

RADIO CONTROLLED .10 ENGINE POWERED RACING BUGGY

RAMPAGE™ GP-10

- Quick, easy starting with built-in recoil starter.
- Double wishbone four-wheel, independent suspension with pressure oil shocks.
- Gear-type differential in fully enclosed gear box.
- Easy starting O.S. CZ-R Engine with special muffler and fuel tank.
- Minimal accessories needed, fuel, (4) D size batteries, and 2-channel radio.



WELCOME TO THE WORLD OF GAS POWERED R/C RACING



TABLE OF CONTENTS

Before Assembly	3-4
Warranty Information	5
List of Bagged Parts (1)	6
List of Bagged Parts (2) and Plastic Tree Layout	7

STEP	MAIN ASSEMBLY	
1	Shock Assembly	8
2	Filling the Shock with Oil	8
3	Knuckle Arm Assembly	9
4	Installation of Front Shock Tower	9
5	Installation of Front Suspension Arm	9
6	Installation of Front Bulkhead and Bumper	10
7	Installation of Front Shock	10
8	Assembly of Servo Saver	10
9	Installation of Servo Saver	11
10	Installation of Tie Rods and Front Plate	11
11	Installation of Rear Gearbox	12
12	Assembly of Rear Hub	12
13	Installation of Rear Hub and Suspension Arm	13
14	Installation of Swing Shafts	13
15	Installation of Rear Shocks	13
16	Installation of Main Gear	16
17	Installation of Servo Mounts	16
18	Installation of Fuel Tubing	17
19	Installation of Engine and Brake	17
20	Installation of Upper Plate and Torque Rod	17
21	Installation of Fuel Tank	18
22	Assembly of Tire and Wheel	18
23	Installation of Tire	18

RADIO INSTALLATION

24	Linkage	19
25	Checking and Adjusting the Radio	19
26	Installation of Receiver and Switch	19
27	Installation of Throttle Servo and Linkage	20
28	Installation of Receiver Battery	20

PREPARING THE BODY

29	Trimming the Body	21
30	Painting	21
31	Applying Decals	21
32	Mounting the Body	22
	Optional Wing	22

GLOW ENGINE

	Glow Engine Operation	23
	Starting the Engine	23-24
	Installation of Air Filter	24
	Adjusting the Needle Valve	25
	Trouble Shooting Guide	25
	Operational Safety	26
	Maintenance After Running the Car	26
	Precautions	26
	Engine Care	26
	Parts List	27
	Purchasing Parts List	28

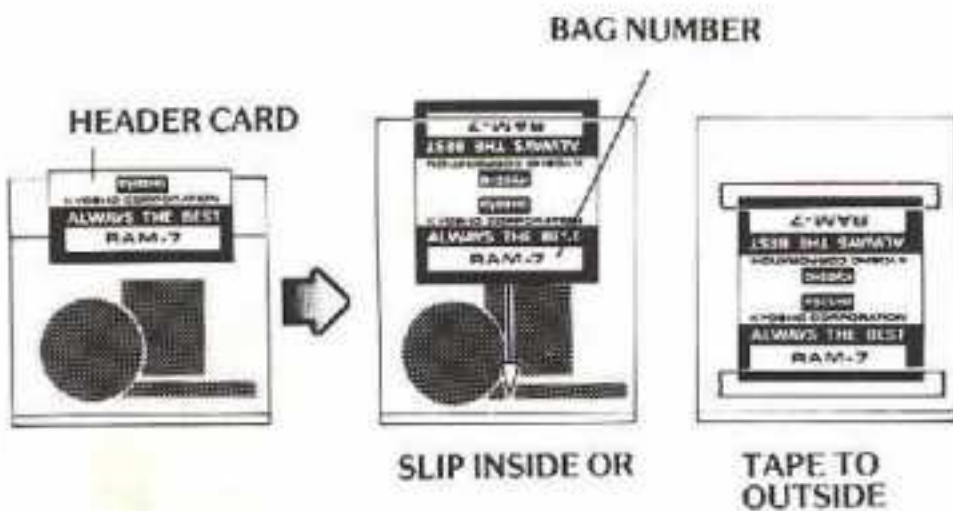
RAMPAGE GP-10™

IMPORTANT! BEFORE YOU BEGIN

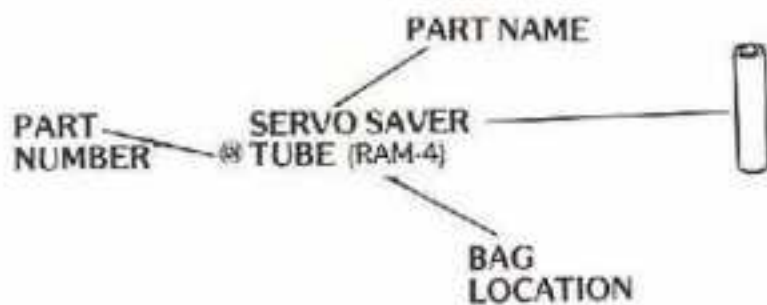
This is a sophisticated model with a large number of moving parts. Before you begin assembly, take a look through the box and these instructions carefully to decide whether or not you are ready for this challenge! If you do not think that this type of model is for you, it may be returned to the dealer as long as it is NEW and UNUSED. UNDER NO CIRCUMSTANCES CAN YOUR DEALER ACCEPT A KIT FOR RETURN IF ASSEMBLY HAS ALREADY BEGUN! If this is not what you bargained for, then go no further and return this kit to the dealer immediately. BUT, if a little maintenance doesn't bother you, and the thrill of high performance driving is for you, then don't hesitate another minute! IT IS VERY IMPORTANT TO read through this entire manual thoroughly to familiarize yourself with the parts and methods of construction used BEFORE actually starting to build.

HOW TO USE THIS MANUAL

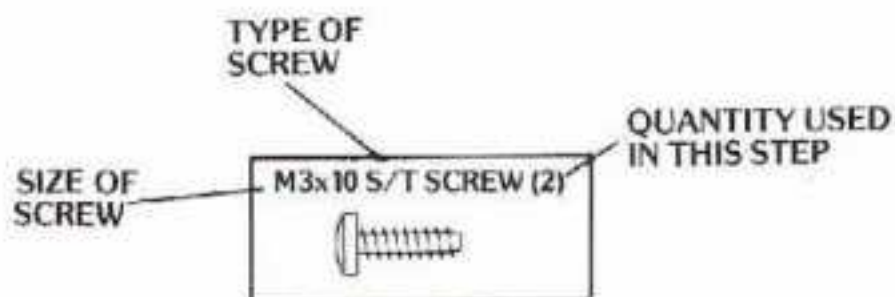
This Kyosho instruction manual uses a unique cross reference system to help you locate all of the bagged parts. DO NOT open each bag and dump out the parts. Carefully remove the header card from the bag and discard the staple. Slip the header card into the bag or tape it to the outside of the bag so that the bag number shows. These bag numbers will be used throughout the assembly process and will prove invaluable when locating parts.



In each step of assembly each part will be labeled with 1) The part number, 2) Part name, and 3) Bag location.



In the left margin of each page you will find a directory of small parts that will be used in each step. For ease of identification, these parts are shown actual size enabling you to place a screw directly on the picture to ensure you have selected the appropriate size.

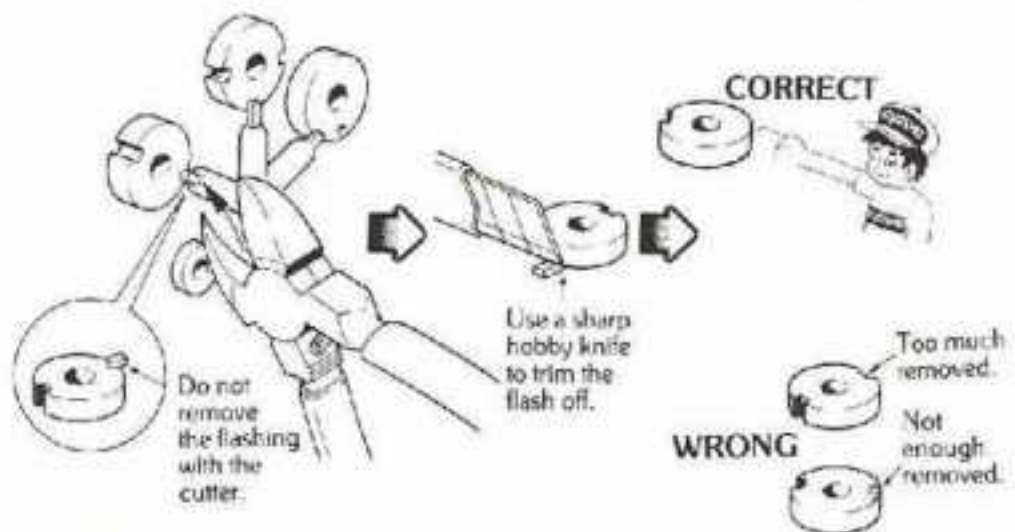


On page 27 you will find a complete list of parts used in this kit including the part number and total quantity supplied in the kit. On pages 6 & 7 you will find an inventory of how each part is bagged in this kit and in which step it is used. When ordering replacement or optional parts, see page 28 for a complete listing of parts and stock numbers.

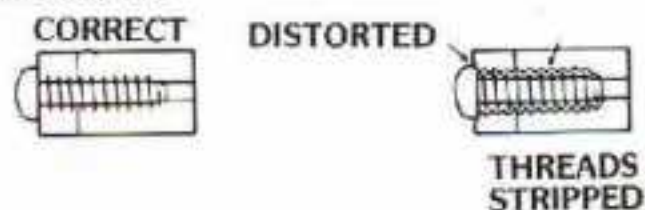
HELPFUL TIPS & PRECAUTIONS

Some precautions need to be observed when building your "Rampage GP-10" to avoid problems.

- 1.) Use a muffin tin or egg carton to separate screws, nuts, washers, etc. This will make it easier to locate the correct part.
- 2.) Place a mat or towel on the work surface where you will be building the kit. This will prevent parts from rolling off and will protect the work surface at the same time.
- 3.) Try to avoid working over a shag carpet. In the event that a small part or screw should fall onto the carpet, it will be difficult to find.
- 4.) Avoid getting products like engine cleaner or screw lock on the plastic parts. They can have a serious effect on your model.
- 5.) Avoid running the "Rampage GP-10" in very cold temperatures. Both plastic and metal parts become brittle at low temperatures. In addition, grease and oil become very thick causing premature wear and deficient performance.
- 6.) Remove all flashing from parts before assembly as shown in the example below.



- 7.) Trial fit all parts to ensure proper fit before attaching them permanently.
- 8.) Do not use excessive force when tightening self tapping type screws into plastic. Overtightening will cause the threaded portion of the plastic to strip. It is recommended to stop tightening when some resistance is felt after the threaded portion enters the plastic.



RADIO OPERATIONAL CHECK

Thoroughly read and follow the instructions supplied with your radio system. The following instructions are a general procedure for testing the operation of your radio system.

An operational check of your complete radio system prior to installation is a must. This check will locate possible defective components BEFORE they are installed in your model.



Gently plug the switch harness and servo connectors into the proper receptacles on the receiver. The connectors are polarized and will fit only one way. If they do not plug in easily, turn them around and try again. (DO NOT FORCE.) Install the batteries into the battery holders for both the transmitter and receiver.

Unravel the receiver antenna wire and turn on the transmitter, then turn on the receiver switch. The servos may move a little bit at this point but this is normal. Check to make sure that the transmitter is on when switched on and if it is, continue. If it is not, recheck your installation of batteries. You should be able to move the servos' arms using the transmitter controls. Notice how the servos move. They should move the same amount as you move the controls. Also, notice the direction of rotation of the servos, then switch the servo reversing switches, if so equipped. See if the rotation of the servos change. They would operate in the opposite direction as before.

Decide whether your radio is in proper working order. If you decide that it is defective, check the warranty procedures described in the radio instruction manual. When turning off the system, always turn the receiver off first, then the transmitter. This will prevent the receiver from responding to stray signals which can cause the servos to react erratically and move to the extreme of their rotation which can cause damage.

NOTICE: Use only radio frequencies specifically allowed to operate "surface" models such as R/C cars and boats. In the United States those frequencies fall within the "75 MHz" or "27 MHz" bands. Use of any other frequencies is both illegal and dangerous.

9.) Ensure that all parts are well lubricated where the instructions indicate the use of grease.

10.) Avoid using power screwdrivers when assembling your kit. They tend to overtighten screws.

11.) Take your time and read the directions thoroughly. It's not how fast you can assemble the kit but how fast it goes once it is assembled.

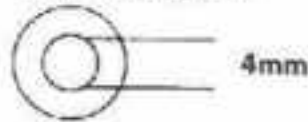
METRIC NUTS AND BOLTS

All nuts and bolts used throughout this kit are metric size. Therefore, some of the notations may not be familiar to you. An M3 nut is a 3 millimeter (3mm) nut. An M3x15 screw is 3mm diameter and 15mm long. Some round parts may be labeled as a "4mm Washer" (a washer with a 4mm inside diameter) or a "3mm Bushing" (a bushing with a 3mm inside diameter). At various points throughout the manual these parts are labeled and pictured in their actual size on the left hand side of the page. For your reference, 1 millimeter equals approximately .039 inches.

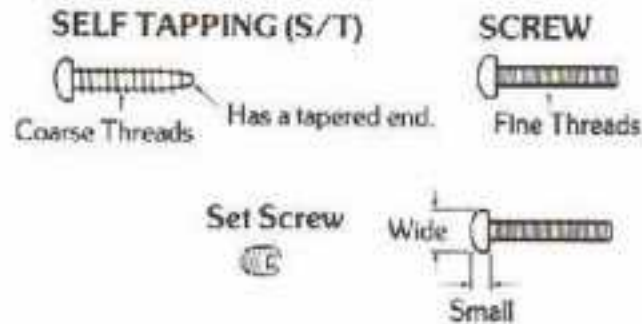
M3 x 15 SCREW



4mm WASHER



A few different types of screws are used in the construction of your model. Here are some examples and how they will be indicated in the instructions. For example, Self Tapping will simply be S/T screw.



Certain symbols are used throughout the instructions. Pay attention to their location.

GREASE Points where Grease/Oil should be applied. (This will reduce wear and friction and provide a smoother operating joint.)

LOCKTITE Places where Locktite (Zap Lock, etc.) should be applied. (This will prevent screws and nuts from loosening up during operation due to the vibration of the model.)



When you see this face, there are steps that you should pay extra particular attention to when building this model.

REQUIRED TOOLS

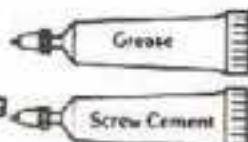
These ARE included with the "Rampage GP-10."

1.5mm Allen Wrench

2mm Allen Wrench

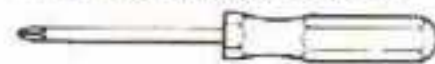
Silicone Grease

Screw Locking Compound



These ARE NOT included with the "Rampage GP-10."

PHILLIPS SCREWDRIVER



3mm & 4mm NUT DRIVER



CYANOACRYLATE GLUE (such as Jet, CA, Hot Stuff or Krazy Glue.)



NEEDLE NOSE PLIERS



LEXAN SCISSORS



PAINT BRUSH



WIRE CUTTERS



AWL



HOBBY KNIFE



PAINT



MASKING TAPE



WARRANTY INFORMATION

90 Day Limited Warranty

It is expressly understood that the standard replacement warranty of the seller, a copy of which is annexed to and made part of this agreement, shall be in lieu of any and all other warranties, including the warranties of merchantability and fitness for use. The sole responsibility of the seller shall be in its replacement obligations contained in this standard warranty.

Kyosho's "Rampage GP-10" is warranted to the original owner to be free of defects in parts or workmanship for a period of 90 days from the date of purchase. During this time Kyosho's authorized U.S. repair facility, Hobby Services, will repair or replace at their option any defective parts without charge.

Limit of our Liability: Our liability under this warranty is limited to the repair or replacement of defect or defective parts by Hobby Services and does not include shipping expense.

Exclusion and/or Voidance of Warranty: This warranty does not apply to damage or defects resulting from misuse, abnormal service, damage in shipment, or damage resulting from a crash. The warranty is voided if the model is modified, altered, or repaired by anyone other than Hobby Services. This warranty gives you specific legal rights, and you may also have other rights that vary from state to state within the U.S.

PROOF OF DATE OF PURCHASE

It is the responsibility of the purchaser to show proof of the date of purchase if a model's warranty is to be honored. Your original purchase invoice or receipt will suffice for this. Your Kyosho "Rampage GP-10" should be returned directly to Hobby Services for warranty work. The address is:

Hobby Services
1610 Interstate Drive
Champaign, IL 61821
Attn: Warranty Dept.
Phone: 217-398-0007

SHIPPING INFORMATION

Please follow steps 1 through 4 in "Repair Service" when returning a model to Hobby Services. (See Below).

We are sorry, but we cannot be responsible for crash damage and/or loss of kits, engines, accessories, etc.

REPAIR SERVICE

Should your model be past the 90 day warranty period, or should your kit be voided or excluded from warranty coverage, repairs are available for a nominal cost through Kyosho's authorized U.S. repair facility, Hobby Services. Since we want you to be happy with your purchase for a long time, Hobby Services employs a full time in-house service staff. They have the professional knowledge and the sophisticated equipment and parts available to service your model for years to come. When returning your model, whether for warranty or repair service, please be sure to follow the instructions listed below. This will help the technician troubleshoot the system, repair it, and return it to you as quickly as possible.

- 1) Under all circumstances, return the ENTIRE system.
- 2) Disconnect the receiver battery switch harness, and make sure the transmitter is turned off.
- 3) Send written instructions which include: proof of purchase date (your store receipt or purchase invoice), a list of all items returned, a THOROUGH explanation of the problem and the service needed, and your phone number where you can be reached during the day.
- 4) Also include your full return address.

Repair charges and postage may be prepaid or billed C.O.D. Additional postage charges will be applied for non-warranty returns. All repairs shipped outside the United States must be prepaid in U.S. funds only.

LIST OF BAGGED PARTS (1)

Before assembly open each bag one at a time and compare the parts in each bag to the parts listed below. Check the bag for the part and the correct quantity. If you are not familiar with the names of some parts, turn to the step where that part is used, and refer to the labeled diagrams. Return all the parts to the correct bag after checking the list. Some of the parts in the list are already assembled. For example, Blister Pack (B) includes the Gear Box which is already assembled at the factory, but each part is listed separately.

NOTE: The parts with a ★ by them are contained on a molded parts tree.

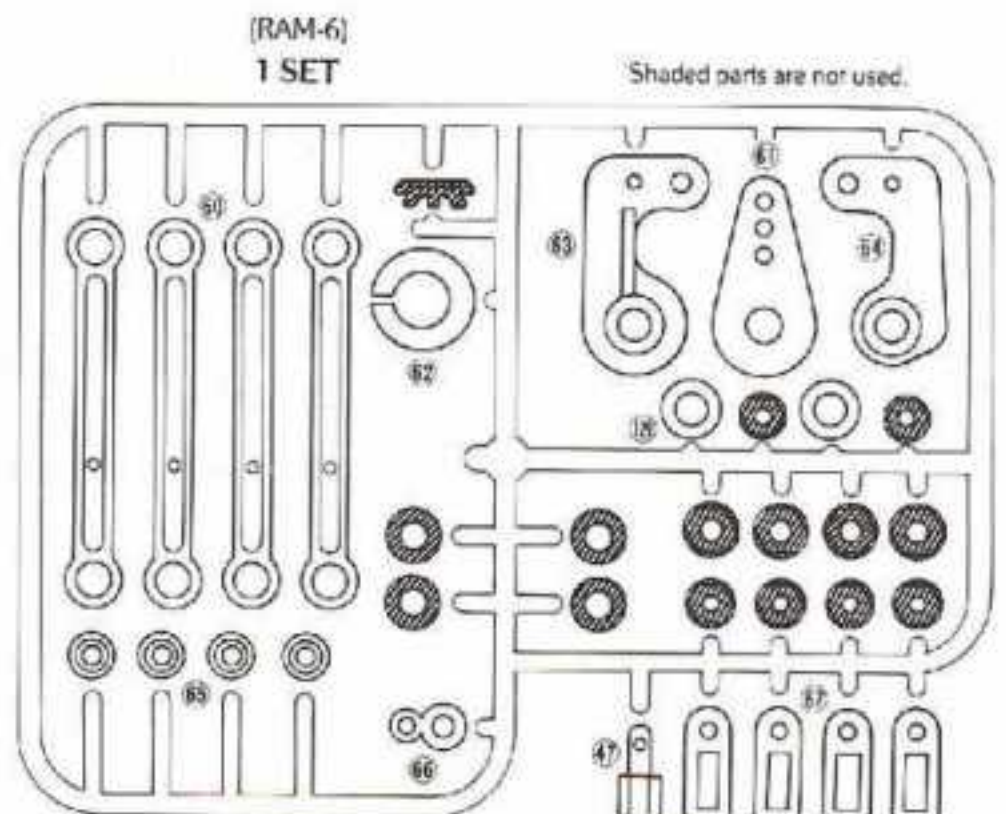
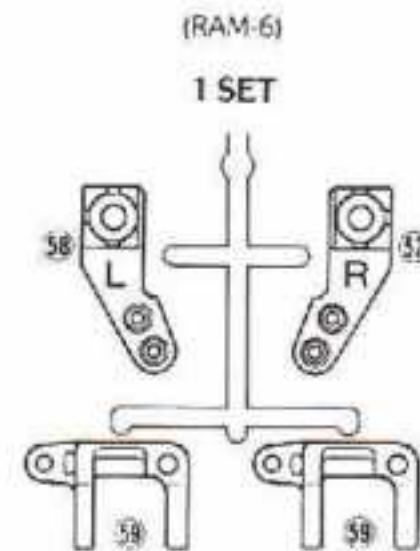
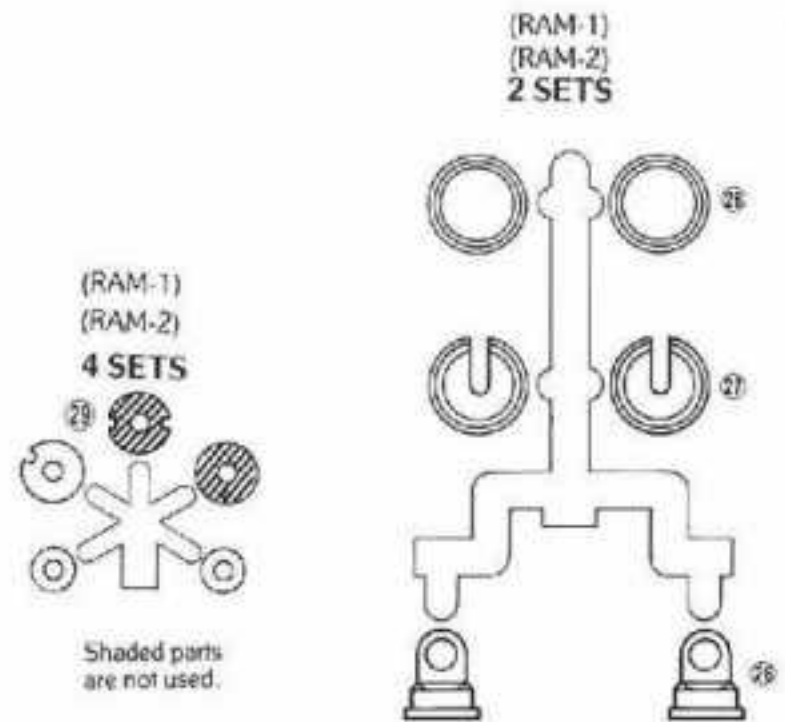
BAG NO.	KEY NO.	DESCRIPTION	QTY.	STEP USED IN
BLISTER PACK (A)	1	Front Suspension Arm	2	5
	2	Rear Suspension Arm	2	10
	3	Front Shock Tower	1	4
	4	Rear Shock Tower	1	11
	5	Swing Shaft	2	12
	6	Joint	2	11
	7	Belt	1	10
	8	Main Gear	1	13
	9	Drive Washer	2	20
	10	Timing Pulley (B)	1	13
	11	Rear Wheel Shaft	2	12
BLISTER PACK (B)	12	Fuel Tank Assembly	1	11
	13	Rear Bulkhead (L)	1	GEAR BOX 11
	14	Rear Bulkhead (R)	1	
	15	Rear Housing	1	
	16	Differential Case (A)	1	
	17	Differential Case (B)	1	
	18	Bevel Gear (A)	2	
	19	Bevel Gear (B)	2	
	20	Bevel Gear Shaft	1	
	21	Final Pinion Gear	1	
	22	2mm x 11mm Pin	1	
	23	Timing Pulley (A)	1	
	24	10mm x 14mm Bushing	2	
	131	5mm x 10mm Bearing	2	
	120	E-Ring (E-4)	1	
125	Bearing Collar	2		
RAM-1 FRONT SHOCK PARTS	★ 26	Shock Cap	2	2
	★ 27	Spring Holder	2	2
	★ 28	Spring Spacer	2	
	★ 29	Shock Piston	2	11
	30	Shock Ring	2	2
	31	Shock Diaphragm	2	2
	32	Shock End	2	11
	118	E-Ring (E-2.5)	4	11
		Shock Bushing	2	
	33	Front Shock Case (Short)	2	11
	34	Front Shock Shaft (Short)	2	11
	35	Front Shock Spring	2	2
	36	Shock Oil	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	11
	30	Shock Ring	2	2
	31	Shock Diaphragm	2	2
	32	Shock End	2	11
	118	E-Ring (E-2.5)	4	11
		Shock Bushing	2	
	37	Rear Shock Case (Long)	2	2
	38	Rear Shock Shaft (Long)	2	11
	39	Rear Shock Spring	2	2
	RAM-4	40	Front Wheel Shaft	2
41		Front Plate	1	10
RAM-4	42	5.8mm Ball (Silver)	4	2
	43	Servo Saver Collar	2	9
	44	3mm Linkage Guide	1	3
	45	Main Gear Shaft	1	13
	128	4mm x 8mm Bushing	4	20
	25	5mm x 10mm Bushing	6	11 12 11
	22	2mm x 11mm Pin	2	10
	48	Upper 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	46	Servo Mount	2	17
	★ 47	Body Post	1	10
	54	Front Bulkhead	1	4
	55	Brake Lever	1	19
	56	Main Gear Shaft Holder	1	13
	★ 57	Knuckle Arm (R)	1	8
	★ 58	Knuckle Arm (L)	1	8
	★ 59	Front Hub	2	8
	★ 60	Upper Rod	4	24 24
	★ 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	27 15
	★ 66	Antenna Post	1	17
	★ 67	Steering Servo Mount	4	17
	★ 129	Servo Saver Tube	2	9
	68	Bumper	1	5
	69	5.8mm Ball End	4	10
70	Rear Hub (R)	1	12	
130	Rear Hub (L)	1	12	
RAM-7	71	King Pin	2	6
	72	Front Suspension Shaft (A)	2	5
	73	Front Suspension Shaft (B)	2	5
	74	Rear Suspension Shaft (A) (Black)	2	10
	75	Rear Suspension Shaft (B)	2	10
	76	M3 Pivot Ball (Silver)	10	3 2 11 12
	77	M2.6 Pivot Ball (Black)	2	3
	78	Center Rod	1	3
	79	Tie Rod	2	10
	80	Torque Rod (A)	1	11
RAM-8	81	Torque Rod (B)	1	20
	82	Steering Rod	1	20
	83	Brake Rod	1	20
	84	Throttle Control Rod	1	20
	85	Stopper	2	20
	86	Air Filter	1	
	87	Element Holder	1	20
	88	Element Cover	1	
	89	Adaptor Tube	1	
	90	Strap (Small)	2	

LIST OF BAGGED PARTS (2)

BAG NO.	KEY.NO	DESCRIPTION	QTY.	STEP USED IN
RAM-8	91	Strap (Medium)	1	☒
	92	Strap (Large)	1	☒
	93	Exhaust Tube	1	☒
	94	Plug Wrench	1	Page 24
	95	Antenna Tube	1	☒
	96	Fuel Tube	1	☒
	97	Battery Holder Assembly	1	Page 23
	98	Double Sided Tape	1	☒
LOOSE IN KIT	99	One-way Assembly	1	ASSEMBLED ENGINE ☒
	100	Starter Assembly	1	
	101	Muffler Assembly	1	
	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	
	109	Flywheel	1	
	110	Flywheel Spacer	1	
	111	Clutch Bearing Case	1	
	112	Clutch Roller	6	
	119	E-Ring (E-3)	1	
	121	E-Ring (E-7)	1	
	126	Exhaust Valve Rod	1	
	113	Body (GP-10)	1	☒
	114	Front Tire	2	☒
	115	Rear Tire	2	☒
116	Chassis	1	☒	
117	Decal	1	☒	
127	Fuel Bulb	1	Page 23	
	Instruction Manual	1		
RAM-3	118	E-Ring (E-2.5)	4	☒ ☒
	119	E-Ring (E-3)	2	☒
	120	E-Ring (E-4)	3	☒
	122	Body Pin	4	☒
	123	Allen Wrench (1.5mm)	1	☒ ☒
	124	Allen Wrench (2mm)	1	☒
		M4x8 Screw	6	
		M3x8 Screw	7	
		M3x10 Screw	2	
		M3x18 Screw	6	
		M3x35 Screw	2	
		M3x50 Screw	1	
		M2.6x12 Screw	4	
		M3x16 S/T Screw	2	
		M2.6x6 S/T Screw	1	
		M2.6x12 S/T Screw	4	
		M3x8 S/T Screw	8	
		M3x10 S/T Screw	17	
		M3x12 S/T Screw	2	
		M2.6 Nut	4	
		M3 Nut	20	
		M3 Nylon Nut	6	
		M4 Nylon Nut	4	
		M3x3 Set Screw	3	
		M4x4 Set Screw	2	
		M5 Washer	2	

LAYOUT OF PLASTIC PARTS TREE

The plastic parts trees are shown below to help identify the location of parts on the trees.

