

04102 534148

RADIO CONTROLLED 10 ENGINE POWERED RACING BUGGY

RAMPAGE GP-10

- SUPER-EASY STARTING BY RECOIL STARTER (BUILT-IN)! FOR SIMPLE OPERATION!
- SUPER-QUIET MUFFLER! CAN BE RUN ALMOST ANYWHERE!
- DOUBLE WISH BONE FOUR WHEEL INDEPENDENT SUSPENSION SYSTEM WITH NEW OIL SHOCKS.
- RELIABLE DRIVE SYSTEM, WITH GEAR-TYPE DIFFERENTIAL IN FULLY-ENCLOSED GEARBOX.
- SPECIAL MUFFLER, FUEL TANK, PLUG HEATING BOX SIZE OF 4D-SIZE DRY CELLS ARE INCLUDED.
- FUEL AND 2CH RADIO ARE NOT INCLUDED.

1:10 SCALE



KYOSHO
THE FINEST RADIO CONTROL MODELS

KIT NO.3072

BEFORE YOU BEGINE ASSEMBLY !

Thank you purchasing the Kyosho's R/C Engine Powered Racing Buggy

In order to keep your Rampage GP-10 in the tip top condition to enjoy the most pleasure from the R/C world, you should throughly read through this instruction manual and the operation instruction of the radio control units to keep the correct way of assembling, and handling.

《KIT FUTURES》

- Super-easy starting by Recoil Starter (Built-in)
- Super-quiet muffler !
- Reliable drive system.
With gear-type differential in fully-enclosed gearbox.
- Wishbone/Parallel arm long-travel suspension.

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BEFORE ASSEMBLY

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

○ Check the parts in the kits.
Check to see if all the parts are correctly bagged as they are listed in the "List of Bagged Parts" (page 4,5). Your thorough understanding of the assembly will enable you to build the kit without any difficulty.

Check the components in the kit prior to your starting of the assembly.

Any claims for replacements or refunds for the model in the process of assembly will not be accepted.

○ Learn the marks described in the instruction.

SW-CEMENT ... Place to put some locktite. It will prevent the screws and nuts get loosen by vibration while running.

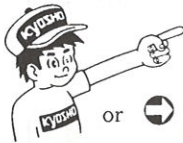
GREASE ... Point where grease should applied. It will reduce friction are assure smooth movements.



Instruction



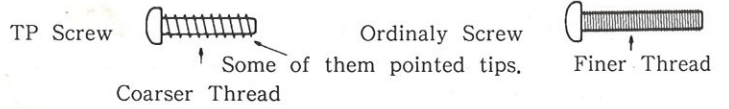
List of bagged parts



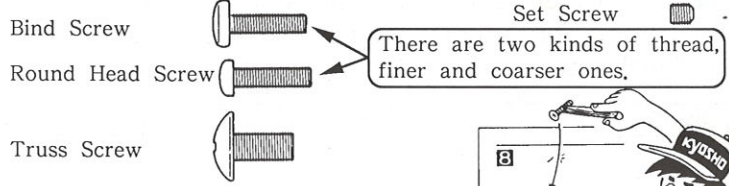
Steps where your particular attention is required.

○ Be well aware of the different types of screws.

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



2) The kinds of screws which will be used in this instruction.



○ Pick up the correct parts and screw. Compare the shape and size of small parts, such as screws, nuts, and washers.

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

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

○ Do not tighten the self-tapping screw too tight.

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 thread part on the screw goes into the plastic part and you feel some resistance from the tightening.

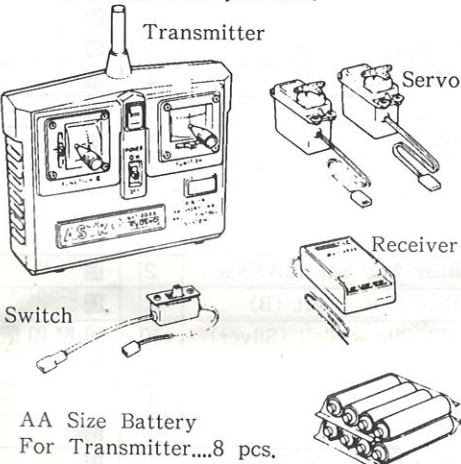
Over tighten may strip the thread in the plastic.



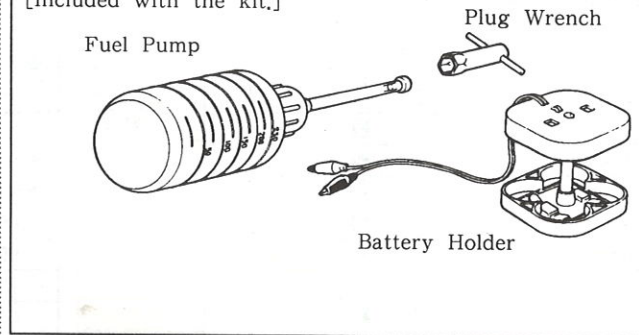
THINGS NEED BESIDES THE KIT

<2 Channel Radio System>

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



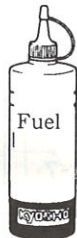
<Things need to start engine>
[Included with the kit.]



[Not included with the kit.]



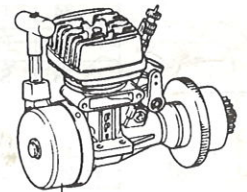
4 Unit #1 (D-size) Dry cells



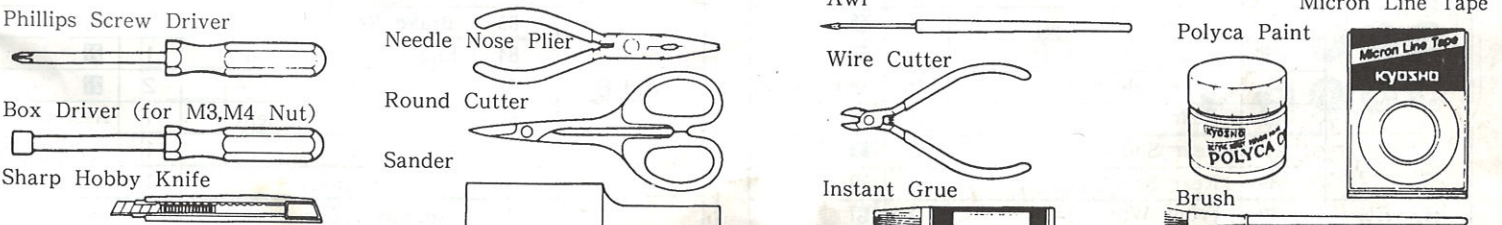
[Not included with the kit.]

Glow Fuel

*Gasoline or kerosone cannot be used.



<Tools Required> A Hex Key, Grease and SW-Cement are in the kit.



LIST OF BAGGED PARTS (1)

The key numbers with ★ indicate the plastic parts on a runner. See page 5 for the layout drawing.

«Do not throw away a bag header»

- **TIP** symbol in the brackets after a name of parts in this instruction is the header number in which the part is contained.
- The header is the only thing to rely upon when looking for a part. Do not discard it until you finish the assembly.



Bag No.	Key #	Parts Name	Q'ty	Step
Blister (A)	1	Front Suspension Arm	2	5
	2	Rear Suspension Arm	2	13
	3	Front Shock Stay	1	4
	4	Rear Shock Stay	1	11
	5	Swing Shaft	2	14
	6	Joint	2	11
	7	Belt	1	16
	8	Main Gear	1	16
	9	Drive Washer	2	23
	10	Timing Pulley (B)	1	16
	11	Rear Wheel Shaft	2	12
Blister (B)	12	Fuel Tank Assembly	1 Set	18
	13	Rear Bulkhead (L)	1	Assembled 11
	14	Rear Bulkhead (R)	1	
	15	Rear Housing	1	
	16	Final Diff. Case (A)	1	
	17	Final Diff. Case (B)	1	
	18	Bevel Gear (A)	2	
	19	Bevel Gear (B)	2	
	20	Bevel Gear Shaft	1	
	21	Final Pinion Gear	1	
	22	2 φ x11 Pin	1	
	23	Timing Pulley (A)	1	
	24	10 φ x14 Plane Bearing	2	
	25	5 φ x10 Plane Bearing	2	
RAM-1 (Front Shock Parts)	★ 26	Shock Cap	2	
	★ 27	Spring Holder	2	2
	★ 28	Spring Spacer	2	Not Using
	★ 29	Shock Piston	2	1
	30	Shock Ring	2	2
	31	Pressure Top	2	2
	32	Shock End	2	1
	118	E Ring (E2,5)	4	1
		Shock Bush	2	Not Using
	33	Front Shock Case	2	1
	34	Front Shock Shaft	2	1
	35	Front Shock Spring	2	2
36	Shock Oil (Green)	1	2	
RAM-2 (Rear Shock Parts)	★ 26	Shock Cap	2	2
	★ 27	Spring Holder	2	2
	★ 28	Spring Spacer	2	2
	★ 29	Shock Piston	2	1
	30	Shock Ring	2	2
	31	Pressure Top	2	2
	32	Shock End	2	1
	118	E Ring (E2,5)	4	1
		Shock Bush	2	Not Using
	37	Rear Shock Case	2	2
38	Rear Shock Shaft	2	1	
39	Rear Shock Spring	2	2	
RAM-4	40	Front Wheel Shaft	2	3
	41	Front Plate	1	10

Bag No.	Key #	Parts Name	Q'ty	Step	
RAM-4	42	5,8 φ Ball (Silver)	4	2	
	43	Servo Saver Tube	2	9	
	44	3 φ Linkage Guide	1	8	
	45	Main Gear Shaft	1	16	
	128	4 φ x8 Plane Bearing	4	23	
	25	5 φ x10 Plane Bearing	6	11 12 16	
	22	2 φ x11 Pin	2	16	
	48	Assist Plate	1	20	
	49	Chassis Cover	1	11	
	50	Screw Locking Compound	1		
	51	Silicon Grease	1		
	RAM-5	52	Front Wheel	2	22
		53	Rear Wheel	2	22
	RAM-6 Plastic Parts	46	Servo Mount	2	17
★ 47		Body Hook	1	10	
54		Front Bulkhead	1	4	
55		Brake Lever	1	19	
56		Main Gear Shaft Holder	1	16	
★ 57		Knuckle Arm (R)	1	3	
★ 58		Knuckle Arm (L)	1	3	
★ 59		Front Hub	2	3	
★ 60		Upper Ring Bar	4	4 14	
★ 61		Servo Saver (A)	1	8	
★ 62		Servo Saver (B)	1	8	
★ 63		Servo Saver (C)	1	8	
★ 64		Servo Saver (D)	1	8	
★ 65		Shock Collar	4	7 15	
★ 66		Antenna Post	1	17	
★ 67		Servo Mount	4	17	
★ 129		Servo Saver Collar	2	9	
68	Bumper	1	6		
69	5,8 φ Ball End	4	10		
70	Rear Hub (R)	1	12		
130	Rear Hub (L)	1	12		
RAM-7	71	King Pin	2	3	
	72	Front Sus Shaft (A) Silver	2	5	
	73	Front Sus Shaft (B)	2	5	
	74	Rear Sus Shaft (A) Black	2	13	
	75	Rear Sus Shaft (B)	2	13	
	76	M3 Pillow Ball (Silver)	10	3 4 11 12	
	77	M2,6 Pillow Ball (Black)	2	3	
	78	Center Rod	1	3	
	79	Tie Rod	2	10	
	80	Assist Rod (A)	1	11	
RAM-8	81	Assist Rod (B)	1	20	
	82	Steering Rod	1	25	
	83	Brake Rod	1	27	
	84	Engine Control Rod	1	27	
	85	Rod Stopper	2	27	
	86	Air Cleaner Element	1	Assembled	
	87	Element Holder	1	See page 20	
	88	Element Cover	1		
	89	Adaptor Tube	1	See page 20	
	90	Strap (S)	2	18 26	

LIST OF BAGGED PARTS (2)

LAYOUT DRAWING OF PLASTIC PARTS ON RUNNERS

Bag No.	Key #	Parts Name	Q'ty	Step	
RAM-8	91	Strap (M)	1	26	
	92	Strap (L)	1	28	
	93	Muffler Tube	1	18	
	94	Plug Wrench	1		
	95	Antenna Tube	1	26	
	96	Fuel Tube	1	18	
	97	Battery Holder Assembly	1 Set		
	98	Double Sided Tape	1	26	
Box	99	One Way Assembly	1 Set	Assembled	
	100	Starter Assembly	1 Set		
	101	Muffler Assembly	1 Set		
	102	Starter Holder	1		
	103	Engine	1		
	104	Engine Mount	2		
	105	Clutch Bell	1		
	106	Clutch Shoe	2		
	107	Clutch Spring	1		
	108	Pilot Shaft	1		19
	109	Flywheel	1		
	110	Flywheel Spacer	1		
	111	Clutch Bearing Case	1		
	112	Clutch Rollar	6		
	119	E Ring (E3)	1		
	121	E Ring (E7)	1		
	126	Valv Rod	1		
	RAM-3	113	Body (Rampage GP10)		1
114		Front Tire	2	22	
115		Rear Tire	2	22	
116		Chassis	1	6	
117		Decal	1	31	
127		Fuel Pump	1	Page 19	
		Instruction Manual	1		
		E Ring (E2,5)	4	5 13	
		E Ring (E3)	2	3	
		E Ring (E4)	3	16	
		Hook Pin	4	32 For wing 2 pcs.	
		Hex Key (1,5mm)	1	25 27	
		Hex Key (2mm)	1	11	
		Truss Screw M4x8	6		
		Round Head Screw M3x8	7		
		M3x10	2		
		M3x18	4		
		M3x35	2		
		M3x50	1		
		Bind Screw M2,6x12	4	For Wing	
		TP Round Head Screw M3x16	2		
		TP Bind Screw M2,6x6	1		
		M2,6x12	4		
		M3x8	8		
	M3x10	17			
	M3x12	2			
	M2,6 Nut	4	For Wing		
	M3 Nut	20			
	M3 Nylon Nut	6			
	M4 Nylon Nut	4	For Wing		
	M3x3 Set Screw	3			
	M4x4 Set Screw	2			
	M5 Washer	2			

《When Cutting off parts from a runner...》

*Pay particular attention when detaching the piston.

The part is made by cutting excessively.

Cut it off with a wire cutter.

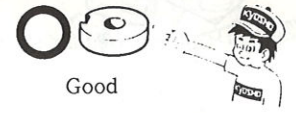
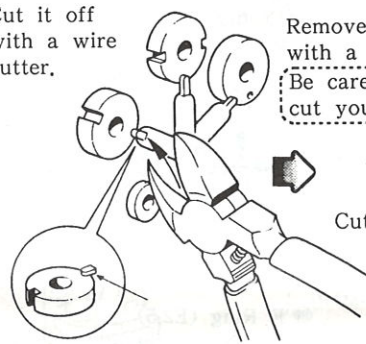
Remove the stubble with a hobby cutter.

Be careful not to cut your finger.

The roots till remains.

Cut both sides.

This is how it should be done.



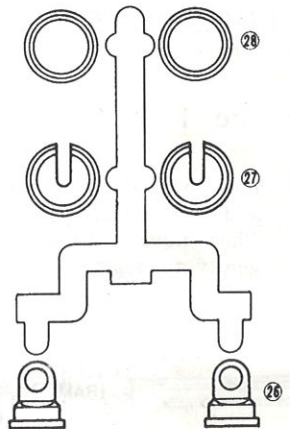
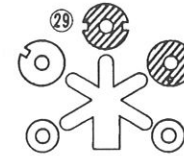
Leave a root of the runner on the part.

Good

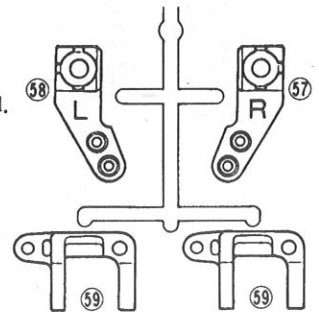
Shock Parts

2 set

4 set

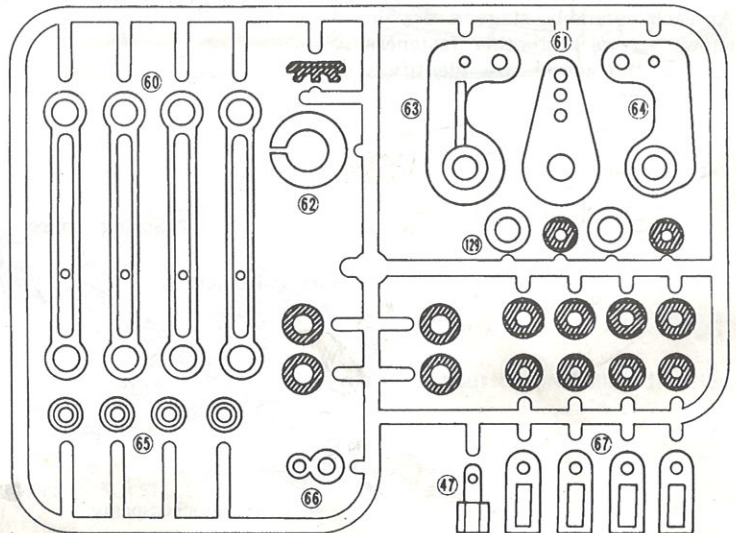


Upright Parts 1 set



These shaded parts are not used.

