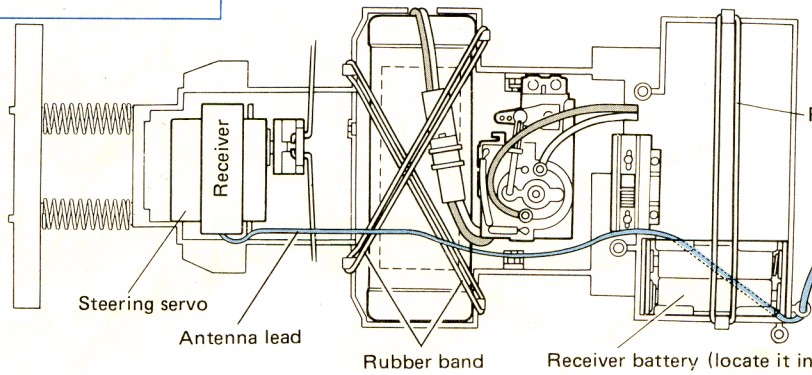


Lift the catch with a finger nail and pull to unplug the connector.

The contact must be in the neutral area when the controller connector is plugged in. Otherwise, the car may
The contact must be in the neutral area when the controller connector is plugged in. Otherwise, the car may run out of control or the controller, battery, or motor may be damaged.



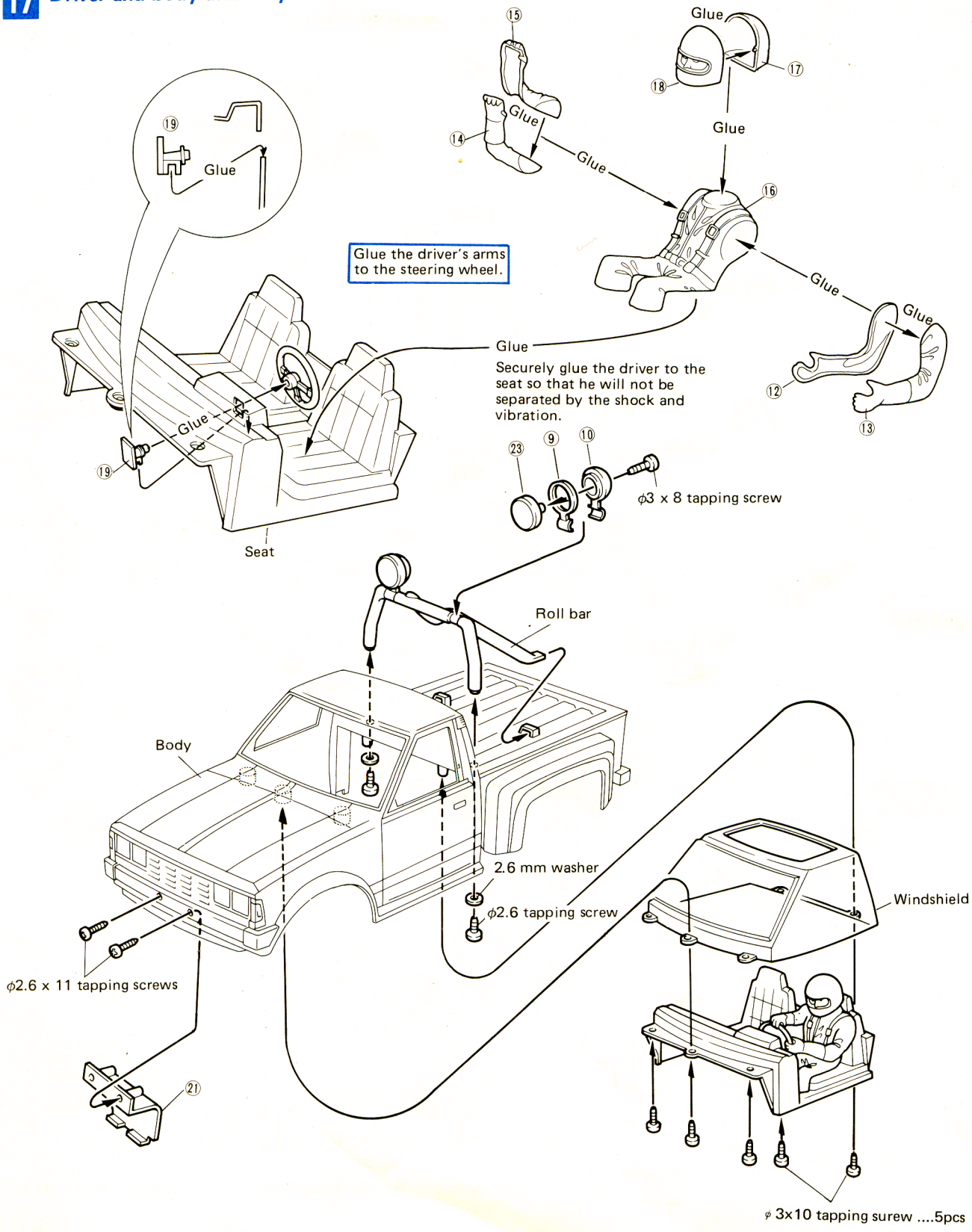
Cut out the thin portion to create an opening for the battery leads. (Not necessary when a 6 V battery is used.)