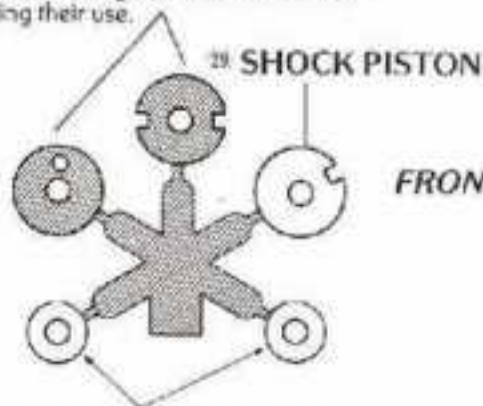


● ASSEMBLY OF CHASSIS

1 SHOCK ASSEMBLY

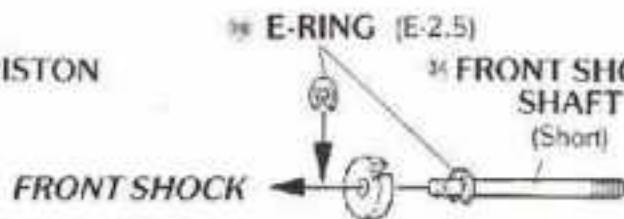
The Front Shock Parts are in Bag (RAM-1).
The Rear Shock Parts are in Bag (RAM-2).

These shock pistons can be used to adjust the dampening effect of the shocks. Page 26 has a chart showing their use.

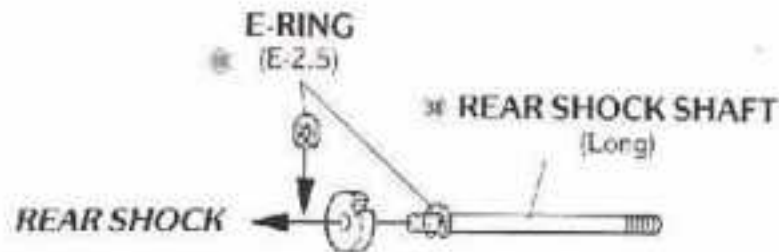


Two of the red plastic spacers will be used in Step 19 in the brake installation.

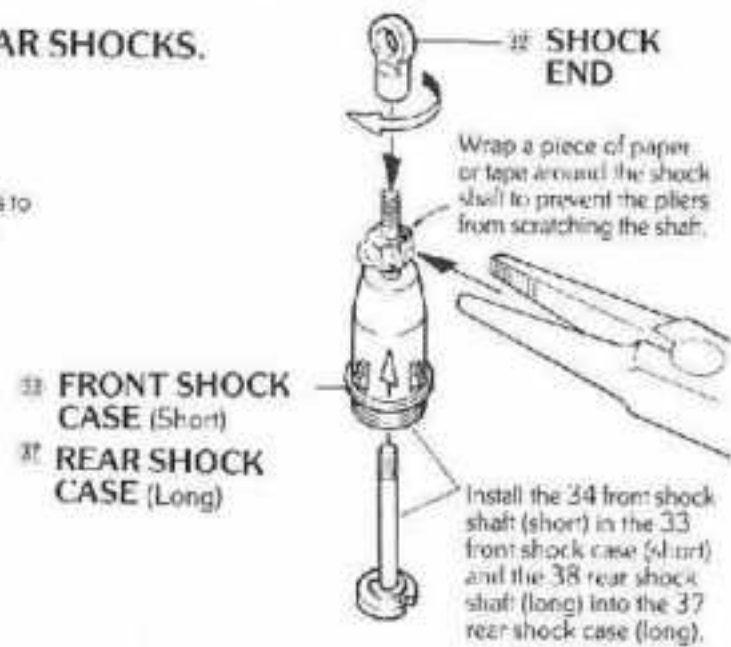
Step 1 ASSEMBLE TWO FRONT AND TWO REAR SHOCKS.



Use needle-nose pliers to gently snap into place.



Step 2

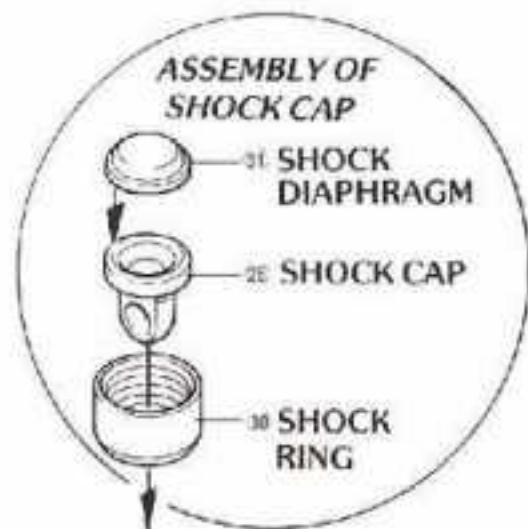


2 FILLING THE SHOCK WITH OIL

IMPORTANT: Assemble all four shock caps before putting oil into the shocks.

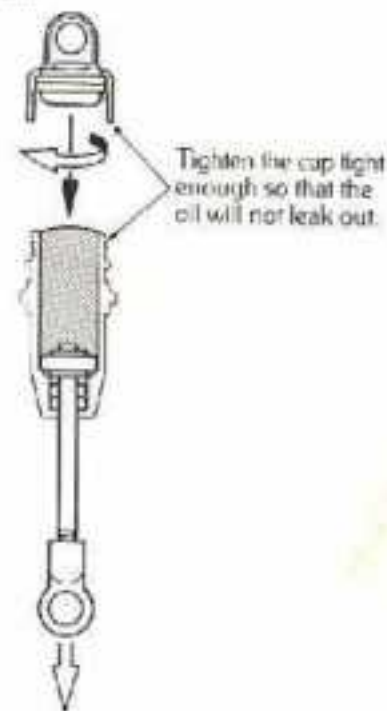
Step 1

Push the piston all the way down and put the oil in little by little while moving the piston up and down. This will help remove air bubbles. Fill the shock full of oil.



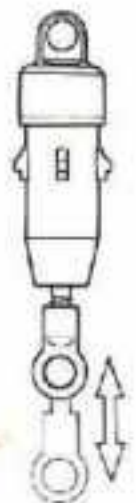
Step 2

Keeping the piston at the bottom, gently screw the shock cap on while allowing the excess oil to overflow out of the shock.

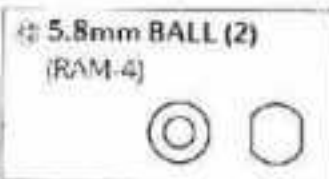
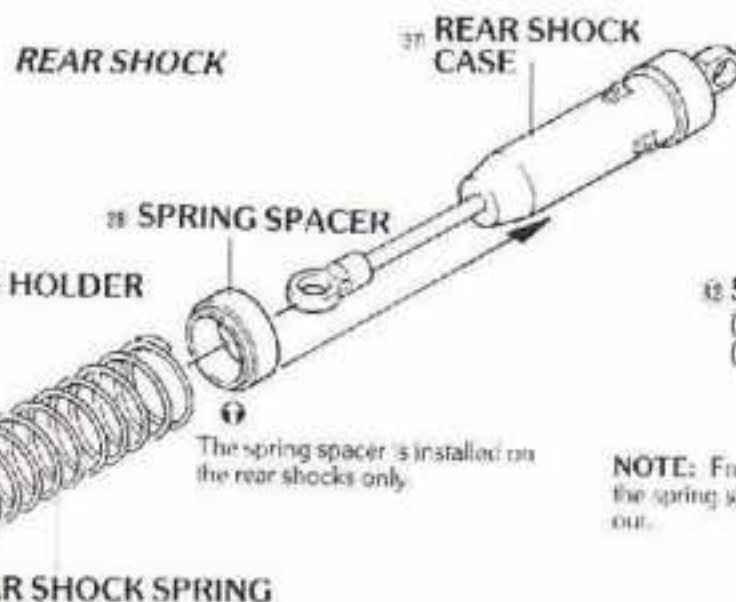


Step 3

Move the shock end up and down. It should move smoothly without binding.

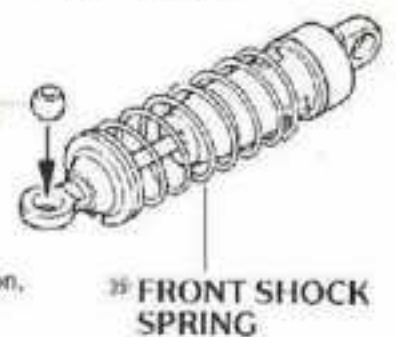


Step 4 Install the shock spring as shown.



Install the 5.8mm ball in the front shock ends only.

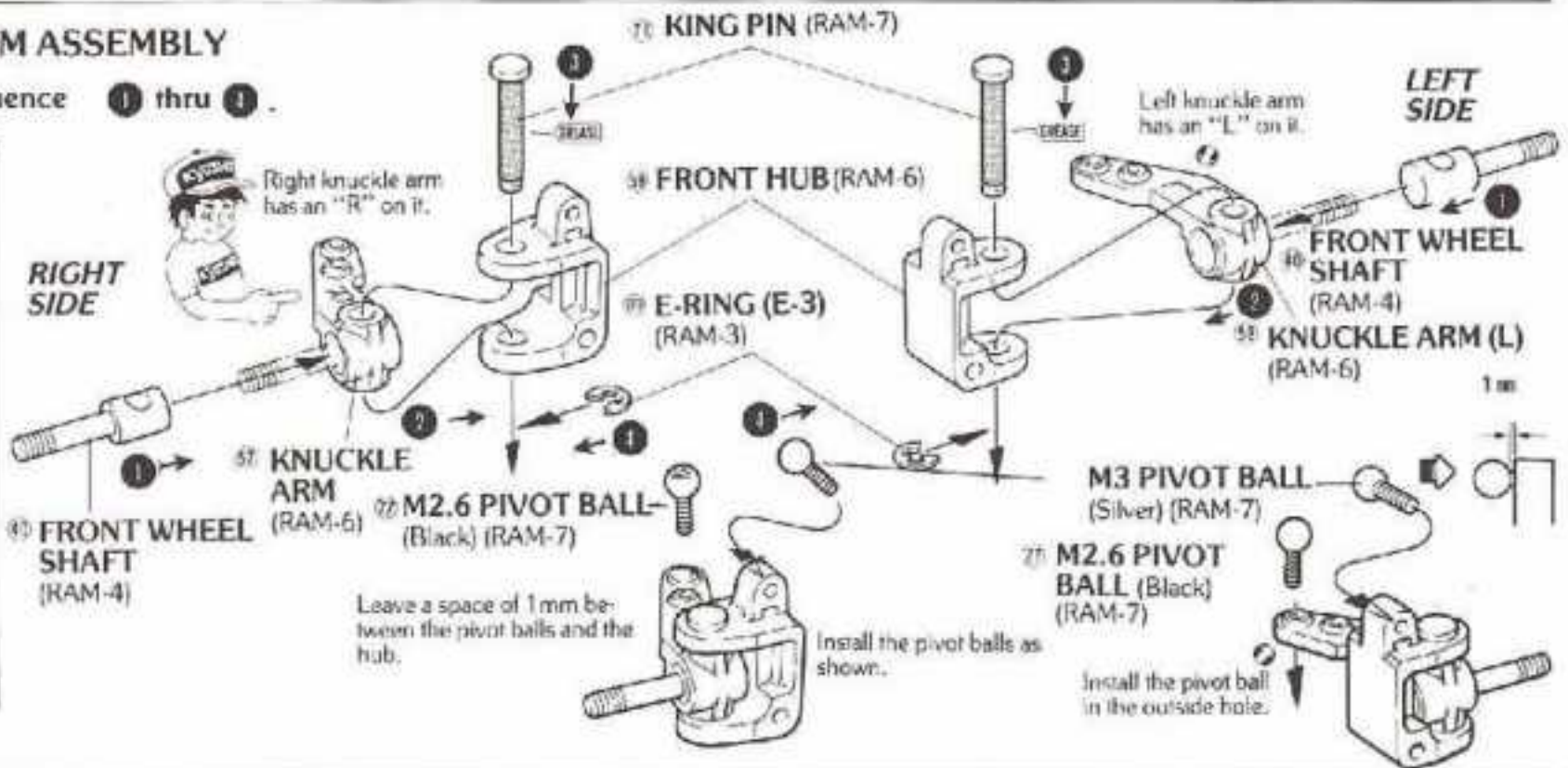
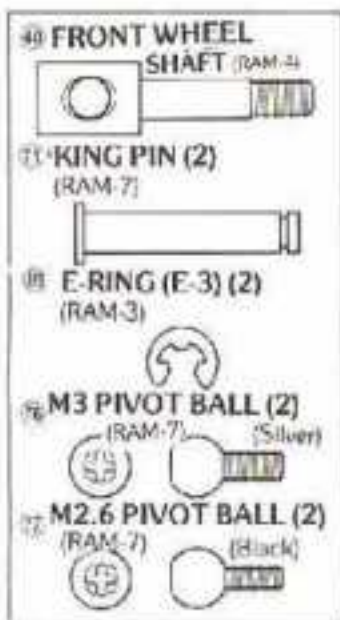
5.8mm BALL (Silver) (RAM-4)



NOTE: For less spring tension, the spring spacer may be left out.

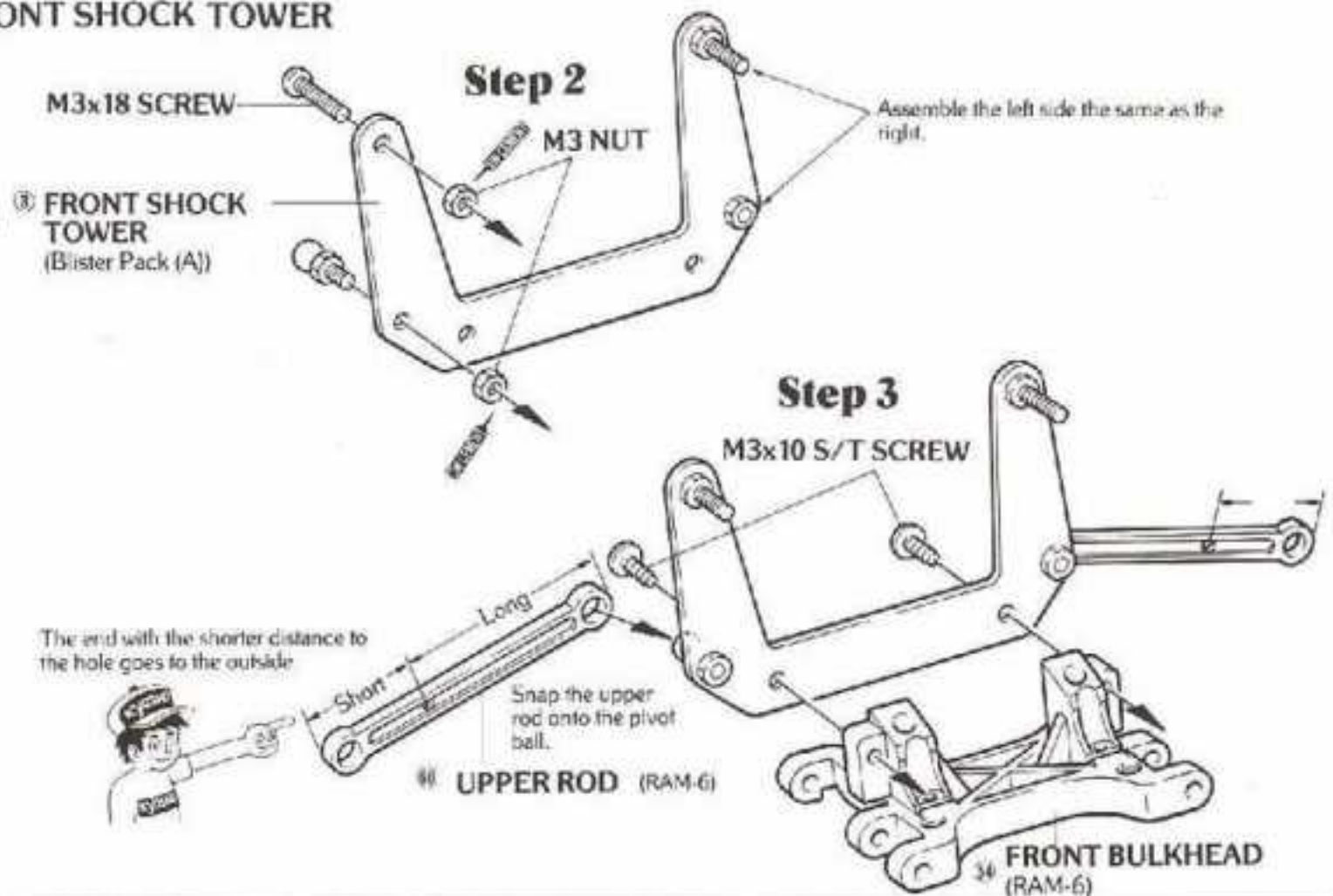
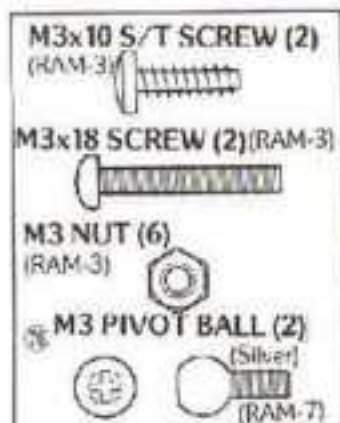
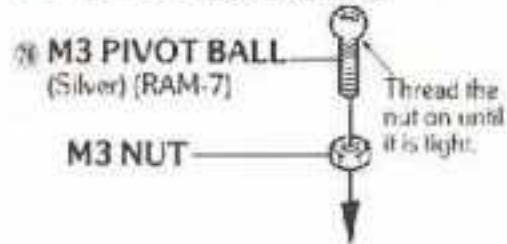
3 KNUCKLE ARM ASSEMBLY

Assemble in sequence 1 thru 1.

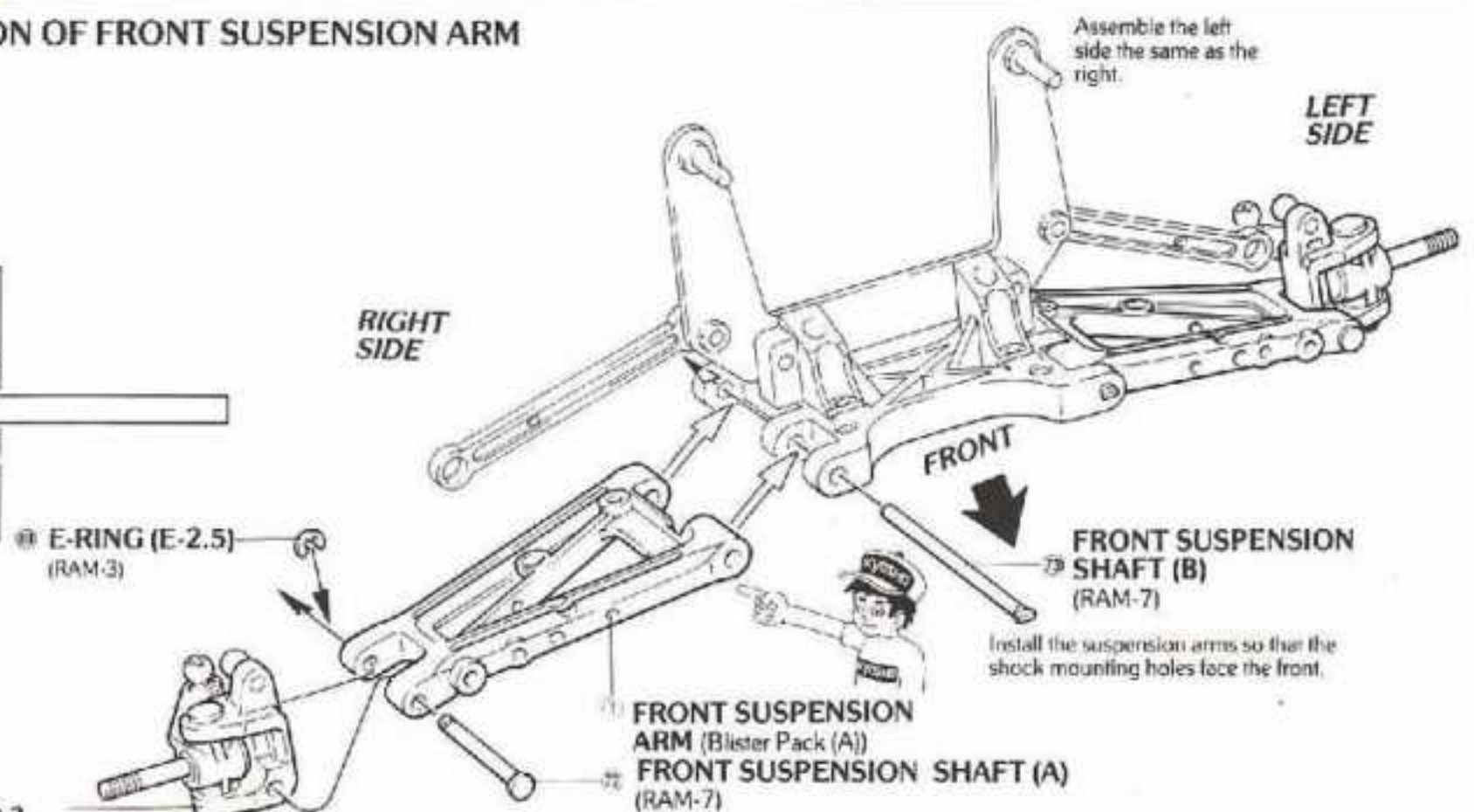
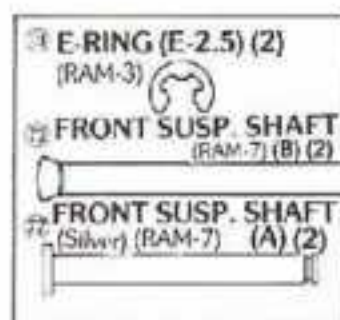


4 INSTALLATION OF FRONT SHOCK TOWER

ASSEMBLE TWO Step 1 PIVOT BALLS

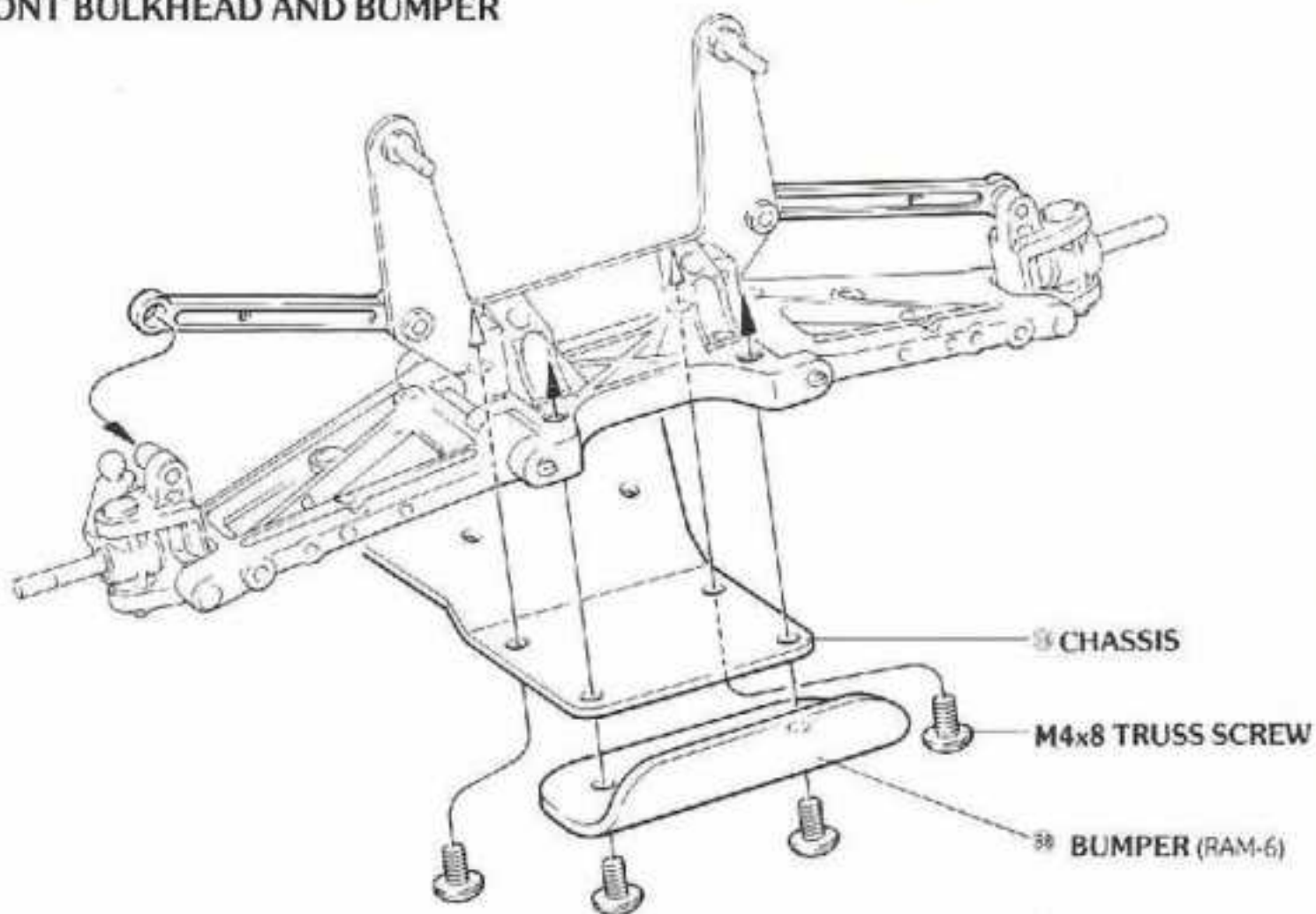
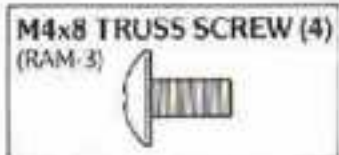


