

Graupner

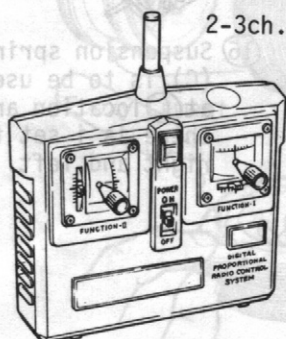
THE BLIZZARD RADIO CONTROL CATERPILLAR TRACTOR



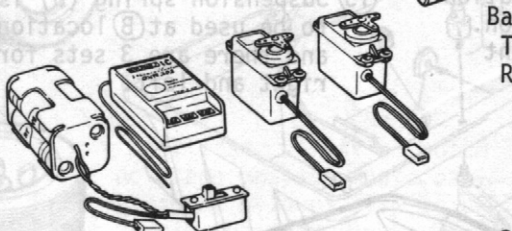
BEFORE ASSEMBLING

Thank you very much for purchasing the R/C Model "THE BLIZZARD". To be able for you to assemble and handle "THE BLIZZARD" properly and also to get maximum performance, please follow the assembling sequence of this instruction sheet carefully. By going through this instruction once and keeping in mind the overall assembly process, it will enable you to build the kit very smoothly.

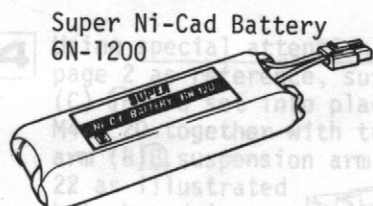
ARTICLES REQUIRED FOR RUNNING



2-3ch. Radio Control System



Batteries:
Transmitter UM-3 x 6 - 8pcs.
Receiver UM-3 x 4pcs.

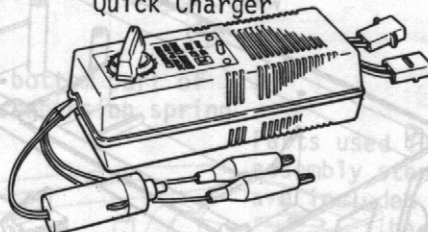


Super Ni-Cad Battery
6N-1200

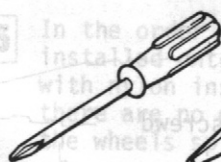
Super Ni-Cad
Home Charger



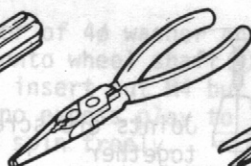
Super Ni-Cad
Quick Charger



TOOLS REQUIRED FOR ASSEMBLING



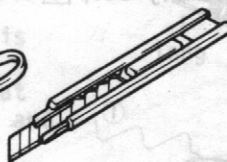
+ Philip Driver



Radio Plier



Scissor



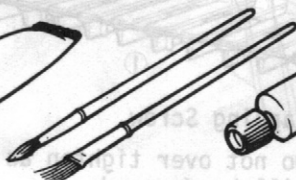
Knife



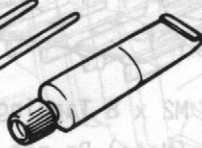
Vinyl Tape



Paint



Brush



Rubber Cement



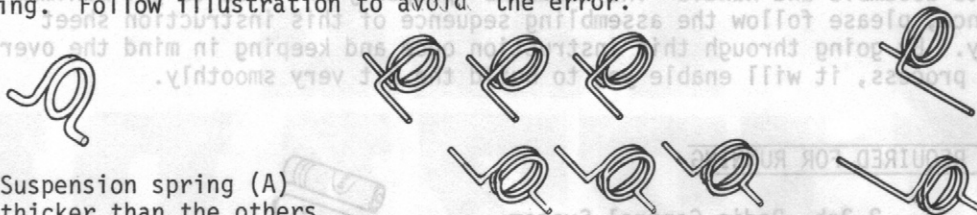
Epoxy Cement
(Instant drying cement)



Spray Oil

SPECIAL ATTENTION NEEDED WHEN ASSEMBLING

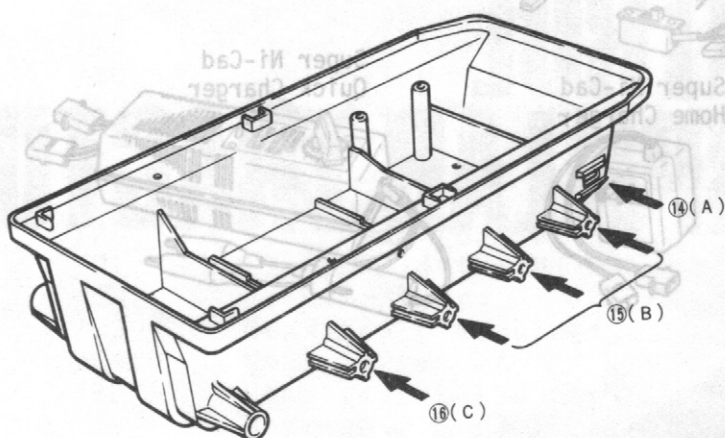
*Part where you might make an error when assembling are the ⑭ ⑮ ⑯ suspension spring. Follow illustration to avoid the error.



⑭ Suspension spring (A) is thicker than the others. It is used in the (A) location of the right illustration. There are 1 set for right and left.

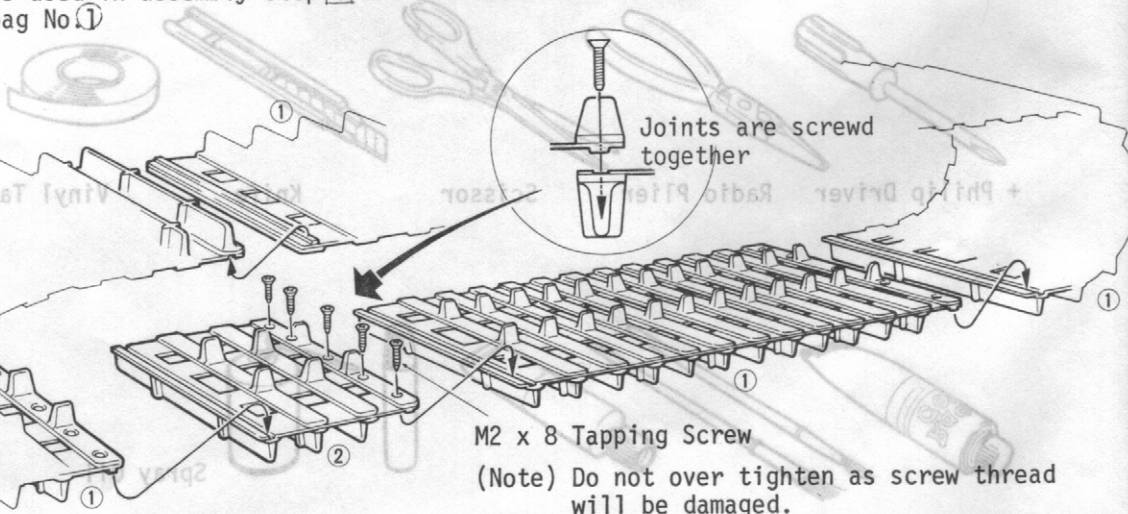
⑮ Suspension spring (B) is to be used at (B) location and there are 3 sets for right and left.

⑯ Suspension spring (C) is to be used at (C) location and there is 1 set for right and left.