(Metal part actual sizes used on P. 12)

- 2.6 mm washer .... 2 pcs
- φ2.6 x 8 tapping screw .... 2 pcs
- φ2.6 x 11 tapping screw .... 2 pcs
- φ3 x 8 tapping screw .... 2 pcs
- φ3 x 10 tapping screw .... 5 pcs

17 Driver and body assembly

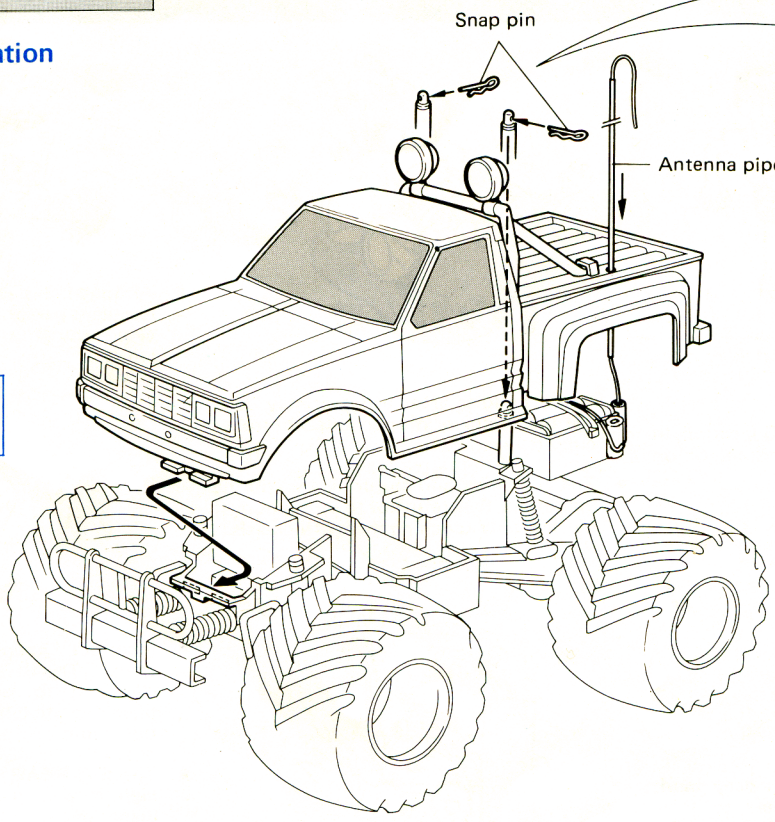


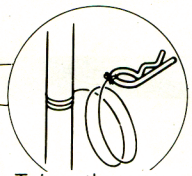
(Metal part actual size used on P. 13)

Snap pin . . . 2 pcs

18 Body installation

Insert the front first.