Servo Saver Parts and Others 1 set



● ASSEMBLY OF CHASSIS PORTION 1 ~ 23

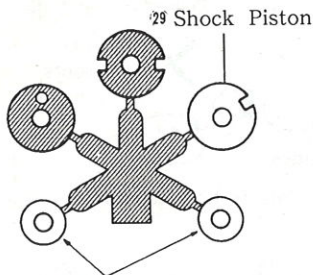
1 ASSEMBLY OF SHOCK

● The parts for the front shocks are in bag [RAM-1], those for the rear are in [RAM-2].

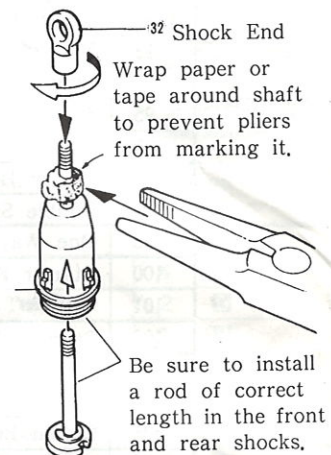
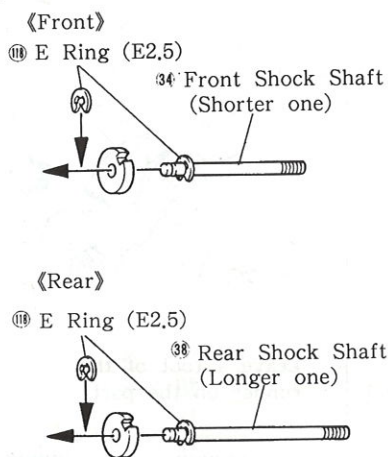
Stage 2

Stage 1 Assemble 2 each for the front and rear.

*The shaded parts will not be used.



These will be used in step 1.

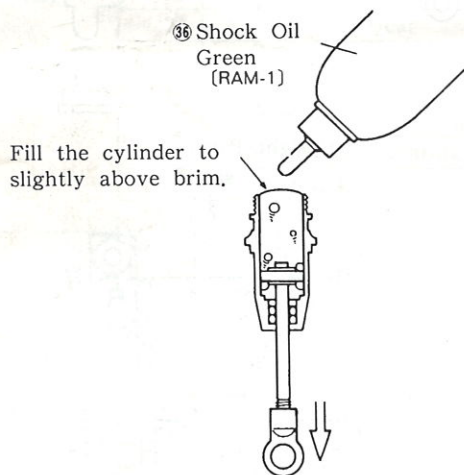


2 FULLING THE OIL SHOCK

● The parts for the front shocks are in bag [RAM-1], those for the rear are in [RAM-2].

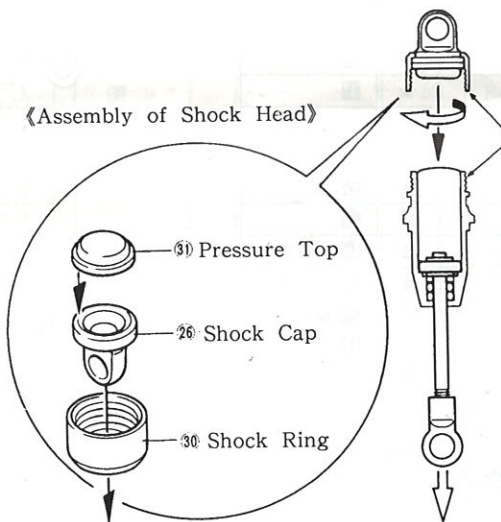
Stage 1

Pull down the piston to the bottom and pour oil slowly. Then move the piston up and down gently to get rid of air bubbles.



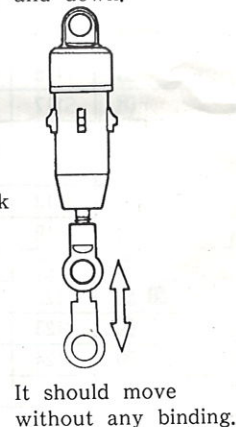
Stage 2

Keep the piston in the lowest position and tight 26 gradually, then excessive oil will run over.

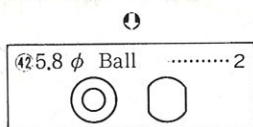


Stage 3

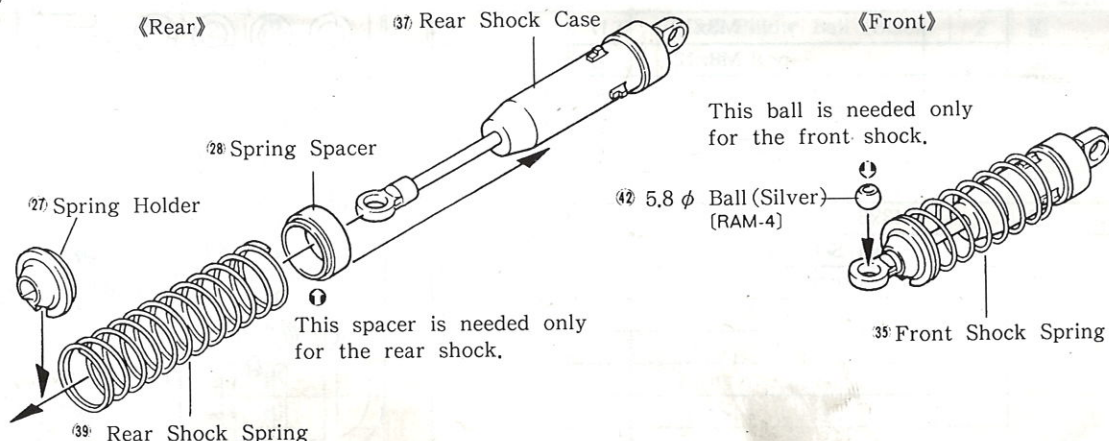
Confirm that it will work smoothly by moving the piston up and down.



At each assembly stage, a drawing shows screws and other fasteners used in the actual size. Identify those required in each stage.

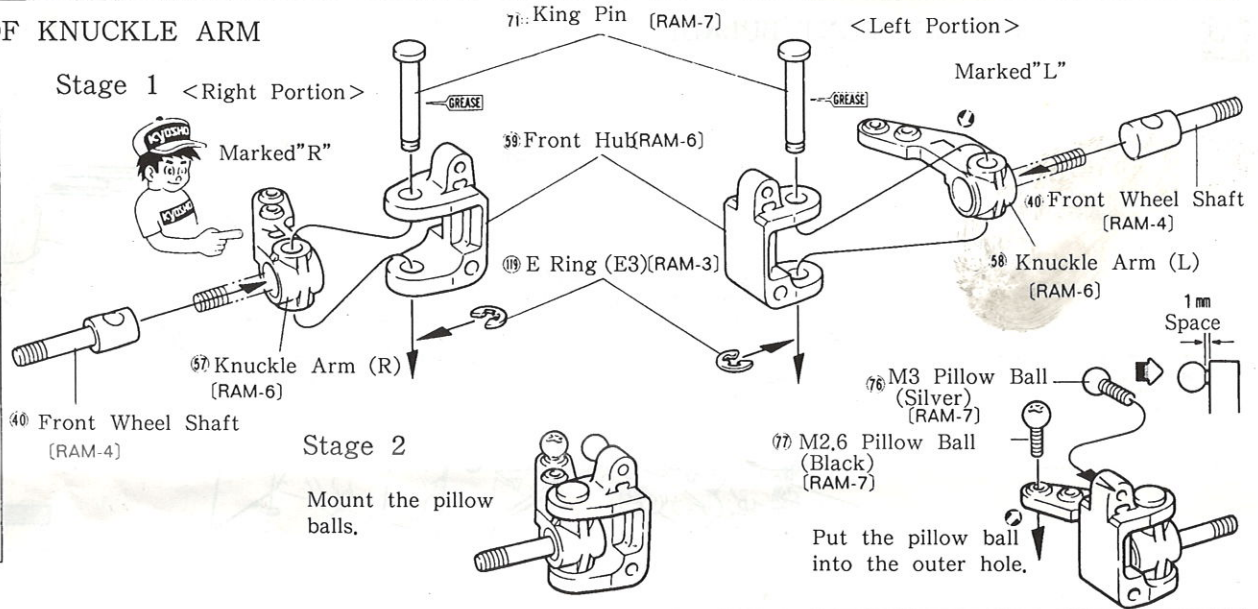


Stage 4 Mount the spring as shown.



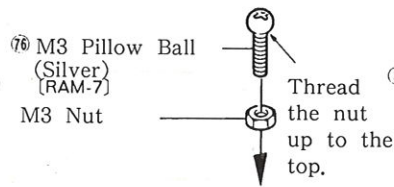
3 ASSEMBLY OF KNUCKLE ARM

- 40 Front Wheel Shaft ... 2
- 71 King Pin 2
- 10 E Ring (E3) 2
- 76 M3 Pillow Ball ... 2 (Silver)
- 77 M2.6 Pillow Ball ... 2 (Black)

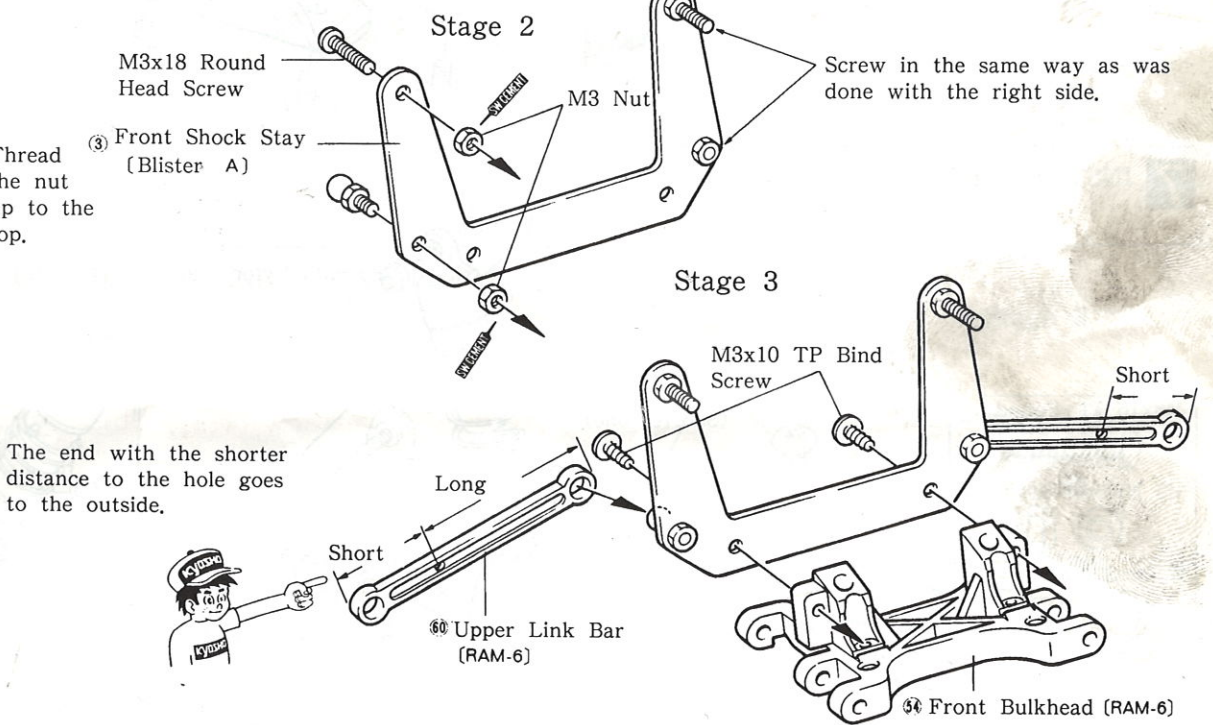


4 INSTALLATION OF FRONT SHOCK STAY

Stage 1

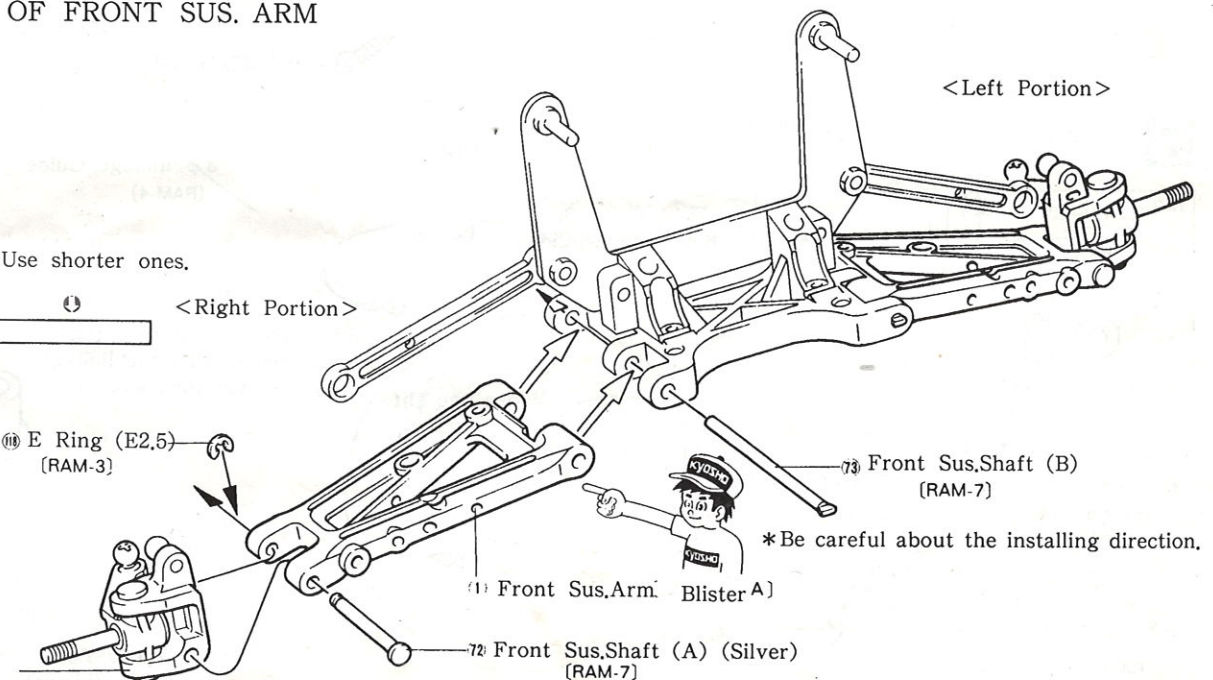


- M3x10 TP Bind Screw ... 2
- M3x18 Round Head Screw ... 2
- M3 Nut 6
- 76 M3 Pillow Ball ... 2 (Silver)

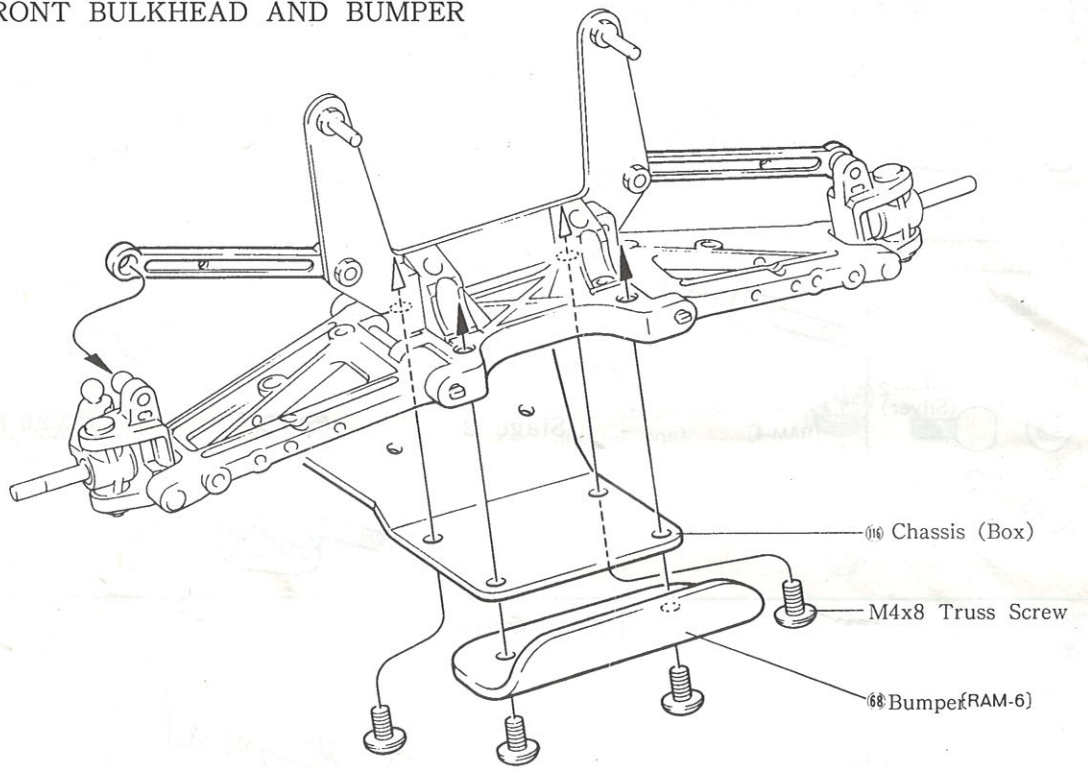
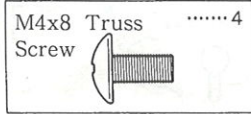