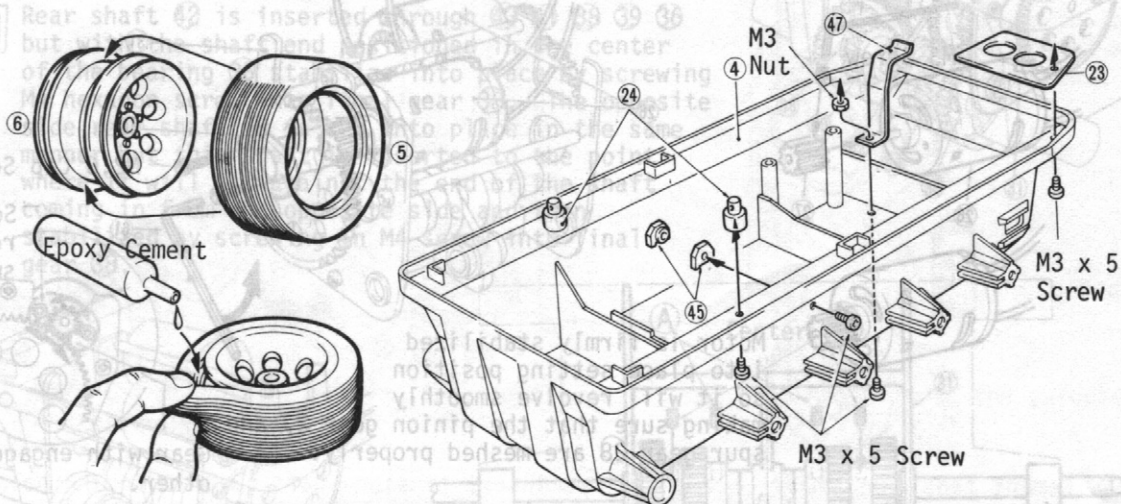


- 1 Screw together 4 caterpillar ① and 1 caterpillar joint ② as illustrated and assembled 2 sets of these together.

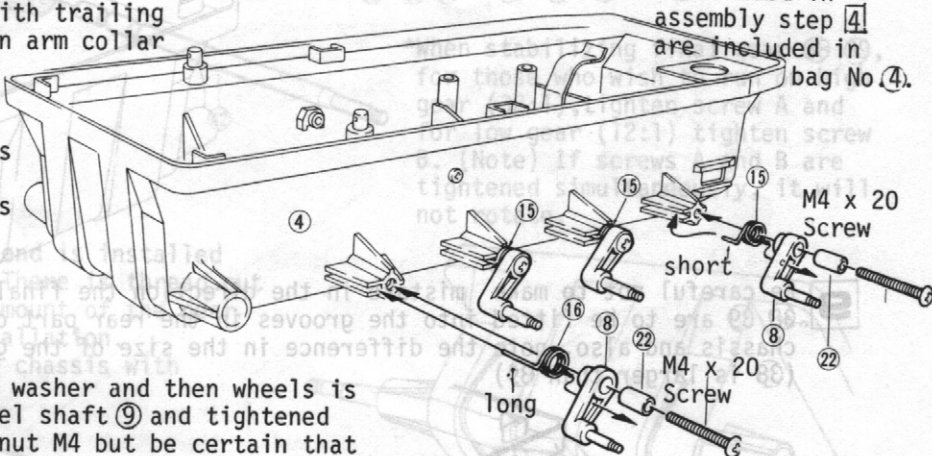
Parts used in assembly step 1 are included in bag No. ①



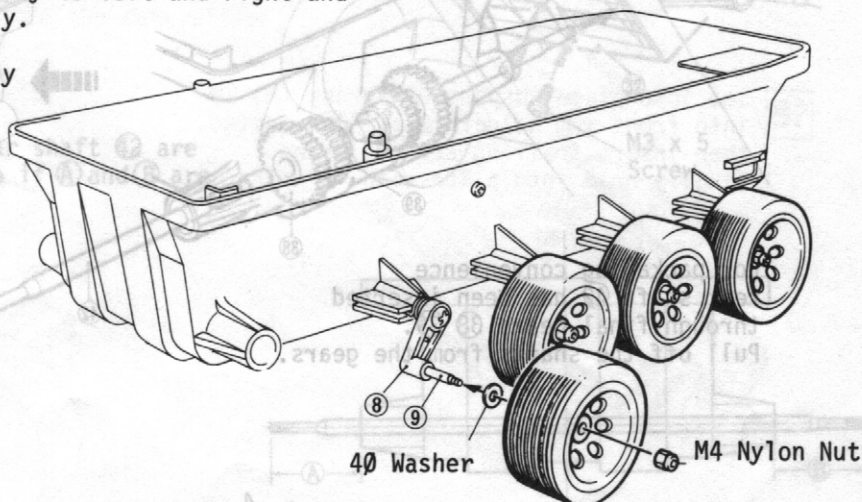
- 2** Fit onto road wheel **6** the tires **5** as illustrated and apply instant drying cement so it will not come off. Parts used in assembly step **2** are included in bag No. **2**.
- 3** Body mount **24**, receiver mount **23**, battery holder bracket **47** battery clips **45** are installed onto chassis **4** as illustrated. Parts used in assembly step **3** are included in bag No. **3**.



- 4** Using special attention needed illustrations on bottom part of page 2 as reference, suspension spring (B) **15**, suspension spring (C) **16** are set into place with screw M4 x 20 together with trailing arm (B) **8**, suspension arm collar **22** as illustrated but when doing so, make sure that there are no excess play to the right and left, and moves up and down when installed. Parts used in assembly step **4** are included in bag No. **4**.

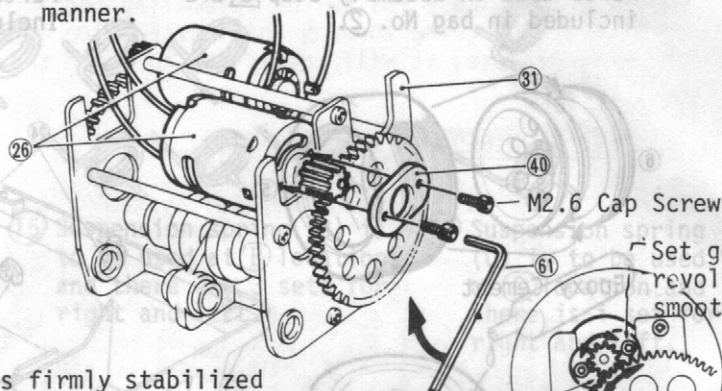
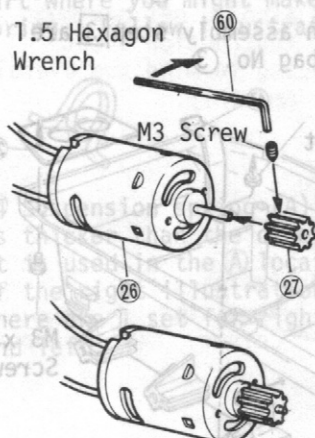


- 5** In the order of 40 washer and then wheels is installed onto wheel shaft **9** and tightened with nylon insert nut M4 but be certain that there are no excess play to left and right and the wheels spin freely. Parts used in assembly Step **5** - **12** are included in bag No. **5**.



- 6** Pinion gear 27 is installed onto motor 26.
- 7** Motor 26 are installed onto the gear box plate 31 with motor mount plate 40 temporarily attaching into place with cap screw (M2.6 x 8). Another motor is installed on the other side in the same manner.

1.5 Hexagon Wrench

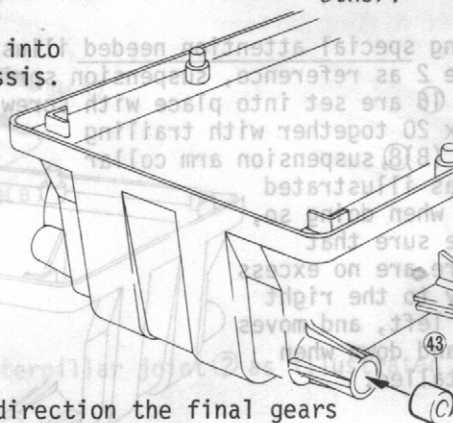


Motor is firmly stabilized into place setting position so it will revolve smoothly making sure that the pinion gear 27 and spur gear 28 are meshed properly.

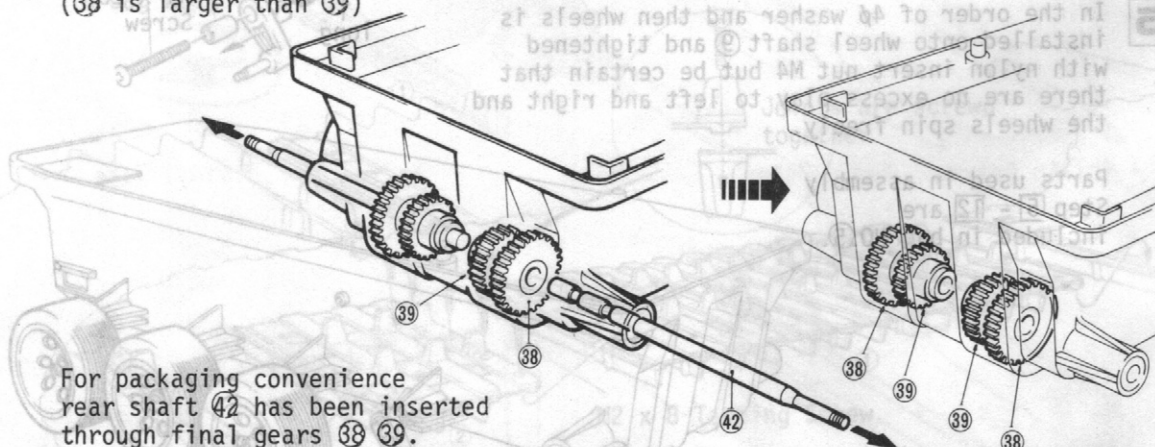
Set gear revolve smoothly.