5 INSTALLATION OF FRONT SUSPENSION ARM

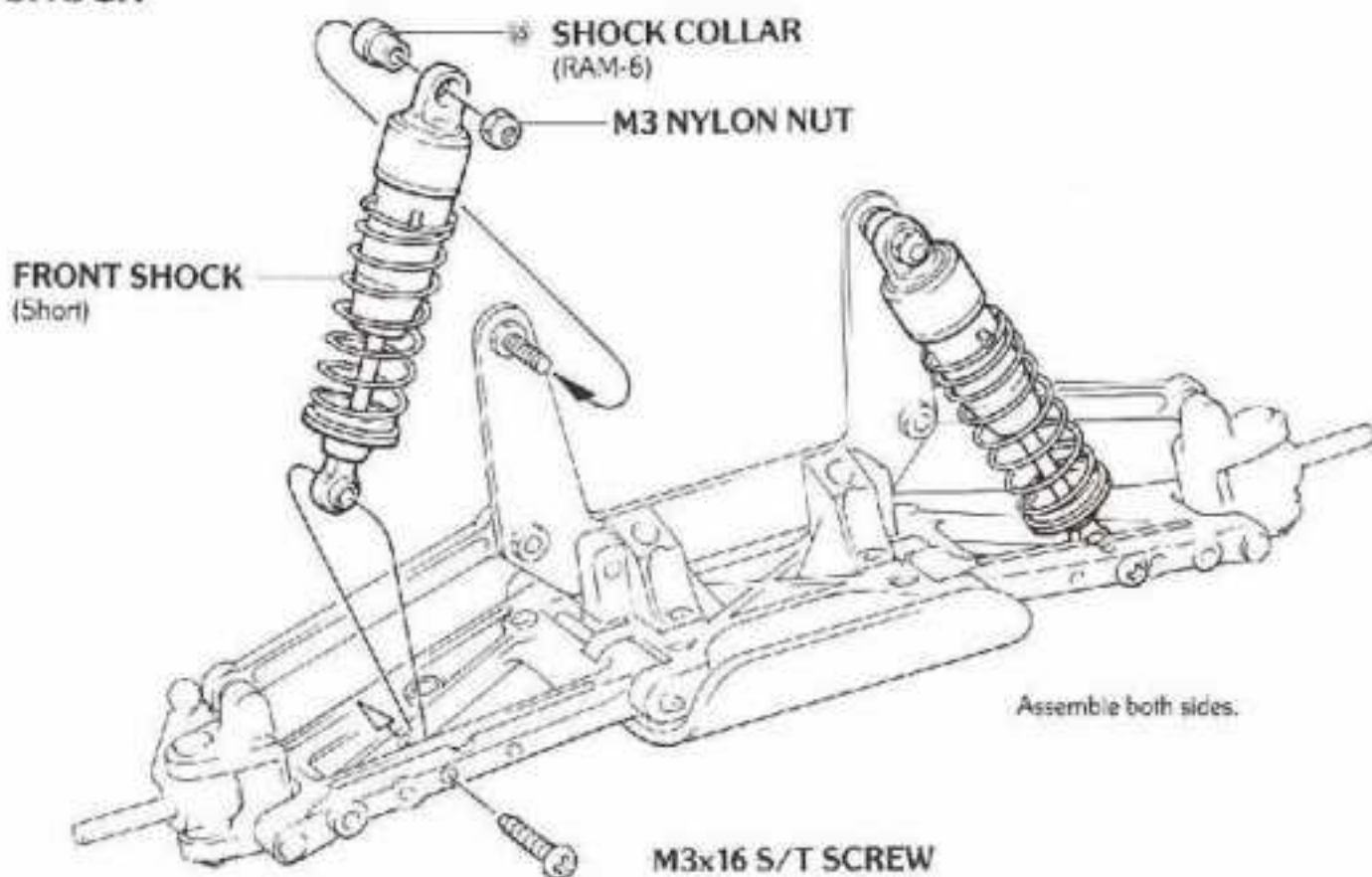
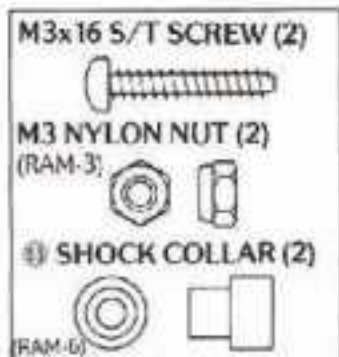


KNUCKLE ARM (R) ASSEMBLED IN STEP 3.

6 INSTALLATION OF FRONT BULKHEAD AND BUMPER



7 INSTALLATION OF FRONT SHOCK



8 ASSEMBLY OF SERVO SAVER



Step 1

SERVO SAVER (B)
(RAM-6)

SERVO SAVER (C)
(RAM-6)

Use a pointed hobby knife to enlarge this hole to 3mm to allow the 3mm linkage guide to rotate freely without side to side movement.

Step 2

When mounting servo saver (B) onto (C), you will need to pry open the end of (B) with a screw driver to allow it to slip over the end of servo saver (C).

3mm LINKAGE GUIDE (RAM-4)

SERVO SAVER (A)
(RAM-6)

M3 NYLON NUT

Do not over tighten the nylon nut. The linkage guide must be able to rotate smoothly.

SERVO SAVER (D)
(RAM-6)

M3 PIVOT BALL (RAM-7) (Silver)

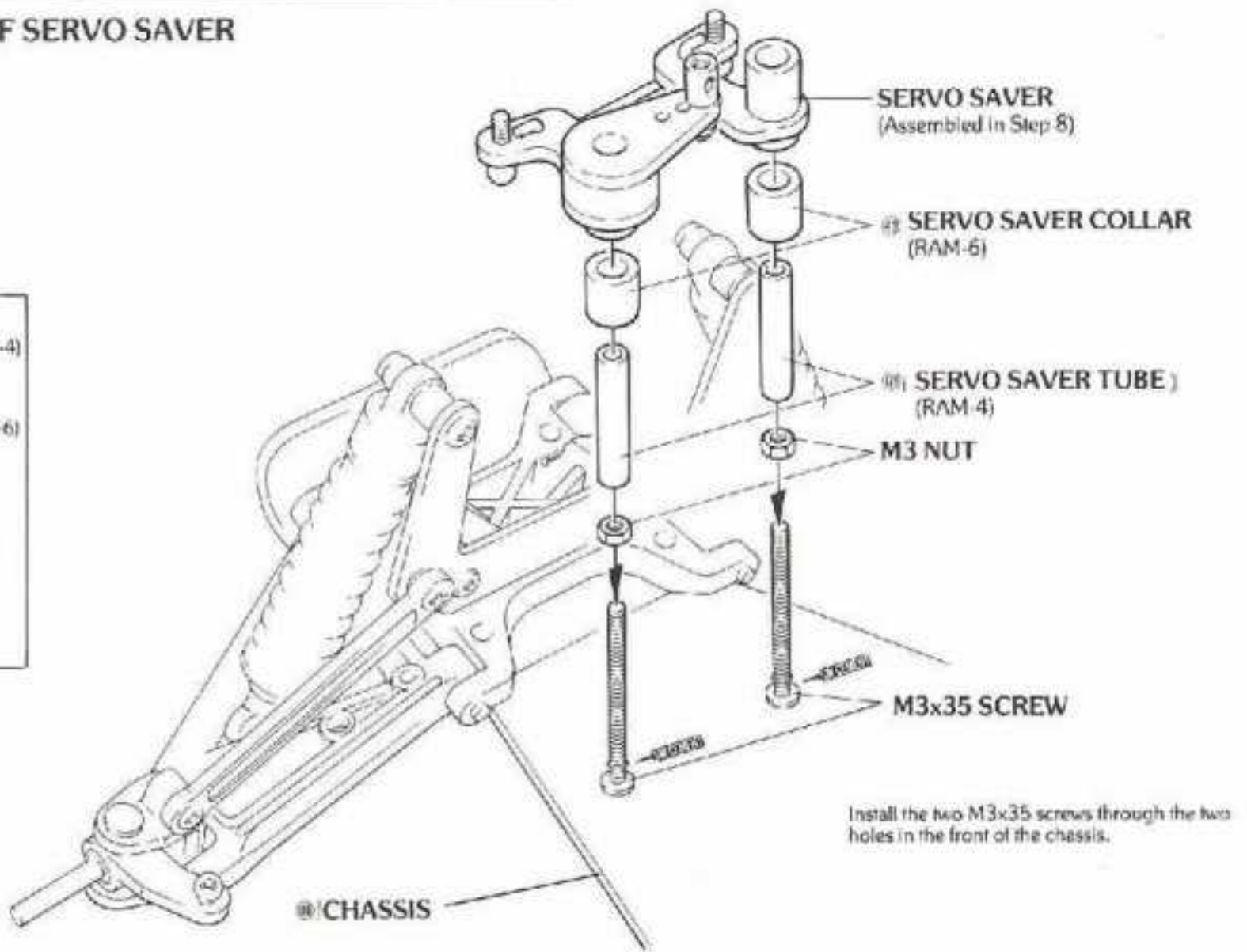
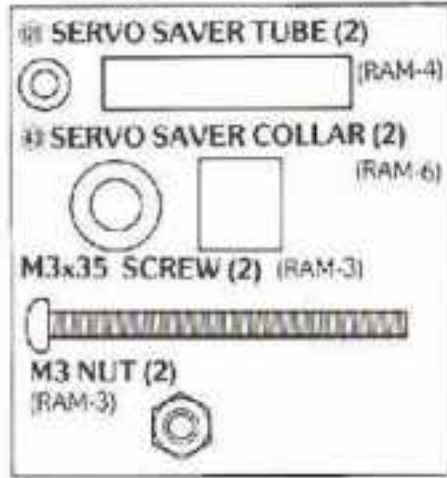
Step 3

Use an Allen wrench to hold as you screw on the nut.

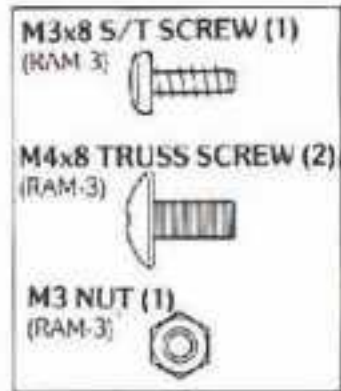
M3 PIVOT BALL (RAM-7) (Silver)

CENTER ROD (RAM-7)

9 INSTALLATION OF SERVO SAVER

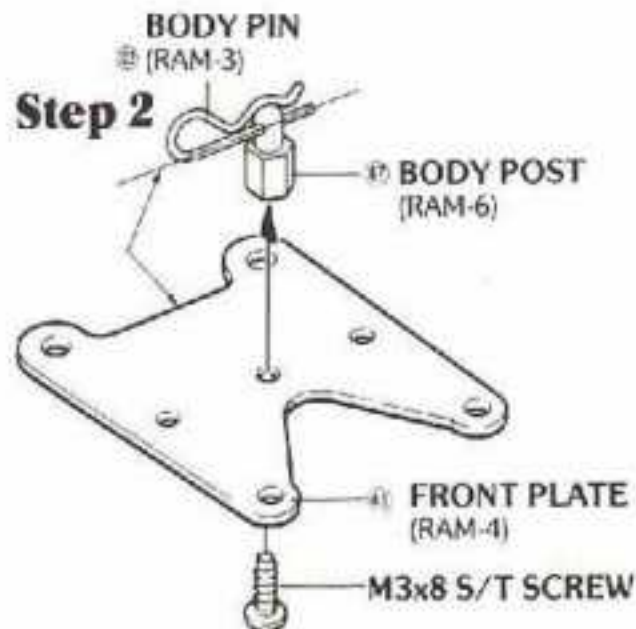
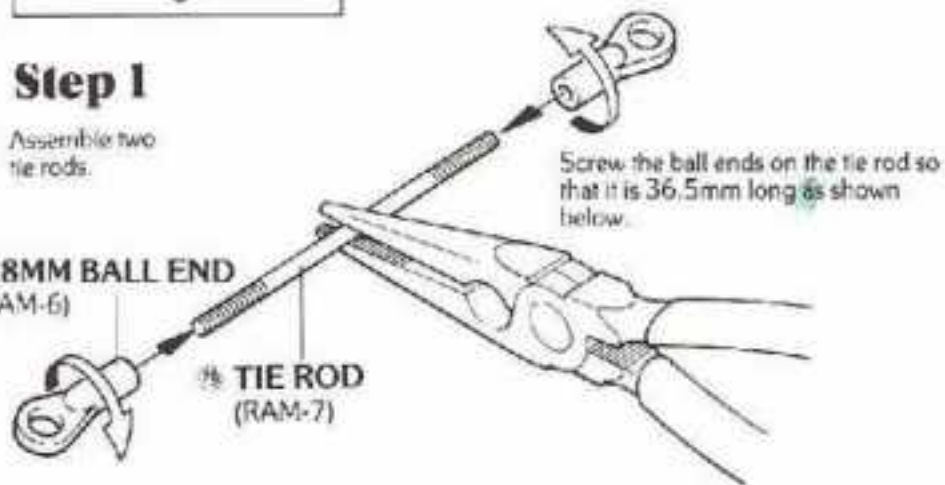


10 INSTALLATION OF TIE RODS AND FRONT PLATE



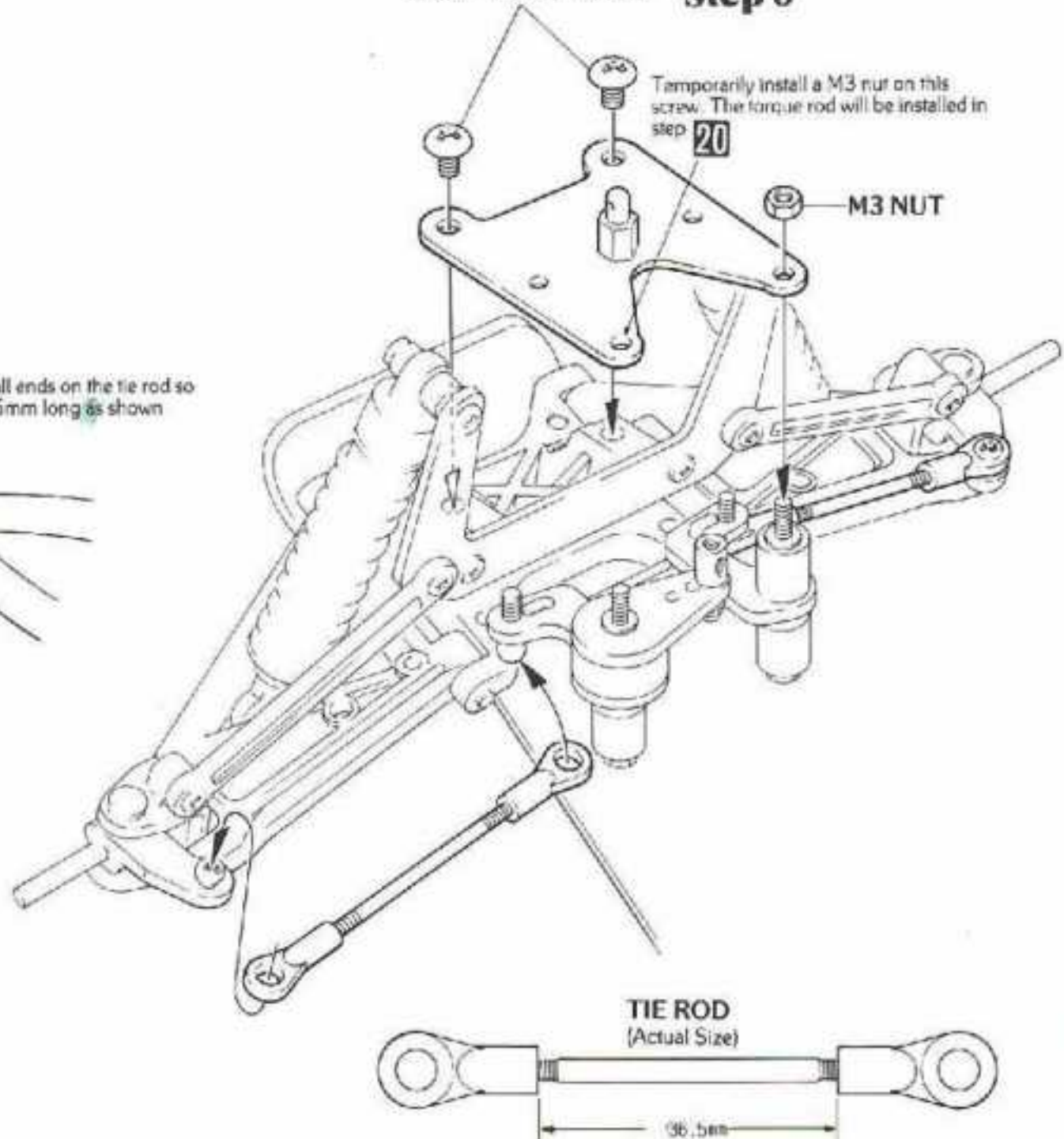
Step 1

Assemble two tie rods.



Step 2

M4x8 TRUSS SCREW Step 3

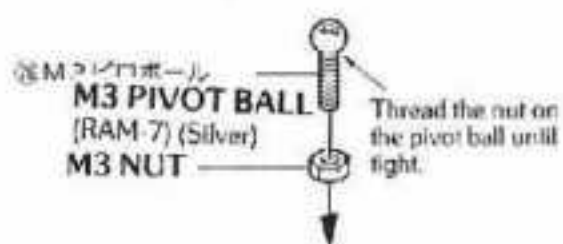


11 INSTALLATION OF REAR GEAR BOX

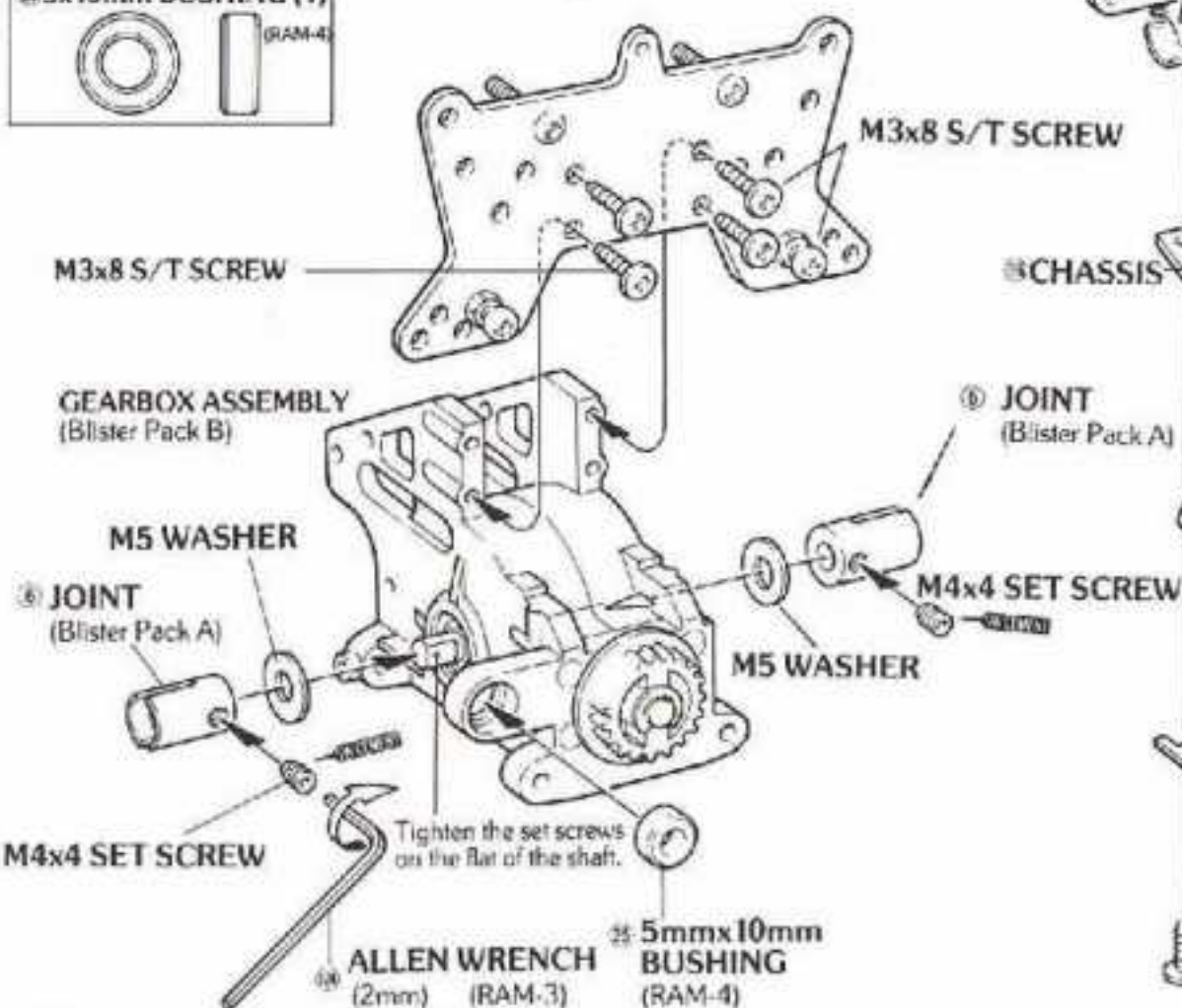
- M3x8 SCREW (2) (RAM-3)
- M3x18 SCREW (2) (RAM-3)
- M3x8 S/T SCREW (4) (RAM-3)
- M3x10 S/T SCREW (4) (RAM-3)
- M4x4 SET SCREW (2) (RAM-3)
- M3 NUT (8) (RAM-3)
- M5 WASHER (2) (RAM-3)
- M3 PIVOT BALL (2) (RAM-7) (Silver)
- 5x10mm BUSHING (1) (RAM-4)

Step 1

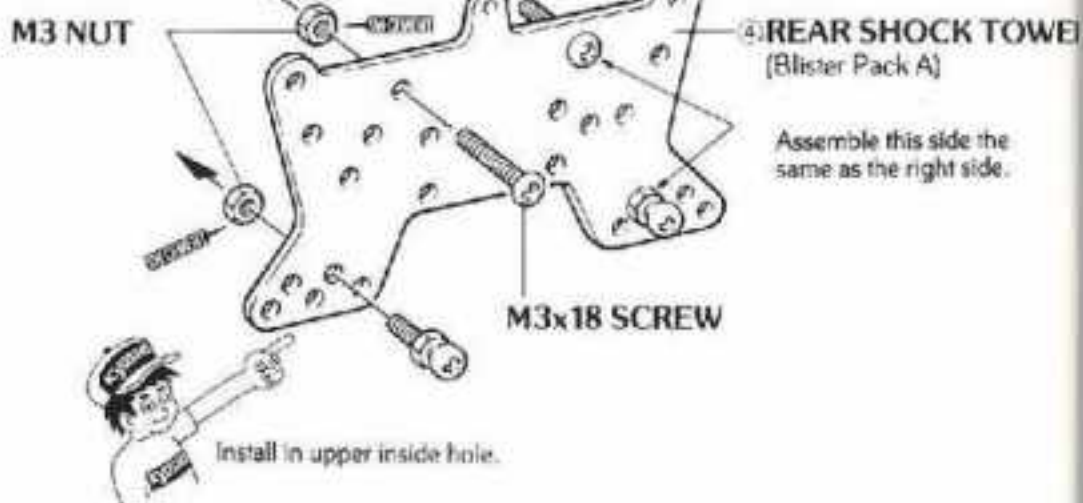
Assemble two pivot balls.