5 INSTALLATION OF FRONT SUS. ARM

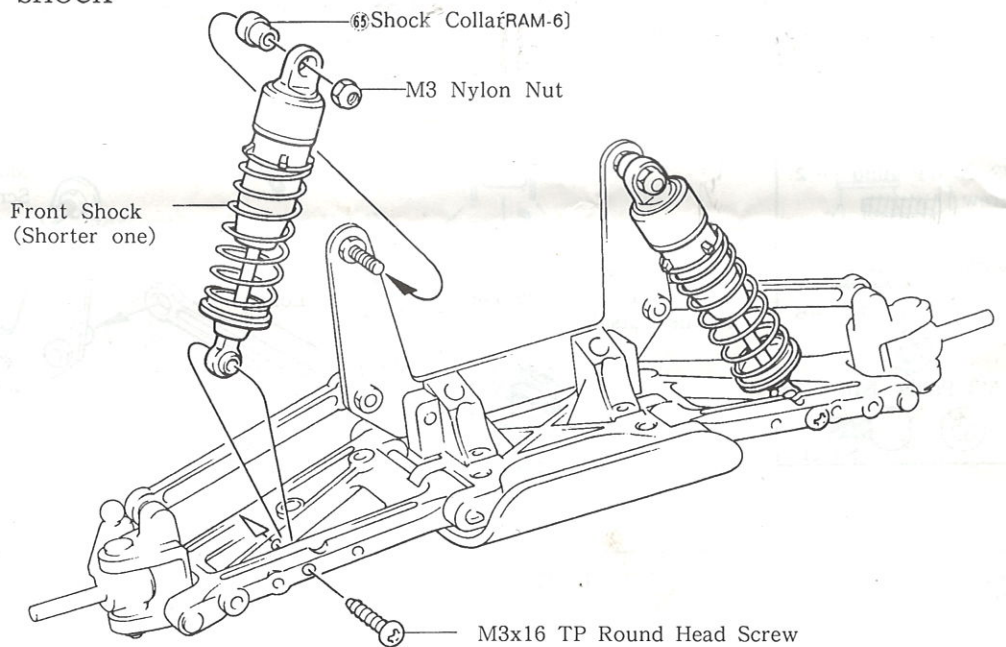
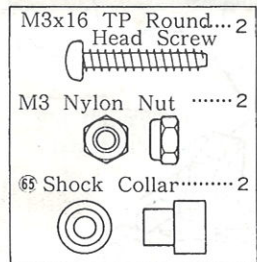
- 10 E Ring (E2.5) 2
- 73 Front Sus. Shaft (B) ... 2
- 72 Front Sus. Shaft (A) ... 2 (Silver)



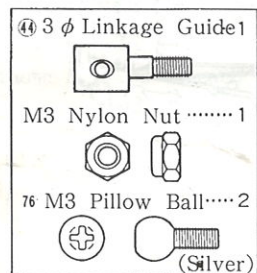
6 INSTALLATION OF FRONT BULKHEAD AND BUMPER



7 INSTALLATION OF FRONT SHOCK



8 ASSEMBLY OF SERVO SAVER



Stage 1

62 Servo Saver (B) (RAM-6)

63 Servo Saver (C) (RAM-6)

Enlarge this hole to 3mm to pass 3 ϕ linkage guide.

Widen the slit with a screw-driver to fit it.

Stage 2

3 ϕ linkage Guide (RAM-4)

61 Servo Saver (A) (RAM-6)

M3 Nylon Nut

*Tighten the nut to the degree so that the linkage guide will turn smoothly.

64 Servo Saver (D) (RAM-6)

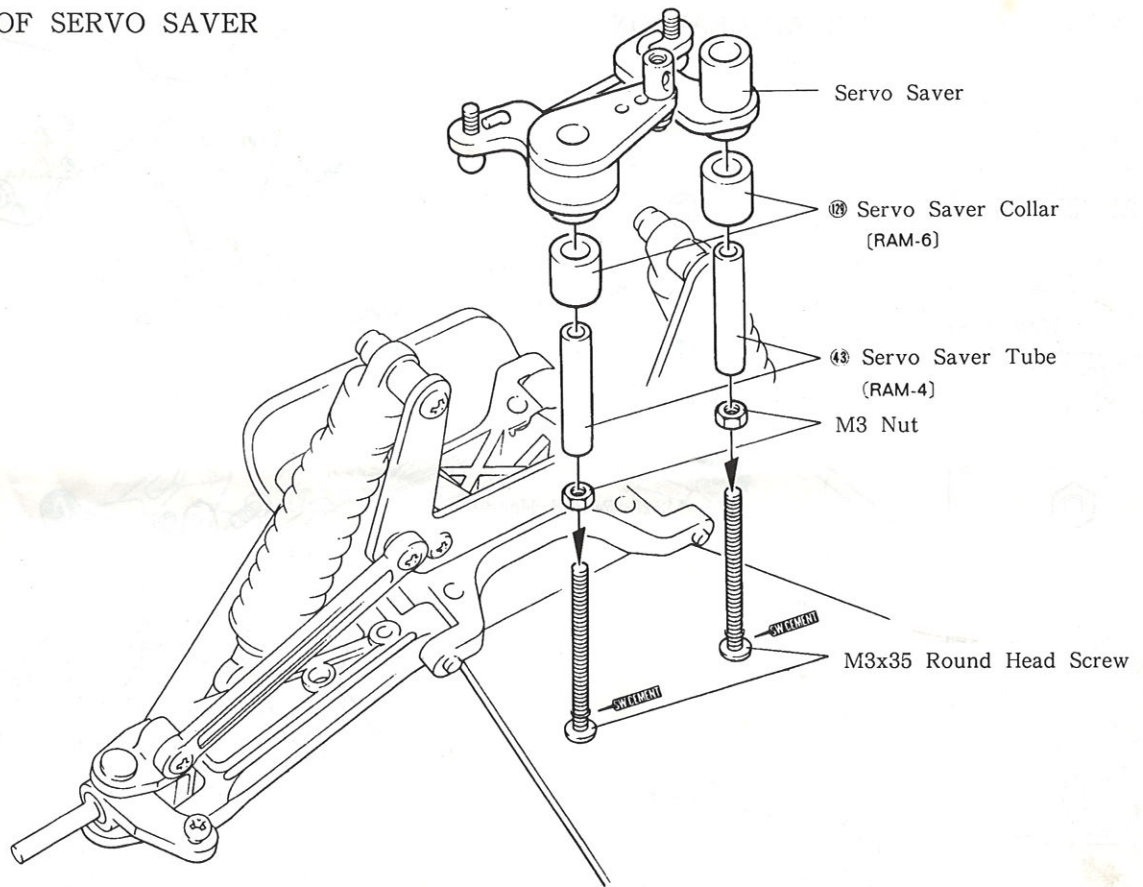
76 M3 Pillow Ball (RAM-7) (Silver)

Stage 3

78 Center Rod (RAM-7)

9 INSTALLATION OF SERVO SAVER

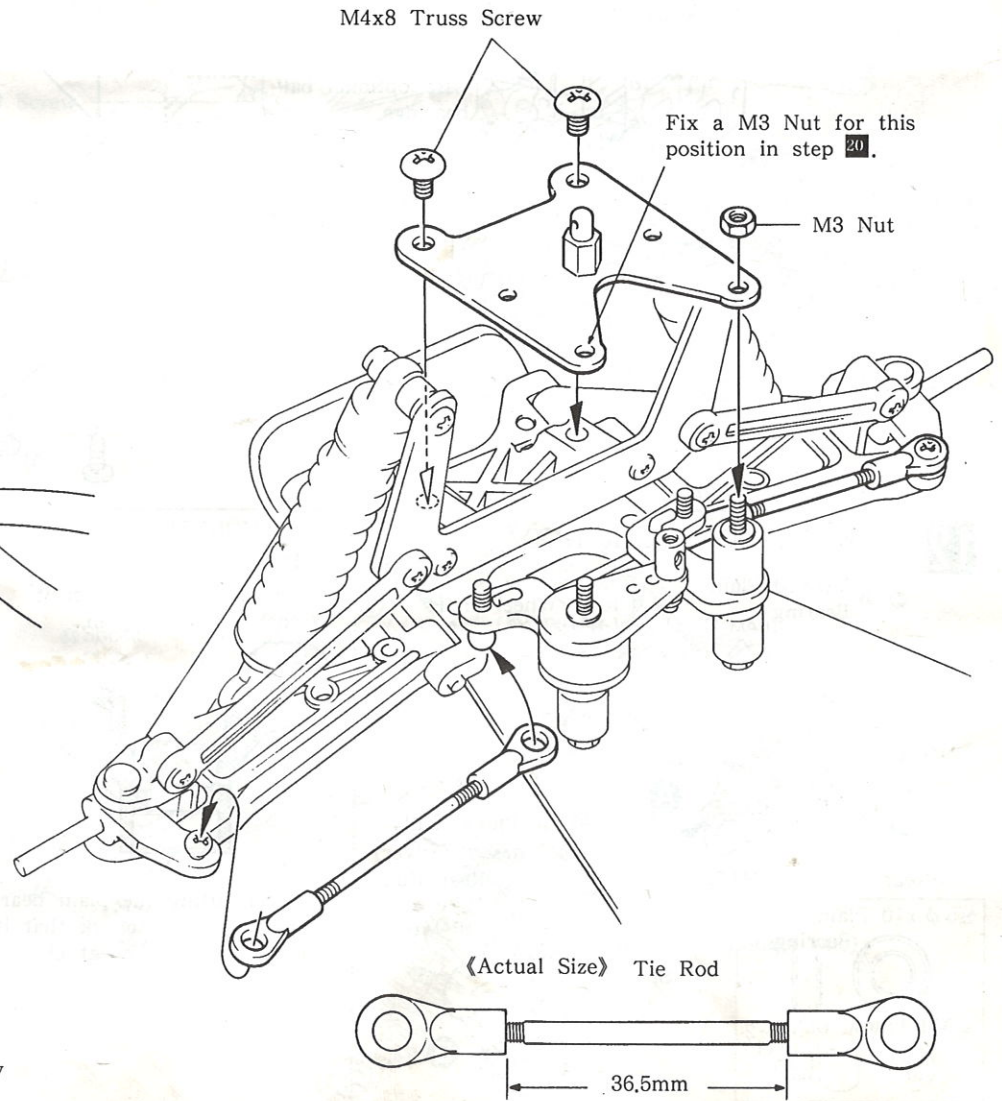
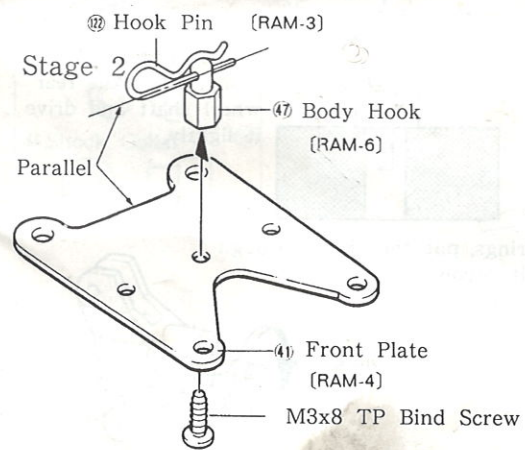
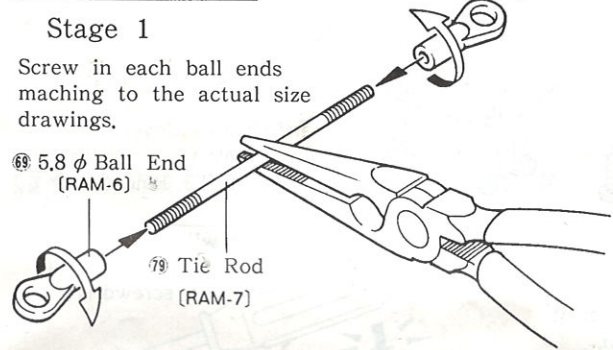
- ⑩ Servo Saver Collar ..2
- ⑪ Servo Saver Tube ..2
- M3x35 Round Head Screw2
- M3 Nut2



10 INSTALLATION OF TIE ROD AND FRONT PLATE

- M3x8 TP Bind Screw .1
- M4x8 Truss Screw..2
- M3 Nut1

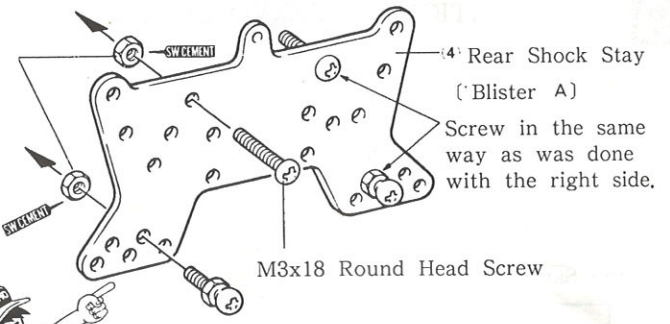
Stage 3



11 INSTALLATION OF REAR GEARBOX

Stage 2

M3 Nut



4 Rear Shock Stay (Blister A)

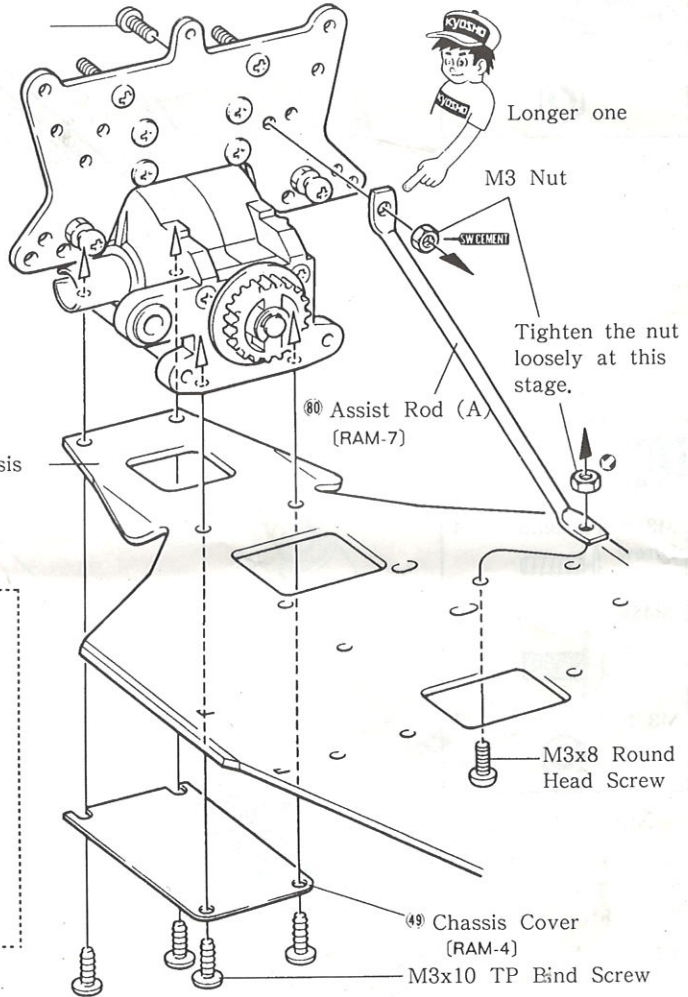
Screw in the same way as was done with the right side.

M3x18 Round Head Screw

Put into upper inside hole.

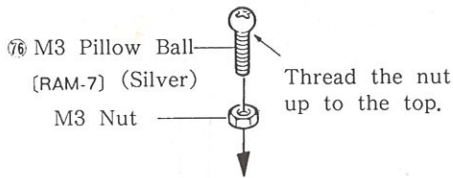
Stage 4

M3x8 Round Head Screw



Stage 1

< Assemble two pieces. >



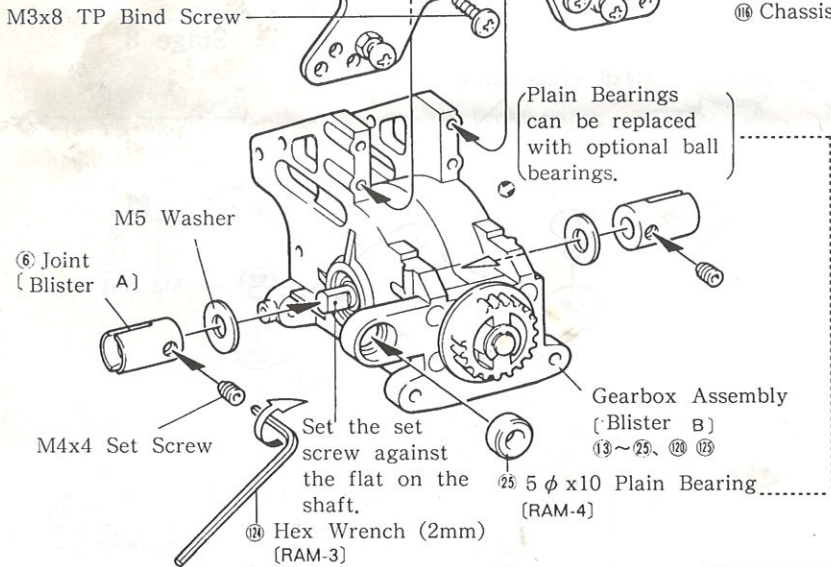
76 M3 Pillow Ball (RAM-7) (Silver)

Thread the nut up to the top.