Gear with engage each other.

- 8** Insert rear shaft nylon axle bushing 43 into rear shaft installation hole of the chassis.



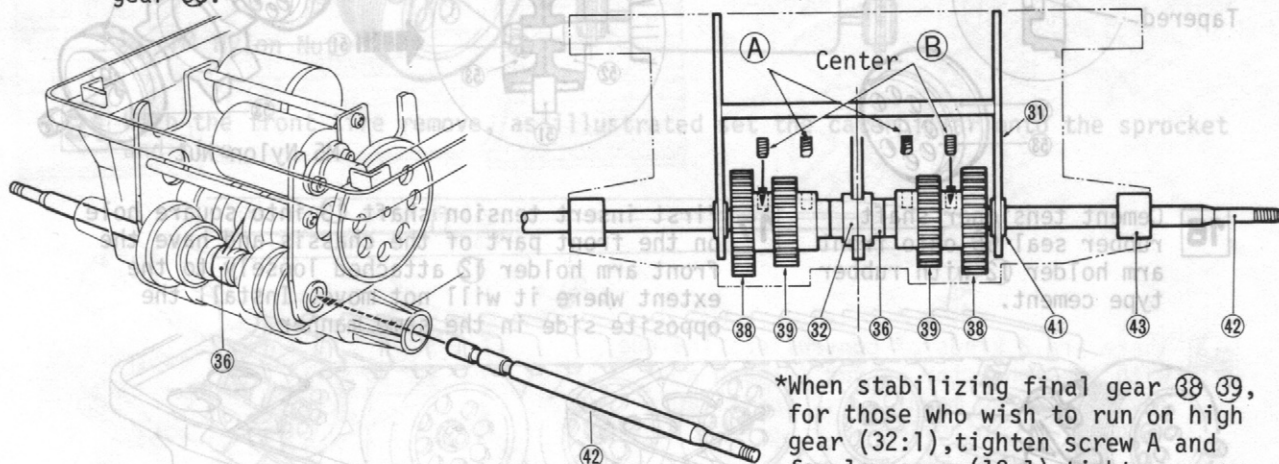
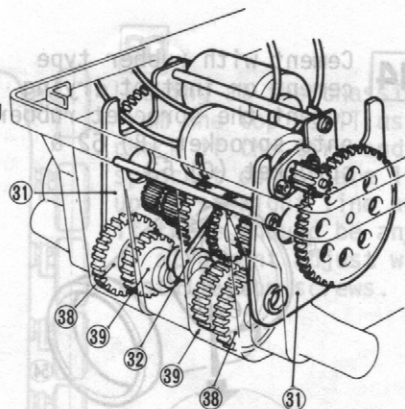
- 9** Be careful not to make mistake in the direction the final gears 38 39 are to be fitted into the grooves in the rear part of the chassis and also, note the difference in the size of the gears. (38 is larger than 39)



For packaging convenience rear shaft 42 has been inserted through final gears 38 39. Pull off the shafts from the gears.

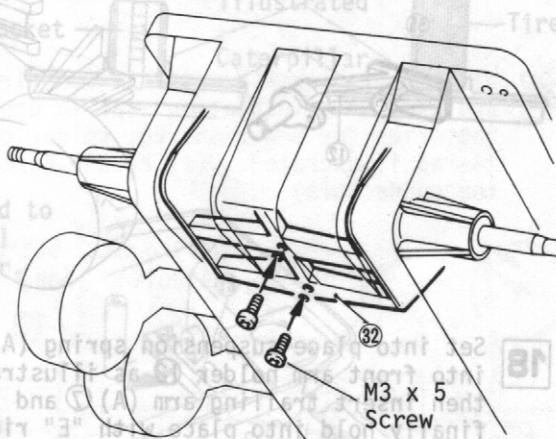
- 10** Next, set the final gears 38 39 that are placed into the rear part of the chassis as if sandwiching with the gear box as illustrated.

- 11** Rear shaft 42 is inserted through 43 41 38 39 36 but with the shaft end positioned in the center of the bearing 36 stabilize into place by screwing M4 hexagon screw into final gear 38. The opposite side rear shaft 42 is set into place in the same manner but this shaft is inserted to the point where it will hit against the end of the shaft coming in from the opposite side and then stabilized by screwing in M4 screw into final gear 38.

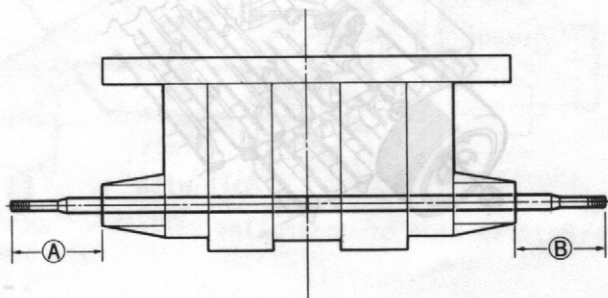


*When stabilizing final gear 38 39, for those who wish to run on high gear (32:1), tighten screw A and for low gear (12:1) tighten screw B. (Note) If screws A and B are tightened simultaneously, it will not rotate.

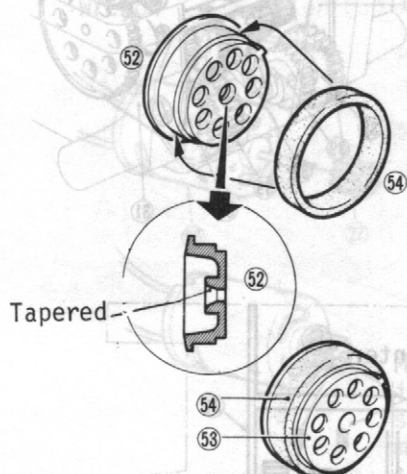
- 12** The assembled rear end is installed onto the chassis. There is thread cut in the 32 gear box mount of the gear box center for installation. Stabilize 32 to the chassis with M3 x 5 screw.



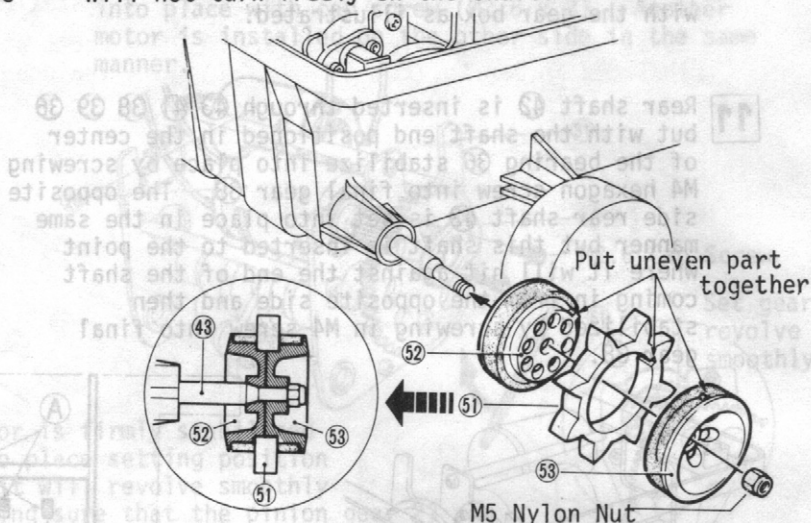
- 13** Check if both side rear shaft 42 are in the center and also if A and B are same length.



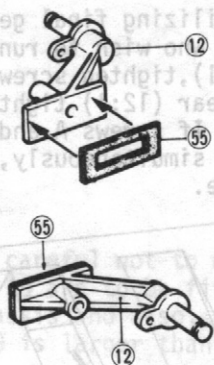
- 14** Cement with rubber type cement or instant drying cement the sprocket rubbers onto sprocket (B) 52 & sprocket (C) 53.