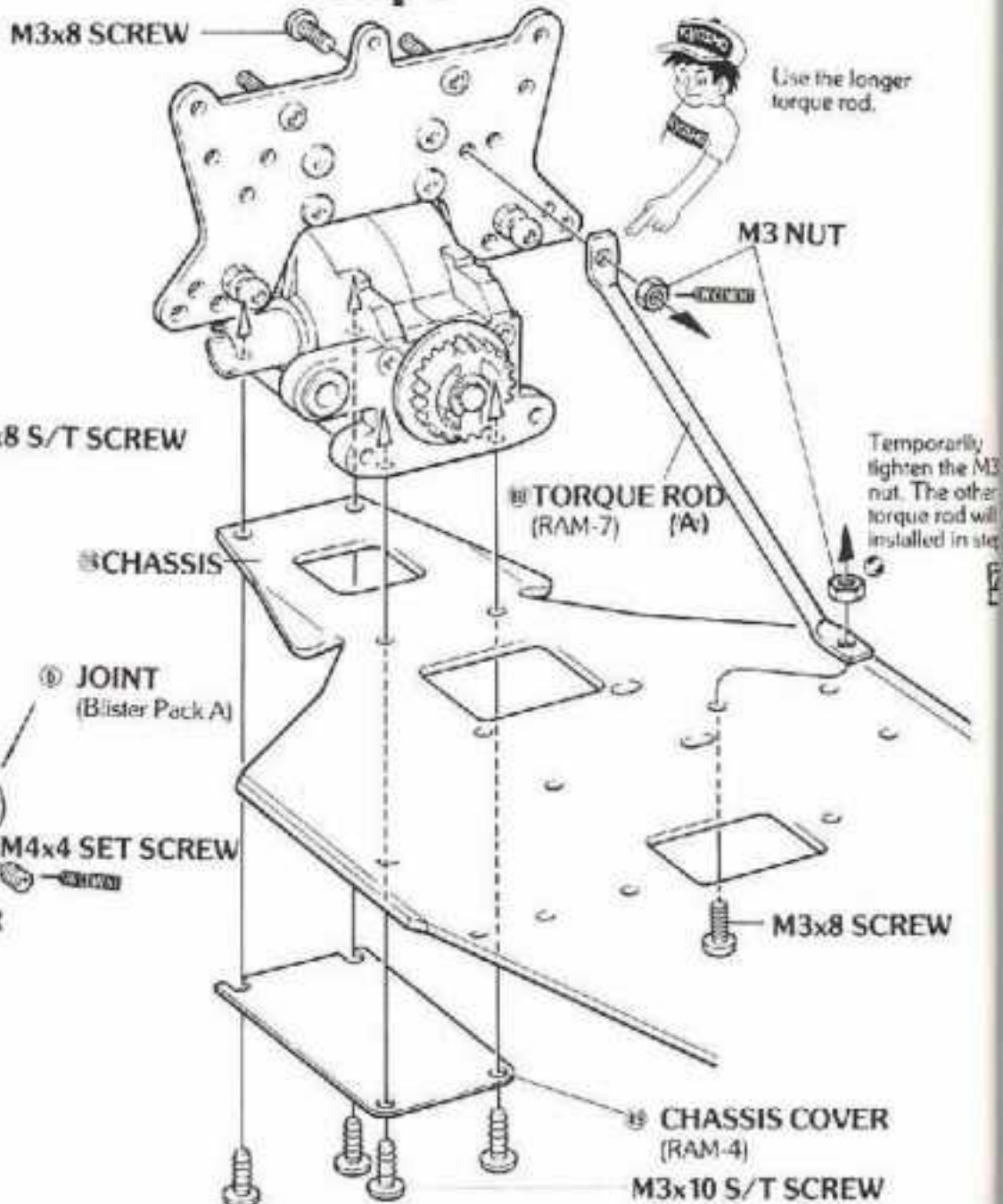
Step 3



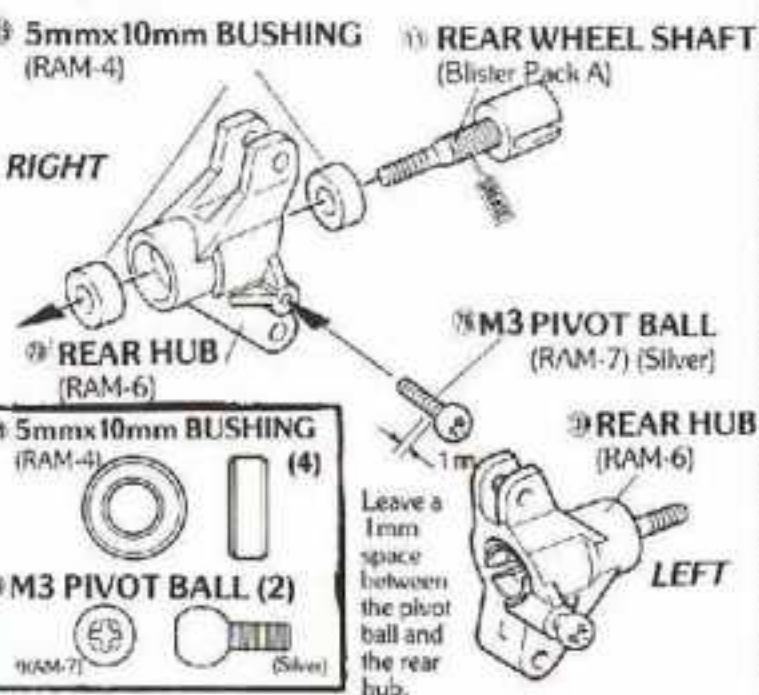
Step 2



Step 4

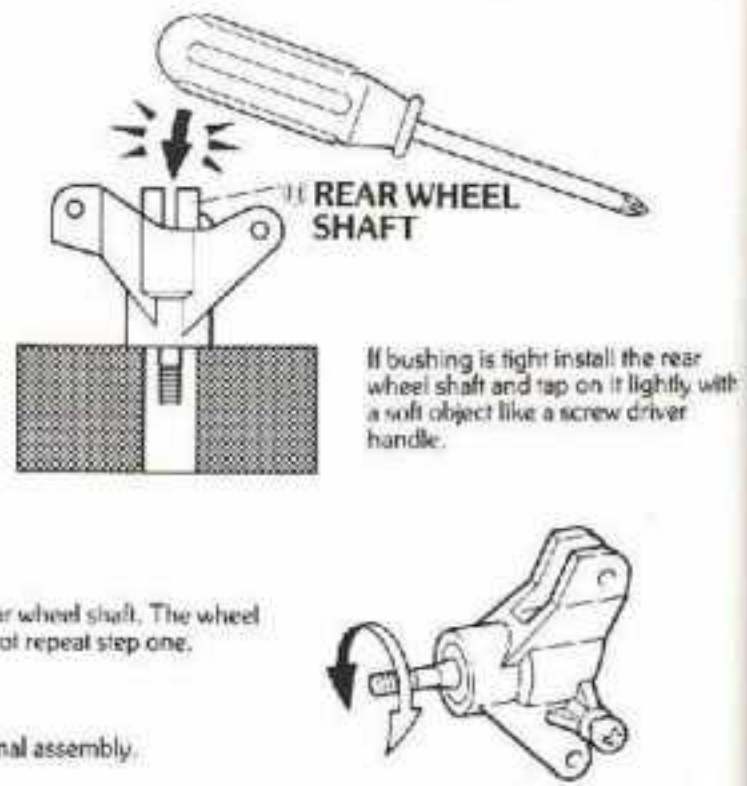


12 ASSEMBLY OF REAR HUB



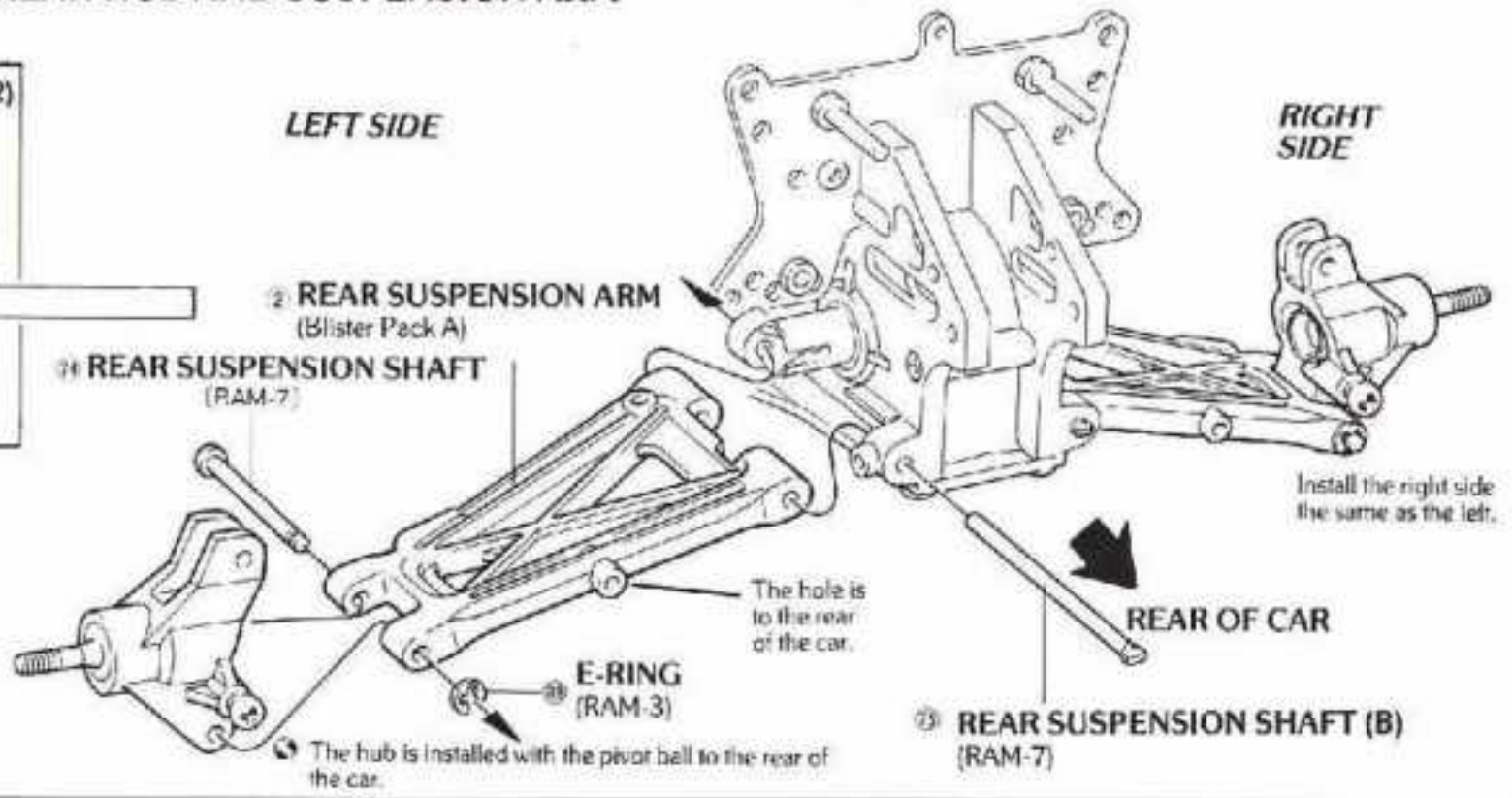
INSTALLING A BUSHING

- (1) Press the bushing in completely. Do not get it cocked to one side.
- (2) After installing the bushing insert the rear wheel shaft. The wheel shaft should rotate smoothly. If it does not repeat step one.
- (3) Apply grease to the wheel shaft before final assembly.



13 INSTALLATION OF REAR HUB AND SUSPENSION ARM

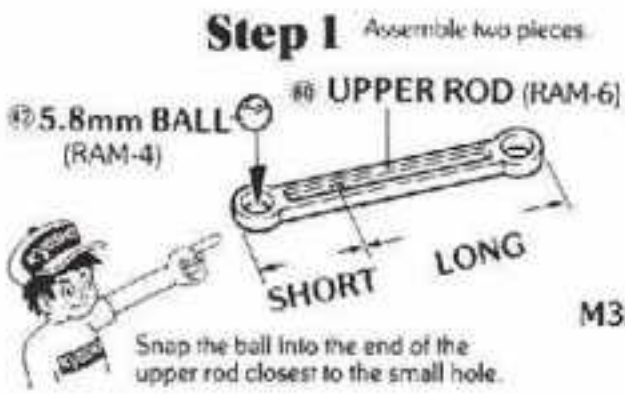
- REAR SUSPENSION SHAFT (A) (2)**
 74 (RAM-7) (Black)
- REAR SUSPENSION SHAFT (B) (2) (RAM-7)**
- E-RING (2) (RAM-3) (E-2.5)**



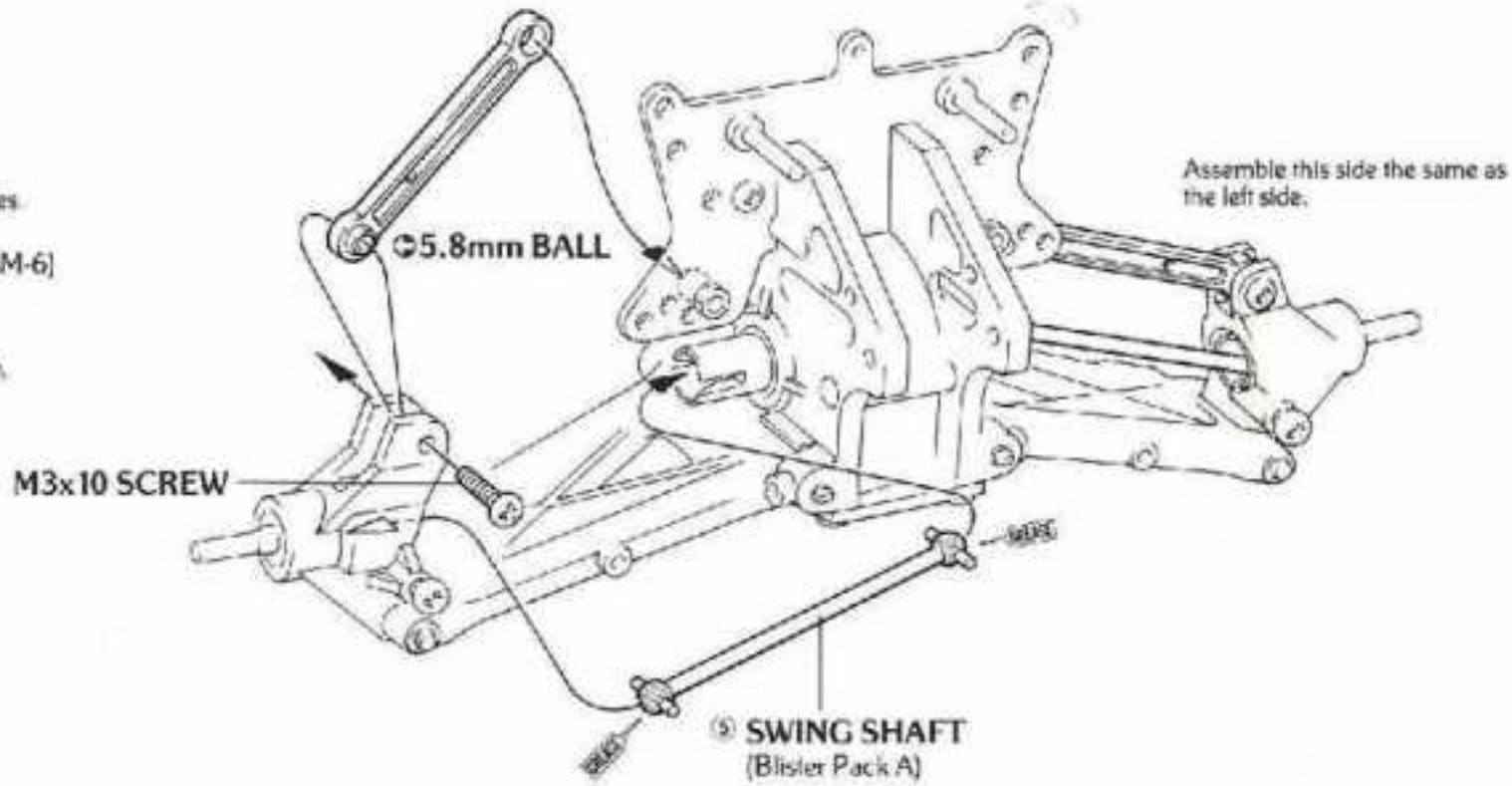
14 INSTALLATION OF SWING SHAFTS

IMPORTANT: Install the swing shafts before installing the upper rods.

- M3x10 SCREW (2) (RAM-3)**
- 5.8mm BALL (2) (RAM-4) (Silver)**



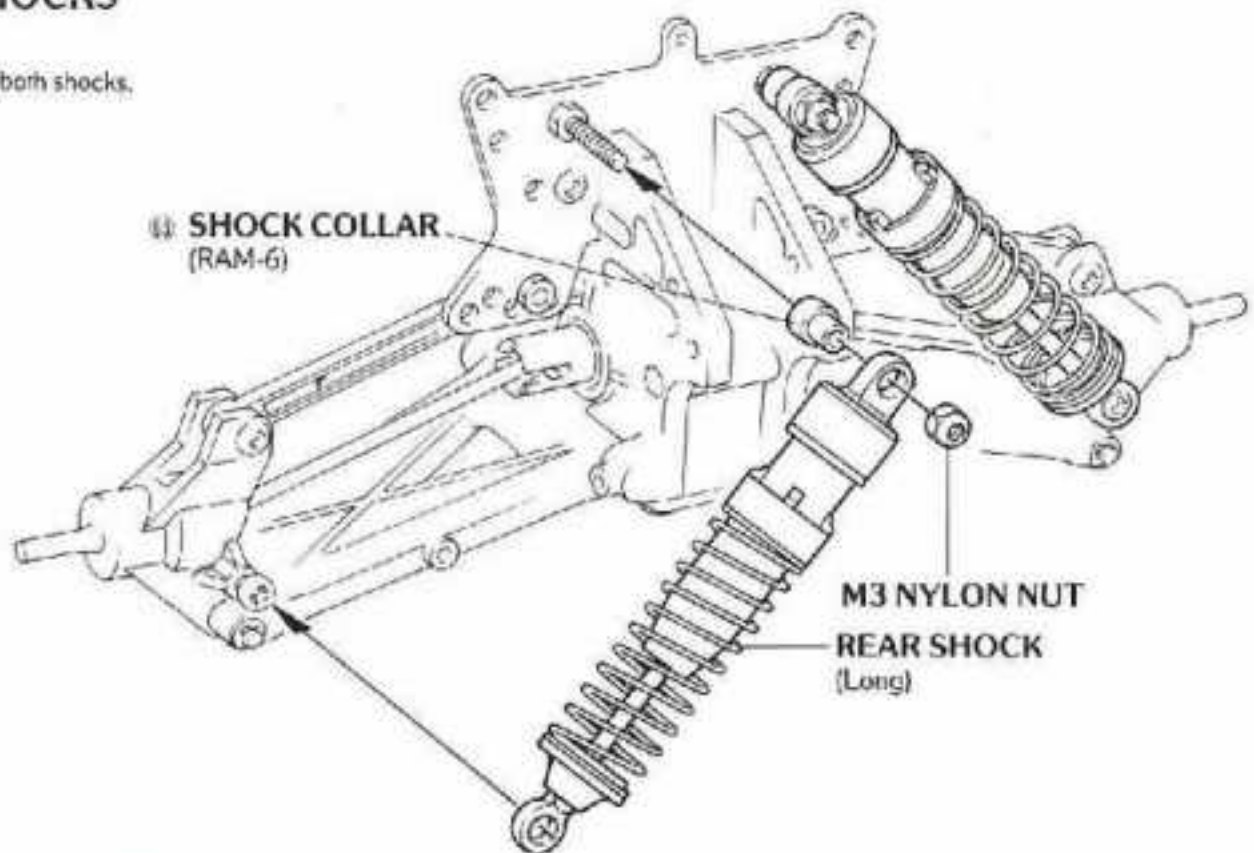
Step 2

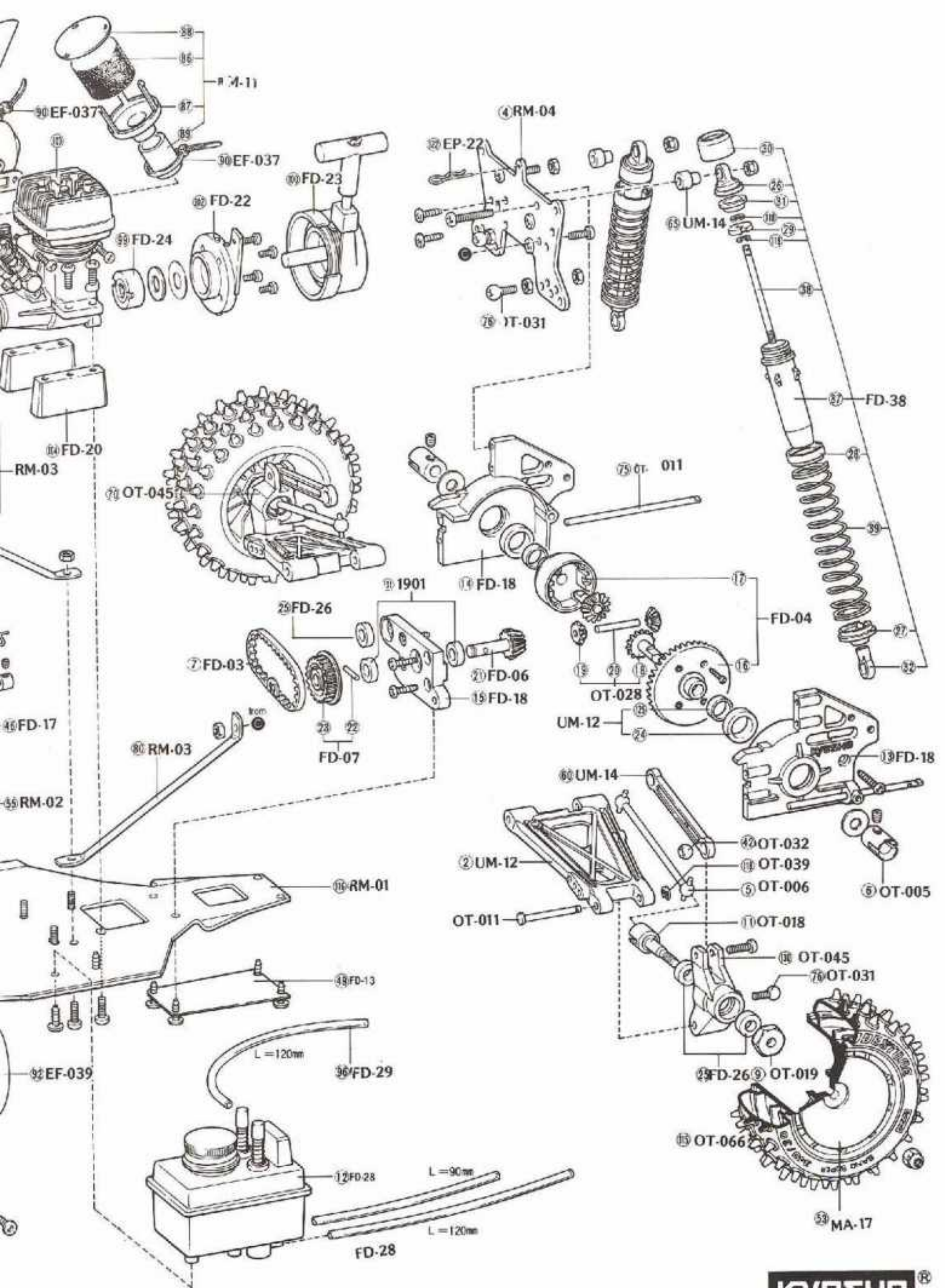


15 INSTALLATION OF REAR SHOCKS

Install both shocks.

- M3 NYLON NUT (2) (RAM-3)**
- SHOCK COLLAR (2) (RAM-6)**





16 INSTALLATION OF MAIN GEAR



Step 1

The side without the slot should face the main gear shaft holder.

Align the pins with the slots and slide the gears over the pins.

Step 2

2mmx11mm PIN
(RAM-4)

MAIN GEAR
(Blister Pack A)

MAIN GEAR SHAFT HOLDER
(RAM-4)

2mmx11mm PIN
(RAM-4)

5mmx10mm BUSHING
(RAM-4)

LONG

Insert the end with the groove farthest from the tip.

TIMING PULLEY (B)
(Blister Pack A)

MAIN GEAR SHAFT
(RAM-4)

SHORT

E-RING (E-4)
(RAM-3)

Step 3

Slide the E-Ring over the slots in the main gear shaft.

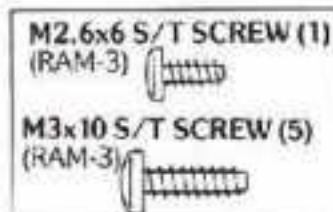
Step 4

After the main gear shaft holder is installed on the chassis, check that the main gear spins freely. If it does not loosen the two screws that attach the holder and retighten while holding the main gear shaft holder.

BELT
(Blister Pack A)

M3x10 S/T SCREW

17 INSTALLATION OF SERVO MOUNTS



SERVO MOUNT
(RAM-6)

This hole in the antenna post is for the antenna tube. It should be installed so the hole is clear of the chassis.

ANTENNA POST
(RAM-6)

M2.6x6 S/T SCREW

Install steering servo mounts with the hollow side facing inward.

Tighten this screw after the servo is installed.

M3x10 S/T SCREW

M3x10 S/T SCREW

STEERING SERVO MOUNT
(RAM-6)

Tighten this screw after the steering servo is installed.

18 INSTALLATION OF FUEL TUBING

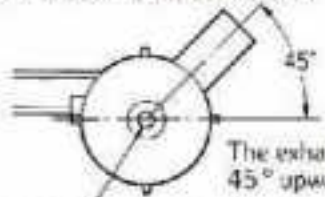
⑧ FUEL TUBE (RAM-8) (Actual Size) 120mm (2) Required

90mm (1) Required

Cut the fuel tubing to the lengths shown above

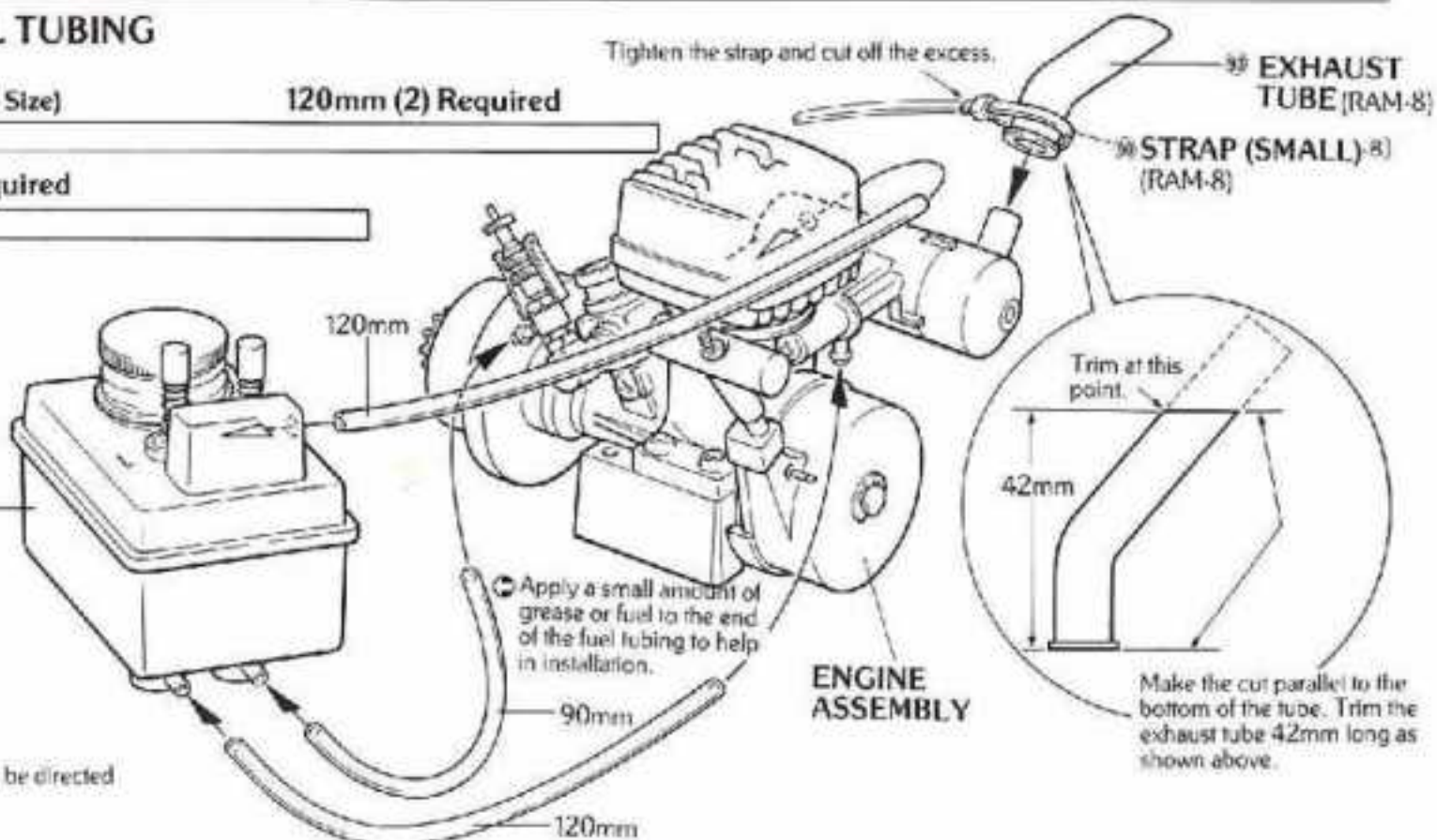
⑦ FUEL TANK ASSEMBLY (B)
(Blister Pack)

MUFFLER ADJUSTMENT



The exhaust outlet should be directed 45° upward.