M3 Nut

Stage 3

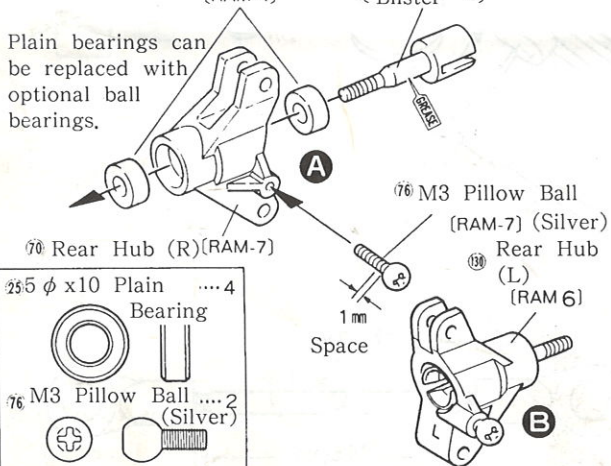
- M3x8 Round Head... 2 Screw
- M3x18 Round Head 2 Screw
- M3x8 TP Bind .. 4 Screw
- M3x10 TP Bind .. 4 Screw
- M4x4 Set Screw 2
- M3 Nut 8
- M5 Washer..... 2
- 76 M3 Pillow Ball.... 2 (Silver)
- 25 5 φ x10 Plain 1 Bearing



12 ASSEMBLY OF REAR HUB

- 25 5 φ x10 Plain Bearing (RAM-4)
- 10 Rear Wheel Shaft (Blister A)

Plain bearings can be replaced with optional ball bearings.

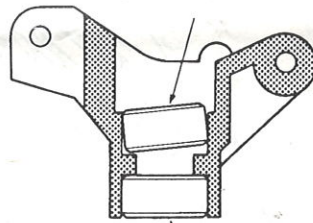


25 5 φ x10 Plain Bearing

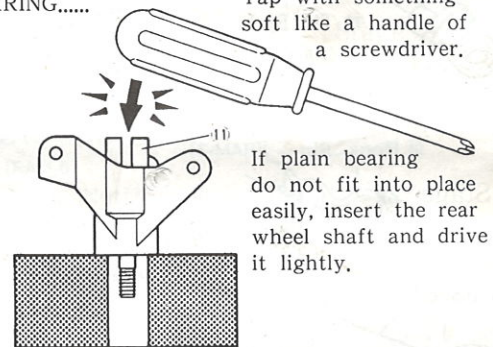
76 M3 Pillow Ball (Silver)

WHEN MOUNTING PLAIN BEARING.....

- 1) Press it in fully. Be careful not to get it coched part way in.



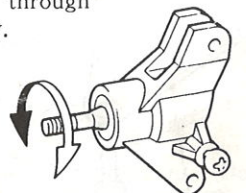
- 2) After fitting the plain bearings, put the shaft through and turn it to check that it revolves smoothly. If it does not, repeat check (1).



Tap with something soft like a handle of a screwdriver.

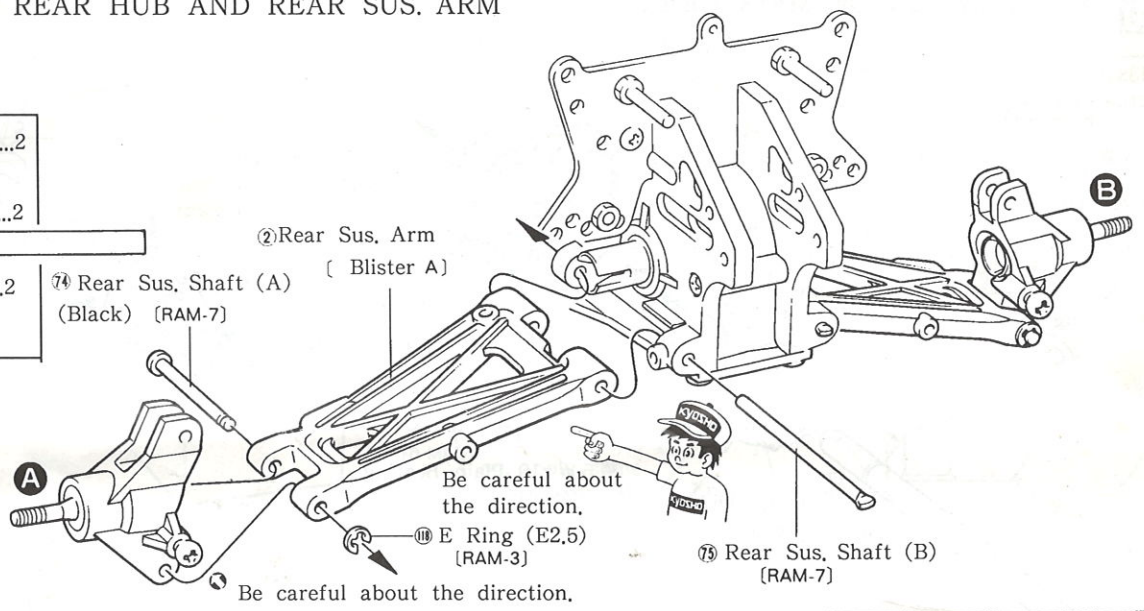
If plain bearing do not fit into place easily, insert the rear wheel shaft and drive it lightly.

- 3) Apply grease to the shaft when assembling them.



13 INSTALLATION OF REAR HUB AND REAR SUS. ARM

- ⑦ Rear Sus. Shaft (A) (Black)...2
- ⑧ Rear Sus. Shaft (B) ...2
- ⑩ E Ring (E2,5) ...2

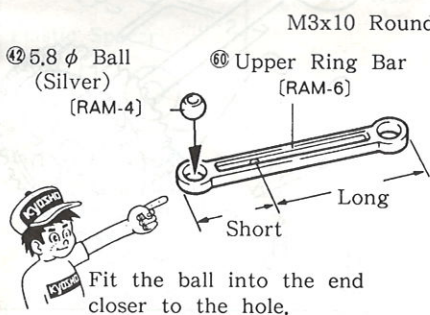


14 INSTALLATION OF SWING SHAFT

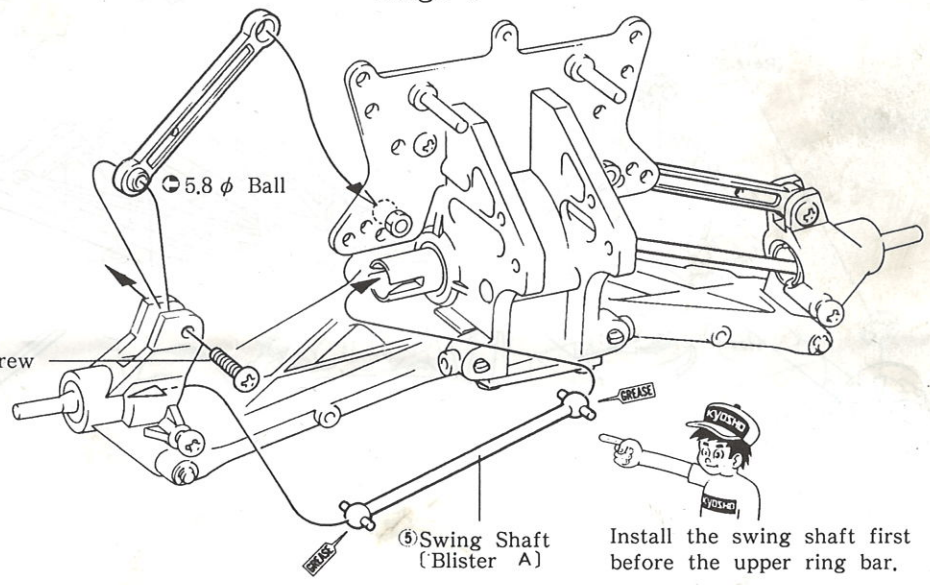
- M3x10 Round Head Screw...2
- ⑫ 5.8 φ Ball (Silver) ...2

Stage 1

< Assemble two pieces >

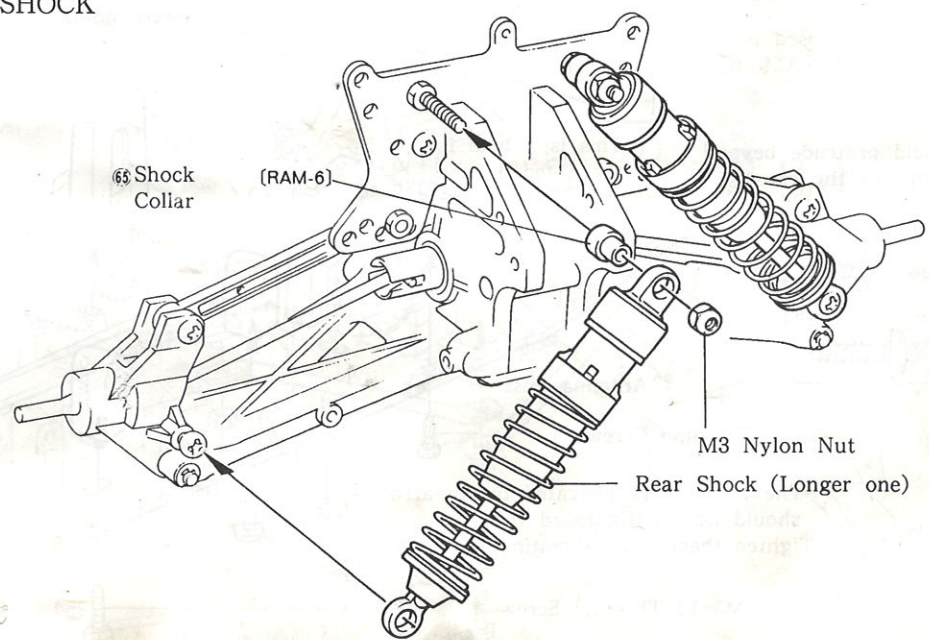


Stage 2



15 INSTALLATION OF REAR SHOCK

- M3 Nylon Nut2
- ⑬ Shock Collar2



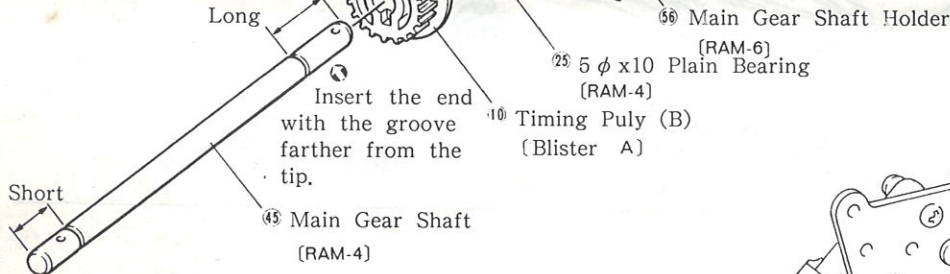
16 INSTALLATION OF MAIN GEAR

Stage 1

- M3x10 TP Bind Screw ...2
- 22 2 φ x11 Pin2
- 25 5 φ x10 Plain Bearing1
- 20 E Ring (E4).....2

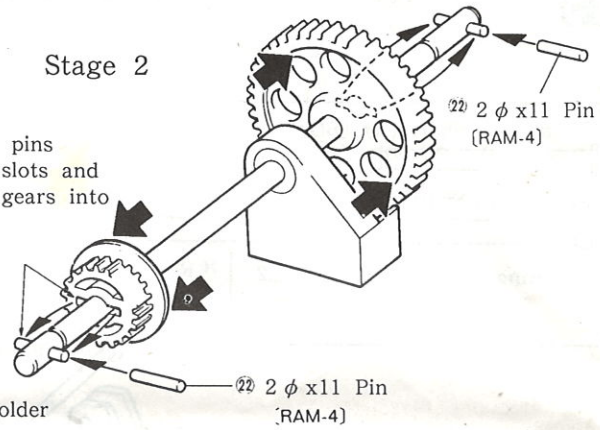
Check the orientation of the hole. The side without the slot should face this way.

Plain Bearing can be replaced with optional ball bearing.



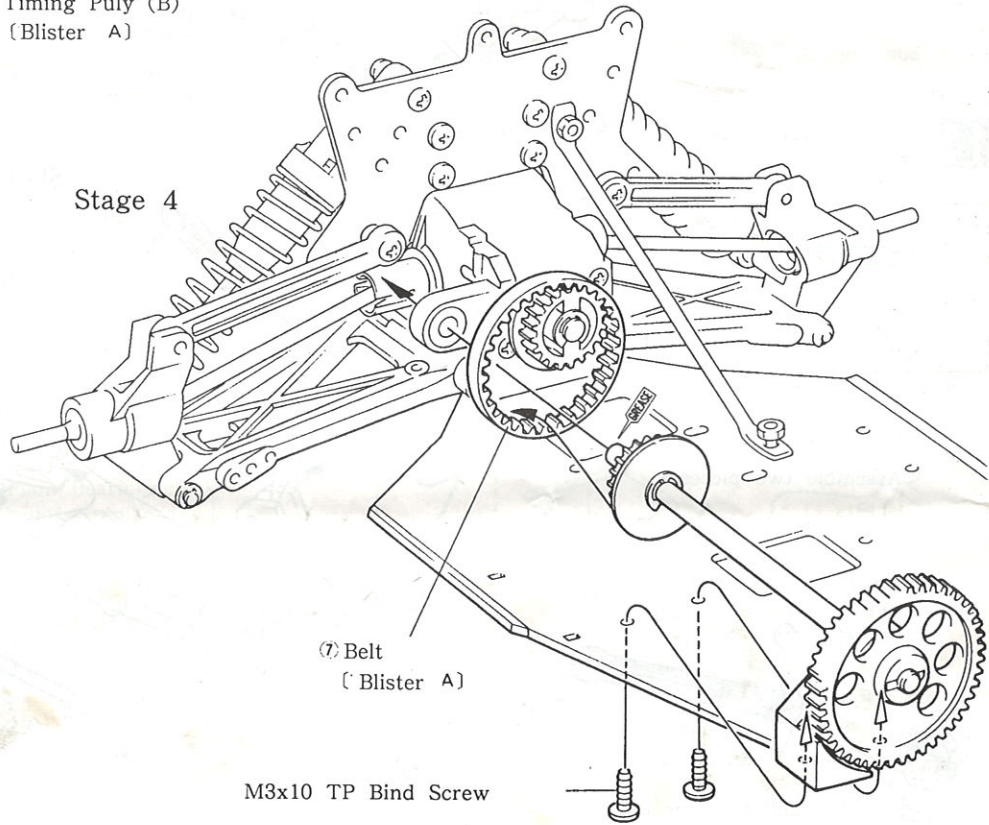
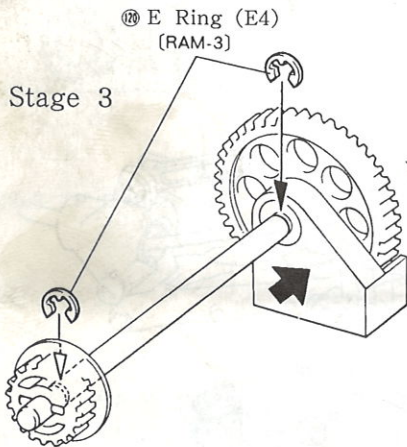
Stage 2

Align the pins with the slots and slide the gears into position.



Stage 4

Stage 3

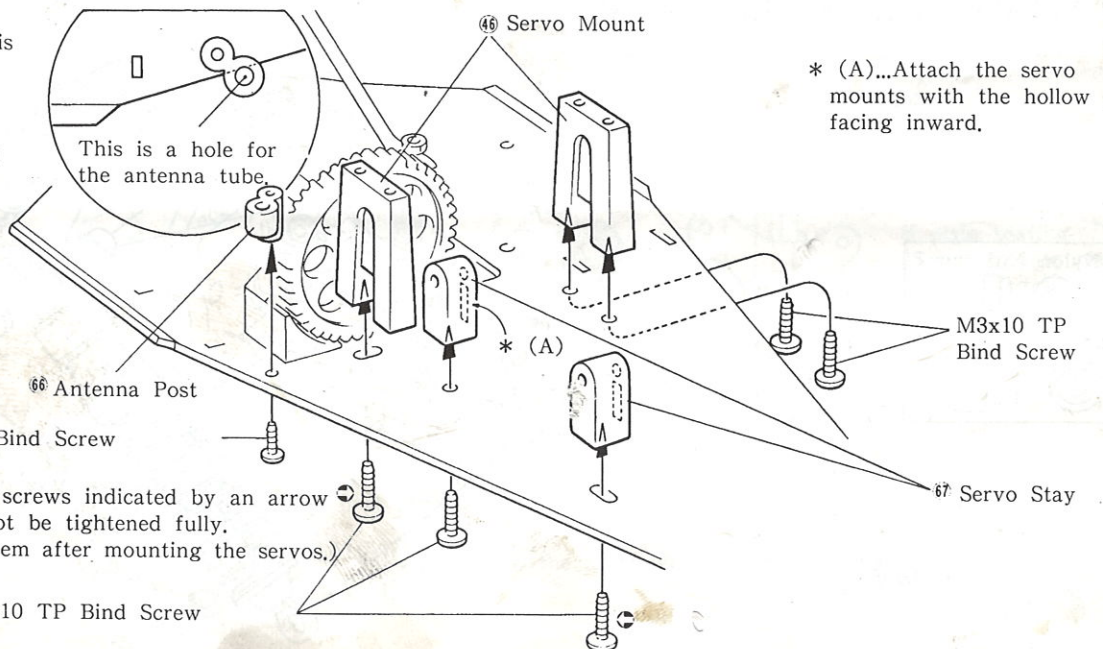


17 INSTALLTION OF SERVO MOUNT AND ANTENNA GUIDE

The plastic parts used in this step are in bag [RAM-6].

*It should protrude beyond the edge of the chassis.

- M2.6x6 TP Bind Screw ...1
- M3x10 TP Bind Screw ...5



18 INSTALLATION OF FUEL TUBE

98 Fuel Tube

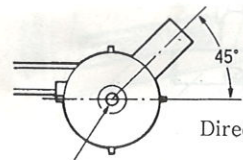
120mm...2

90mm...1

*Cut fuel tube [RAM-8] to the lengths shown.