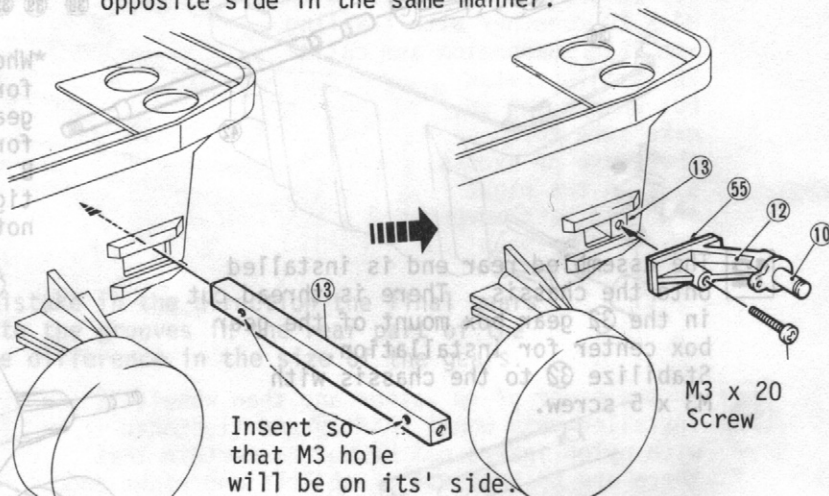
- 15** Fit onto rear shaft 42 as illustrated, 52 51 53 and install firmly with M5 nylon nut so that it will not turn freely on the shaft.



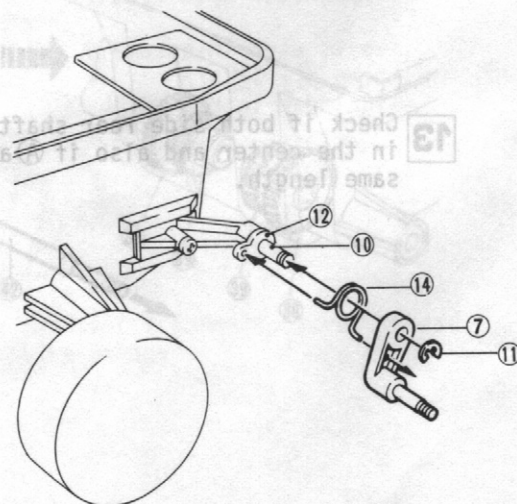
- 16** Cement tensioner shaft rubber seal 65 onto front arm holder 12 with rubber type cement.



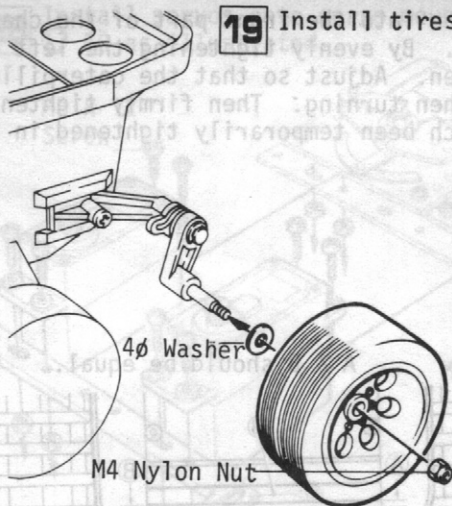
- 17** First insert tension shaft 13 into square hole on the front part of the chassis and have the front arm holder 12 attached loosely to the extent where it will not move. Install the opposite side in the same manner.



- 18** Set into place suspension spring (A) 14 into front arm holder 12 as illustrated, then insert trailing arm (A) 7 and finally hold into place with "E" ring 11.



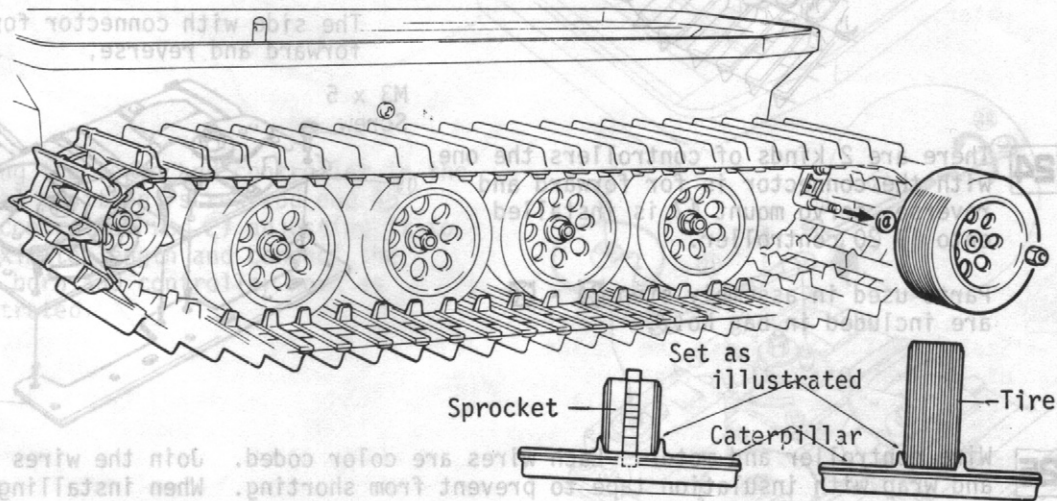
19 Install tires



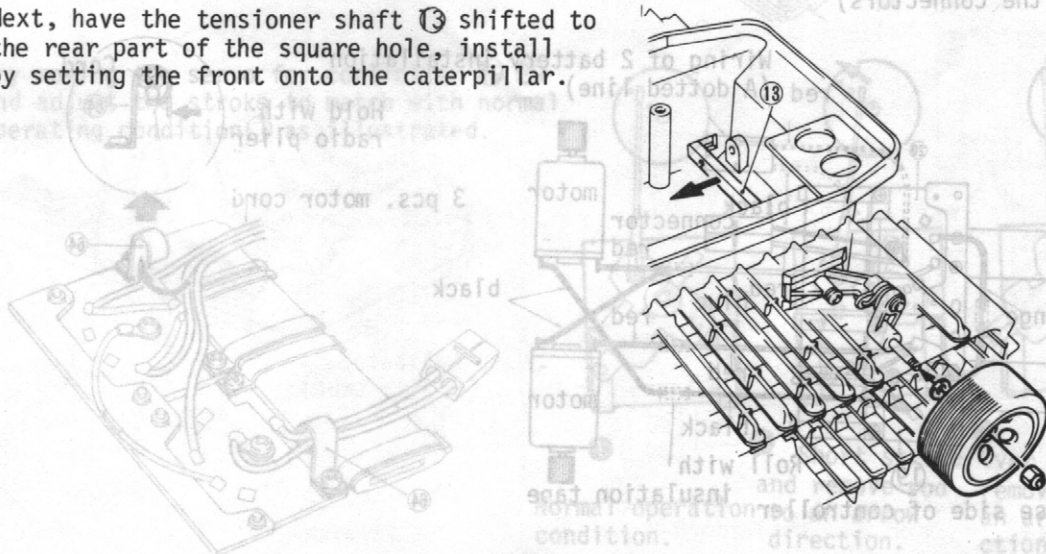
20

Looking at the chassis from the top as illustrated check if the tire and sprocket center are lined up in straight line and if there should be any out of alignment adjust with installation screws.

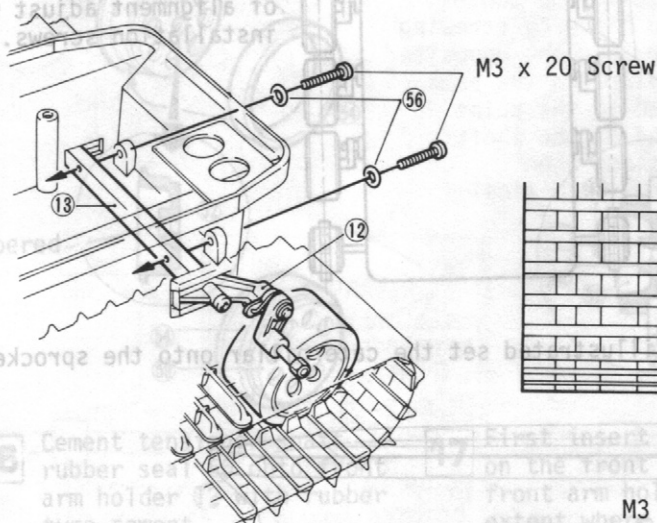
21 With the front tire remove, as illustrated set the caterpillar onto the sprocket and tire.