Loosen this screw to adjust the exhaust outlet.



19 INSTALLATION OF ENGINE AND BRAKE

M3x8 SCREW (4)
(RAM-3)

M3x50 SCREW (1)
(RAM-3)

M3 NUT (1)
(RAM-3)

M3 NYLON NUT (1)
(RAM-3)

PLASTIC SPACER (2)
(From Step 1)
(Red)

M3 NYLON NUT

⑥ BRAKE LEVER
(RAM-6)

PLASTIC SPACER
(Red) (From Step 1)

M3 NUT

⑤ CLUTCH BELL

Tighten the M3 Nylon Nut enough to eliminate the up and down movement of the brake lever and yet loose enough to rotate.

IMPORTANT: The gears must mesh smoothly for the car to operate properly. The engine should be as far forward as possible. To set the proper gear mesh, place a piece of notebook paper between the two gears and squeeze the gears together. Tighten the (4) M3x8 screws that hold the engine. Rotate the main gear, it should mesh smoothly with the clutch bell. If it does not, repeat the above steps. After the proper gear mesh is set, remove one of the M3x8 screws holding the engine to the chassis. Put a small amount of screw cement on the threads of the screw and re-install it tightly into the engine mount. Repeat this procedure for the other three screws. **WARNING!** If the M3x8 screws are not installed with screw cement they may vibrate loose allowing the engine to move and damaging the main gear and clutch bell.

MAIN GEAR CLUTCH BELL

M3x50 SCREW

M3x8 SCREWS

The fuel tank is mounted in step 21.

20 INSTALLATION OF UPPER PLATE AND TORQUE ROD

M3x8 SCREW (1).....1
(RAM-3)

M3 NUT (2).....2
(RAM-3)

⑧ TORQUE ROD (B)
(RAM-7)

M3x8 SCREW
Do not tighten at this time.

④ UPPER PLATE
(RAM-4)

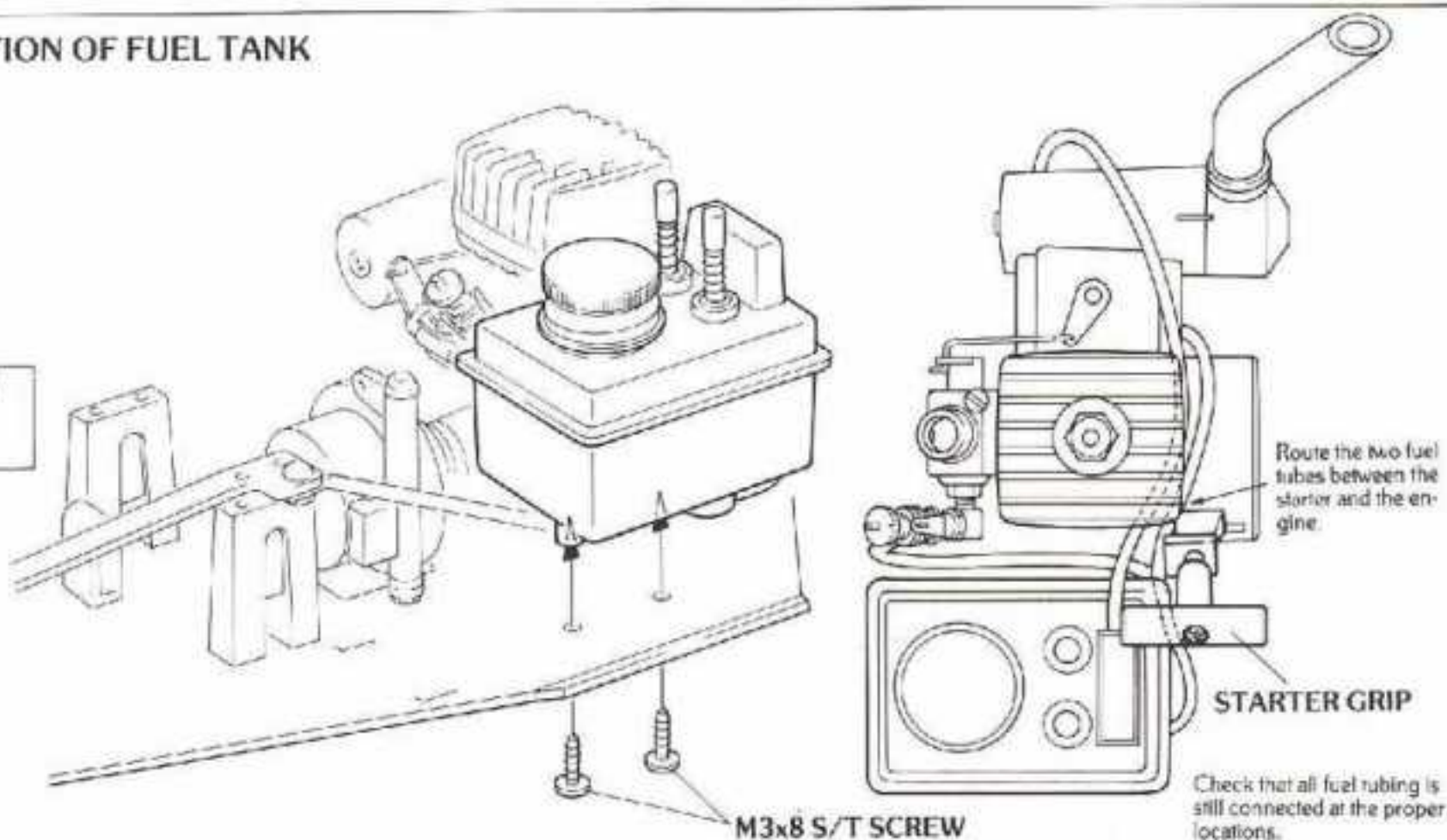
M3 NUT
Do not tighten at this time.

M3 NUT

Remove the M3x8 screw installed in step 11. Install ⑧ Torque Rod (B) and re-install the M3x8 screw and nut.

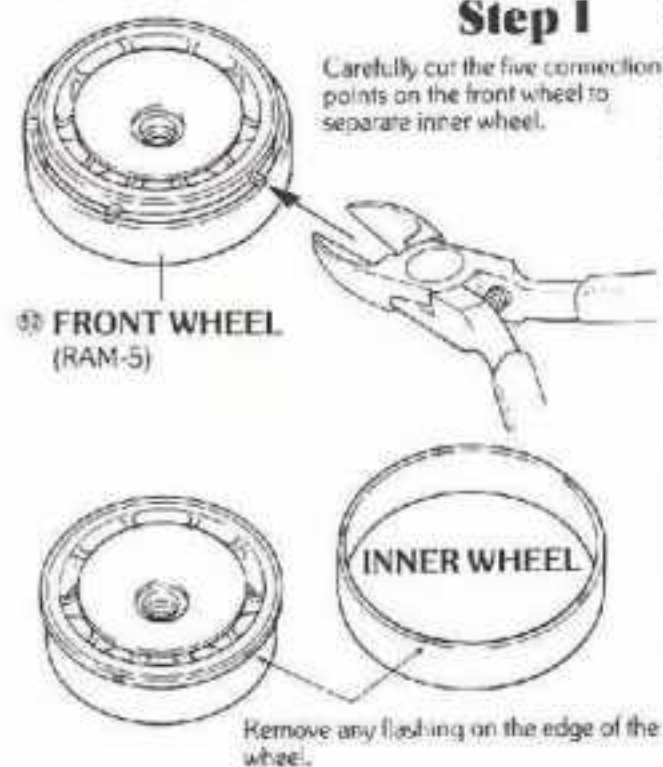
21 INSTALLATION OF FUEL TANK

M3x8 S/T SCREW (2)
(RAM-3)

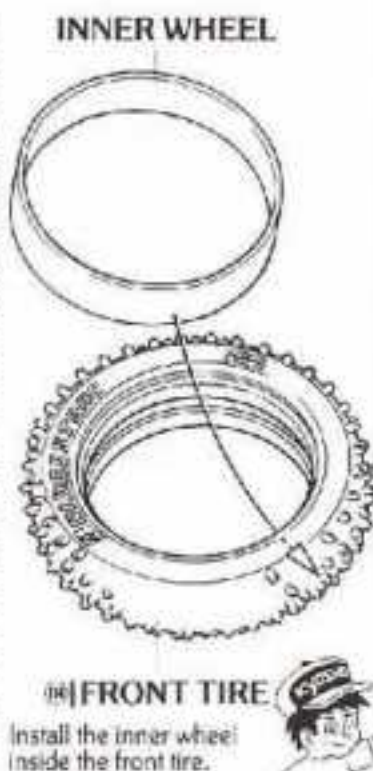


22 ASSEMBLY OF TIRE AND WHEEL

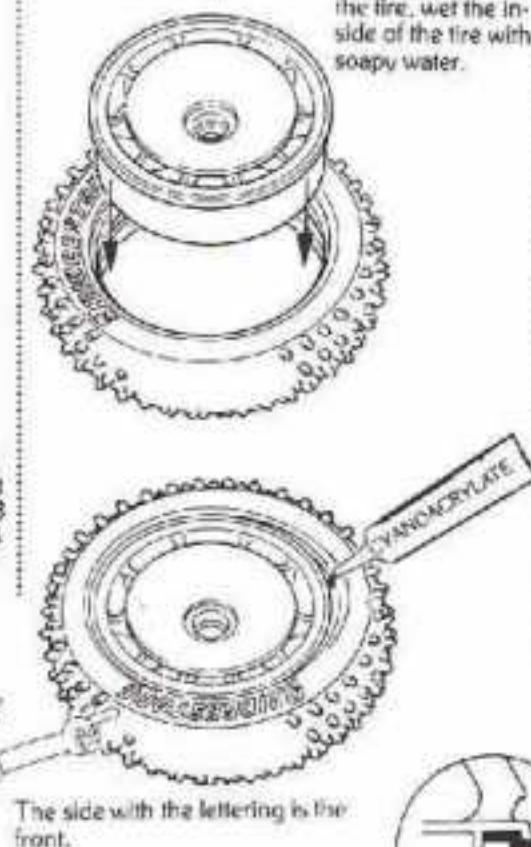
FRONT WHEEL



Step 2

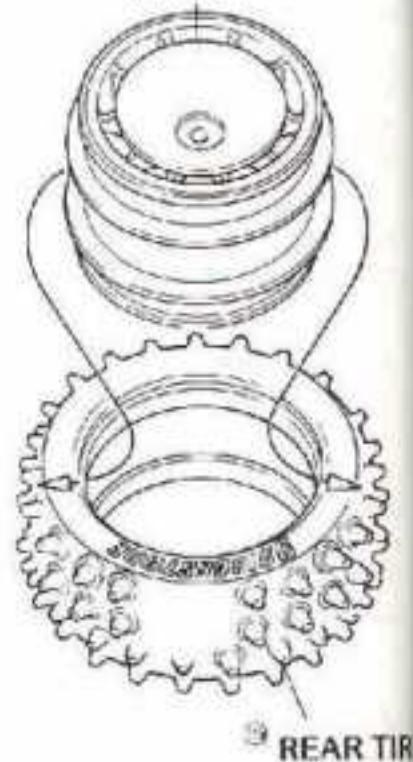


Step 3



REAR WHEEL

REAR WHEEL (RAM-5)



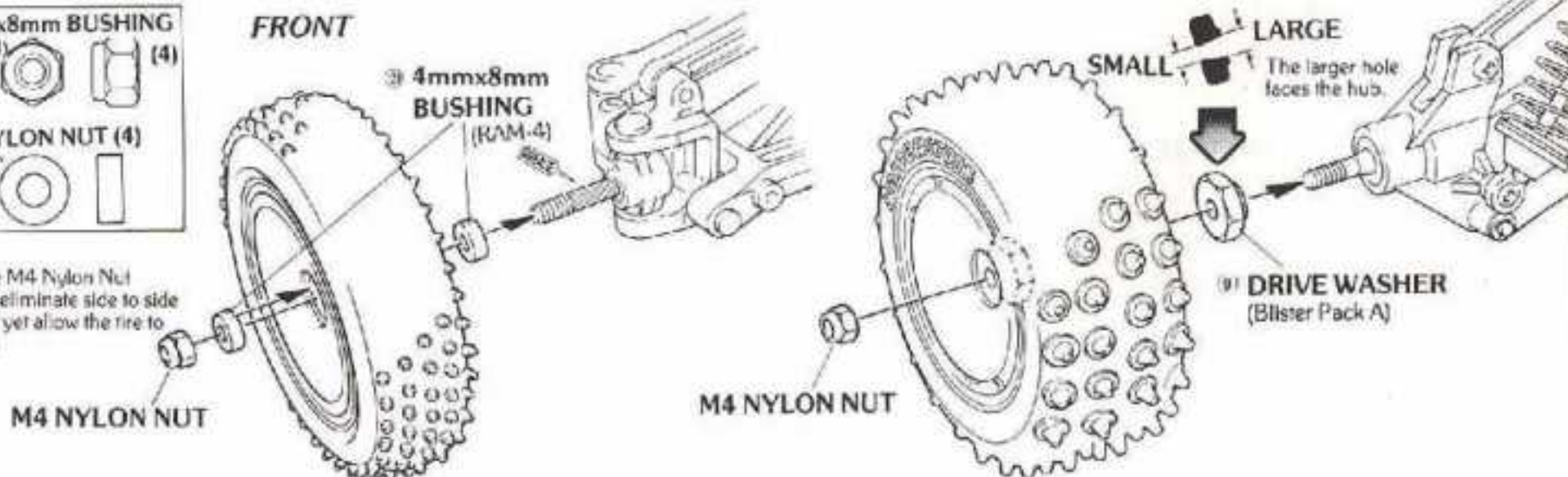
After the tire and wheel are assembled, apply cyanoacrylate along the seam of the tire and wheel.

23 INSTALLATION OF THE TIRE

4mmx8mm BUSHING (RAM-4) (4)

M4 NYLON NUT (4) (RAM-3)

Tighten the M4 Nylon Nut enough to eliminate side to side movement yet allow the tire to spin freely.



RADIO INSTALLATION

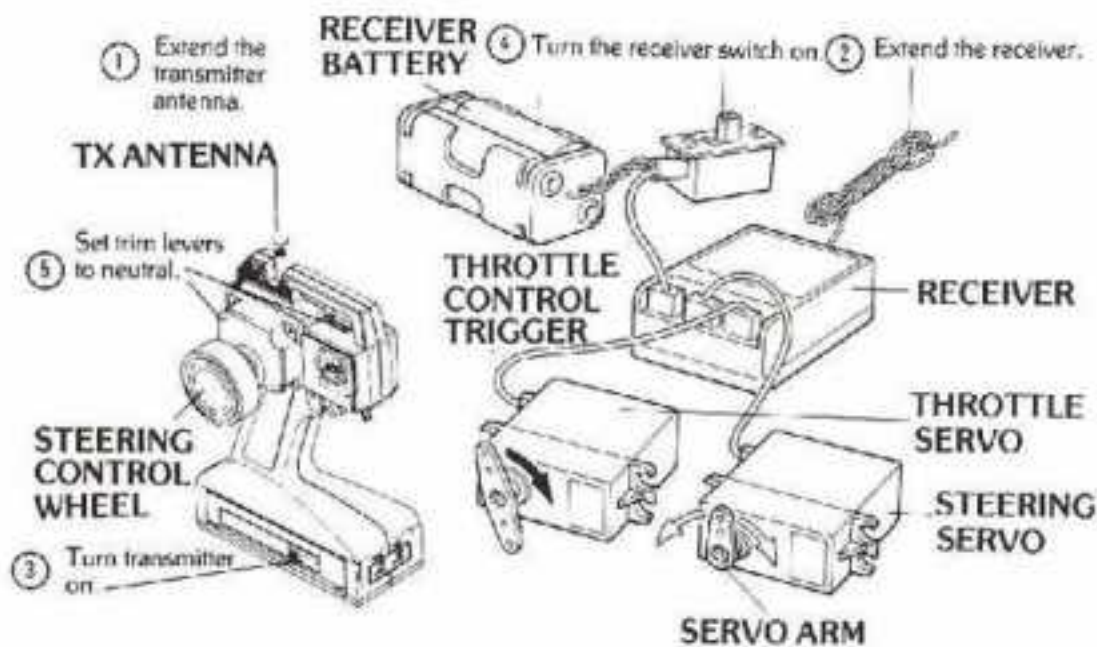
24 HOW TO CHECK AND ADJUST THE RADIO

TESTING THE RADIO

1. Follow sequence 1 thru 5 at the right to turn the radio on.
2. Move the steering wheel and throttle trigger. Watch the two servo arms, they should move in proportion to the movement of the wheel and trigger.
3. If the radio has reversing switches, this reverses the direction of rotation of the servos, reverse them and recheck the servos for operation.
4. Set the trim levers to the neutral position. Neutral position is when the trim levers are centered.
5. Turn the radio system off.

CAUTION: Always switch the transmitter on first, then the receiver. When turning the radio off, switch the receiver off first, then the transmitter. If the transmitter is turned off first, an outside signal may cause the car to drive away.

TEST THE RADIO IN SEQUENCE 1 THRU 5:

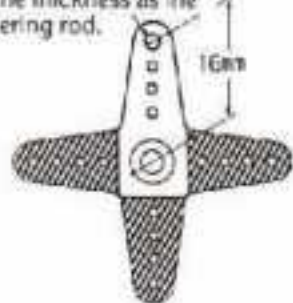


IMPORTANT: Carefully read the instruction manual that comes with your radio system before operating the radio.

25 INSTALLATION OF STEERING SERVO AND LINKAGE

Step 1 Remove the shaded area of the Servo Arm to obtain the proper shape.

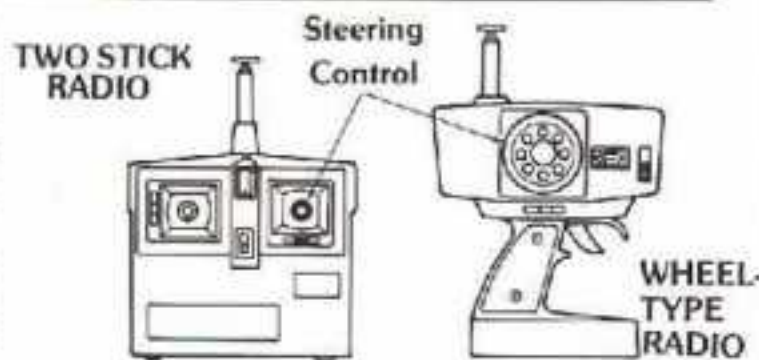
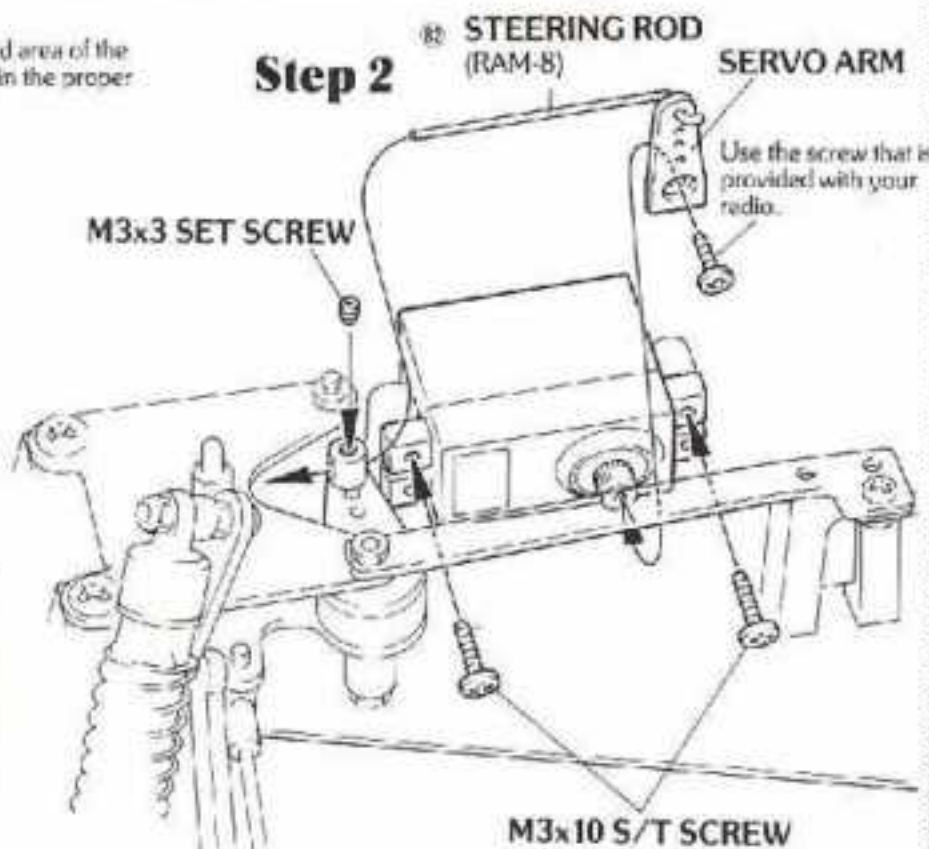
Enlarge the hole to the same thickness as the steering rod.



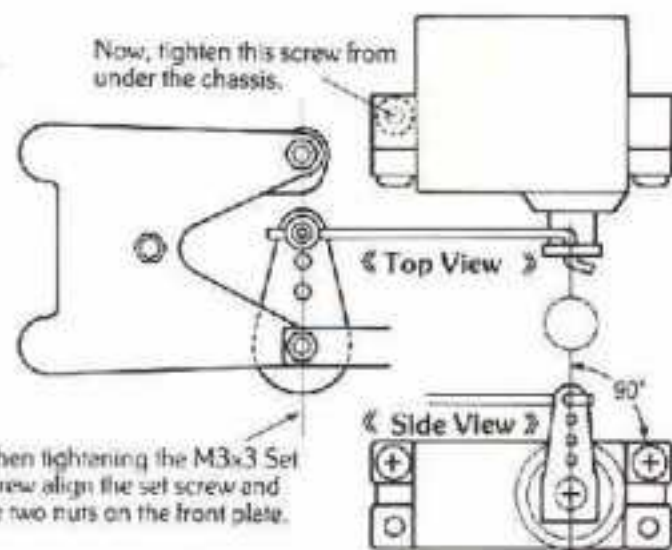
M3x3 SET SCREW (1)
(RAM-3)

M3x10 S/T SCREW (2)
(RAM-3)

Step 2 STEERING ROD (RAM-8) SERVO ARM



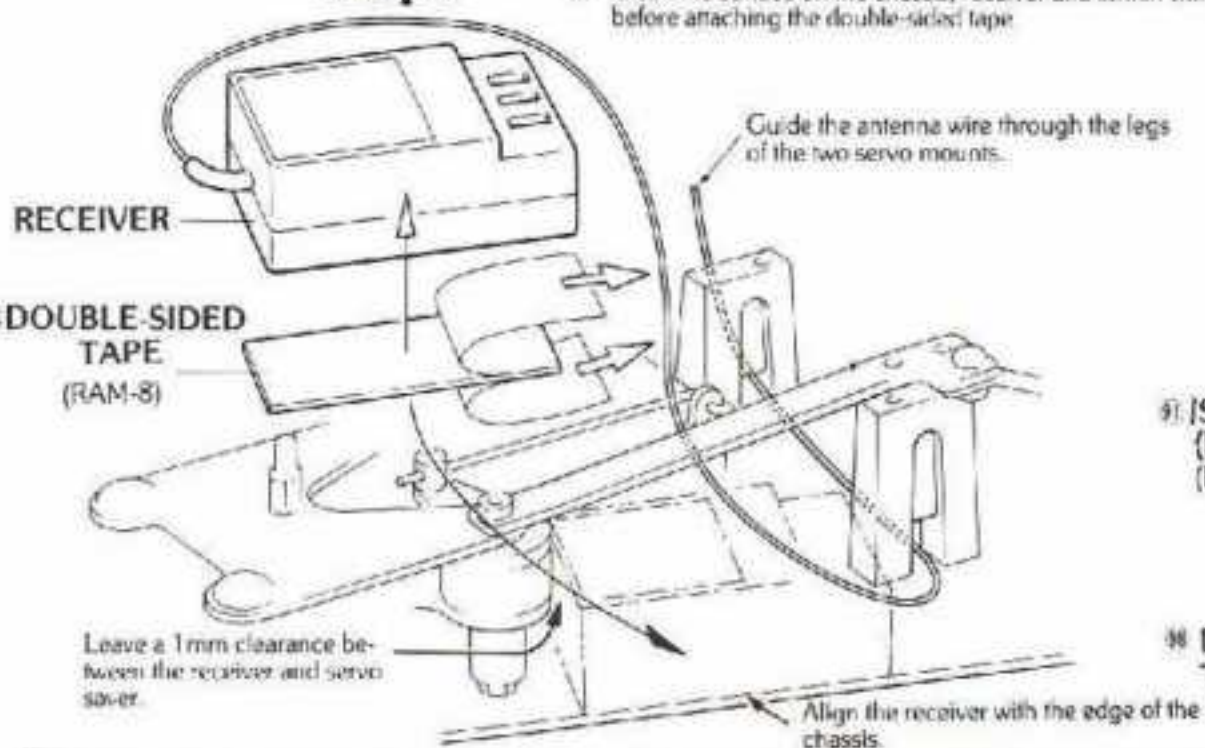
Now, tighten this screw from under the chassis.



26 INSTALLATION OF RECEIVER AND SWITCH

Step 1

1. Cut the double-sided tape the same size as the receiver and switch.
2. Clean the surface on the chassis, receiver and switch with alcohol before attaching the double-sided tape.



Step 2

ANTENNA TUBE (RAM-8)

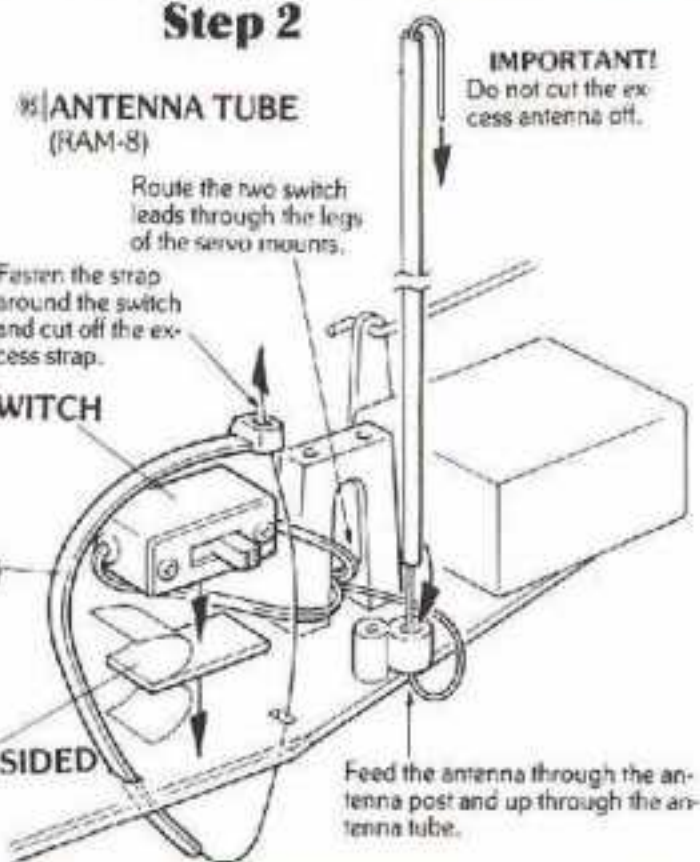
Route the two switch leads through the legs of the servo mounts.