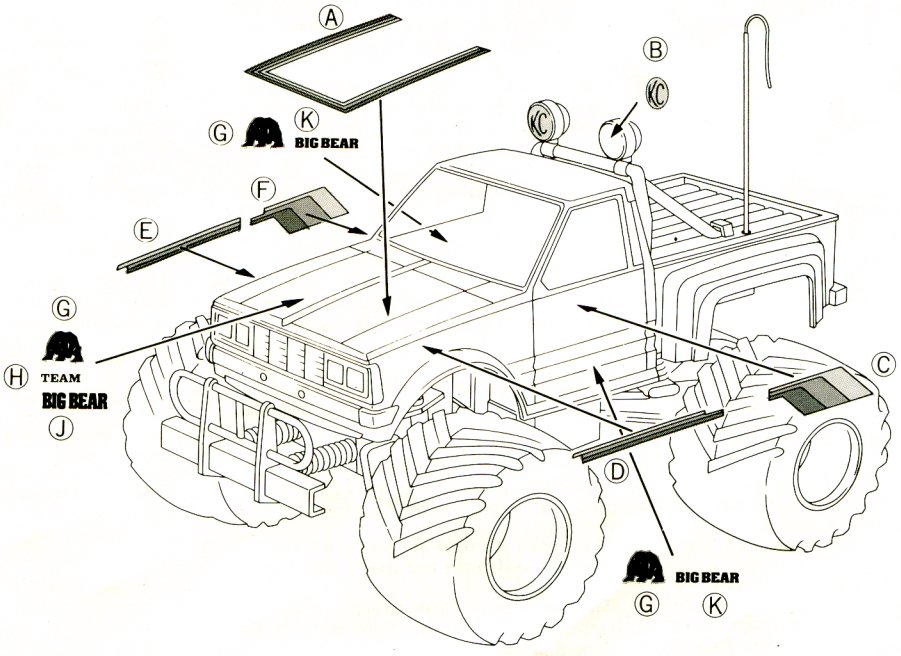
Tying the snap pins to the roll bar with a strong string is one way to keep them from getting lost.

1 Thread the antenna through the antenna pipe.

2 Press the antenna pipe into the support provided on the chassis.

19 Applying decals

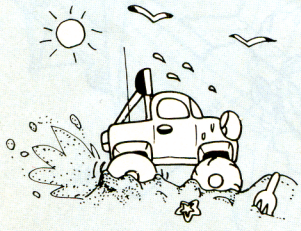
*Apply the decals in the positions.



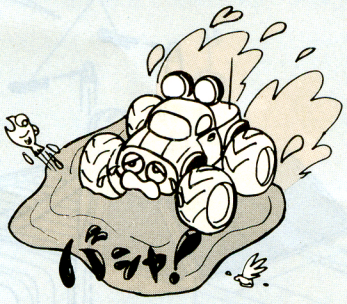
《 Handling precautions 》

BIC BEAR runs at high speed due to built-in tuning motor. Handle and operate with exreme care.

- Do not operate in a crowded location, in the presence of small children, or on roads.

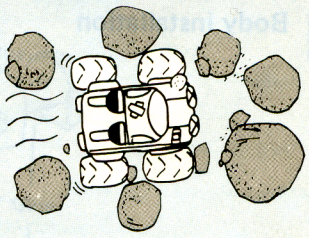


- When the car is trapped in deep sand, return the transmitter levers to their neutral positions and turn the controller off.
- Avoid grassy areas as long grass may become wound on drive shafts.

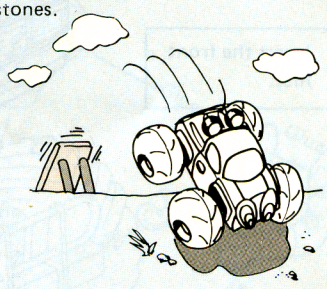


- Avoid puddles areas as water may damage the motor or proportional controller circuits.
- The controller and motor heat up during operation. Becareful not to burn yourself by carelessly touching them afterwards.

- When the car encounters an obstacle, do not try to continue driving. The excessive load may burn out the motor.