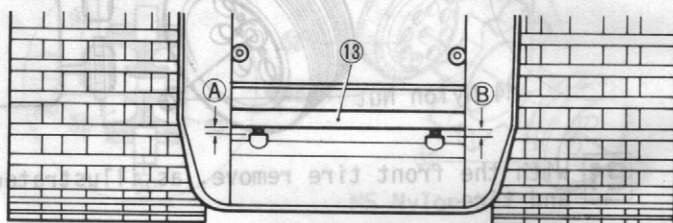
22 Next, have the tensioner shaft 13 shifted to the rear part of the square hole, install by setting the front onto the caterpillar.



- 23** Insert M3 x 20 screw fitting on "0" ring 56 then into the front part of the chassis as illustrated and screw into tension shaft 13. By evenly tightening the left and right screw the caterpillar tension will tighten. Adjust so that the caterpillar will not come off easily or it becomes heavy when turning. Then firmly tighten the front arm holder 12 installation screw which been temporarily tightened in previous step.

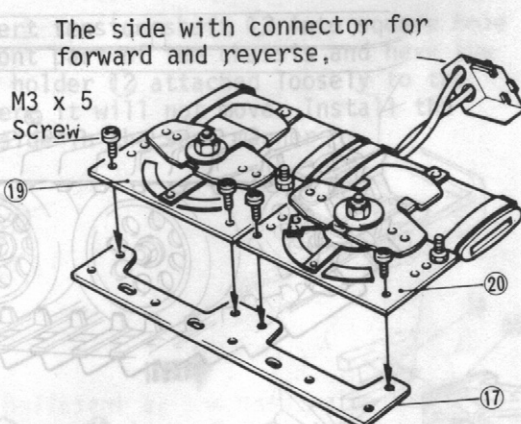


A & B should be equal.

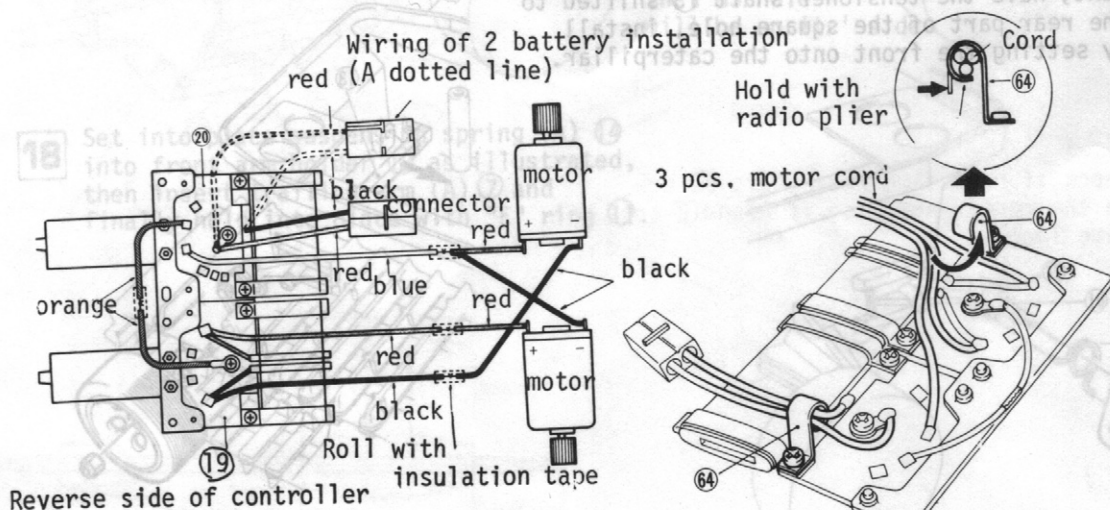


- 24** There are 2 kinds of controllers the one with the connector is for forward and reverse, servo mount 17 is installed onto 19 20 controller.

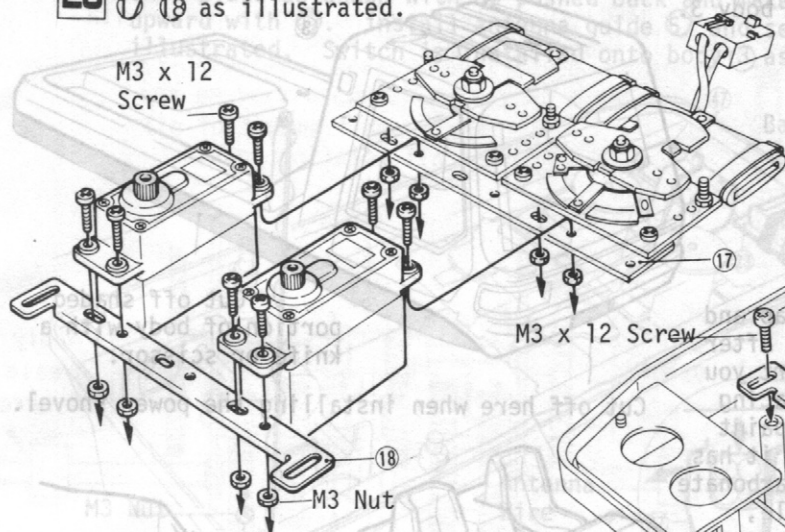
Parts used in assembly step 24 - 36 are included in bag No. 7.



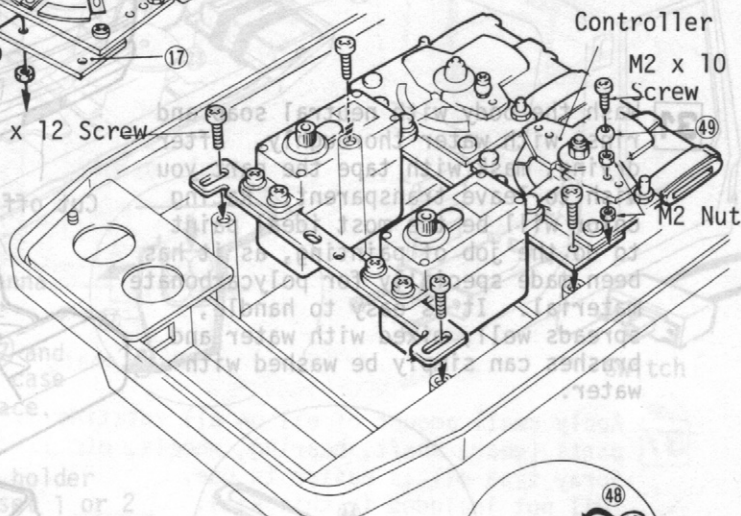
- 25** Wire controller and motor. Each wires are color coded. Join the wires as shown and wrap with insulation tape to prevent from shorting. When installing 2 batteries for power source, solder connector so that there will be no error on \oplus as illustrated. (If Kyosho Super-Ni-Cad Battery is purchased it will include the connectors)



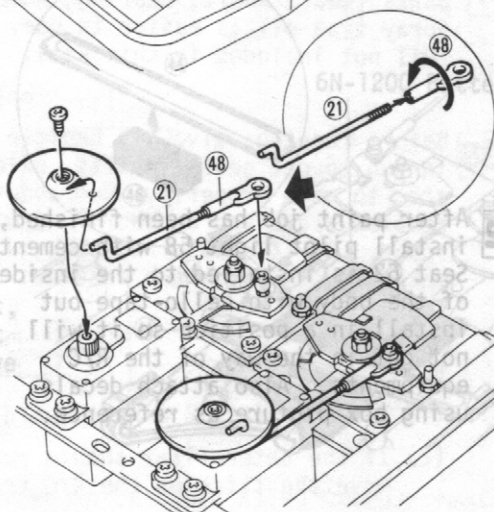
- 26** Install servos onto servo mount 17 as illustrated.