Fasten the strap around the switch and cut off the excess strap.

SWITCH

STRAP (MEDIUM) (RAM-8)

DOUBLE-SIDED TAPE



27 INSTALLATION OF THROTTLE SERVO AND LINKAGE

M3x10 S/T SCREW (2)
(RAM-3)

M3x12 S/T SCREW (2)
(RAM-3)

M3x3 SET SCREW (2)
(RAM-3)

M3x3 SET SCREW (2)
(RAM-3)

M3x3 SET SCREW (2)
(RAM-3)

M3x3 SET SCREW (2)
(RAM-3)

M3x3 SET SCREW (2)
(RAM-3)

M3x3 SET SCREW (2)
(RAM-3)

STOPPER (2) (RAM-8)

STOPPER (2) (RAM-8)

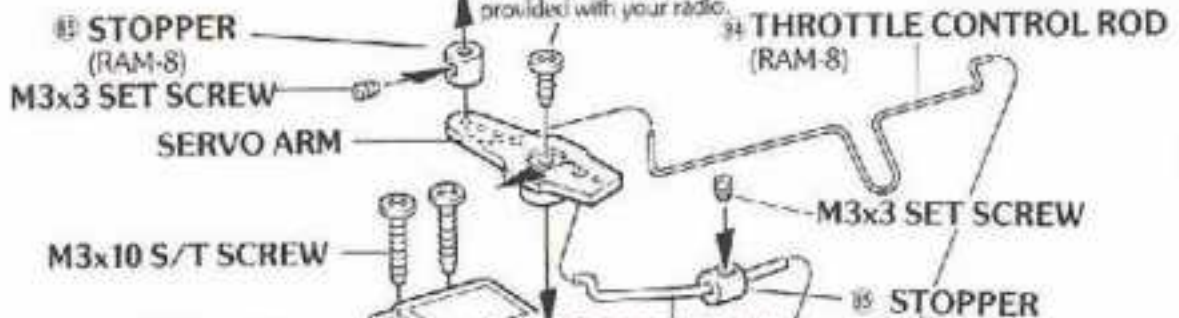
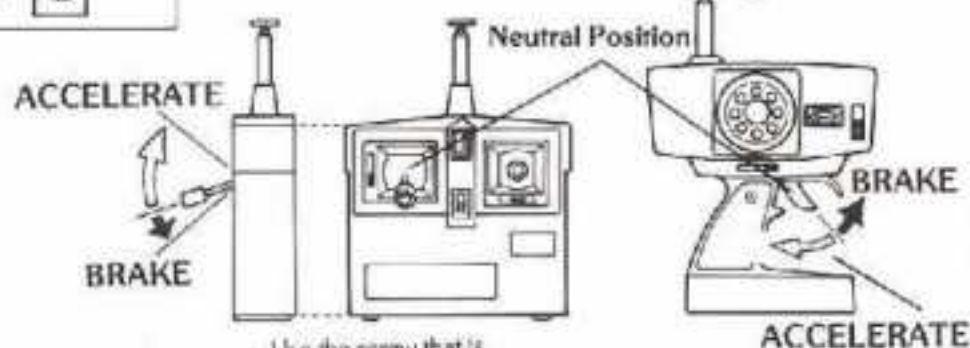
Remove the shaded area of the servo arm to obtain the proper shape.

Step 1

Connect the control rod for the throttle to the hole 14mm from the center.

Connect the brake control rod to the hole 8mm from the center.

Step 2



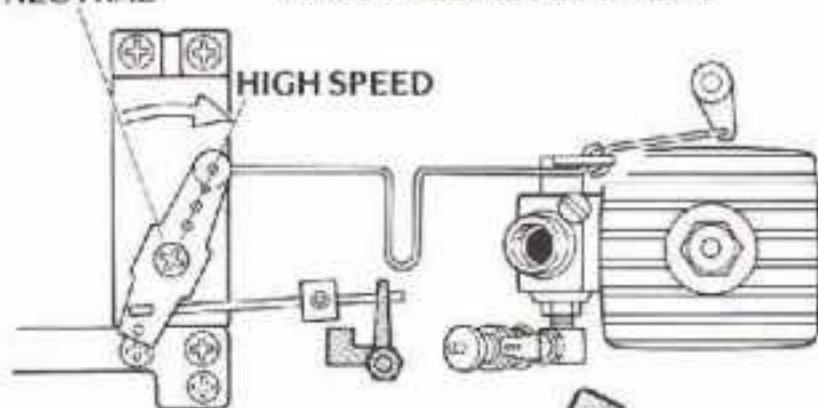
Step 3

Install the throttle servo before installing the linkage.

Tighten completely after servo is installed.

Install the servo under the upper plate. The nut on the servo saver may need to be loosened.

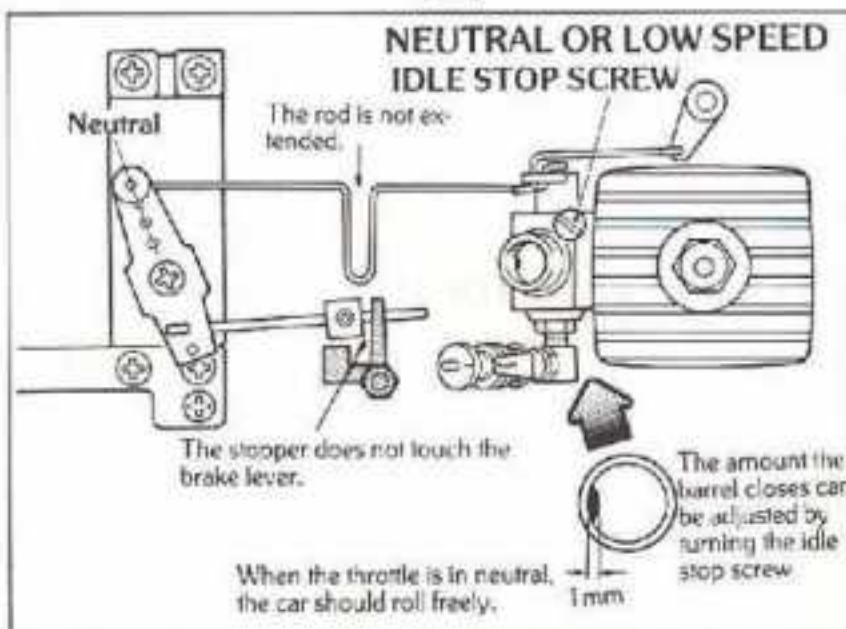
NEUTRAL THROTTLE ADJUSTMENT



The stopper does not touch the brake lever.

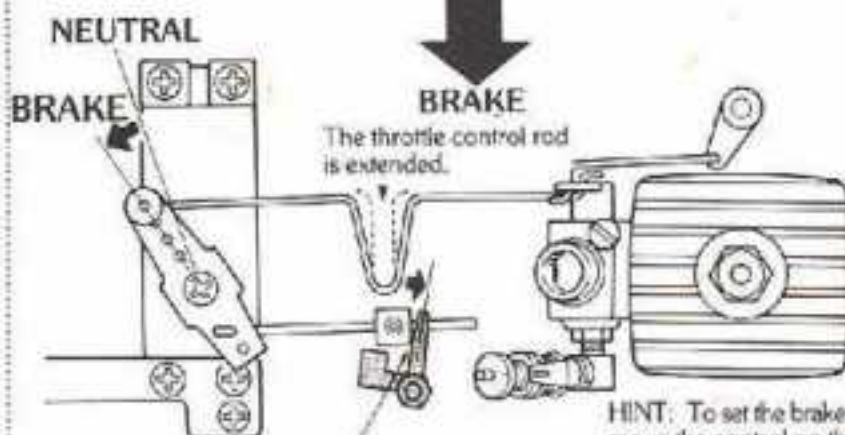
The barrel of the carburetor is completely open.

High Speed



When the throttle is in neutral, the car should roll freely.

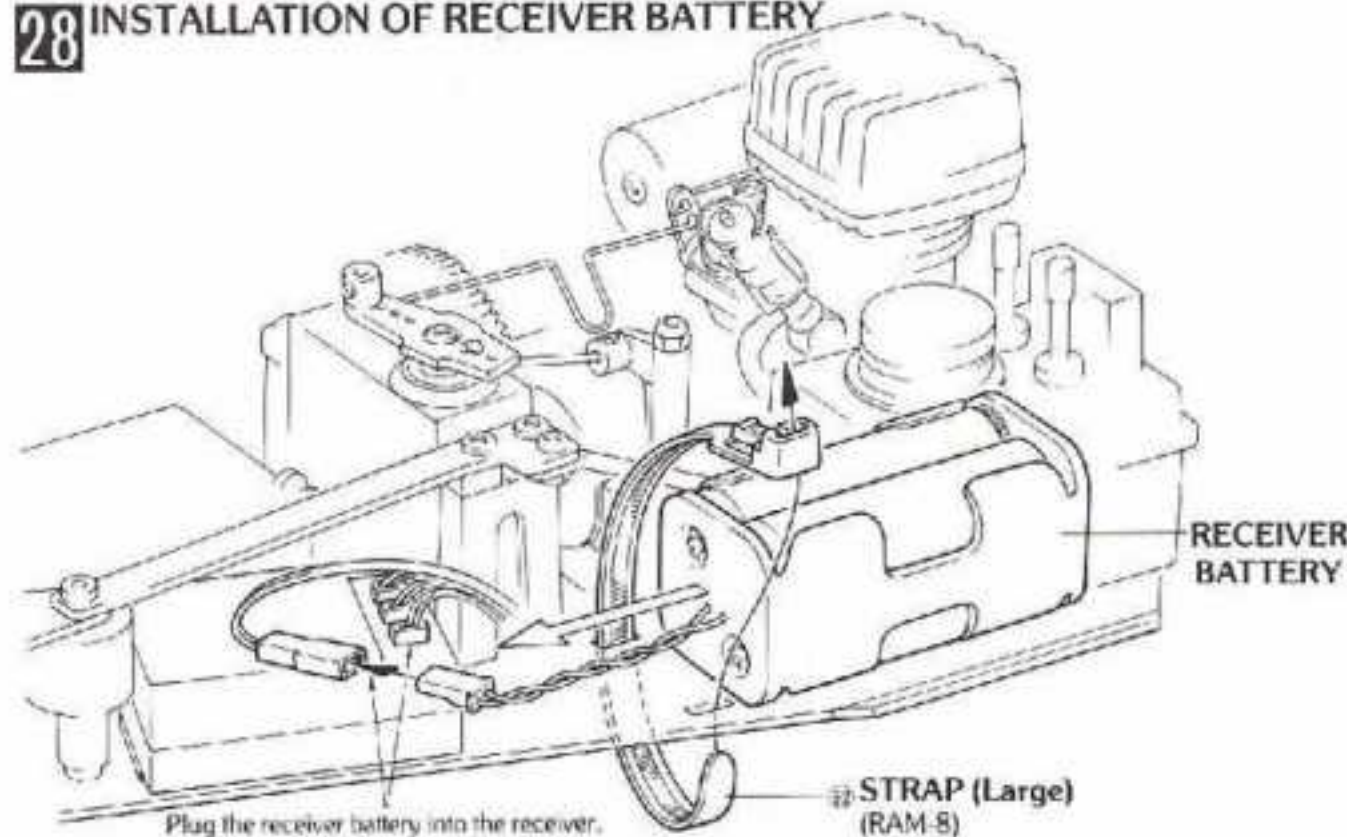
1mm



The stopper is against the brake lever.

HINT: To set the brake control move the control on the transmitter to the brake position. Tighten the stopper on the rod against the brake lever.

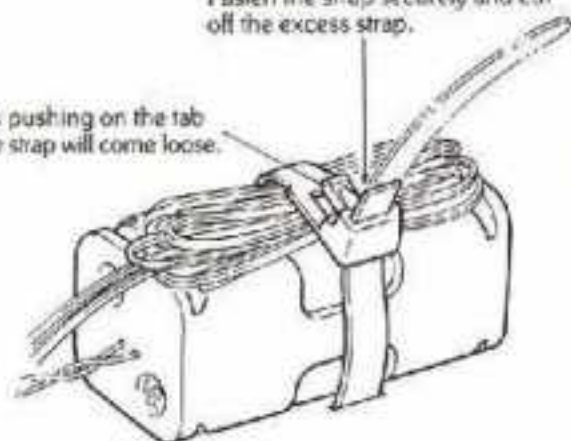
28 INSTALLATION OF RECEIVER BATTERY



If there are excessive servo wires bundle them under the strap.

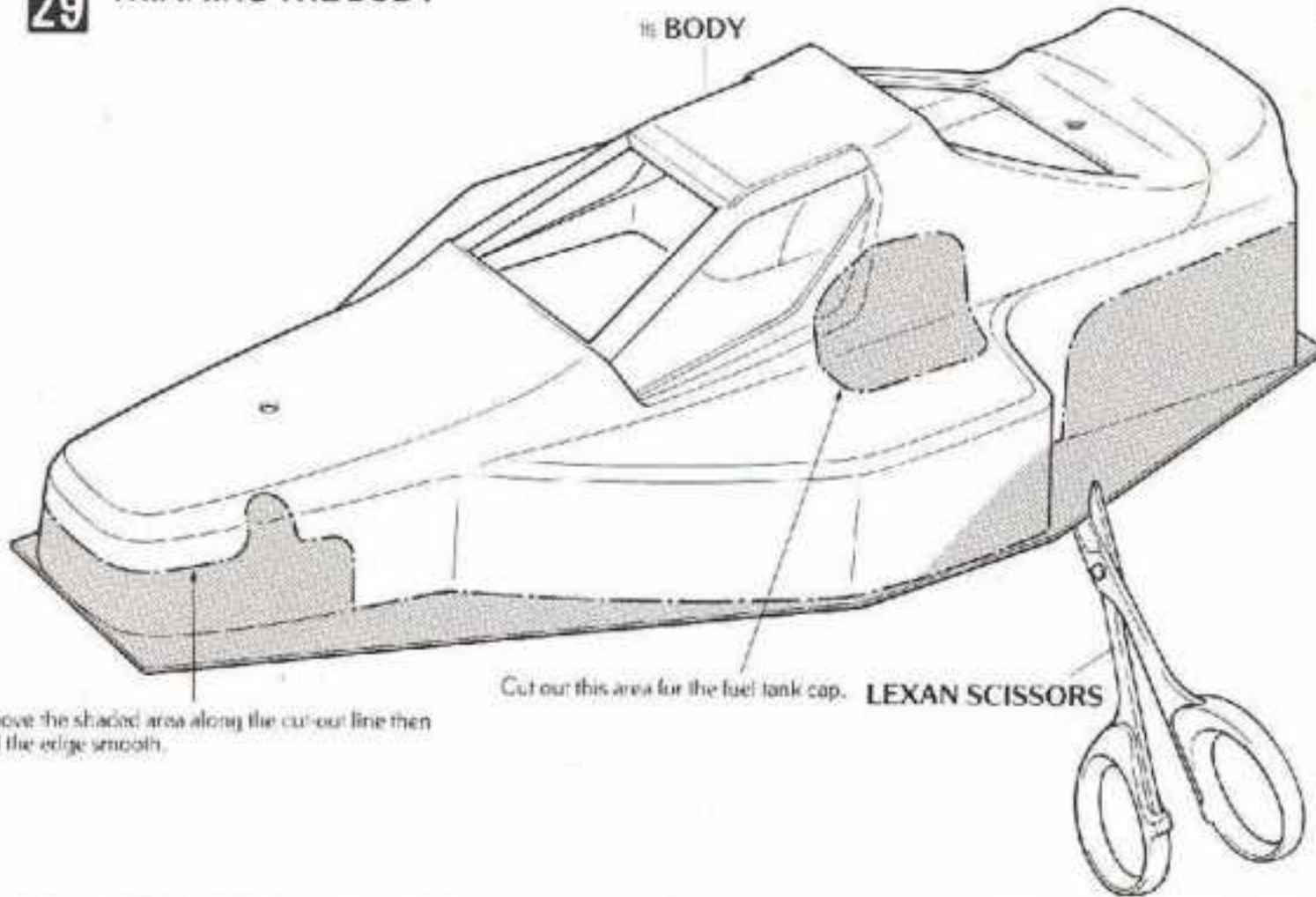
Fasten the strap securely and cut off the excess strap.

By pushing on the tab the strap will come loose.



PREPARING THE BODY

29 TRIMMING THE BODY

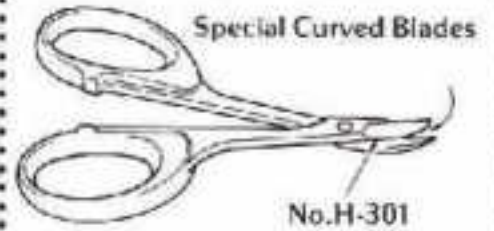


REAR OF BODY

When installing the optional wing, remove the shaded area of the body.

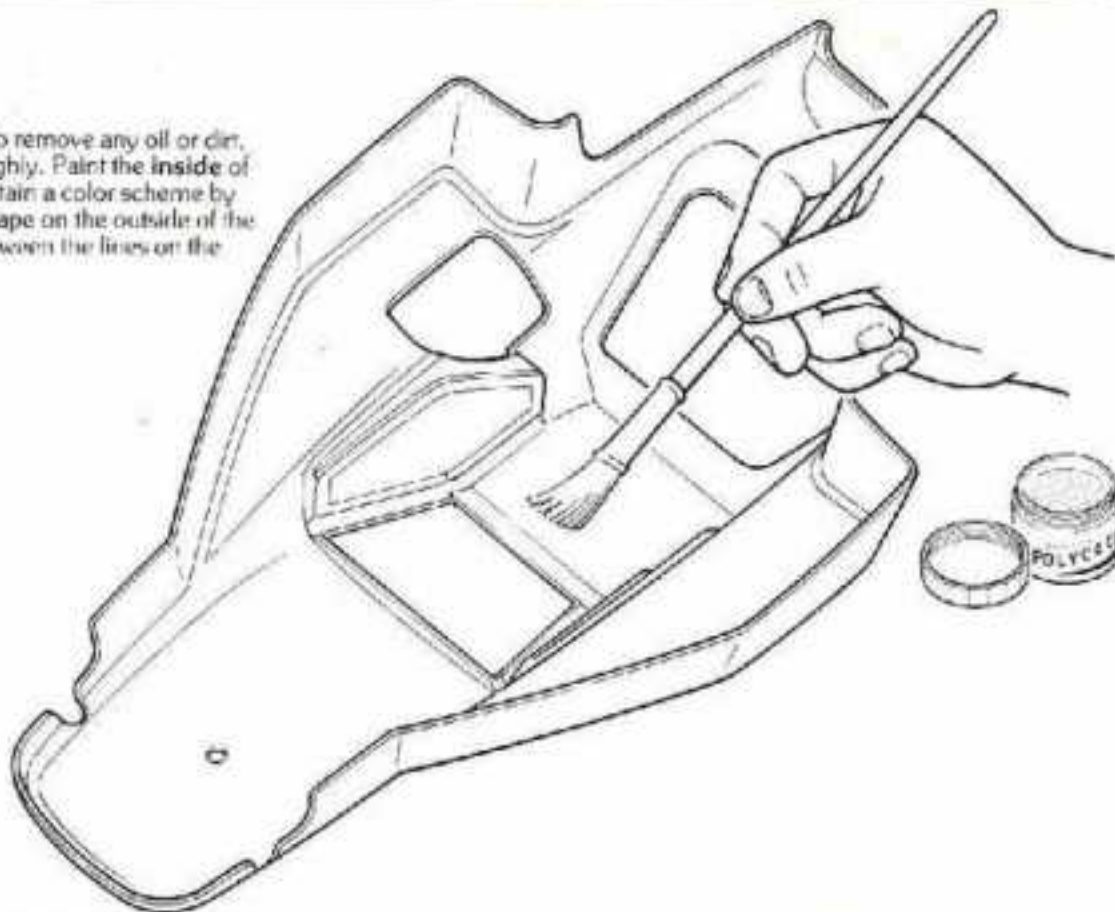
KYOSHO

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



30 PAINTING

First, wash the body to remove any oil or dirt. Rinse and dry thoroughly. Paint the **inside** of the body. You can obtain a color scheme by putting pin stripping tape on the outside of the body and painting between the lines on the inside.



KYOSHO

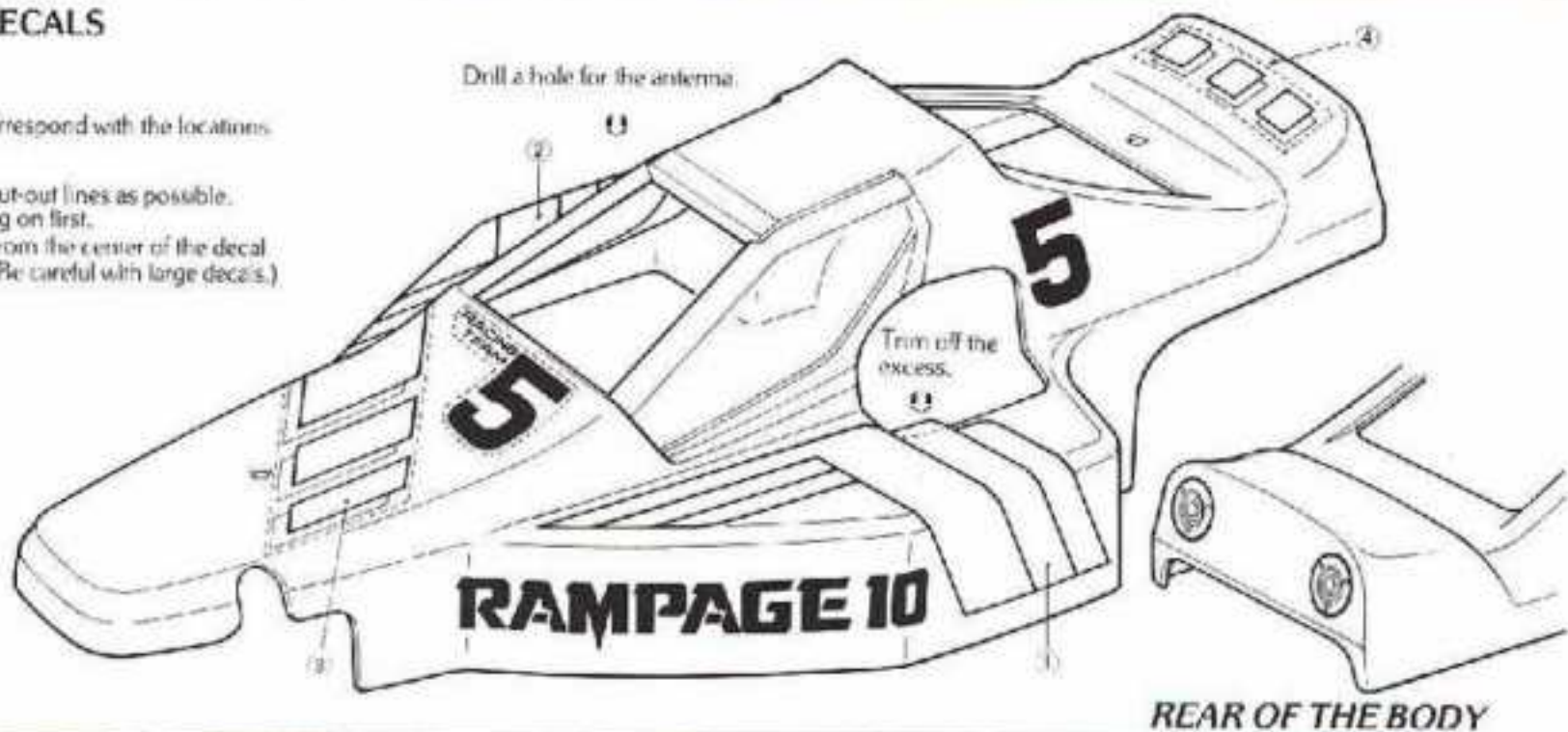
• Polycolor Paints is available for painting your Lexan bodies. Twelve great looking colors are available.
• No.2230



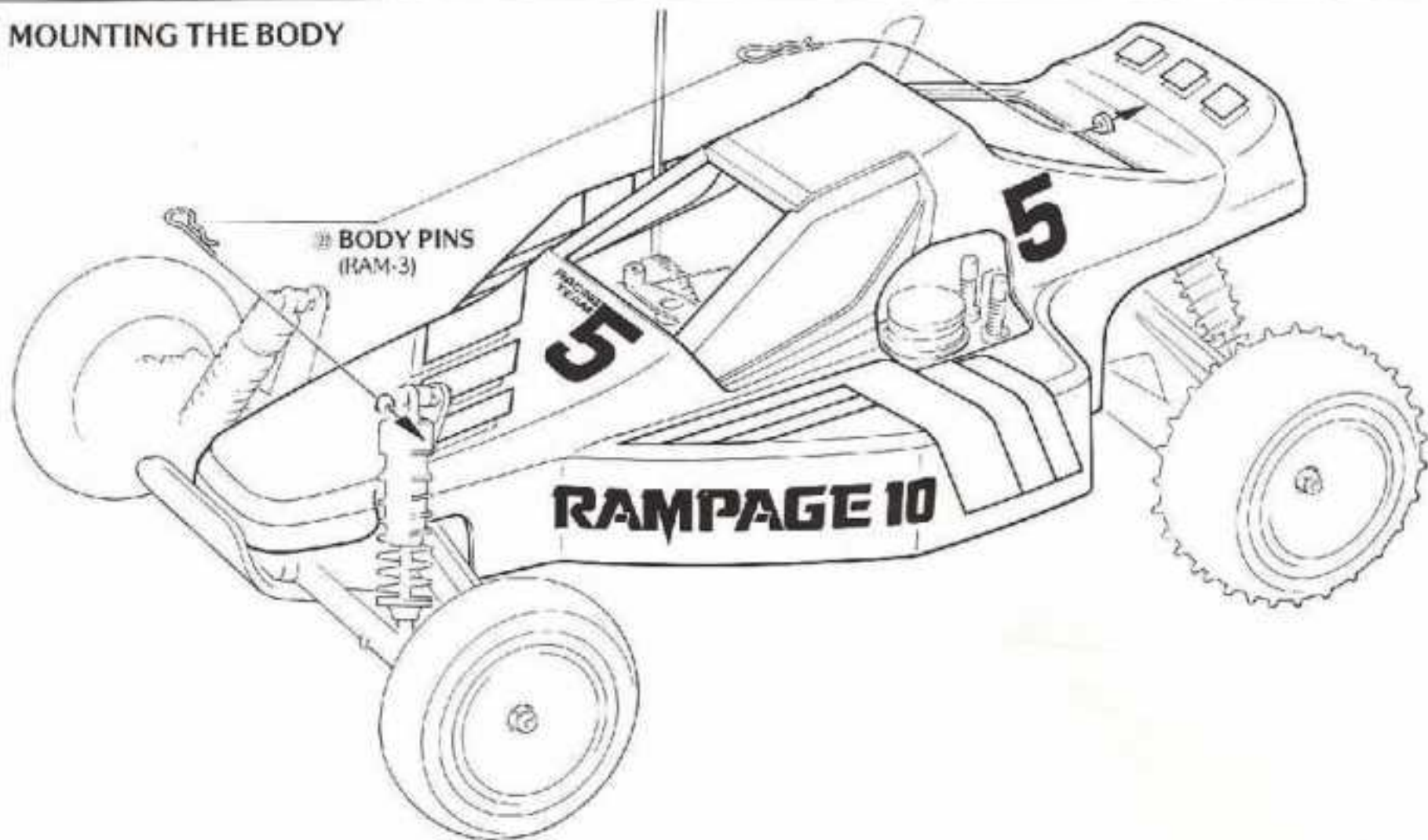
31 APPLYING THE DECALS

The decals are numbered which correspond with the locations shown below.