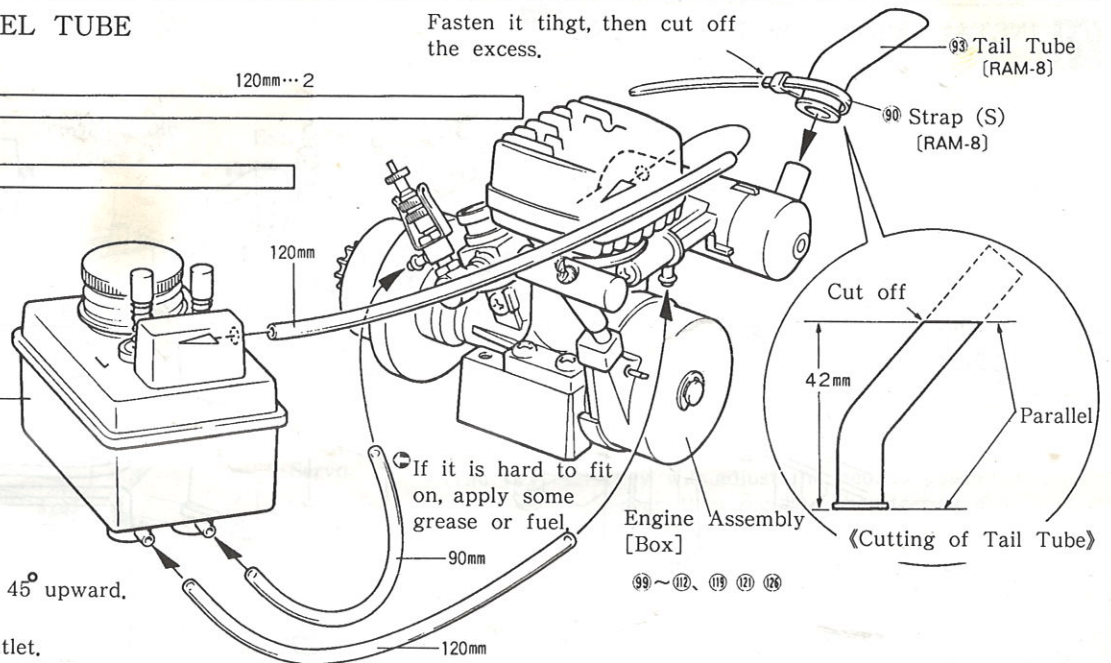
12 Fuel Tank Assembly (Blister B)

« Direction of Muffler »



Loosen this screw for adjusting outlet.

Fasten it tight, then cut off the excess.

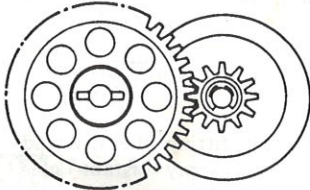


19 INSTALLATION OF ENGINE AND BRAKE

- M3x8 Round Head Screw
- M3x50 Round Head Screw
- M3 Nut
- M3 Nylon Nut
- Plastic Spacer (Red)

- M3 Nylon Nut
- 59 Brake Lever [RAM-6]
- Plastic Spacer (Red)
- M3 Nut

Backlash (Meshing of gear teeth)
Gears should match smoothly without excessive backlash (free play).



Set the clearance when tightening engine mounting screws.

Tighten it enough to stop up and down movement, but loosely enough that the brake lever will move easily.

M3x50 Round Head Screw

Mount the fuel tank in step 21.

M3x8 Round Head Screw

20 INSTALLATION OF ASSIST PLATE AND ROD

- M3x8 Round Head Screw
- M3 Nut

81 Assist Rod (B) [RAM-7]

M3x8 Round Head Screw

*Do not tighten fully at this time.

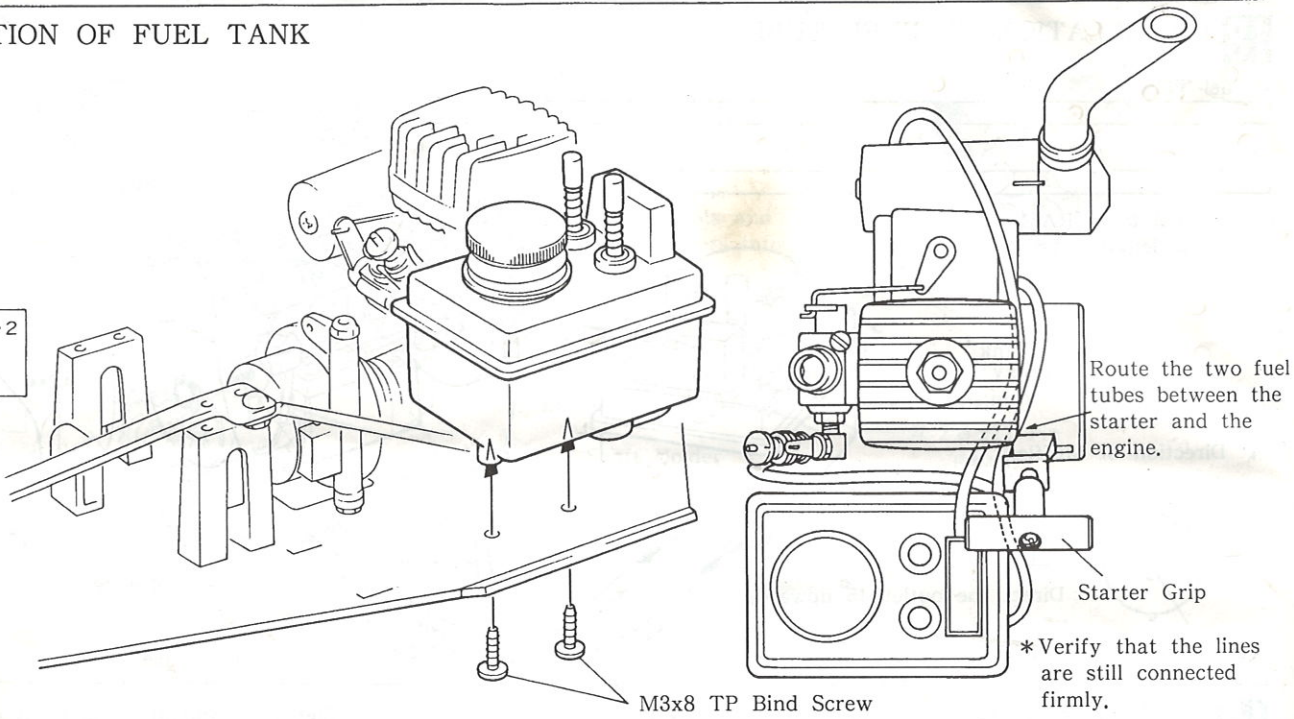
48 Assist Plate [RAM-4]

*Do not tighten fully at this time.
M3 Nut

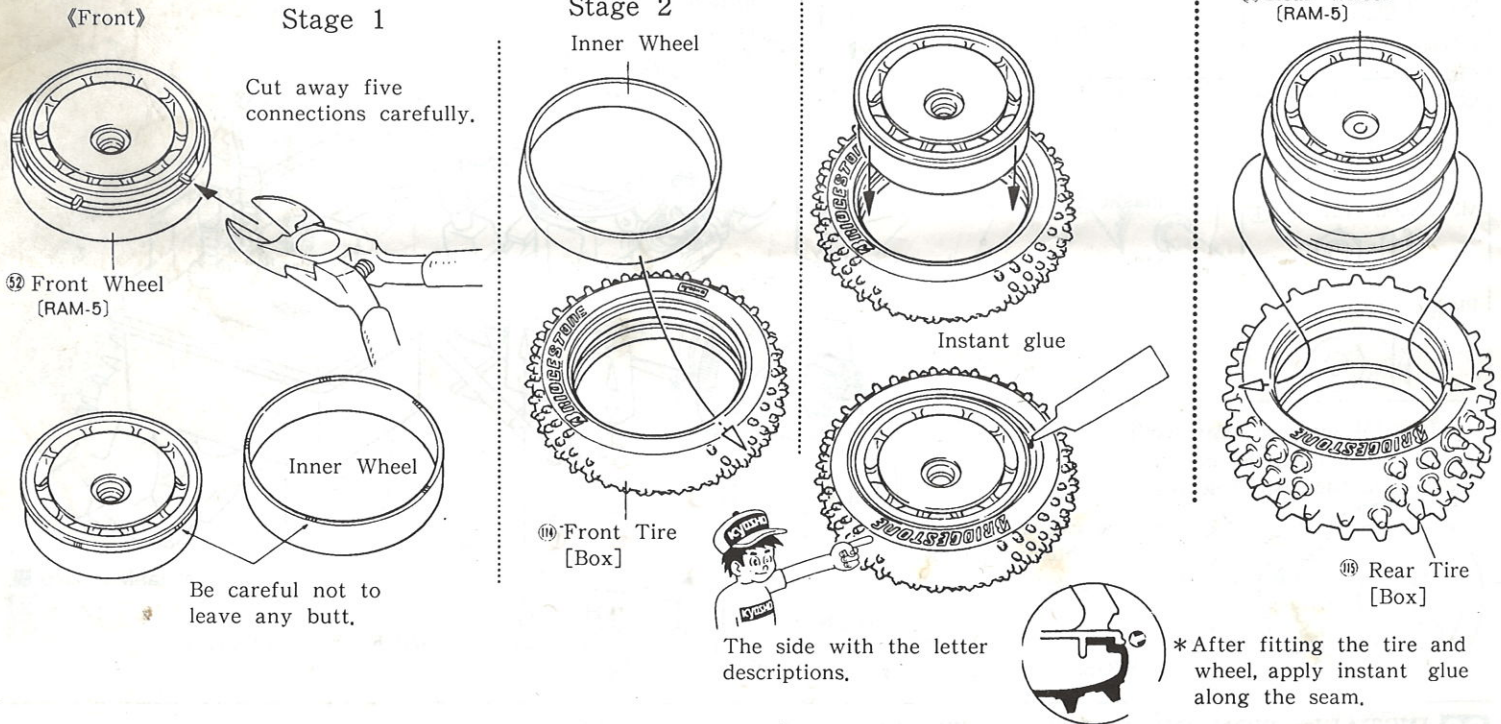
M3 Nut

21 INSTALLATION OF FUEL TANK

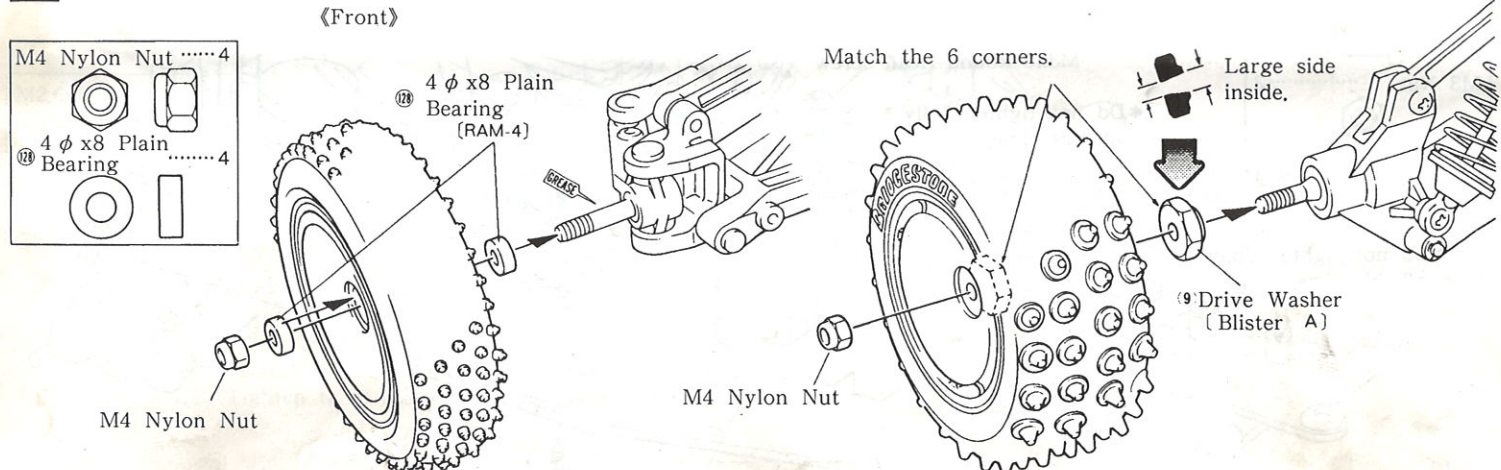
M3x8 TP Bind Screw ..2



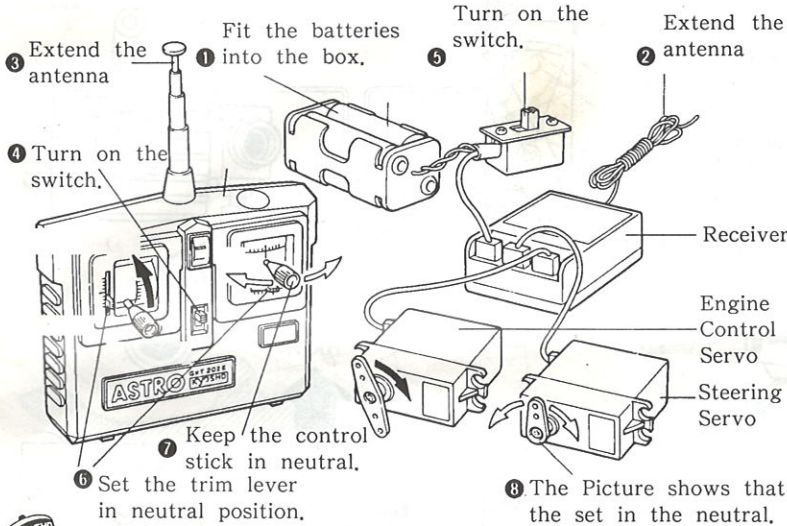
22 ASSEMBLY TIRE AND WHEEL



23 INSTALLATION OF TIRE



24 HOW TO CHECK RADIO UNIT



- When switch on the radio.... Get the switches in order from transmitter to receiver.
- When switch off the radio.... In order from receiver to transmitter.

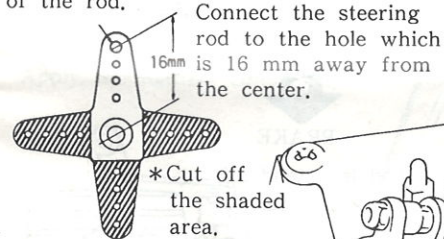
A two channel radio is composed of things like a transmitter, receiver, servos, and battery.

- *Transmitter... It is control box which manipulates by stick movements. Signal waves are transmitter through on antenna.
- *Receiver... Receivers the signals from the transmitter and send them to the servos.
- *Servo... They move the control mechanism of a model car in accordance with the signals from the receiver.
- *Antenna... An antenna in the transmitter sends signals, and one on the receiver accepts them. They should be fully extended.
- *Trim Lever... They will adjust the neutral position of servos, thus regulate the steering and advancing controls finely.
- *Battery Meter... You can tell the amount of electricity in a battery and how the signals are emitted.
- *Servo Horn... They are intermediate devices on the servos to activate the controls. There are several types in shape. They should be selected depending upon the usage.

25 INSTALLATION OF STEERING SERVO AND LINKAGE

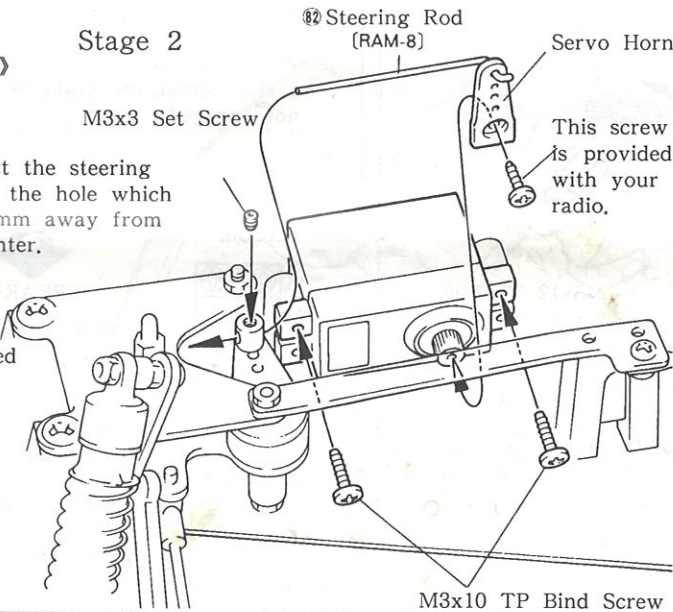
Stage 1 «Cutting of servo horn»

Enlarge the hole to the thickness of the rod.