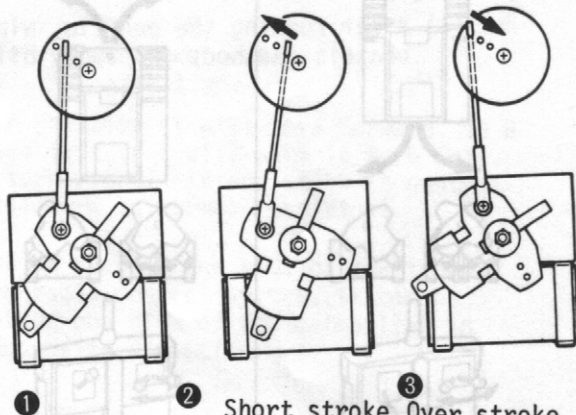
- 27** Install servos and controller onto chassis. Install 49 rod end ball with screw into the hole on the inner side of the controller horn.



- 28** Keeping the servo and controller in the neutral position, screw rod end 48 into controller rod 21 adjusting it to approximate length and connect the servo horn and controller horn as illustrated.

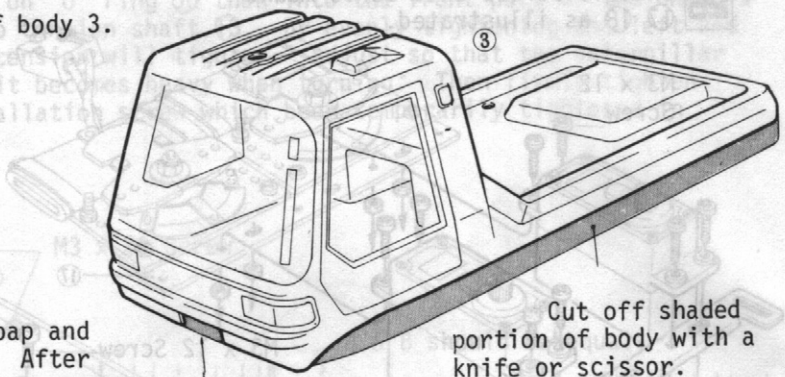


- 29** Try moving the servo for controller 19 20 and adjust the stroke to match with normal operating condition 1 as illustrated.



- 1** Normal operation condition.
- 2** Short stroke and remove rod to an arrow direction.
- 3** Over stroke remove rod to an arrow direction.

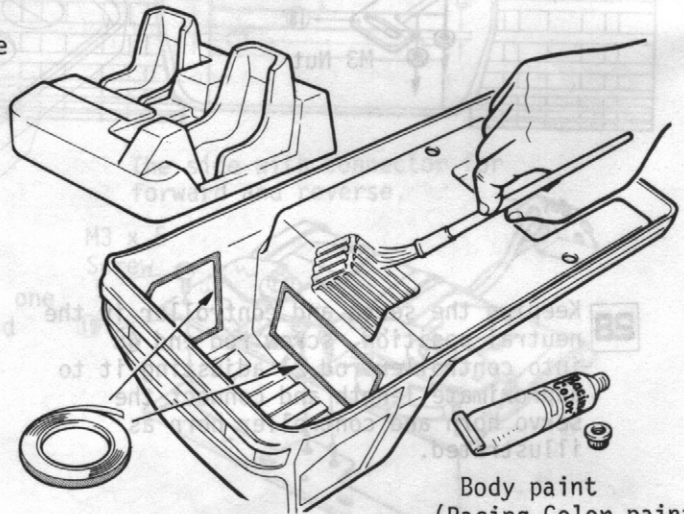
- 30** Cut off the shaded portion of body 3.



Cut off shaded portion of body with a knife or scissor.

Cut off here when installing the power shovel.

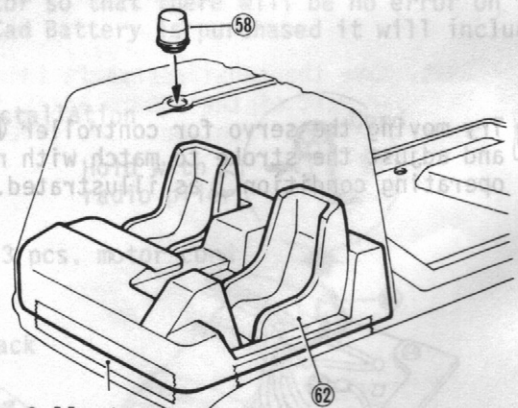
- 31** Wash the body with neutral soap and rinse with water thoroughly. After drying, mask with tape the part you wish to leave transparent. Racing color will be the most ideal paint to do the job of painting, as it has been made specially for polycarbonate material. It is easy to handle, spreads well, mixed with water and brushes can simply be washed with water.



Body paint
(Racing Color paint)

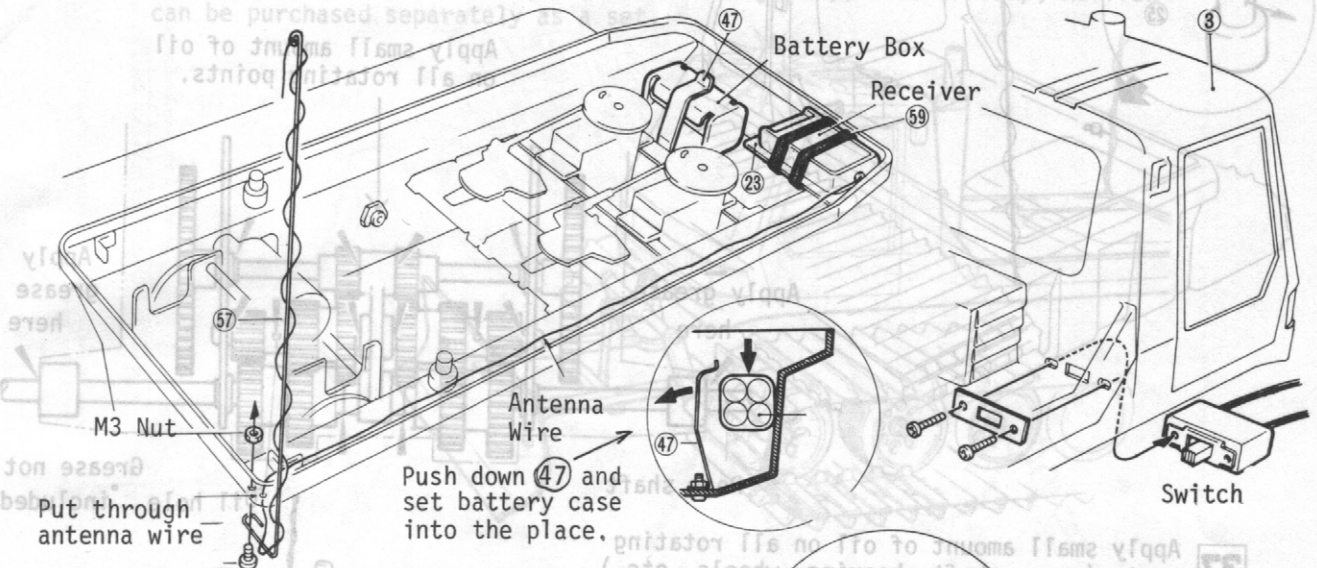
- 32** After paint job has been finished, install pilot light 58 with cement. Seat 62 is installed to the inside of the body with cello-tape but install in a position so it will not get in the way of the R/C equipments. Also attach decals using box picture as reference.

Micron tape.