- Trim the decals as close to the cut-out lines as possible.
- Test fit the decal with the backing on first.
- When applying the decal work from the center of the decal outwards to remove airbubbles. (Be careful with large decals.)



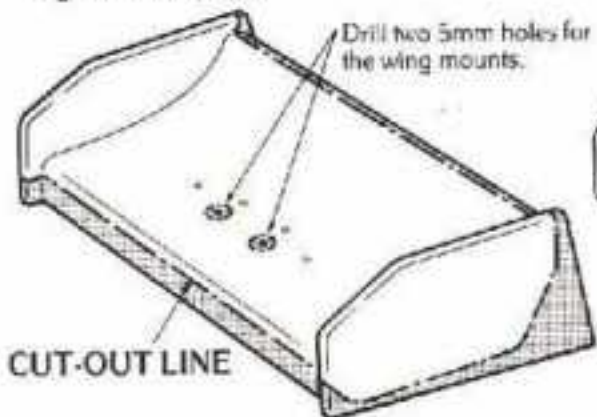
REAR OF THE BODY



OPTIONAL WING

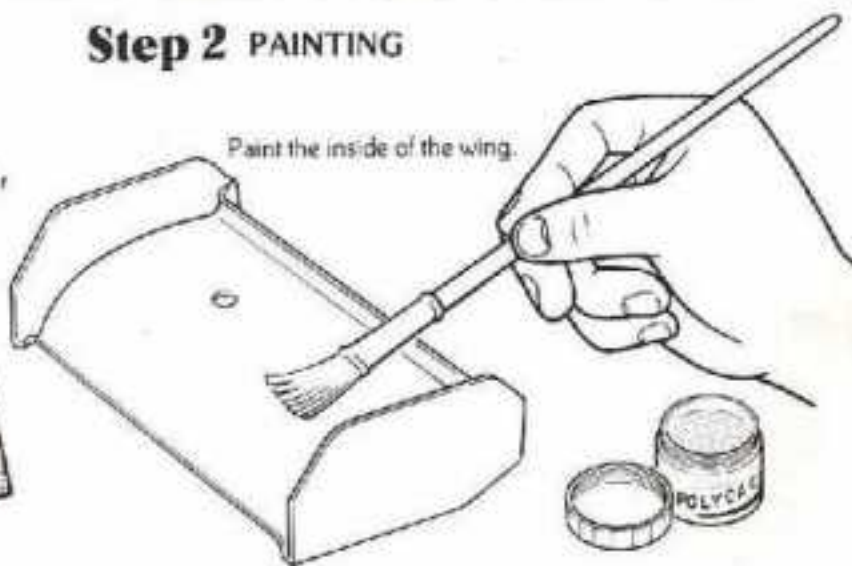
Step 1 TRIMMING THE WING

Remove the shaded area and smooth the edges with sandpaper.

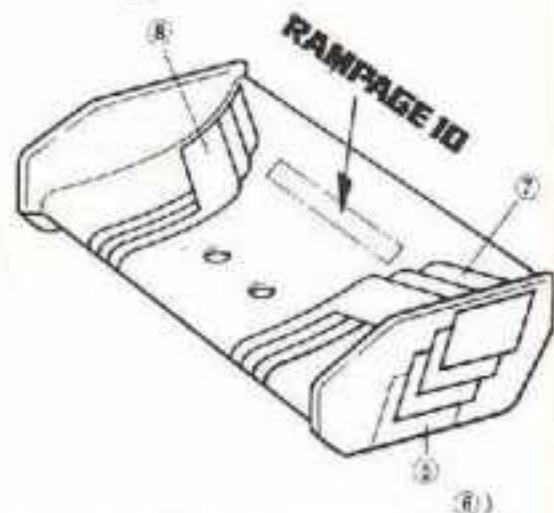


Step 2 PAINTING

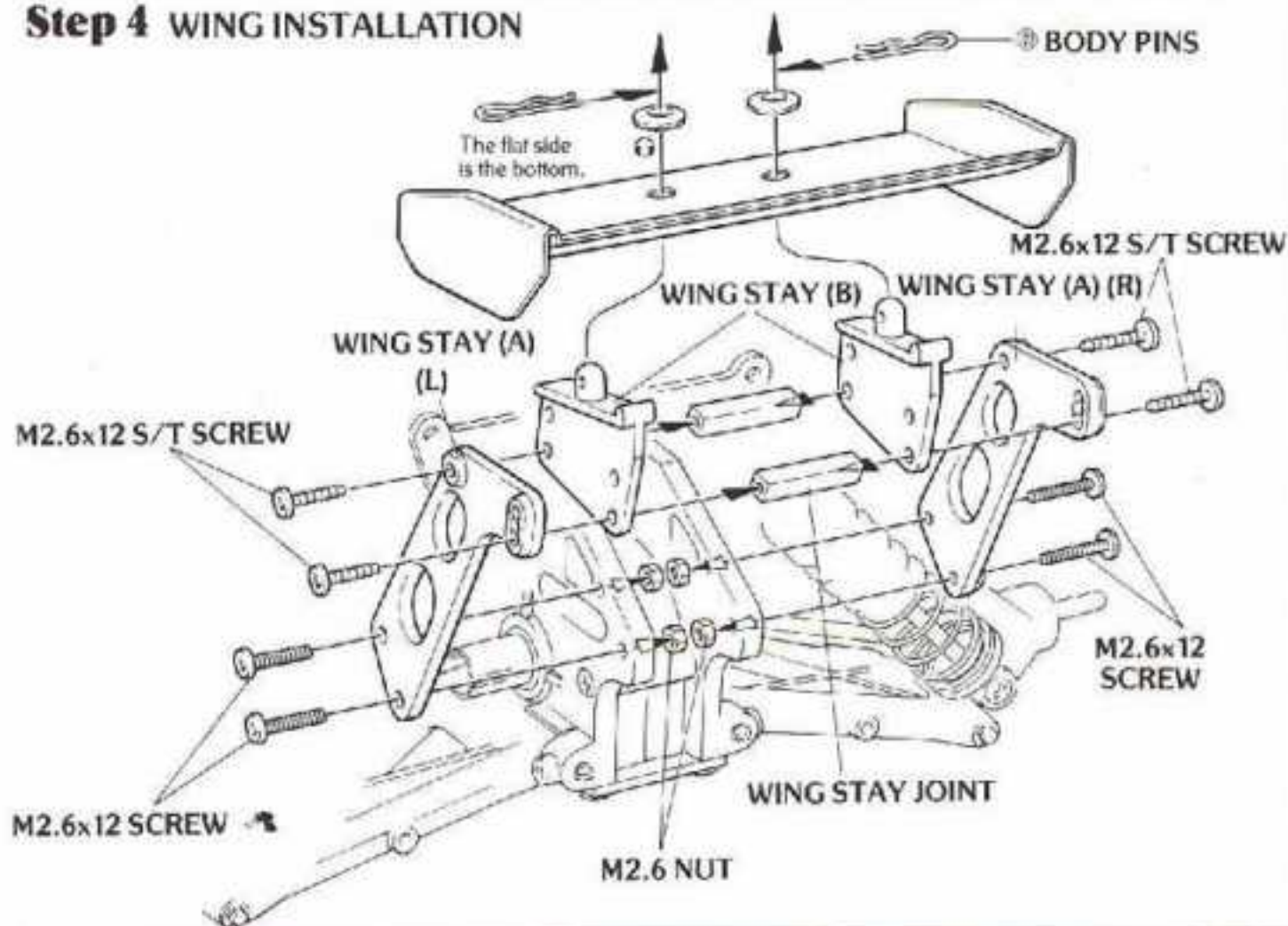
Paint the inside of the wing.



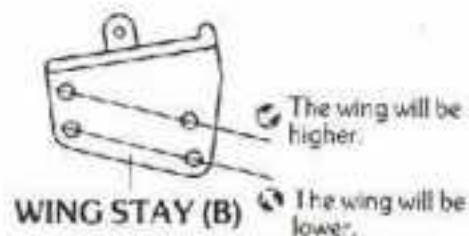
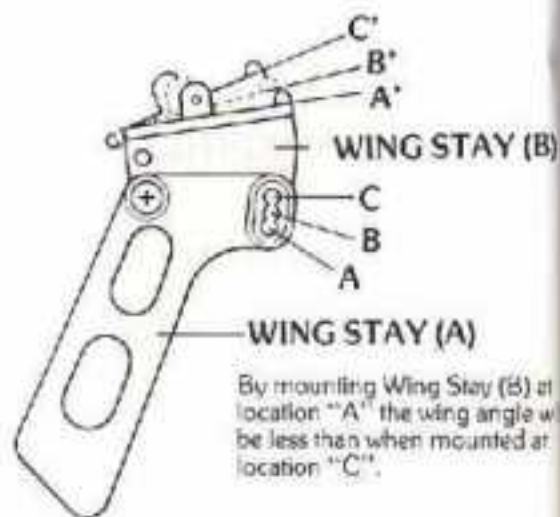
Step 3 APPLYING THE DECALS



Step 4 WING INSTALLATION

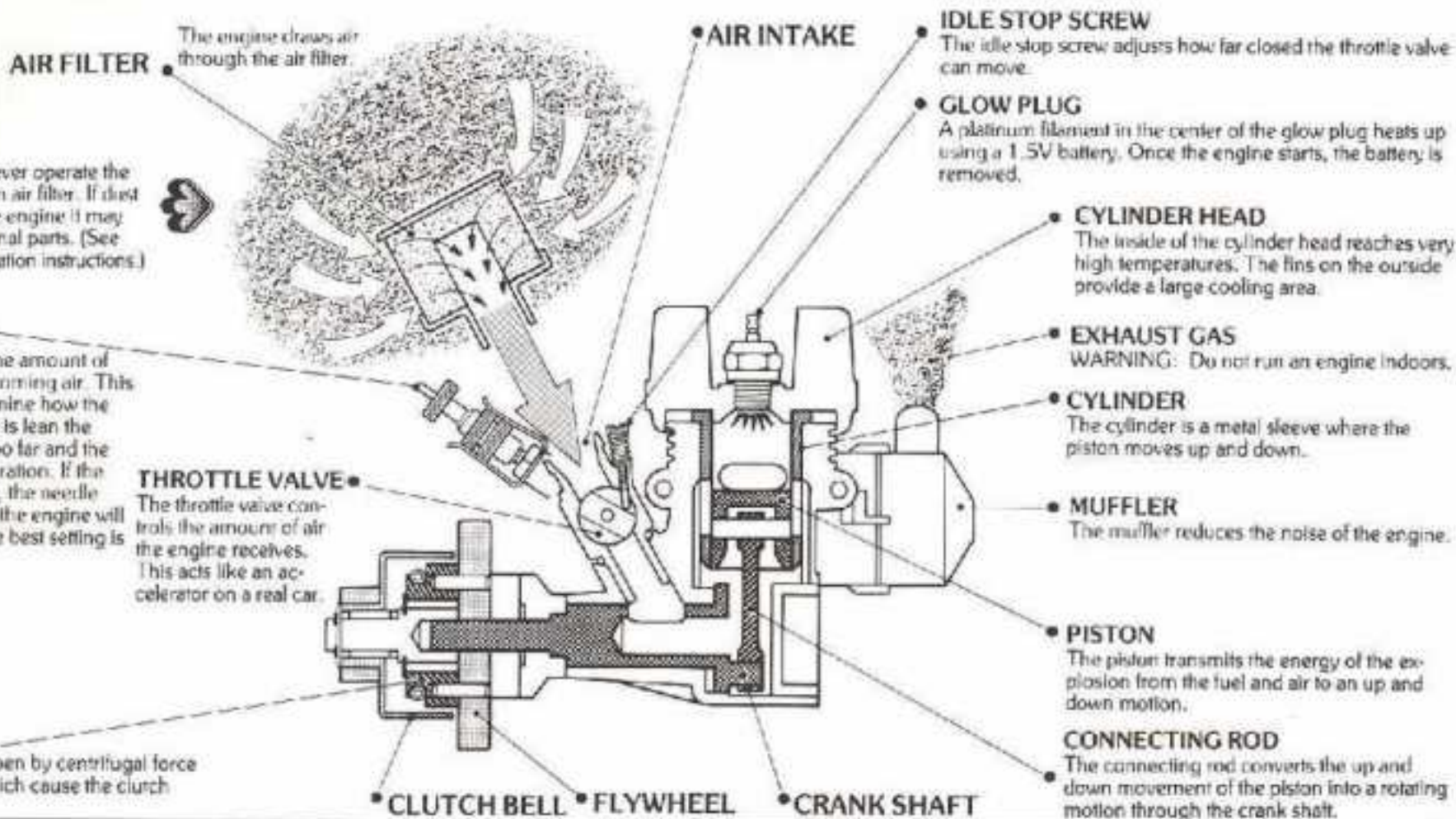


ADJUSTMENT OF WING STAY



GLOW ENGINE

- Knowledge of how a glow engine operates is very beneficial to the first time enthusiast of a gas powered R/C car.
- The glow engines operate on a mixture of alcohol, oil and some additives. **WARNING: Do not use gasoline or kerosene.**



STARTING THE ENGINE

REQUIRED TO START THE ENGINE.

(4) D-SIZE DRY CELL BATTERIES

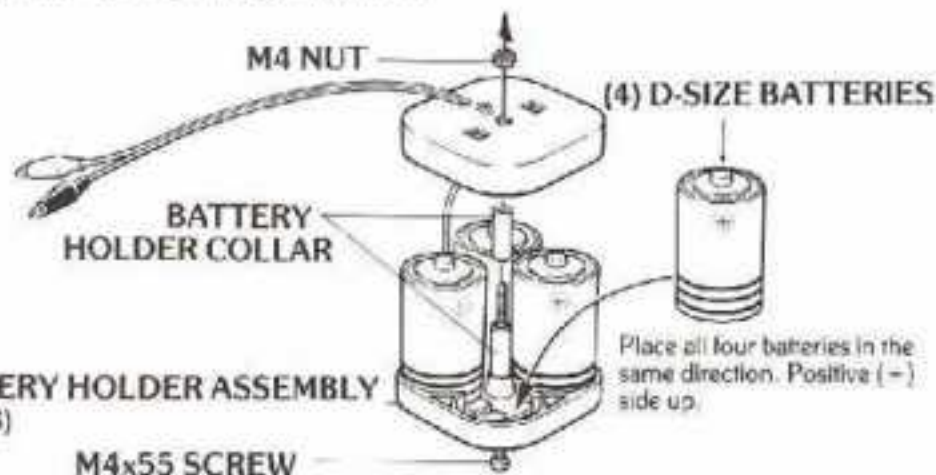


GLOW FUEL

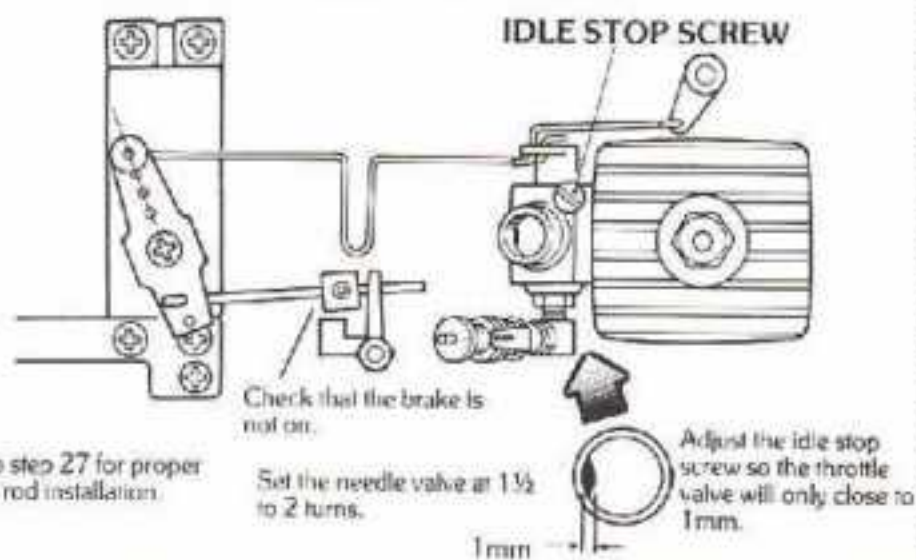
Do NOT use gasoline or kerosene.



1 Assemble the glow plug battery holder.



2 Set the throttle control on the transmitter to neutral (idle) position.



Refer to step 27 for proper control rod installation.

3 Fill the fuel tank with fuel.

STEP 1
Unscrew the brass cap until the hole is clear of the tube.

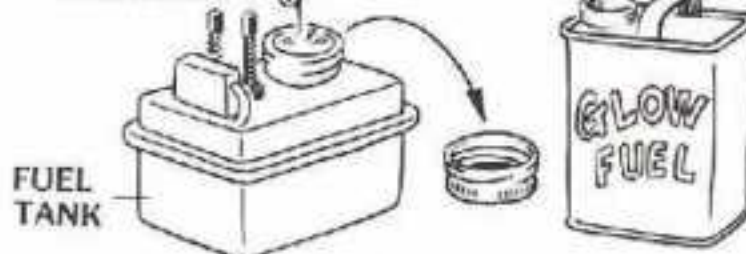


STEP 2

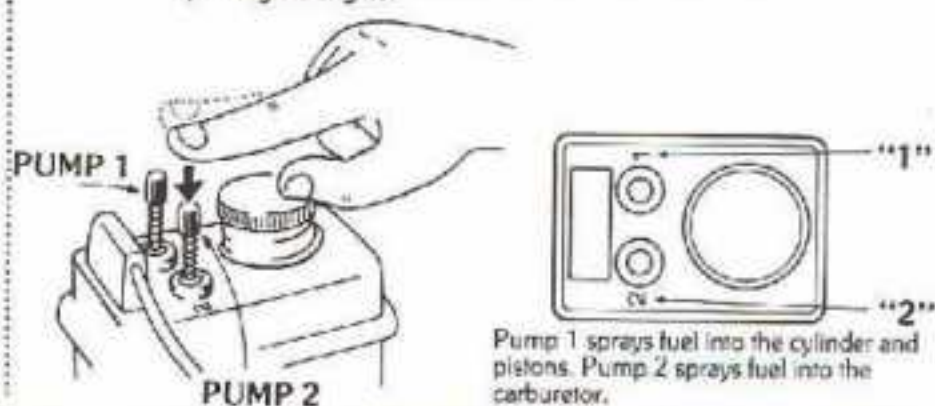
Squeeze the fuel bulb and insert the end into the can of fuel. The fuel bulb will pull the fuel from the can into the bulb when released.



STEP 3
Fill the fuel tank.

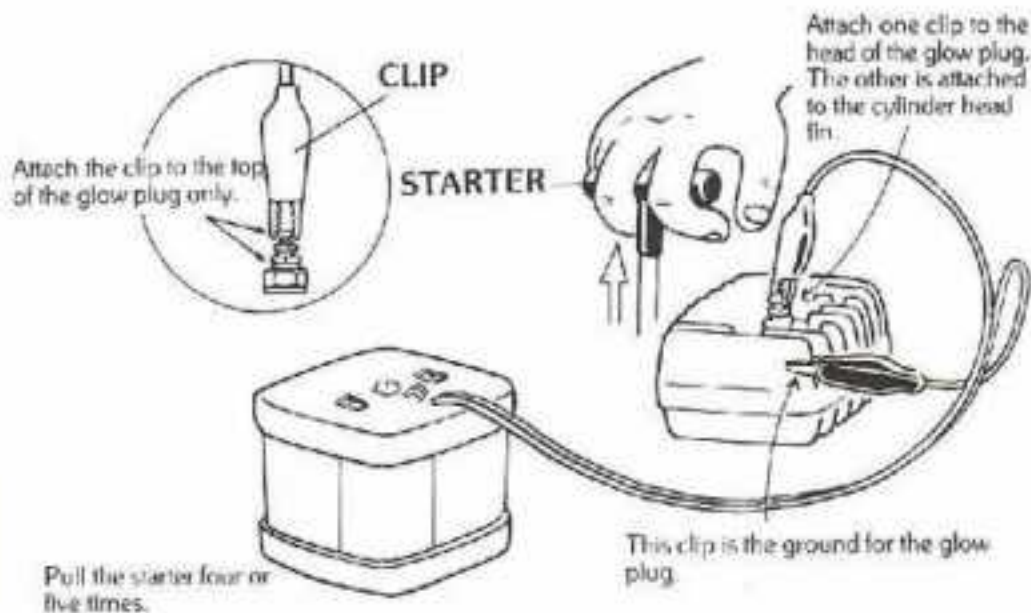


4 The engine may be hard to start, you will need to press down the pump marked 1 twice. (When the temperature is cold. Also press down pump 2 twice.) This is known as priming the engine.



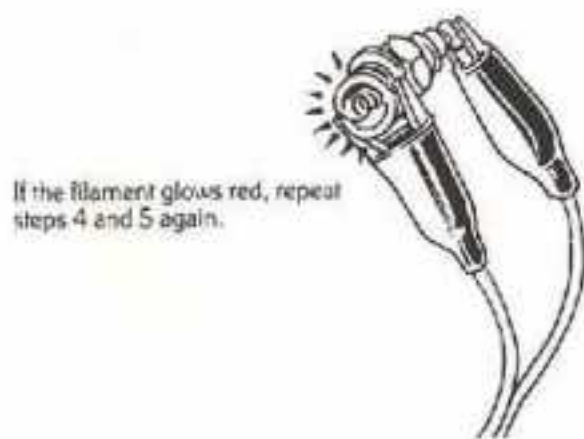
STARTING THE ENGINE

- 6 Attach the glow plug battery clips to the glow plug.

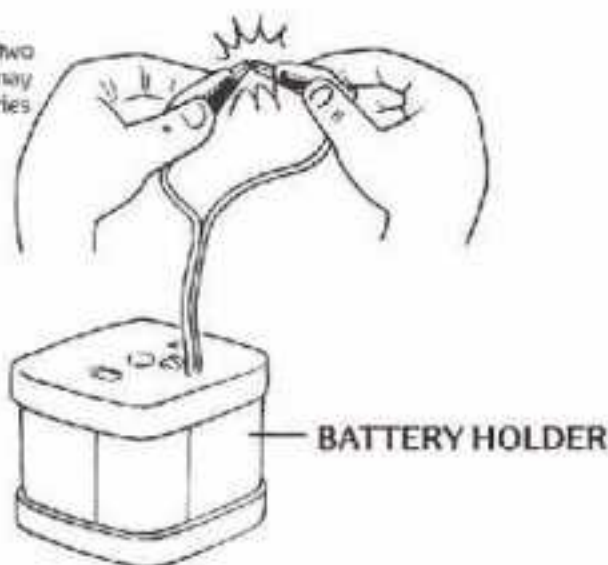


If the engine is hard to start, press down Pump 2 twice. If it still has not started, press down Pump 1 twice. If the engine has not started, repeat steps 4 and 5. Pull the starter four or five times between the pumping process or the engine may flood with fuel.

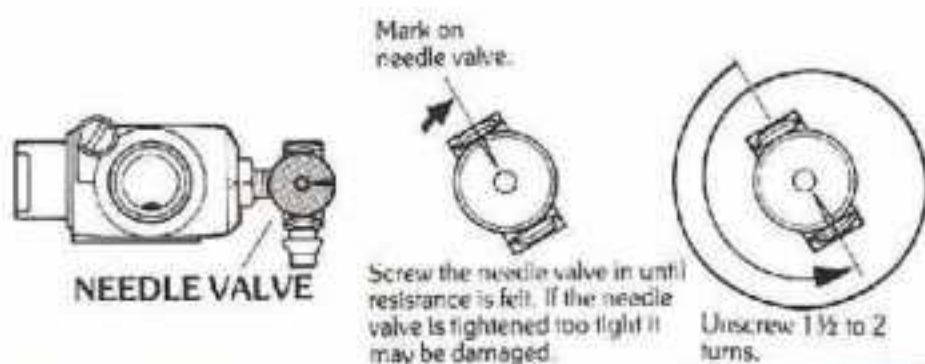
- 7 If the engine still does not start, remove the glow plug with the plug wrench. Attach the clips, one to the top of the plug the other to the threaded portion of the plug. The filament in the plug should glow red hot. If it does not glow red, the batteries may be discharged; the clips may be making poor contact on the plug; the batteries may be installed wrong; or the filament in the glow plug may be burnt out.



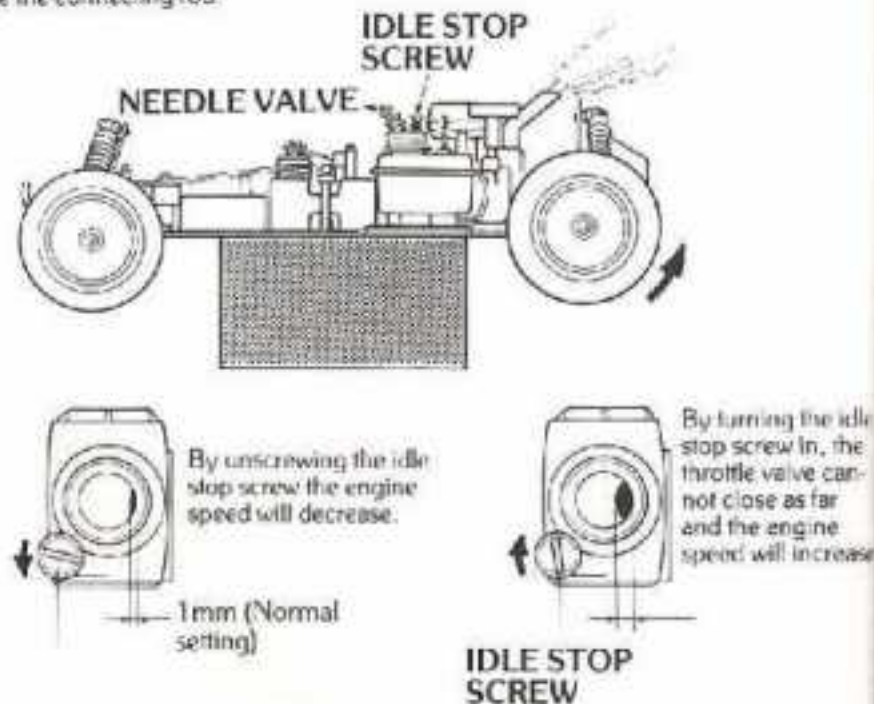
Do not touch the two clips together, it may damage the batteries.



- 8 Check the needle valve adjustment.