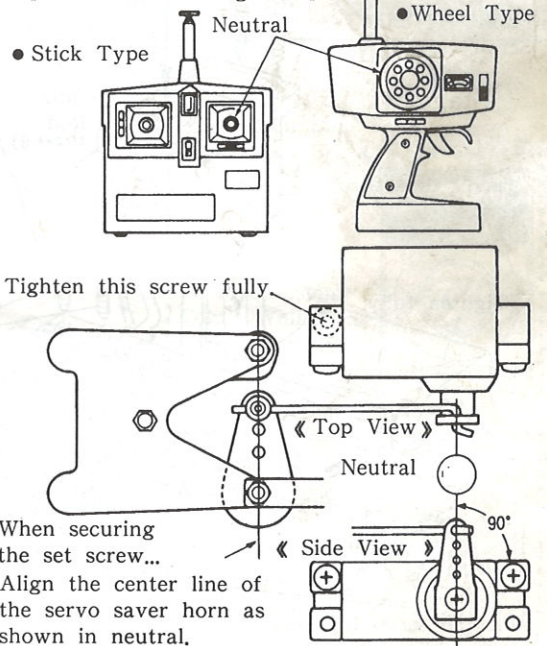


- M3x3 Set Screw..... 1
- M3x10 TP Bind Screw .. 2

Stage 2



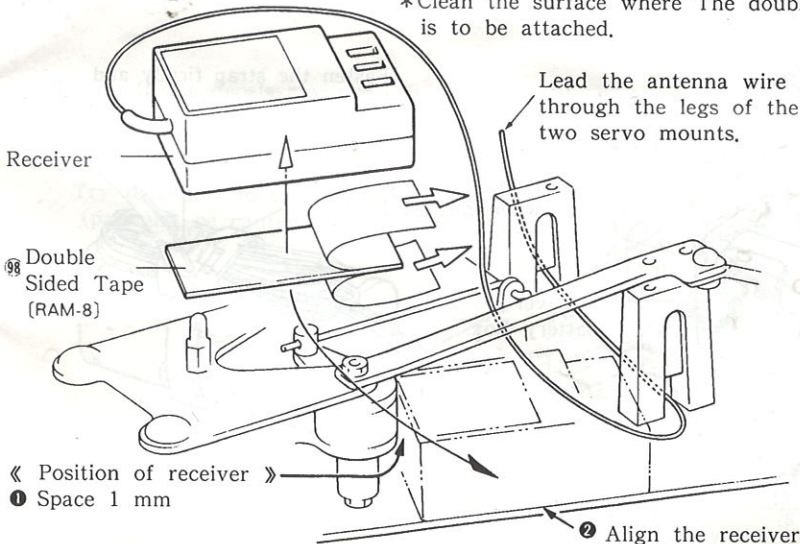
«Position of steering stick»



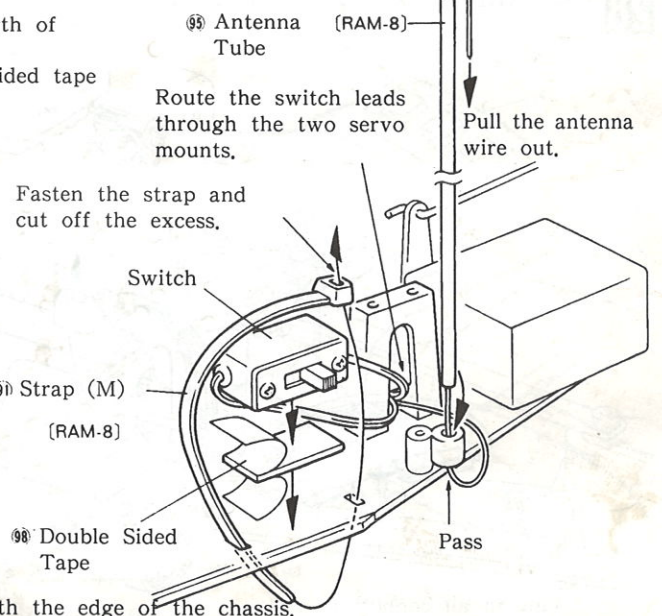
26 INSTALLATION OF RECEIVER AND SWITCH

Stage 1

- *Cut the double sided tape to the length of the receiver and switch.
- *Clean the surface where The double sided tape is to be attached.



Stage 2



27 INSTALLATION OF ENGINE CONTROL SERVO AND LINKAGE

- M3x10 TP Bind Screw ... 2
- M3x12 TP Bind Screw ... 2
- M3x3 Set Screw ... 2
- 95 Rod Stopper ... 2

Stage 1

«Cutting of servo horn»

*Cut off the shaded area.

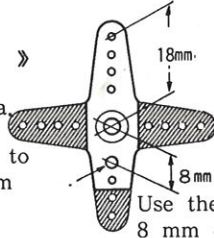
Connect the control rod to the hole which is 18 mm away from the center.

Stage 2
«Position of engine control stick»

• Stick Type

Use the hole 8 mm off the center for the brake rod.

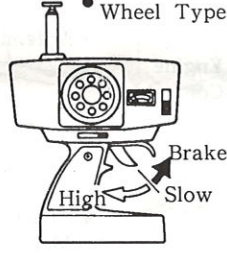
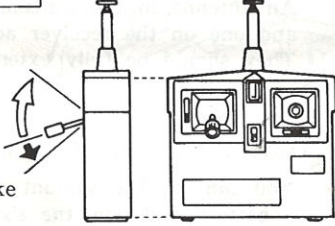
• Wheel Type



High

Slow

Brake



94 Engine Control Rod (RAM-8)

95 Rod Stopper (RAM-8)

M3x3 Set Screw

This screw is provided with your radio.

M3x10 TP Bind Screw

Stage 3

Install the servo first.

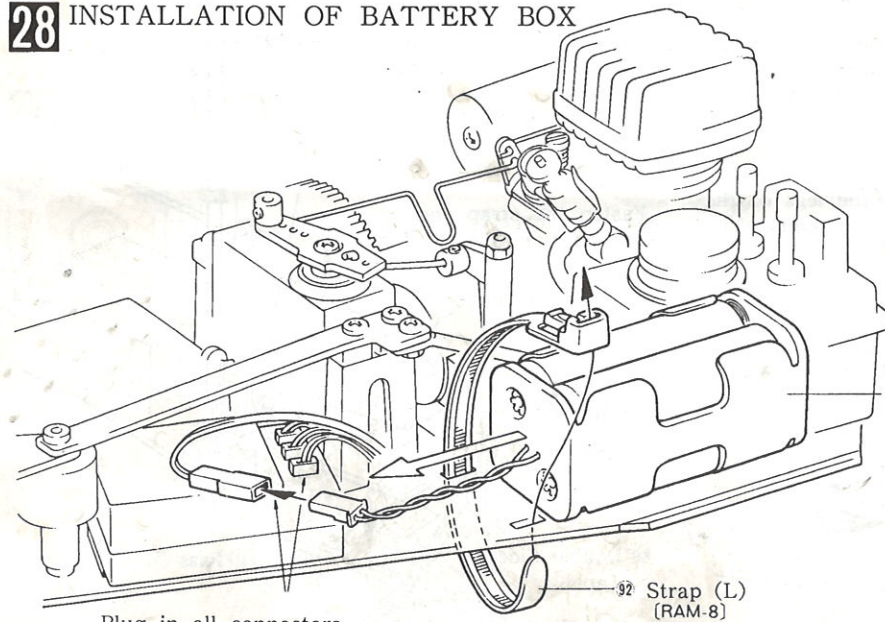
Tighten fully.

Tighten fully.

Route the servo wires through the servo mount.

Fit the servo lugs here; if it is not easy, loosen the nut marked with an arrow.

28 INSTALLATION OF BATTERY BOX

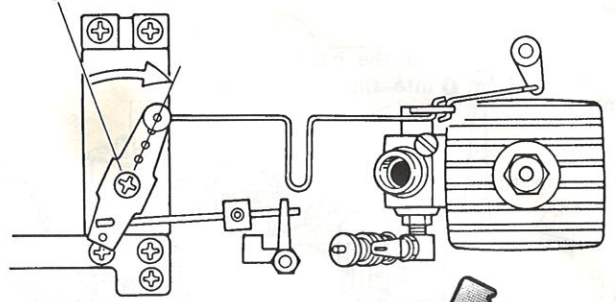


Plug in all connectors.

92 Strap (L) (RAM-8)

« Correlative movement of servo » horn and control rod

Slow Portion



HIGH



Throttle Stop Screw

The rod is not extended.

When the engine is set at a slow speed, the brake is not engaged.

SLOW (Idling)

1 mm space

Adjust the setting with the throttle stop screw.

Slow Portion

BRAKE

The rod is extended

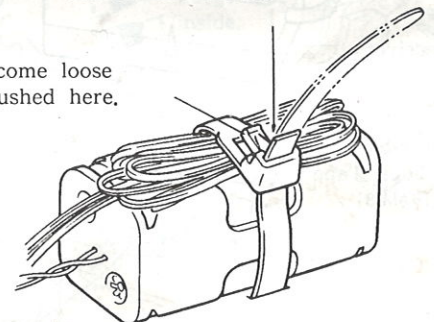
Position the stopper so that the brake begins to operate when the engine control rod is extended.

*In case the cord is too long, bundle it neatly with the strap.

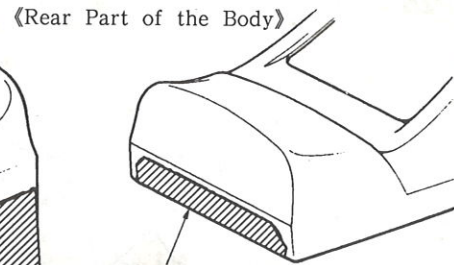
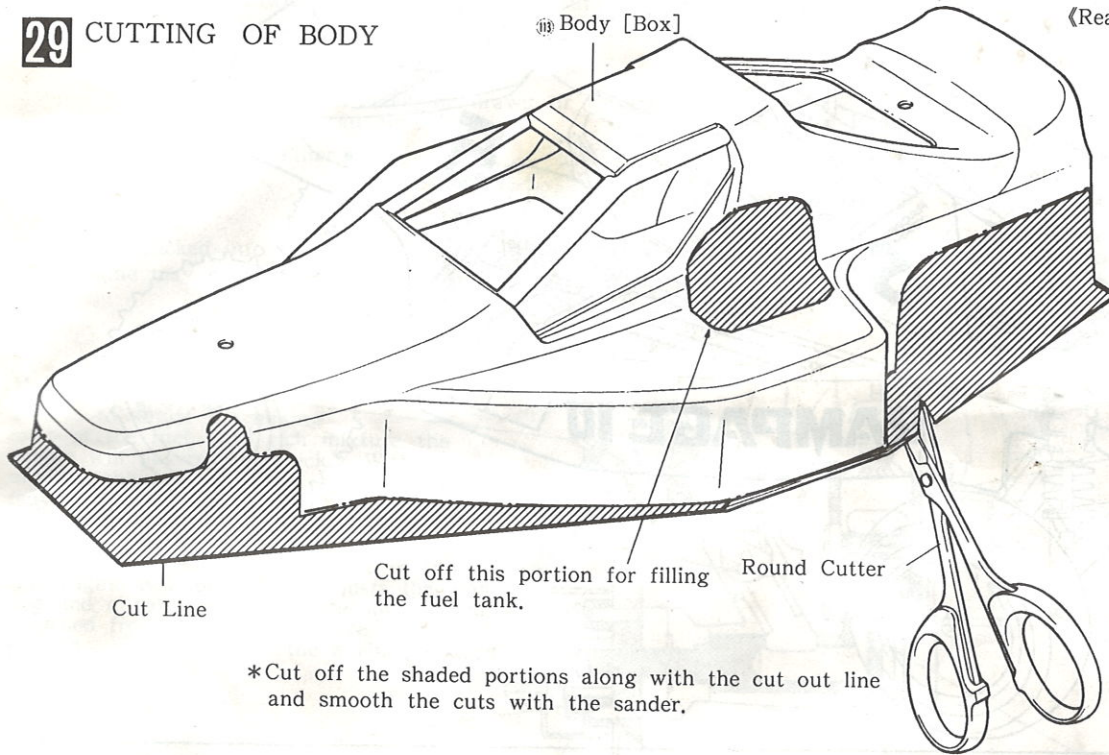
Fasten the strap firmly and cut off the excess.

It will come loose when pushed here.

Receiver Battery Box



29 CUTTING OF BODY



《Rear Part of the Body》
(When installing the optional wing.)
Cut off this portion.

KYOSHO NO.1829 Round Cutter & Sander

These special Lexan Scissors make trimming bodies a breeze and the sander comes in handle for finishing the rough edges.

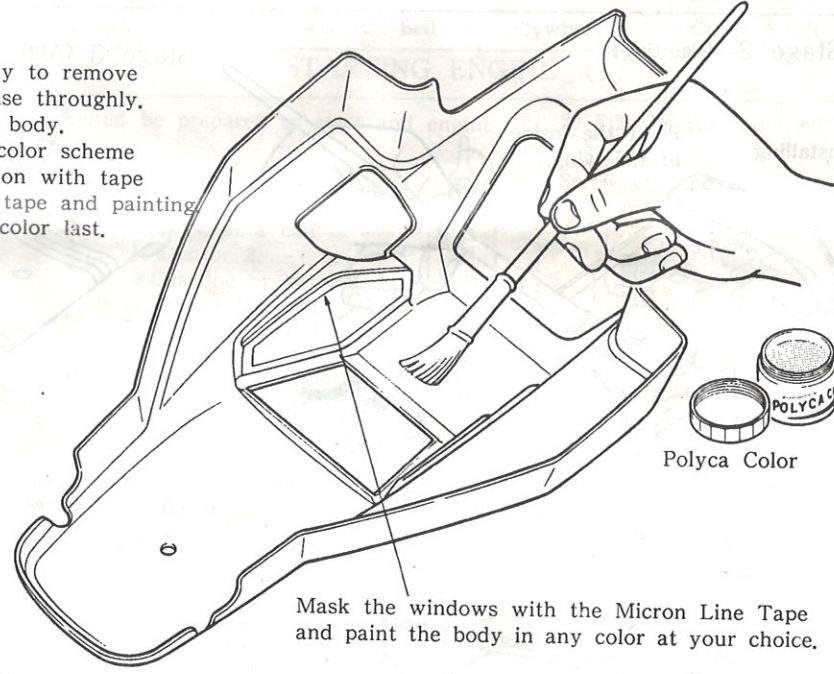
Round Cutter

Sander

*Cut off the shaded portions along with the cut out line and smooth the cuts with the sander.

30 PAINTING

First wash the body to remove any oil or dirt. Rinse thoroughly. Paint the inside of body. You can obtain a color scheme by masking a portion with tape then removing the tape and painting. Apply the lightest color last.



Micron Line Tape

KYOSHO

- No.1841...1mm
- No.1842...1.5mm
- No.1843...2.5mm
- Color White,Red, Yellow,Green,Blue and Black

Polyca Color No.2230

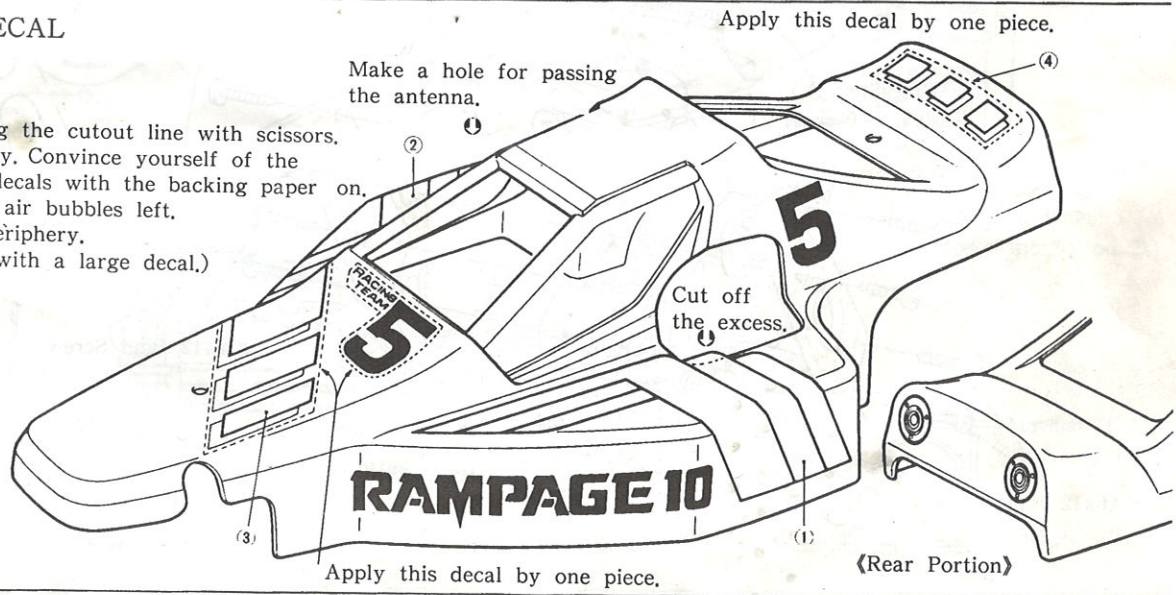
KYOSHO

- White,Red,Yellow, Green,Blue,Skyblue, Orange,Black,Violet, F.Pink,F.orange and Yellow Green

*For example if you need the white color paint, ask your dealer for 2230W Polyca Color White.