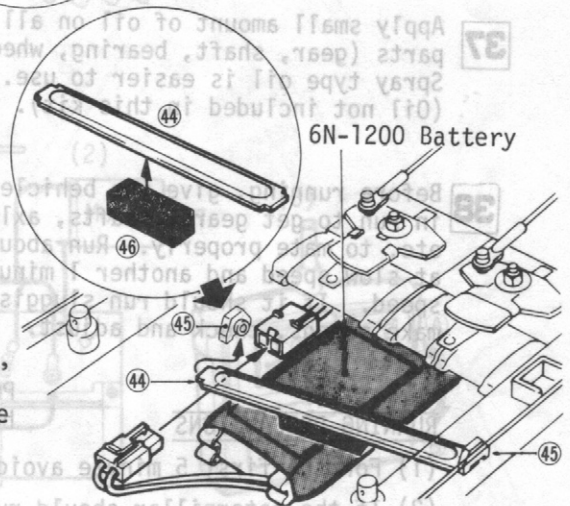


Cello-tape
(Scotch tape)

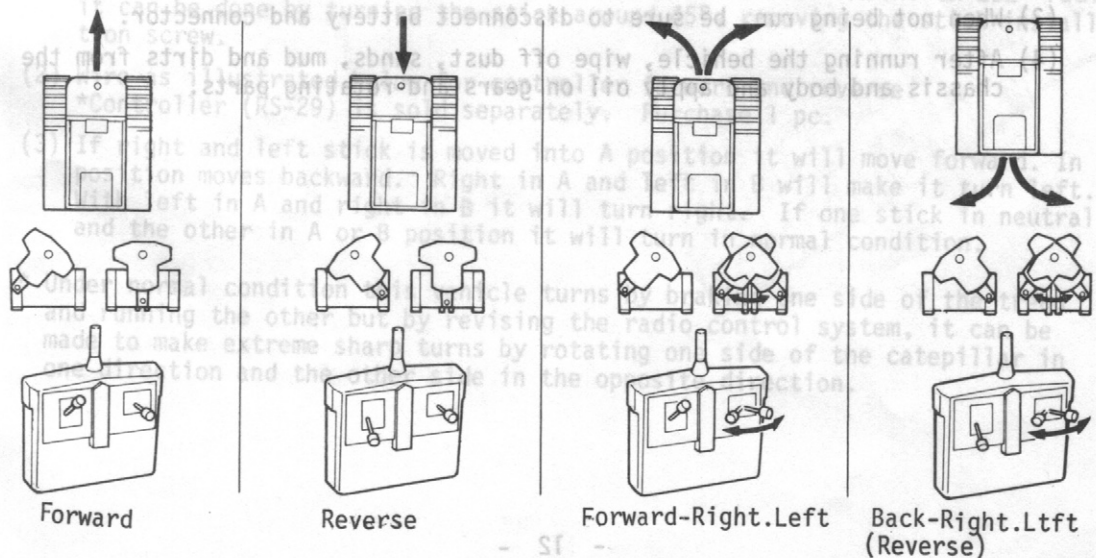
- 33** Install receiver onto receiver mount (23) with strap (59) and set receiver battery into place as shown with (47) pushed back and make it so that it will not shift upward with (47). install antenna guide (57) and set antenna into place as illustrated. Switch is installed onto body (3) as illustrated.

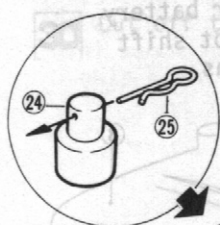


- 34** Cement sponge (46) onto battery holder clip with rubber type cement, set 1 or 2 power battery into place illustrated and having battery clip (44) attached to (45) and insert the other end from the side.



- 35** Illustration shows the movement of the stick, controller and the model. Check to see that it moves as illustrated. If it does not move as shown, it is most likely an error in the wiring connections of controller and motor. Re-check wiring.





- 36** Insert body into body mount 24 as illustrated, and hold into place with body pin 25.

Apply small amount of oil on all rotating points.

Apply grease here

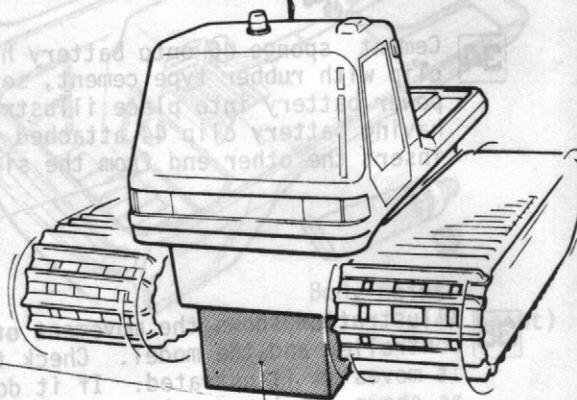
Apply grease here

Rear shaft

Grease not included
Oil hole

- 37** Apply small amount of oil on all rotating parts (gear, shaft, bearing, wheels, etc.). Spray type oil is easier to use. (Oil not included in this kit).

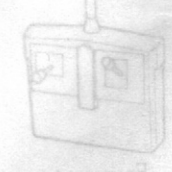
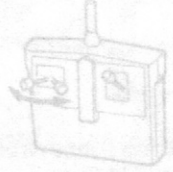
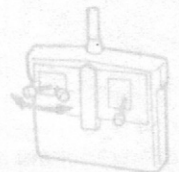
- 38** Before running, give the behicle a break-in run to get gears, shafts, axle holders, etc. to mate properly. Run about 1 minute at slow speed and another 1 minute at high speed. If it should run sluggishly or make sounds, check and adjust.



Put on the base.

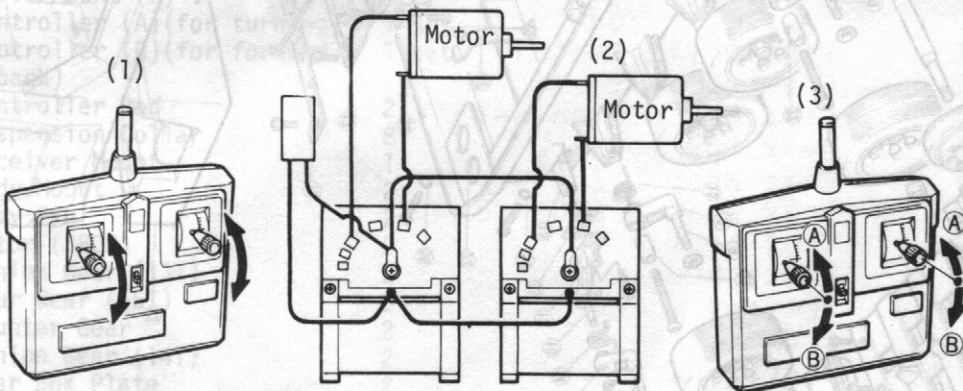
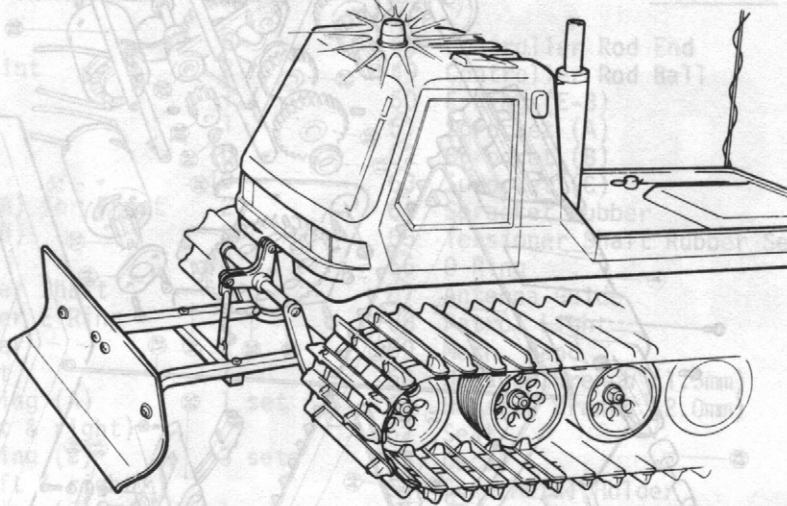
RUNNING PRECAUTIONS

- (1) For the first 5 minute avoid forcing or overloading the running capacity.
- (2) If the caterpillar should run into a situation of not being able to move, move the stick on the R/C transmitter into neutral position immediately.
- (3) When not being run, be sure to disconnect battery and connector.
- (4) After running the behicle, wipe off dust, sands, mud and dirts from the chassis and body and apply oil on gears and rotating parts.