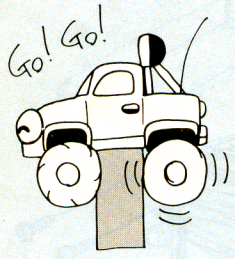
- Although this car has outsized tires for excellent performance on rough surfaces, avoid rough areas with many sizable stones.



- Incorrect jumping may damage the chassis. The BIG BEAR's weight balance allows it to land beautifully if it is travelling straight at full speed prior to the jump. (However, avoid excessive drops.)
- The BIG BEAR's outsized tires provide a high road grip, but also impose great loads on the motor when the car is operated in sand and grassy areas. Avoid long periods of continuous operation under such conditions. (The motor will overheat and burn out so give the motor frequent chances to rest.)

<Checks before operation>

1 Are all screws and nuts tight? Check especially those securing the driving components.



2 Does the drive mechanism work smoothly? Place the car on suitable stand so that the tires do not contact the ground. Test-run the car for one or two minutes and check for faulty contacts of drive parts.

3 Does the controller function sharply? (See the manufacturer's instructions and Page 9 for controller adjustment.)

4 Does the steering operate correctly? If the car does not run straight, turn the steering lever trim toward the reverse direction of the car's drift. (See Page 8 for trim adjustment.)

5 Do the proportional controller batteries have sufficient power? The receiver battery life is shorter than that of the transmitter. Earlier battery replacement is recommended. (See Page 2.)

6 Are all lead connections tight? Faulty insulation or soldering may lead to shortcircuits. Repair with insulating tape (See Pages 2, 9, and 11.)

7 Is the drive battery properly recharged? (See Page 2.)

<Troubleshooting>

① The car does not move forward although the motor is operating. See Pages 5 and 6.

② Abnormal motor or gear sound. Rear wheels do not rotate smoothly. See Page 6.

③ The car does not respond properly to the controller operation or performs erratically. See Pages 5 and 6.

④ The speed control is faulty on the car does not shift into top speed. See Page 9.

⑤ The car does not run straight or steering response differs on the right and left. See Page 8.

⑥ The controller, drive battery, or lead overheats. See Pages 4, 5, 6, and 9.

⑦ Proportional controller operation seems faulty—servoes do not operate, for example. Check: (1) the battery charge, (2) battery connections, and (3) electrical continuity of all wiring including each leads and connectors. If the faulty operation is not corrected even after the above checks, contact your radio controller dealer for repairs.

<Checks after operation>

① Through maintenance after use is important to maintaining performance and prolonging the service life.

② Remove all accumulated dirt and sand.

③ Always remove all batteries.

④ Regularly apply grease to gears and other moving parts.

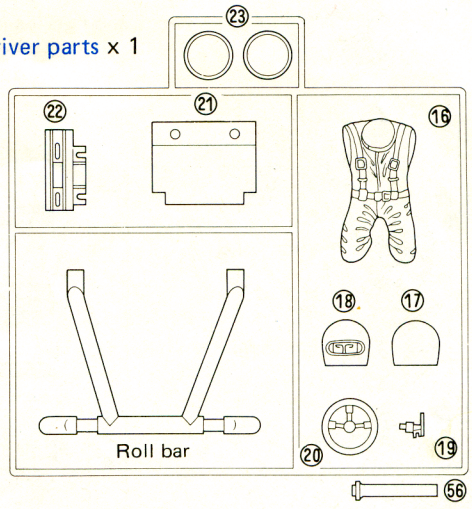
⑤ Check all screws for looseness.