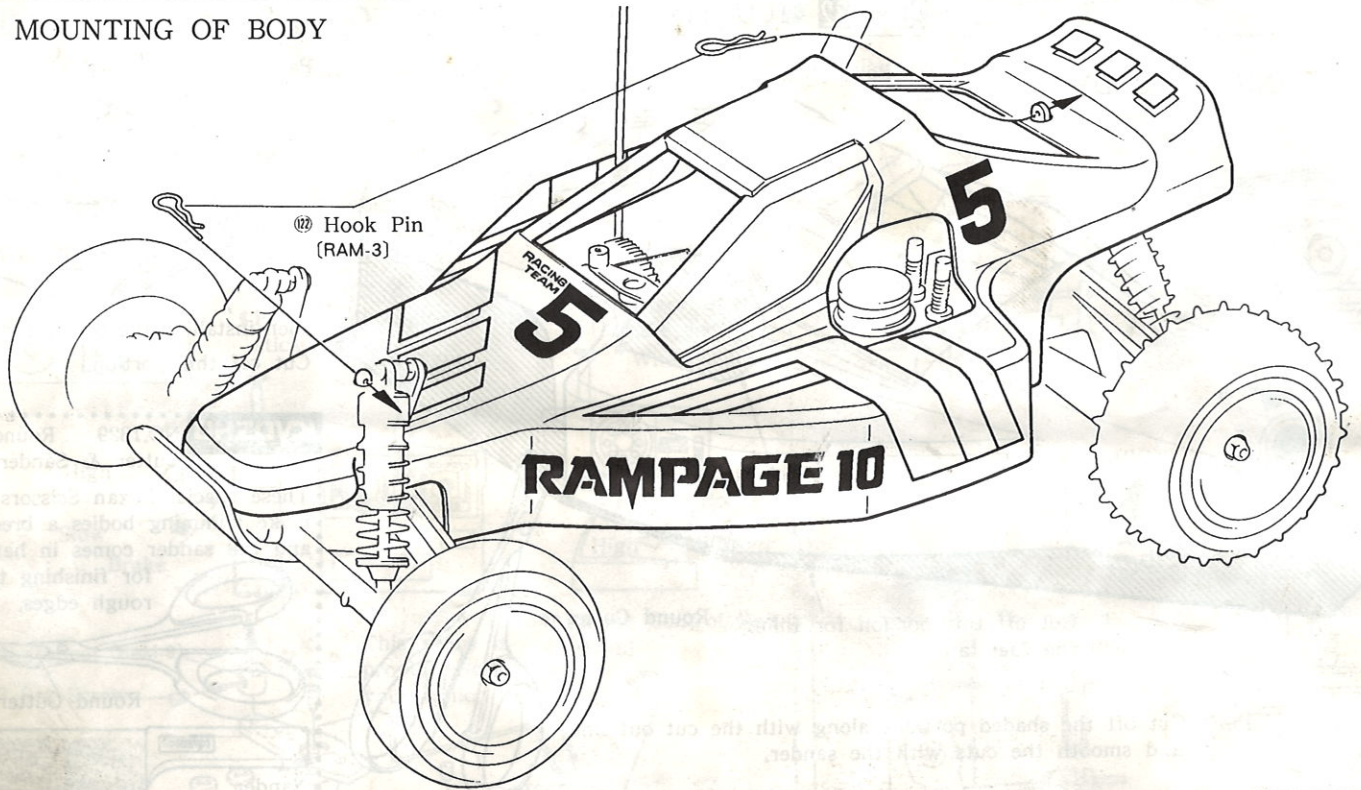
31 APPLYING OF DECAL

- Cut off the decals along the cutout line with scissors.
- Do not apply it abruptly. Convince yourself of the position by trying the decals with the backing paper on.
- Be careful not to have air bubbles left. Try to center to the periphery. (particular be cautious with a large decal.)



Apply this decal by one piece.

《Rear Portion》

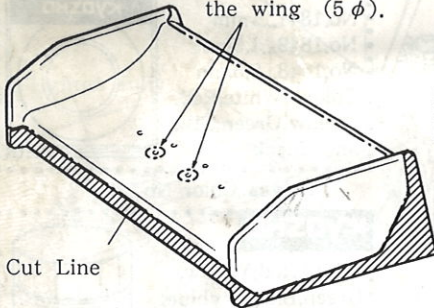


● INSTALLATION OF WING (OPTION)

Stage 1 <Cutting of Wing>

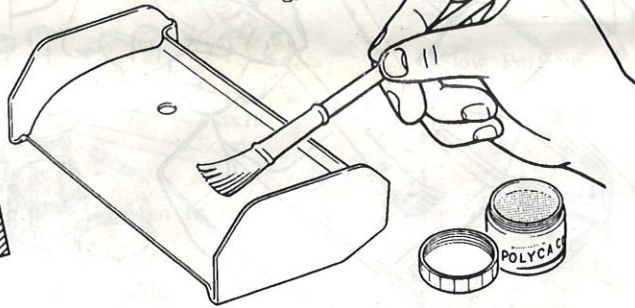
*Cut off the shaded area.

The opening is for installing the wing (5 φ).

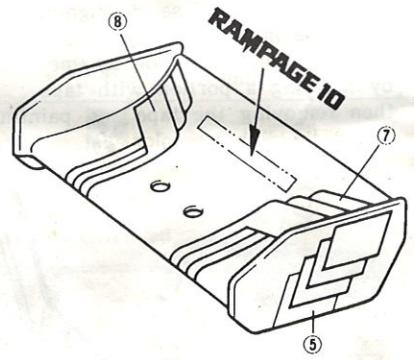


Stage 2 <Painting>

Paint the inside of the wing.

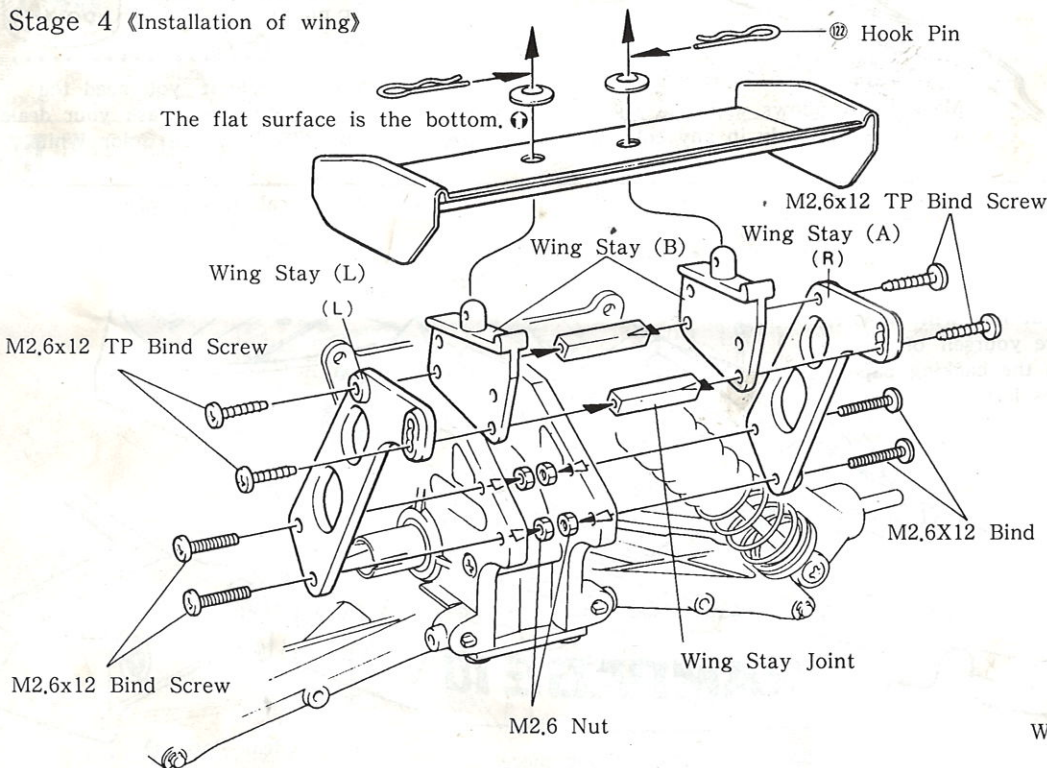


Stage 3 <Applying of Decal>

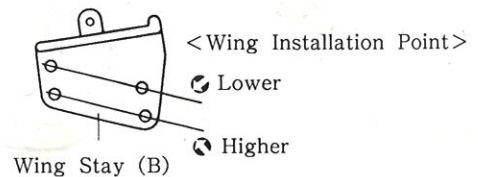
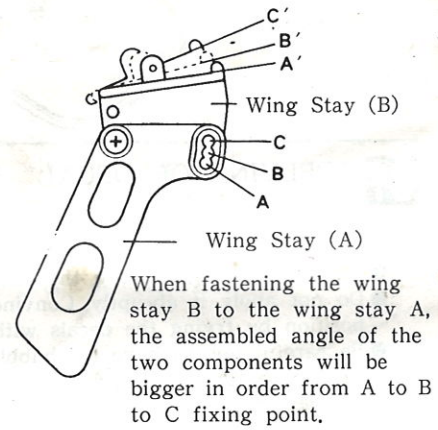


Stage 4 <Installation of wing>

The flat surface is the bottom. (7)



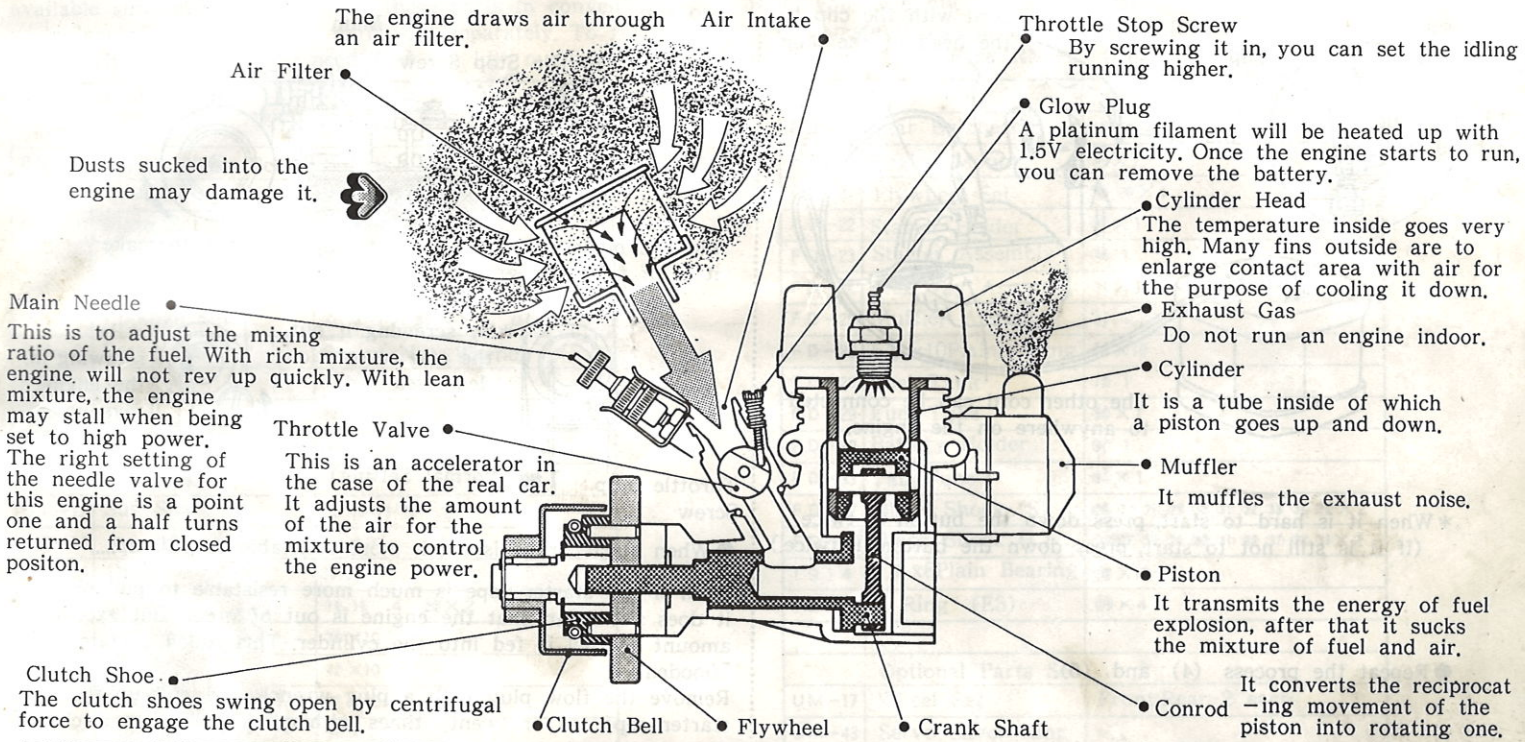
<Adjustment of Wing Stay>



GLOW ENGINE

● Your previous knowledge of the engine structure is very beneficial, particularly for those who handle an engine powered model car for the first time.

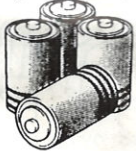
● The fuel is a mixture of alcohol with some additives. You can not use gasoline or kerosene for this type of engines.



STARTING ENGINE (1)

*The following things should be prepared to start an engine.

4 Unit #1 (D-size) Dry cells.

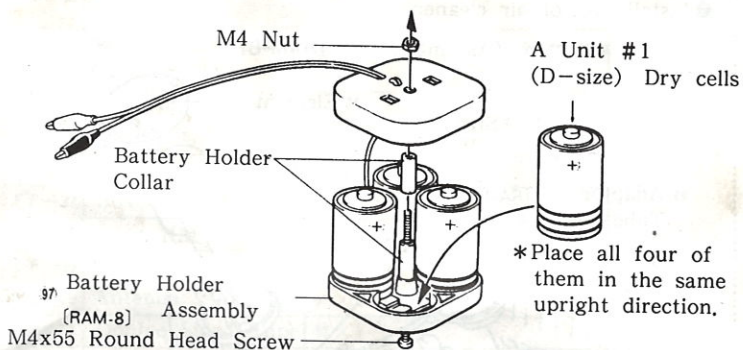


Glow Fuel, a can of 1 liter or 2.
*Gasoline or kerosene cannot be used.

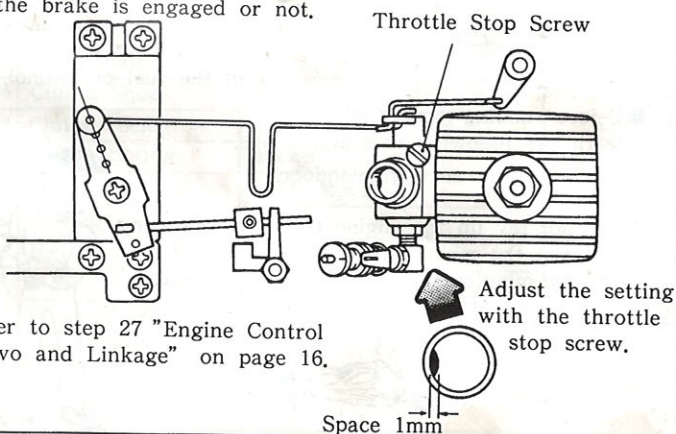


● Now you start the engine. Follow the procedures.

1) Fit the dry cells into the battery holder as shown.



2) Set the throttle valve to idling position and check to see if the brake is engaged or not.



*Refer to step 27 "Engine Control Servo and Linkage" on page 16.

3) Fill the fuel tank with a feeder.

Step 1
Screw out the cap until you see a hole.

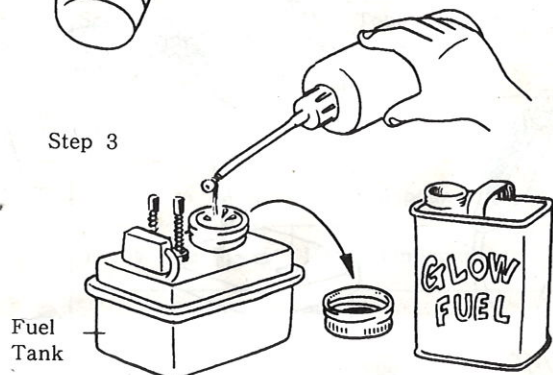


Fuel Pump

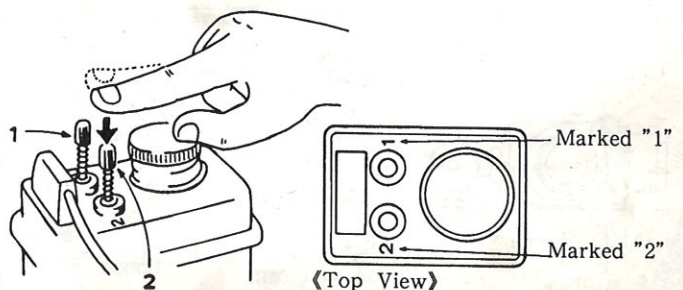
Step 2



Step 3

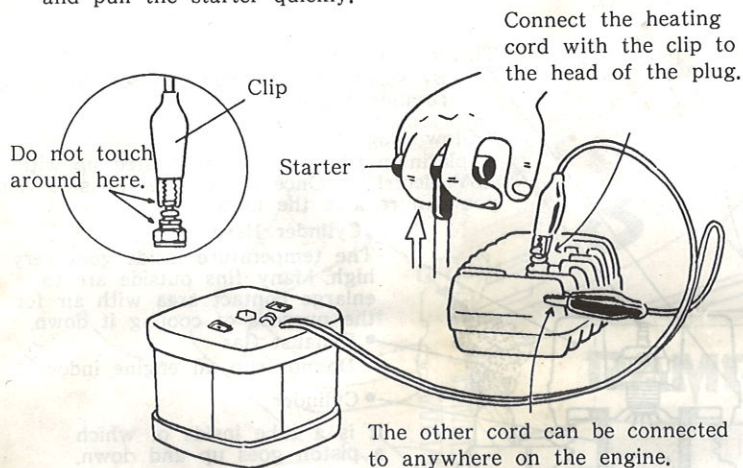


4) Press down the pump bottom ① twice on the fuel tank. (When it is hard to start in winter, press down the bottom ②.)



STARTING ENGINE (2)

- 5) Turn on an electric current to the plug and pull the starter quickly.



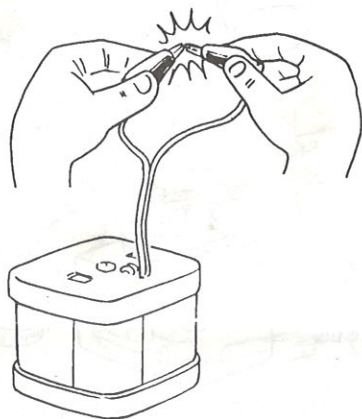
*When it is hard to start, press down the button ② twice. (If it is still not to start, press down the button ① twice.)