OPTION

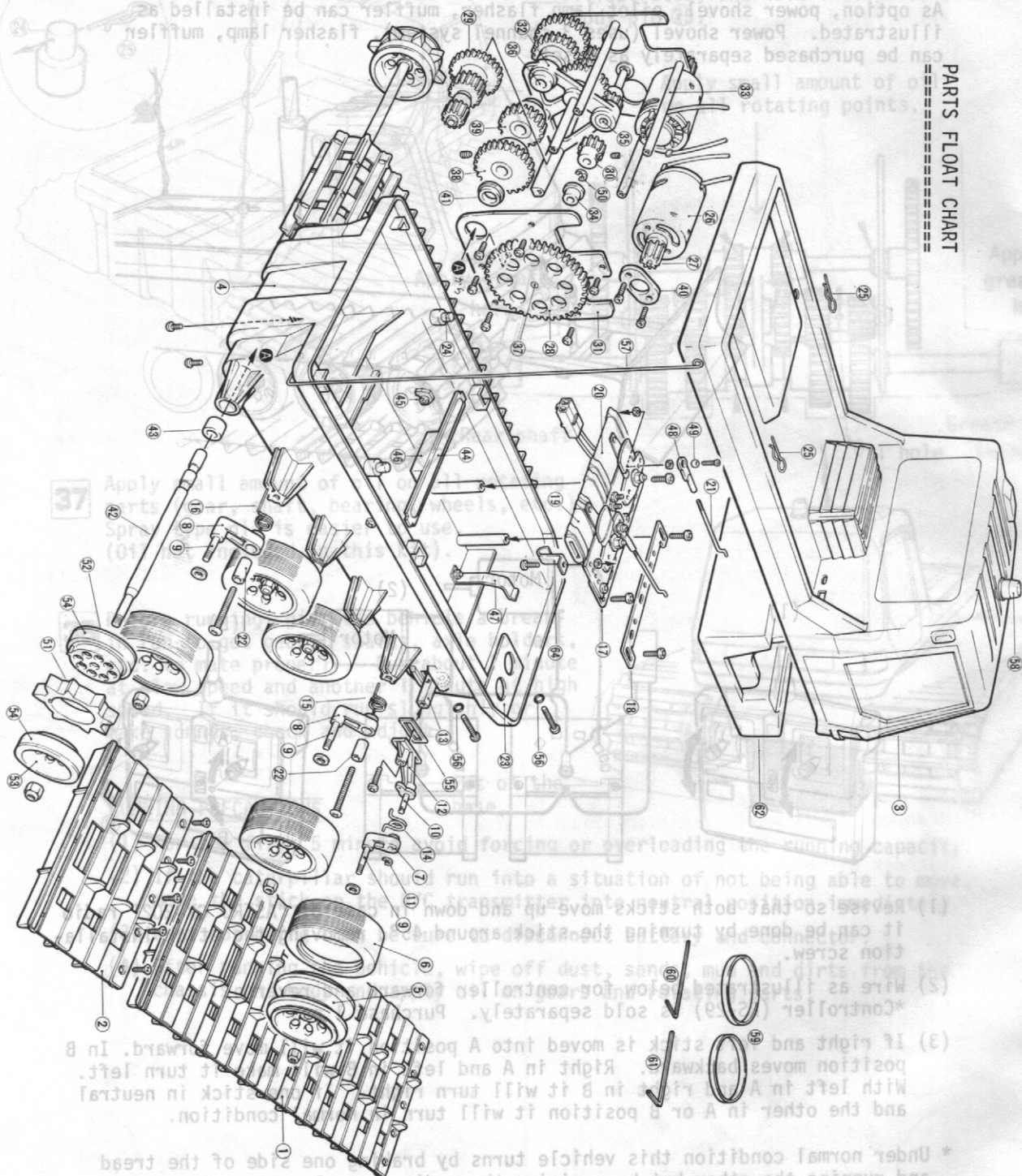
As option, power shovel, pilot lamp flasher, muffler can be installed as illustrated. Power shovel (uses 3 channel system), flasher lamp, muffler can be purchased separately as a set.



- (1) Revise so that both sticks move up and down in case of "ASTRO GX-202" radio it can be done by turning the stick around 45°, removing the stick installation screw.
- (2) Wire as illustrated below for controller forward and reverse.
*Controller (RS-29) is sold separately. Purchase 1 pc.
- (3) If right and left stick is moved into A position it will move forward. In B position moves backward. Right in A and left in B will make it turn left. With left in A and right in B it will turn right. If one stick in neutral and the other in A or B position it will turn in normal condition.

* Under normal condition this vehicle turns by braking one side of the tread and running the other but by revising the radio control system, it can be made to make extreme sharp turns by rotating one side of the caterpillar in one direction and the other side in the opposite direction.

PARTS FLOAT CHART



PART LIST

KEY NO.	PARTS NAME	QTY.	KEY NO.	PART NAME	QTY.
①	Caterpillar	8	48	Controller Rod End	2
②	Caterpillar Joint	2	49	Controller Rod Ball	2
③	Body	1	50	E Ring (E-3)	2
④	Chassis	1	51	Sprocket (A)	2
⑤	Tire	10	52	Sprocket (B)	2
⑥	Road Wheel	10	53	Sprocket (C)	2
*⑦	Trailing Arm (A) for Front	2	54	Sprocket Rubber	4
*⑧	Trailing Arm (B)	8	55	Tensioner Shaft Rubber Seal	2
*⑨	Wheel Shaft	10	56	O Ring	2
*⑩	Front Arm Holder Shaft	2	57	Antenna Guide	1
⑪	Front Arm Holder E Ring	2	58	Patrol Light	1
⑫	Front Arm Holder	2	59	Mech. Band	2
⑬	Tensioner Shaft	1	60	Hexagon Wrench (1.5mm)	1
⑭	Suspension Spring (A) for Front (left & right)	1 set	61	Hexagon Wrench (2.0mm)	1
⑮	Suspension Spring (B) for Center (left & right)	3 sets	62	Seat	1
⑯	Suspension Spring (C) for Rear (left & right)	1 set	63	Decal	1
⑰	Servo Mount (A)	1	64	Cord Metal Holder	2
⑱	Servo Mount (B)	1	* Marked parts are assembled.		
⑲	Controller (A)(for turning)	1 set			
⑳	Controller (B)(for forward & back)	1 set			
㉑	Controller Rod	2			
㉒	Suspension Collar	8			
㉓	Receiver Mount	1			
㉔	Body Mount	2			
㉕	Body Pin	2			
㉖	Motor (380S)	2			
㉗	Pinion Gear (13T)	2			
*㉘	Spur Gear (65T)	2			
*㉙	Counter Gear	2			
*㉚	Pinion Gear (14T)	2			
*㉛	Gear Box Plate	2			
*㉜	Gear Box Mount	1			
*㉝	Joint Shaft	3			
*㉞	Metal (4 x 8 w/flange)	2			
*㉟	Metal (4 x 8 x 8)	1			
*㊱	Metal (6 x 10 x 14)	1			
*㊲	Spur Gear Shaft	2			
*㊳	Final Gear (L) 36T	2			
*㊴	Final Gear (S) 30T	2			
㊵	Motor Mount Plate	2			
*㊶	Rear Shaft Guide	2			
㊷	Rear Shaft	2			
㊸	Rear Shaft Nylon Shaft	2			
㊹	Battery Metal Holder	1			
㊺	Battery Metal Holder Stopper	2			
㊻	Battery Metal Holder Sponge	1			
㊼	Receiver Battery Metal Holder	1			

Spare Parts List

No.	Description	Part No.
4986	/1 Caterpillar set	1,2
	/2 Body set	3,58,62
	/3 Chassis	4
	/4 Rims	5
	/5 Pneumatic tyre	6
	/6 Trailing arm A	7
	/7 Trailing arm B	8,9,22
	/8 Front arm holder	10,11,12
	/9 Strut (tensioner)	13
	/10 Suspension spring A	14
	/11 Suspension spring B	15
	/12 Suspension spring C	16
	/13 Servo mount	17,18
	/14 Speed controller A	19
	/15 Speed controller B	20
	/16 Controller rod set	21,48,40
	/17 Set of accessories for receiver	23,47
	/18 Body mount set	24,25
	/19 Pinion (13 teeth)	27
	/20 Spur gear (65 teeth)	28,37,50
	/21 Pinion (14 teeth)	30
	/22 Counter gear	29
	/23 Gear box platen set	31,33
	/24 Gear box mount	32
	/25 Rear gear L (36 teeth)	38
	/26 Rear gear S (30 teeth)	39
	/27 Gear bearing	35,34,36,41,43
	/28 Motor mounting plate	40
	/30 Battery metal holder set	44,46,45
	/31 Sprocket set	51,52,53
	/32 Rubber parts set	55,56,54
	/33 Decal	63
	/34 Screws/wrench set	1 screw, wrench set
	/35 Body pin	
	/36 Rear axle	42
	<u>Tuning parts</u>	
4986	/29 Speed controller for separate control of vehicle, forward/backward	
	/80 Front shovel	
	/81 Snow roller	
	/82 Flashing light set	
	/83 Headlight	
	/84 Exhaust pipe	

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Ski Run Bully