PART LIST

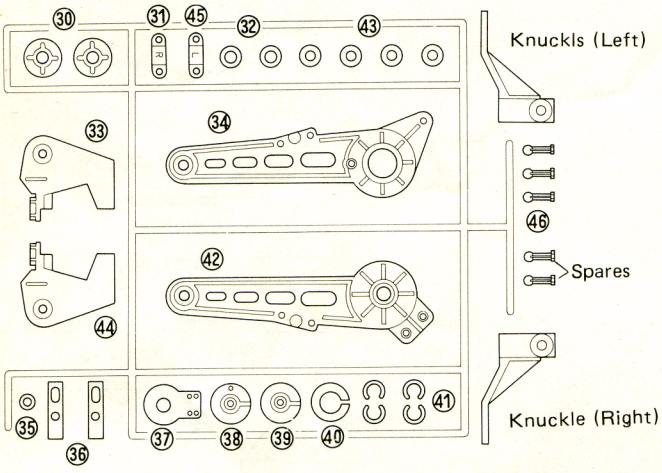
Body x 1

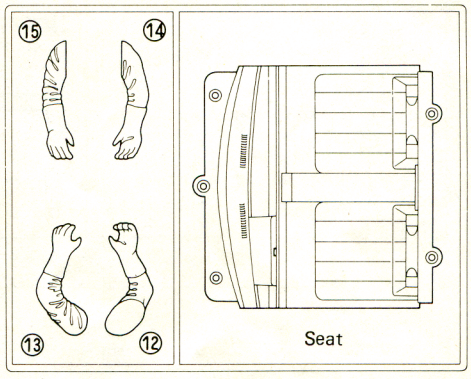
Chassis x 1

Driver parts x 1

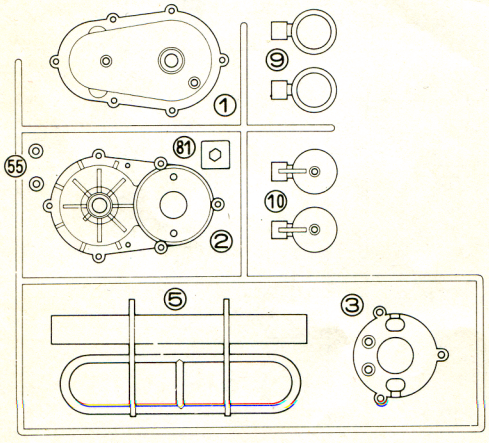


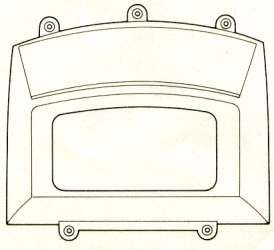
Reinforced nylon parts x 1





ABS parts x 1

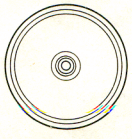




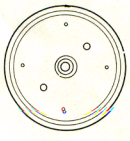
Windshield x 1

Fron wheel

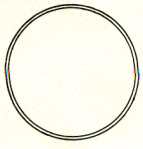
Outside x 2



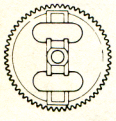
Inside x 2



Tire ring x 4



Differential gear set
(with gear case plate)



Differential gear x 1

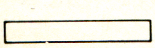
Idler gear x 1

Pinion gear x 1

Bevel gear (A) x 2

Bevel gear (B) x 2

Bevel bushing x 2



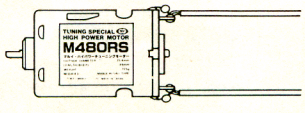
ϕ3 x 20 idler shaft x 1

ϕ4 x 11.5 bevel shaft x 2

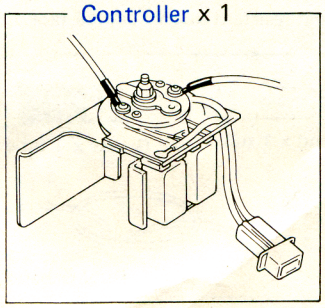
ϕ2 x 10.5 bushing pin x 2

ϕ3 x 4 screw x 1

M480RS motor x 1

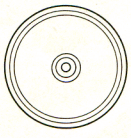


Controller x 1

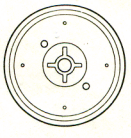


Rear wheel

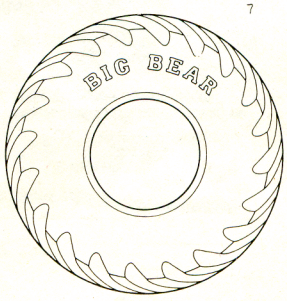
Outside x 2



Inside x 2



Tire x 4



PART LIST

• Spare screws and nuts are included.
("ϕ3" means "3 mm in diameter.")