● Repeat the process (4) and (5).

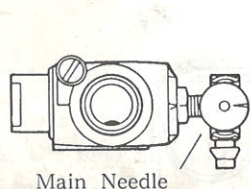
- 6) In case the engine still does not start, remove the plug and electrify it. If it does not become red-hot, one of the following causes is conceivable; the battery is discharged, poor contact in the electric circuit, the filament of the plug is burnt out. Try to brush the clips in a dirt place, if you see a spark, the battery is in good. Then you should change the plug.

If the filament becomes red-hot, try the steps (4) and (5).

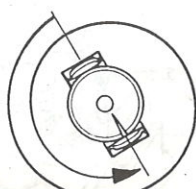
Short-circuit them for a moment.



- 7) Check to see if the main needle valve is set properly. If it is out of adjustment, tighten it all the way and loosen one turn and a half.

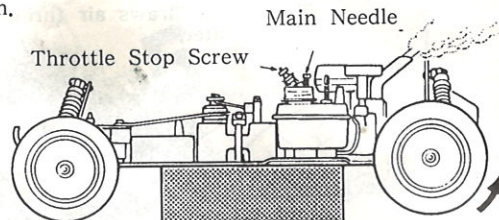


Screw in as deep as you can.



Loosen one turn and a half.

- 8) When the engine starts running, disconnect the clips and take a look at its idle-running. If it is too fast, the wheels may begin to rotate. If it is too slow, the engine will discontinue to run.



Put the model on a box or anything like that, to make it aloof from the ground.



*By screwing it out, the rate of rotation decreases.



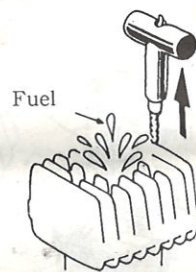
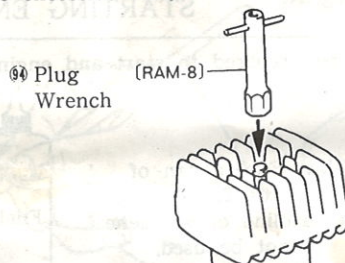
*By screwing in, the engine revs up.

Throttle Stop Screw 1 mm (Normal Setting)

- When starter rope is much more resistable to pull up....

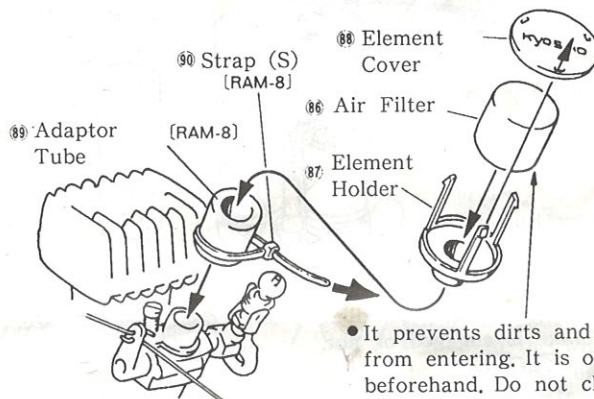
Even if the starter rope is much more resistable to pull up, it does not mean that the engine is out of order. But excessive amount of fuel is fed into the cylinder. This called a state of "flooded".

Remove the flow plug with a plug wrench and pull up the starter rope ten or twenty times with quick pulling to discharge the excessive fuel.



- Installation of air cleaner

* ⑧⑥ ⑧⑦ ⑧⑧ (Assembled) [RAM-8]



• It prevents dirt and dusts from entering. It is oil-soaked beforehand. Do not clean it with the fuel or alcohol.

- Before running your model car, learn the following do's and don't's.

- 1) Do not start an engine indoor.
- 2) Do not rev up the engine from the beginning, but run the model slowly for the first ten or twenty minutes for a break-in operation.



PURCHASABLE PARTS FOR YOUR KIT

You can purchase replacement optional parts for your kit. All of the part identified by key number are usually not available singularly, but we offer these parts in convenient parts "packs" which can be purchased separately. To figure out which parts pack you need, find the key number for

that part within the manual.

Then consult out part pack guide below. When referring to the parts you need, always use the Parts Pack Number.

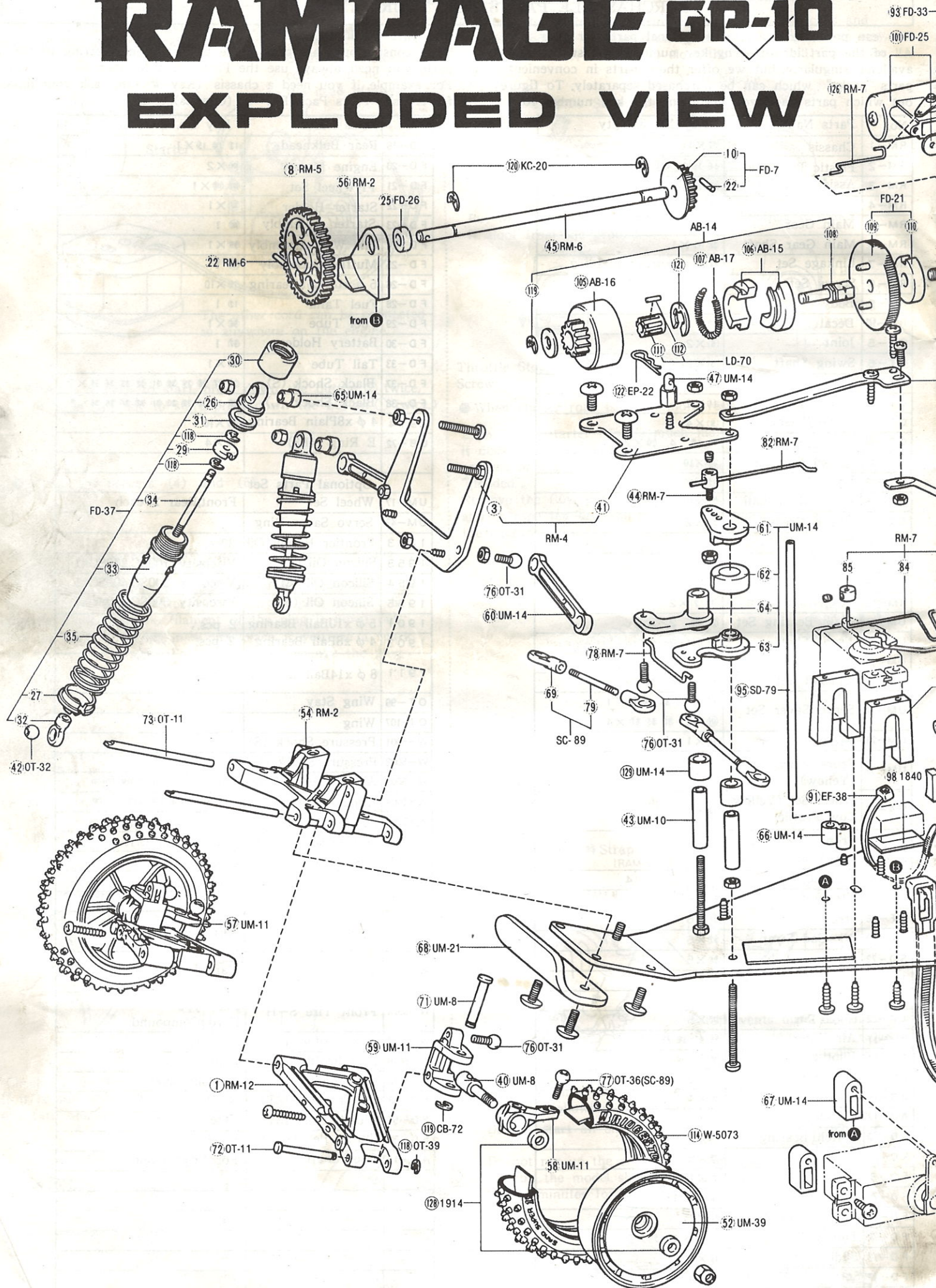
For example, if you need a chassis (Key # 116) ask your dealer for Kyosho Parts Pack RM-1 (Chassis).

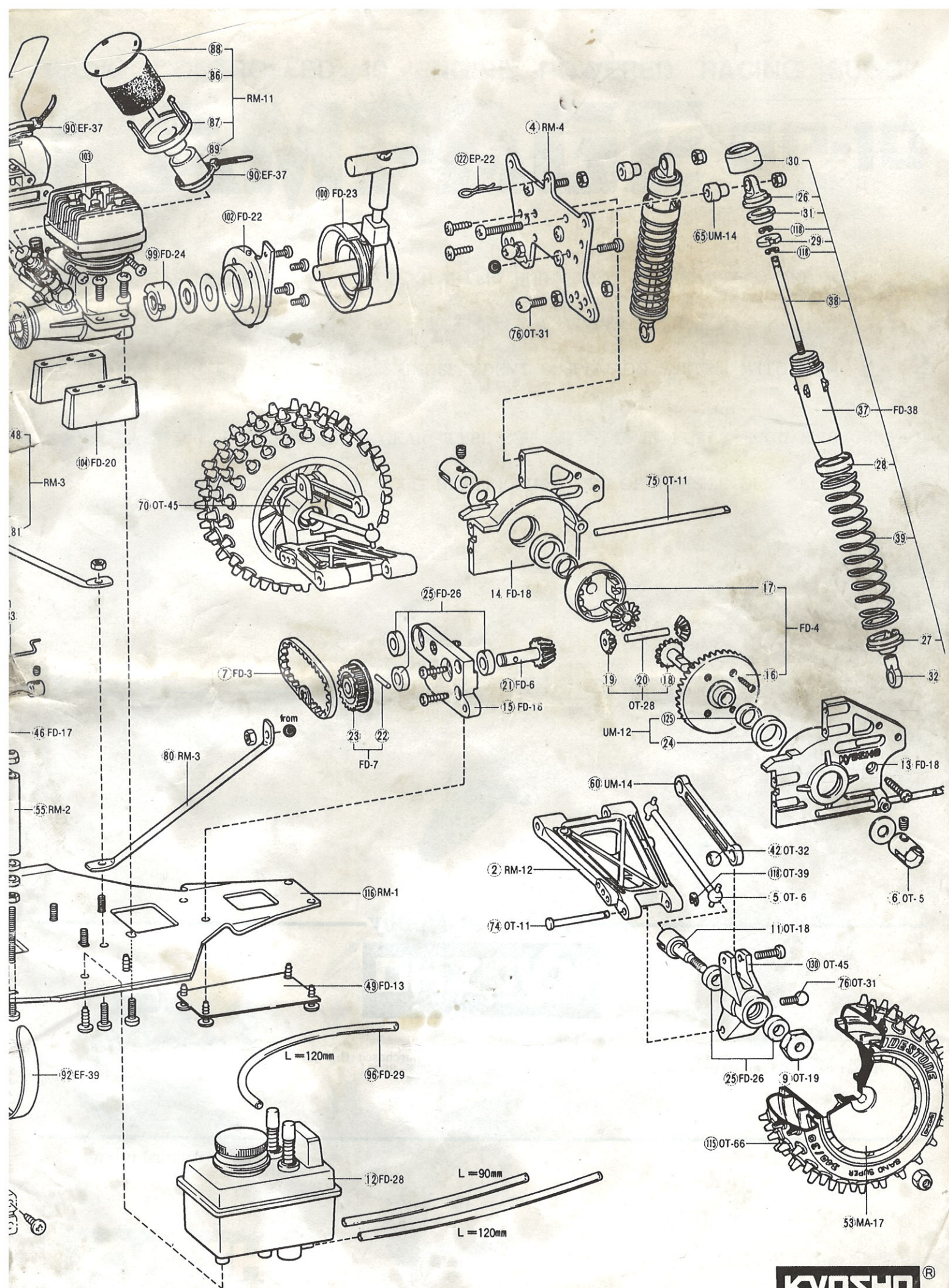
No.	Parts Name	Key No. & Q'ty
RM-1	Chassis	116 X 1
RM-2	Plastic Parts Set	54 55 56 X 1
RM-3	Assist Rod Set	48 80 81 X 1
RM-4	Plate Set	(3) (4) (10) X 1
RM-5	Main Gear	(8) X 1
RM-6	Main Gear Shaft	22 45 X 1
RM-7	Linkage Set	44 78 82 83 84 86 X 1 85 X 2
RM-8	Screw Set	Screw, Nut, Wrench
RM-9	Body	(9) X 1
RM-10	Decal	(10) X 1
OT-5	Joint	(6) X 2
OT-6	Swing Shaft	(5) X 2
OT-11	Sus. Shaft	72 73 74 75 2
OT-18	Rear Shaft	10 X 2
OT-19	Drive Washer	(9) X 4
OT-28	Differential Gear	18 19 4 20 X 2
OT-31	M3 Pillow Ball	76 X 10
OT-32	5.8 φ Ball	42 X 10
OT-36	M2.6 Pillow Ball	77 X 10
OT-38	Silicon Grease	51 X 2
OT-39	E Ring (E2,5)	(10) X 10
OT-45	Rear Hub	70 (9) 1
OT-66	Low Profile Tire	(10) X 2
RM-12	Suspension Arm	(1) (2) X 2
UM-2	Plain Bearing Set	24 (5) 2
UM-8	Front Shaft	40 (7) 2
UM-10	Collar Set	43 X 2
UM-11	Upright Set	57 58 1 59 X 2
UM-14	Servo Saver Set	47 61 62 63 64 65 1 (5) X 2 60 65 67 X 4
UM-21	Front Bumper	68 X 1
UM-39	Front Wheel Set (Yellow)	52 X 2
MA-17	Wheel Set (Yellow) Low Profile	53 X 4
W-5073	Front Tire S-S Pin Type, Soft	(10) X 2
SC-89	Rod Set	79 X 2 69 77 4
EF-37	Strap (S)	80 X 6
EF-38	Strap (M)	91 X 6
EF-39	Ni-Cad Strap	92 X 6
SD-79	Antenna Tube	95 X 5
1840	Double Sided Tape	98 X 1
1878	Screw Locking Compound	50 X 2
EP-22	Hook Pin	(10) X 5
RM-11	Air Filter	66 87 88 89 1
AB-14	Pilot Shaft (OS)	(10) (10) (10) 1
AB-15	Clutch Shoe	(8) X 2
AB-16	Clutch Bell	(8) X 1
AB-17	Clutch Spring	(10) X 4
LD-70	Clutch Bearing	(10) X 1 (10) X 6
KC-20	E Ring (E4)	(10) X 5
FD-3	Belt	(7) X 1
FD-4	Final Diff. Case	(16) (17) X 1
FD-6	Final Pinion Gear	(21) X 1
FD-7	Timing Pulley	(10) (23) X 1 (22) X 2
FD-13	Slider Set	(49) X 1
FD-17	Servo Mount Set	(46) X 4

No.	Parts Name	Key No. & Q'ty
FD-18	Rear Bulkhead	13 14 15 X 1
FD-20	Engine Mount	(10) X 2
FD-21	Flywheel Set	(10) (10) X 1
FD-22	Starter Holder	(10) X 1
FD-23	Starter Assembly	(10) 1
FD-24	One Way Assembly	(10) X 1
FD-25	Muffler Assembly	(10) 1
FD-26	5 φ x10 Plain Bearing	25 X 10
FD-28	Fuel Tank	12 1
FD-29	Fuel Tube	(96) X 1
FD-30	Battery Holder	(97) 1
FD-33	Tail Tube	(93) X 1
FD-37	Black Shock (S)	26 27 28 29 30 31 32 33 34 35 X 2
FD-38	Black Shock (L)	26 27 28 29 30 31 32 37 38 39 X 2
1914	4 φ x8 Plain Bearing	(10) X 10
CB-72	E Ring (E3)	(10) X 4
	Optional Parts Set	
UM-17	Wheel Set	Front, Rear 2 each
UM-43	Servo Saver Ring	
1883	Frontier Hobby Oil	30cc.
1953	Silicon Oil (S)	Viscosity 100SC, 200SC x 1
1954	Silicon Oil (M)	Viscosity 300SC, 400SC x 1
1955	Silicon Oil (H)	Viscosity 500SC, 600SC x 1
1901	5 φ x10 Ball Bearing	2 pcs.
1903	4 φ x8 Ball Bearing	2 pcs.
1911	8 φ x14 Ball Bearing	2 pcs.
OT-99	Wing Stay	
OT-107	Wing	
W-5001	Pressure Shock (S)	
W-5002	Pressure Shock (L)	
W-5003	Adjustable Shock (S)	Easy adjusting damping force
W-5004	Adjustable Shock (L)	Easy adjusting damping force
W-5005	Special Rod	One Touch Adjustable
W-5061	Universal Swing Shaft	For Smooth Drive
1875	Front Tire (A)	Block Type
W-5031	Low Profile Tire	
W-5032	Low Profile Tire	
W-5071	Front Tire M-S	Soft Compound
W-5072	Front Tire M-H	Hard Compound
W-5074	Front Tire S-H	Pin Type Hard Compound
W-5077	Low Profile Tire	Pin Type
W-5078	Low Profile Tire	Multi Spike
KC-18	3 φ Stopper	For Sus. Shaft
SD-53	Clutch Bell (12T)	Steel
SD-54	Clutch Bell (13T)	Steel
SD-55	Clutch Bell (14T)	Steel
AB-13	Pilot Shaft	For Enya engine

RAMPAGE GP-10

EXPLODED VIEW





RANGE OF BEST VIEW

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