Washer set


5 mm washer x 2


4 mm washer x 4


3 mm wahser x 8

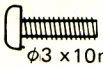

2.6 mm wahser x 2


2 mm wahser x 16

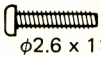

3 mm spring washer x 8


4 mm spring washer x 4

Tapping screw set

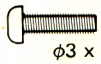

ϕ3 x10mm tapping screw x 8


ϕ3 x 8 mm tapping screw x 10


ϕ2.6 x 11 mm tapping screw x 3

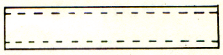

ϕ2.6 x 8 mm tapping screws x 2

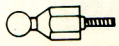

ϕ2 x 9 mm tapping screw x 16


ϕ3 x 10 mm screw x 7

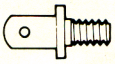

ϕ3 x 6 mm screw x 4

Metal part set

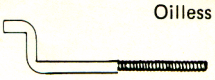

ϕ4 x 28 mm spacer x 2

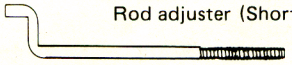

Free ball x 3

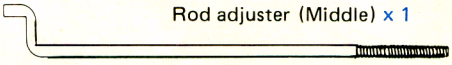

Snap pin x 2


Body mount x 2

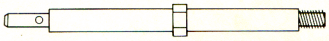

Oilless bearing x 2

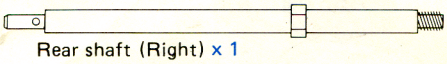

Rod adjuster (Short) x 1


Rod adjuster (Middle) x 1

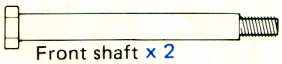

Rod adjuster (Long) x 1

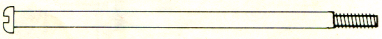
Rear shaft set

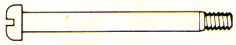

Rear shaft (Left) x 1

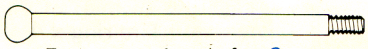

Rear shaft (Right) x 1

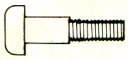
Shaft set

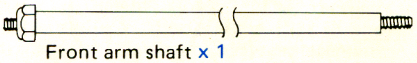

Front shaft x 2


Motor holder screw x 3


Front suspension shaft x 4


Rear suspension shaft x 2


Rear arm screw x 2


Front arm shaft x 1

Nut set


Partially nylon 4 mm locknut x 8


Partially nylon 3 mm locknut x 1

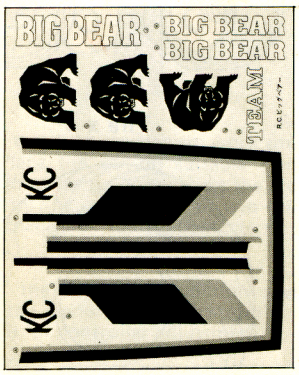

4 mm nut x 4


3 mm nut x 10


2 mm nut x 3

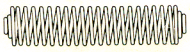
In addition following parts are included:

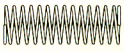
Decal sheet x 1



Antenna pipe x 1

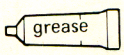
Spring set


Rear suspension spring x 2


Fron suspension spring x 2

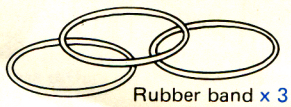

Bumper spring x 2

Heat resistant double coated tape x 1

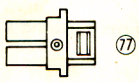


Bond x 1 tube

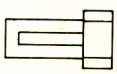
Grease x 1 tube

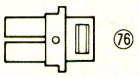

Rubber band x 3

Connector set

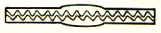


Intermediate connector


Holder (Large) x 1




Holder (Small) x 1


×2
ϕ2 x 20 joint pipe


×1
ϕ2 x 6.7 tapping screw

Designs and specifications in this instruction brochure are subject to change without notice.

'59·12