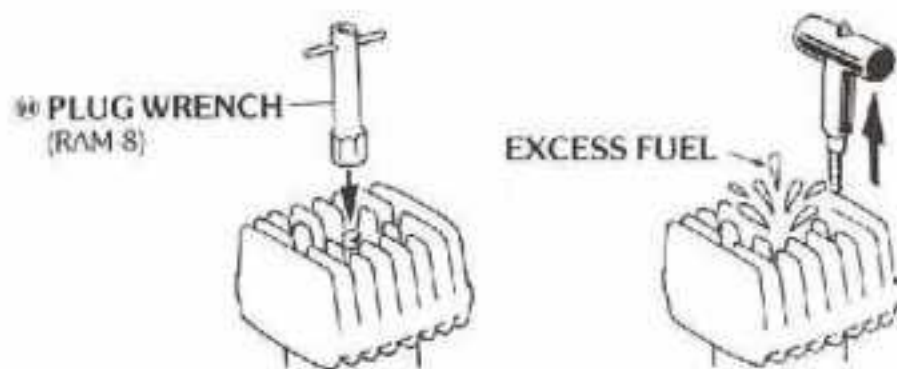


- 9 After the engine starts to run, disconnect the clips from the glow plug and set the car on a box so the wheels can spin freely. If the idle is set too high the wheels will start to rotate. If it is set too low the engine may quit. **WARNING:** Do not rev the engine up! This may damage the connecting rod.



You have a proper setting when the wheels do not turn yet and the engine does not quit.

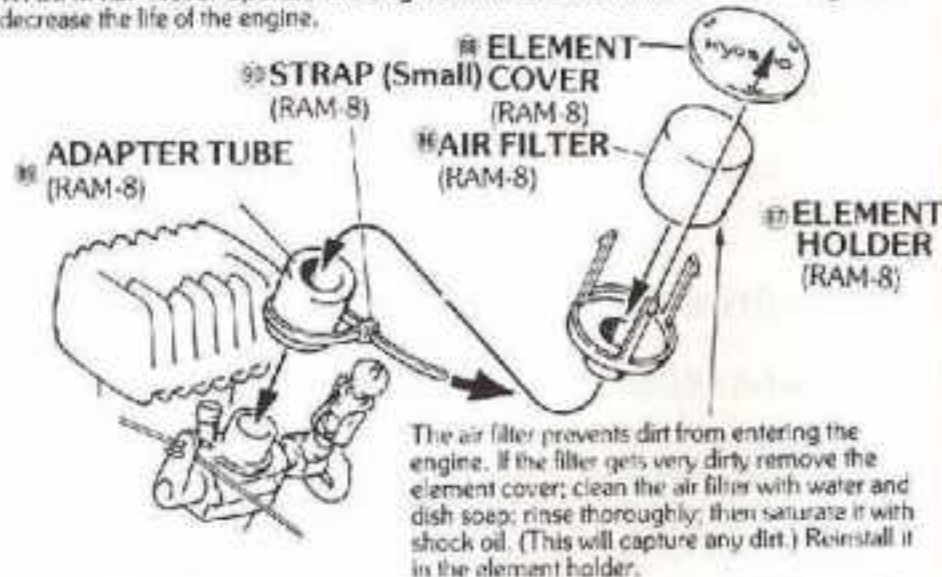
- 10 If the starter rope is hard to pull the cylinder may be "flooded" with excessive fuel. If this happens remove the glow plug with the glow plug wrench and pull the starter rope 15 to 20 times. This will expel the excess fuel.



Replace the glow plug and follow steps 4 and 5 to start the engine.

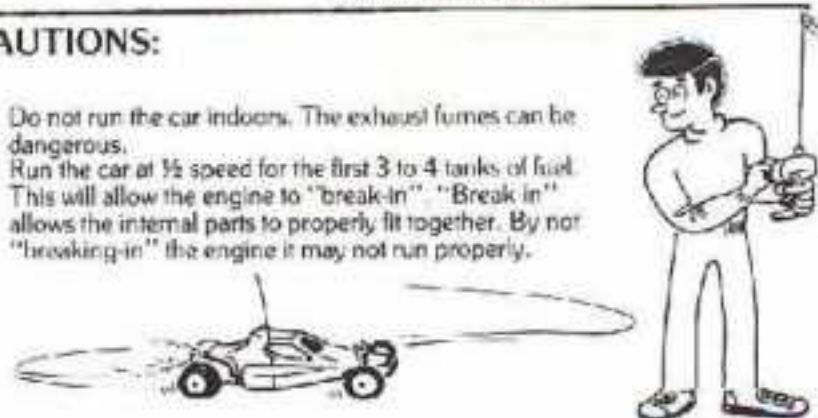
INSTALLATION OF AIR FILTER

WARNING: Never operate the engine without an air filter. Dirt in the engine will decrease the life of the engine.



CAUTIONS:

1. Do not run the car indoors. The exhaust fumes can be dangerous.
2. Run the car at 1/2 speed for the first 3 to 4 tanks of fuel. This will allow the engine to "break-in". "Break in" allows the internal parts to properly fit together. By not "breaking-in" the engine it may not run properly.



STARTING THE ENGINE (3)

PROPERLY ADJUSTING THE NEEDLE VALVE

If the engine stalls when the throttle is moved to high speed, the needle valve is too lean. Unscrew it slightly and try again.

NEEDLE VALVE

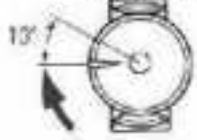


If the engine runs slow, the needle valve is too rich. Turn the needle valve in slightly and try again.

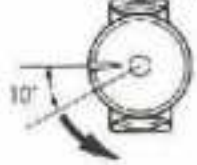
Too Lean



Too Rich



Too Lean



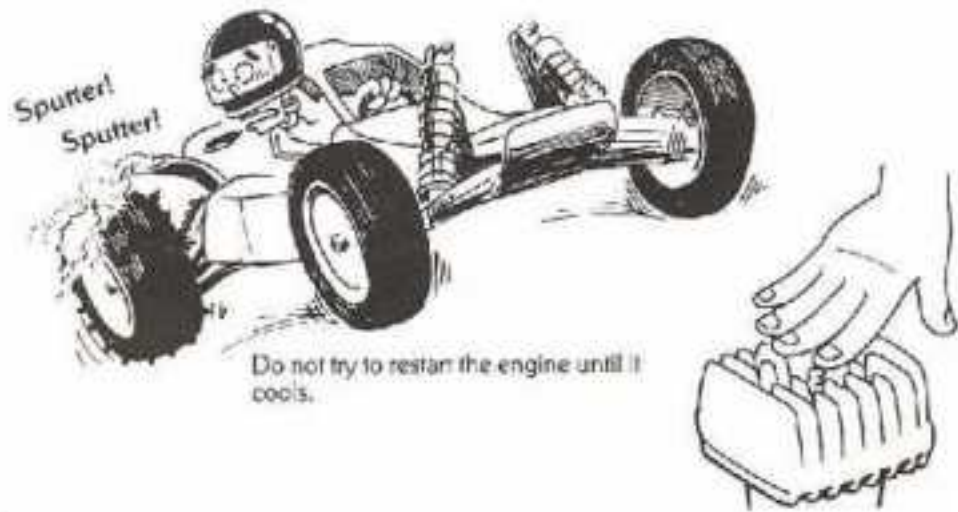
If the engine does not rev-up, the needle valve is too lean. Unscrew it 10° quickly and try again.

OVERHEATING THE ENGINE

A sign of overheating occurs when the engine runs fine for 1 to 2 minutes then slowly decreases in speed. Overheating may be caused by running the engine too lean, or running on the terrain shown below.

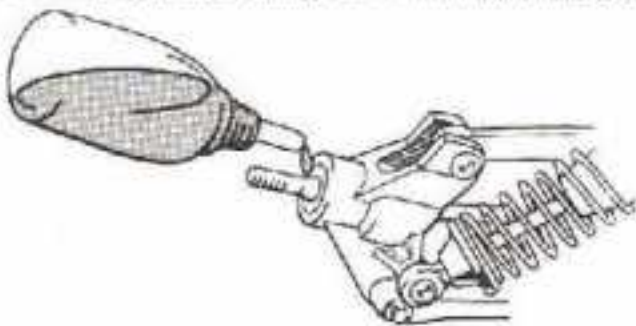


If the engine overheats it will be very hard to start until it cools down. Excessive overheating will damage the engine. Do not restart the engine until the reason for the engine overheating has been located and corrected.

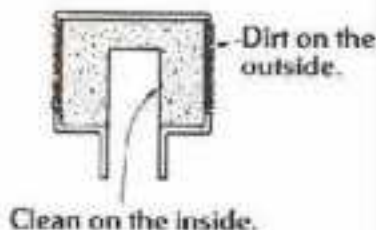


Do not try to restart the engine until it cools.

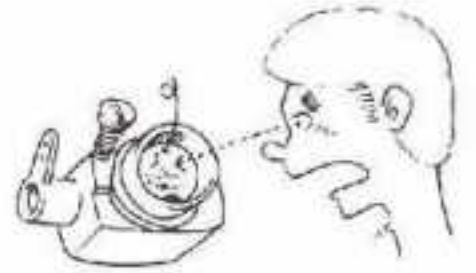
Clean and oil the bushings regularly. By taking care of them they will last a long time.



If the air filter gets too dirty, the engine will not be able to receive enough air and performance will decrease. Clean the air filter with water and dish soap. Then saturate it with shock oil to capture any dirt and reinstall the air filter on the engine.

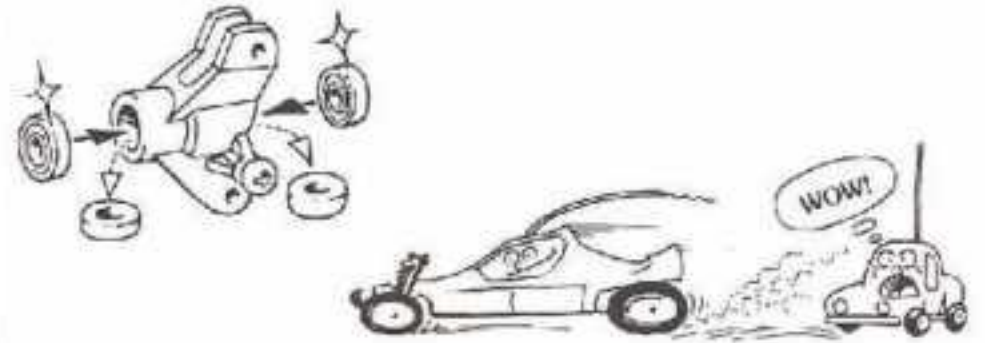


After each tank of fuel, remove the air filter and check for dirt in the carburetor. If there is dirt, carefully wipe it out and locate where the dirt is getting by the air filter. Do not run the engine until the problem is corrected.

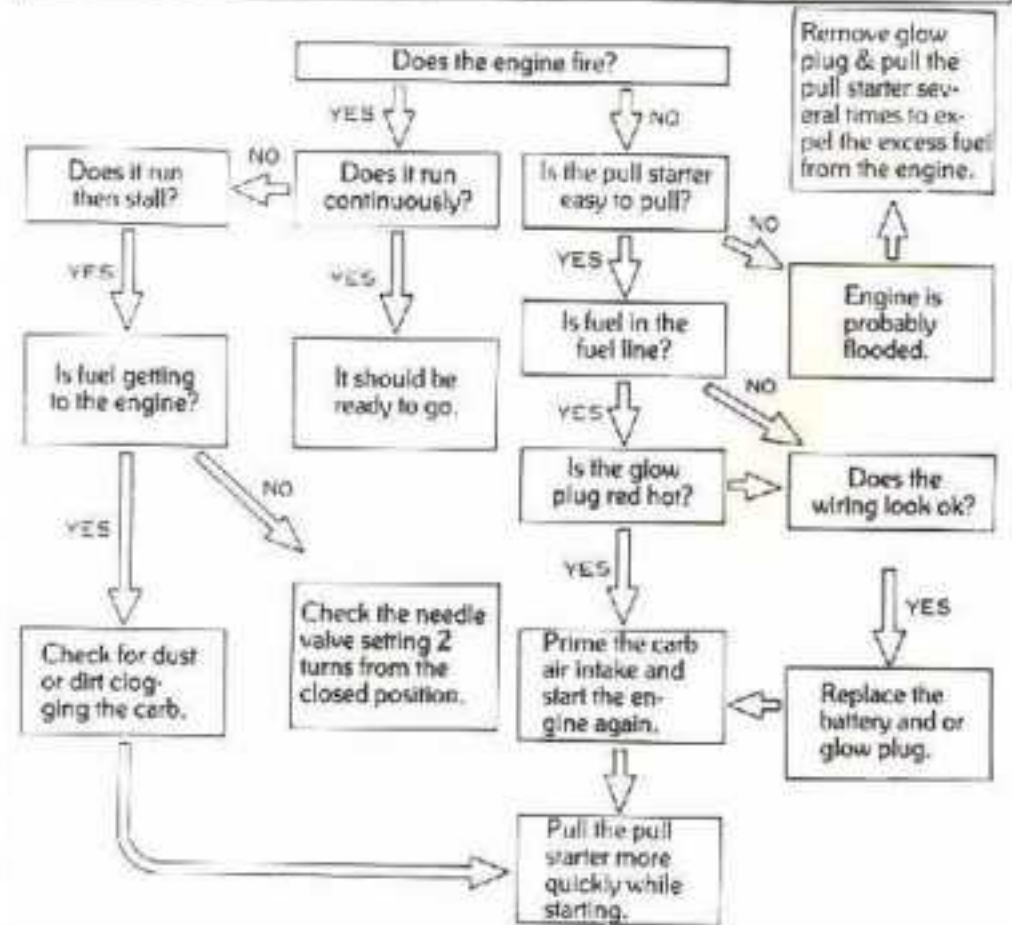


BEARINGS

By replacing the bushings with bearings the speed of the car may increase. Bearings reduce friction so the engine doesn't have to work as hard.



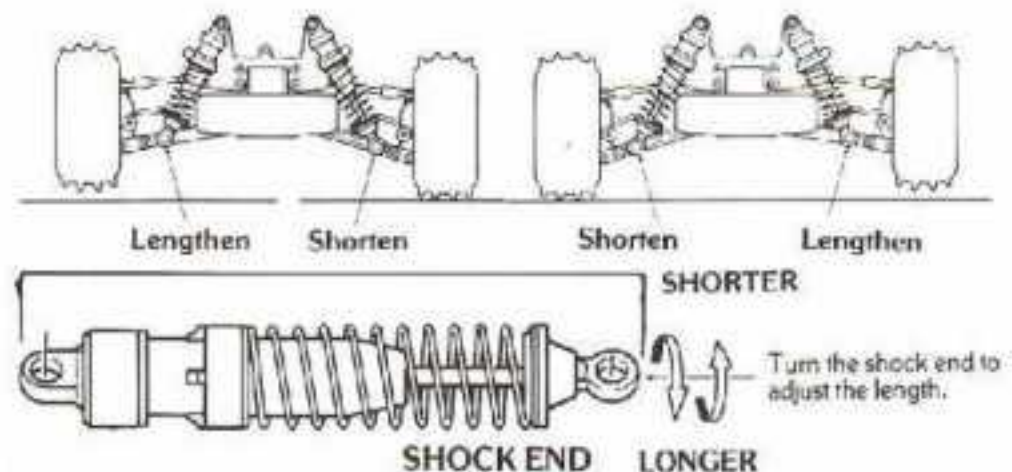
TROUBLE SHOOTING DIAGRAM



ADJUSTMENTS

SHOCK LENGTH ADJUSTMENT

Slowly lower the front end of the Rampage, checking that both tires touch at the same time. If they do not, adjust the shock end as shown below. If both tires do not touch at the same time, the car will not steer properly.



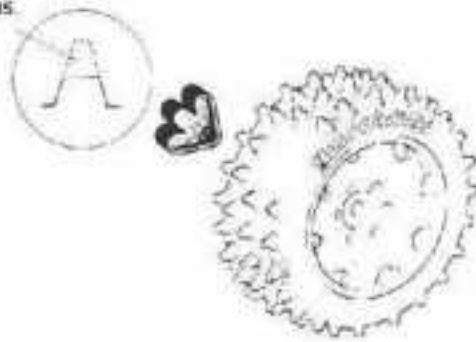
ADJUSTMENTS

CUSTOMIZING THE TIRES

You can increase performance for various track conditions by trimming the knobs of the tires. Consult the chart below.

Trim the knobs

Track	Amount to Trim
Grass	1/2
Concrete	2/3
Sand	NONE
Hard Dirt	1/3
Soft Dirt	NONE



Also available are the "Option House" series tires. The W-5021 low profile tire is for hard surface. The W-5032 low profile tire is for soft surfaces.

SHOCK ADJUSTMENTS

By using different shock oils, different pistons, and the spring spacer, the dampening can be adjusted to different track conditions. Kyosho sells a shock oil assortment stock number KYOC5681.

DAMPENING HARDNESS

OIL	YELLOW	GREEN	YELLOW	RED	GREEN	RED
PISTON						
HARDNESS	←			→ SOFTER		

ADJUSTMENT OF SHOCKS

FRONT	Lightweight shock oil Weak spring tension	SHARP STEERING RESPONSE
FRONT	Heavy shock oil Strong spring tension	SLOW STEERING RESPONSE
REAR	Lightweight shock oil Weak spring tension	MORE WHEEL TRACTION
REAR	Heavy shock oil Strong spring tension	LESS WHEEL TRACTION

PRECAUTIONS

CHECK BEFORE EVERY RUN:

- Check to see if all bolts and nuts are tightened firmly.
- Check to see if transmitter and receiver batteries are fully charged.
- Check to see if the steering and throttle are in proportion to your control of the transmitter.
- Check to see that all wiring is properly insulated.
- Check to see if parts are moving smoothly.

OPERATING PROCEDURES:

- Turn transmitter switch on.
- Switch on the receiver.
- Check to see if the radio system is working properly.

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

OPERATIONAL SAFETY

The Rampage GP10 is powered by quick O.S. CZ-R engine which allows the car to obtain high speeds. **CAUTION** is required when operating the car.

Do not run R/C cars on the street.

Check to make sure no one else is on your frequency. If so do not turn your radio on.

If your car is stopped by an obstacle do not continue running the car. Remove the car manually. Failing to do so may ruin the engine and clutch.

Do not grab the tires while they are rotating.

Do not touch the engine while it is running or right after it stops. The engine gets very hot and may cause a severe burn.

MAINTENANCE AFTER RUNNING THE CAR

Wipe the dirt off of the car.

Make sure all the switches of the radio control unit are off.

Clean and grease the moving parts periodically.

Check and tighten all nuts and screws.

ENGINE CARE

Read and follow all the engine instructions included with the Rampage.

Never allow the Rampage GP10 to set still for more than 1 minute while the engine is running. The air flowing over the engine, when the car is moving, cools the engine.

Adjust the needle valve so the engine does not run lean. A lean engine will overheat and damage the piston and cylinder.

Before putting the Rampage away at the end of the day, remove all the fuel from the fuel tank. Try to start the engine to burn any fuel left inside the engine. This will help prevent rust and corrosion from ruining the engine.

Always put after run oil in the engine to prevent rust on the bearings.

Wipe the engine off to remove any excess fuel on it. If fuel is left on the engine it will turn brown when heated by the engine.

PARTS LIST

KEY NO.	DESCRIPTION	QTY.	KEY NO.	DESCRIPTION	QTY.	KEY NO.	DESCRIPTION	QTY.
①	Front Suspension Arm	2	⑤②	Front Wheel	2	②⑧	Engine	1
②	Rear Suspension Arm	2	⑤③	Rear Wheel	2	②⑨	Engine Mount	2
③	Front Shock Tower	1	⑤④	Front Bulkhead	1	②⑩	Clutch Bell	1
④	Rear Shock Tower	1	⑤⑤	Brake Lever	1	②⑪	Clutch Shoe	2
⑤	Swing Shaft	2	⑤⑥	Main Gear Shaft Holder	1	②⑫	Clutch Spring	1
⑥	Joint	2	⑤⑦	Knuckle Arm (R)	1	②⑬	Pilot Shaft	1
⑦	Belt	1	⑤⑧	Knuckle Arm (L)	1	②⑭	Flywheel	1
⑧	Main Gear	1	⑤⑨	Front Hub	2	②⑮	Flywheel Spacer	1
⑨	Drive Washer	2	⑥①	Upper Rod	4	②⑯	Clutch Bearing Case	1
⑩	Timing Pulley (B)	1	⑥②	Servo Saver (A)	1	②⑰	Clutch Roller	6
⑪	Rear Wheel Shaft	2	⑥③	Servo Saver (B)	1	②⑱	Body (GP-10)	1
⑫	Fuel Tank Assembly	1	⑥④	Servo Saver (C)	1	②⑲	Front Tire	2
⑬	Rear Bulkhead (L)	1	⑥⑤	Servo Saver (D)	1	②⑳	Rear Tire	2
⑭	Rear Bulkhead (R)	1	⑥⑥	Shock Collar	4	②㉑	Chassis	1
⑮	Rear Housing	1	⑥⑦	Antenna Post	1	②㉒	Decal (GP-10)	1
⑯	Differential Case (A)	1	⑥⑧	Steering Servo Mount	4	②㉓	E-Ring (E-2.5)	12
⑰	Differential Case (B)	1	⑥⑨	Bumper	1	②㉔	E-Ring (E-3)	3
⑱	Bevel Gear (A)	2	⑦④	5.8mm Ball End	4	②㉕	E-Ring (E-4)	4
⑲	Bevel Gear (B)	2	⑦⑤	Rear Hub (R)	1	②㉖	E-Ring (E-7)	1
⑳	Bevel Gear Shaft	1	⑦⑥	King Pin	2	②㉗	Body Pin	4
㉑	Final Pinion Gear	1	⑦⑦	Front Suspension Shaft (A)	2	②㉘	Allen Wrench (1.5mm)	1
㉒	2mm x 11mm Pin	3	⑦⑧	Front Suspension Shaft (B)	2	②㉙	Allen Wrench (2mm)	1
㉓	Timing Pulley (A)	1	⑦⑨	Rear Suspension Shaft (A) (Black)	2	②㉚	Bearing Collar	2
㉔	10mm x 14mm Bushing	2	⑦⑩	Rear Suspension Shaft (B)	2	②㉛	Exhaust Valve Rod	1
㉕	5mm x 10mm Bushing	6	⑦⑪	M3 Pivot Ball (Silver)	10	②㉜	Fuel Bulb	1
㉖	Shock Cap	4	⑦⑫	M2.6 Pivot Ball (Black)	2	②㉝	4mmx8mm Bushing	4
㉗	Spring Holder	4	⑦⑬	Center Rod	1	②㉞	Servo Saver Tube	2
㉘	Spring Spacer	4	⑦⑭	Tie Rod	2	②㉟	Rear Hub (L)	1
㉙	Shock Piston	4	⑧③	Torque Rod (A)	1	②㊱	5mmx10mm Bearing	
㉚	Shock Ring	4	⑧④	Torque Rod (B)	1		M3x16 S/T Screw	2
㉛	Shock Diaphragm	4	⑧⑤	Steering Rod	1		M4x8 Screw	6
㉜	Shock End	4	⑧⑥	Brake Rod	1		M3x8 Screw	7
㉝	Front Shock Case (Short)	2	⑧⑦	Throttle Control Rod	1		M3x10 Screw	2
㉞	Front Shock Shaft (Short)	2	⑧⑧	Stopper	2		M3x18 Screw	6
㉟	Front Shock Spring	2	⑧⑨	Air Filter	1		M3x35 Screw	2
㊱	Shock Oil	1	⑧⑩	Element Holder	1		M3x50 Screw	1
㊲	Rear Shock Case (Long)	2	⑧⑪	Element Cover	1		M2.6x12 Screw	4
㊳	Rear Shock Shaft (Long)	2	⑧⑫	Adaptor Tube	1		M2.6x6 S/T Screw	1
㊴	Rear Shock Spring	2	⑧⑬	Strap (Small)	2		M2.6x12 S/T Screw	4
㊵	Front Wheel Shaft	2	⑧⑭	Strap (Medium)	1		M3x8 S/T Screw	8
㊶	Front Plate	1	⑧⑮	Strap (Large)	1		M3x10 S/T Screw	17
㊷	5.8mm Ball (Silver)	4	⑧⑯	Exhaust Tube	1		M3x12 S/T Screw	2
㊸	Servo Saver Collar	2	⑧⑰	Plug Wrench	1		M2.6 Nut	4
㊹	3mm Linkage Guide	1	⑧⑱	Antenna Tube	1		M3 Nut	20
㊺	Main Gear Shaft	1	⑧⑲	Fuel Tube	1		M3 Nylon Nut	6
㊻	Servo Mount	2	⑧⑳	Battery Holder Assembly	1		M4 Nylon Nut	4
㊼	Body Post	1	⑧㉑	Double Sided Tape	1		M3x3 Set Screw	3
㊽	Upper Plate	1	⑧㉒	One-way Assembly	1		M4x4 Set Screw	2
㊾	Chassis Cover	1	⑧㉓	Starter Assembly	1		M5 Washer	2
㊿	Screw Locking Compound	1	⑧㉔	Muffler Assembly	1		Instruction Manual	
1	Silicon Grease	1	⑧㉕	Starter Holder	1			

PURCHASING PARTS FOR YOUR KIT

You can purchase replacement and optional parts for your kit. All of the parts identified by key numbers (see page 27 for complete list) 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 our parts pack guide below. When referring to the parts you need, always use the **Parts Pack Number**. For instance, if you need a Front Hub (Key #59) ask your dealer for Kyosho Parts Pack UM-11 (Upright Set).

STOCK NO.	KYOSHO #	DESCRIPTION	CONSISTING OF
KYOC2888	RM-01	Chassis	⑩ × 1
KYOC4849	RM-02	Plastic Parts Set	⑪ ⑫ ⑬ × 1
KYOC5389	RM-03	Rod Set	⑭ ⑮ ⑯ × 1
KYOC4859	RM-04	Plate Set	⑰ ⑱ ⑲ × 1
KYOC4558	RM-05	Main Gear	⑳ × 1
KYOC4187	RM-06	Main Gear Shaft	㉑ ㉒ × 1
KYOC4494	RM-07	Linkage Set	㉓ ㉔ ㉕ ㉖ ㉗ ㉘ × 1 ㉙ × 2
KYOC5522	RM-08	Screw Set	
KYOC2476	RM-09	Body	㉚ × 1
KYOC3257	RM-10	Decal	㉛ × 1
KYOC4322	OT-005	Joint	㉜ × 2
KYOC6122	OT-006	Swing Shaft	㉝ × 2
KYOC6077	OT-011	Suspension Shaft	㉞ ㉟ ㊱ ㊲ × 2
KYOC5658	OT-018	Shafts Rear	㊳ × 2
KYOC3332	OT-019	Drive Washer	㊴ × 4
KYOC3297	OT-028	Differential Gear Set	㊵ ㊶ × 4 ㊷ × 2
KYOC4823	OT-031	M3 Pivot Ball	㊸ × 10
KYOC2167	OT-032	5.8mm Ball	㊹ × 10
KYOC4822	OT-036	M2.6 Pivot Ball	㊺ × 10
KYOC5732	OT-038	Silicone Grease	㊻ × 2
KYOC3392	OT-039	E-Ring (E-2.5)	㊼ × 10
KYOC4232	OT-045	Rear Hub	㊽ ㊾ × 1
KYOC6246	OT-066	Low Profile Tires	㊿ × 2
KYOC6067	RM-12	Suspension Arm	① ② × 2
KYOC2747	UM-02	Bushing Set	③ ④ × 2
KYOC3737	UM-08	Front Shaft Set	⑤ ⑥ × 2
KYOC3067	UM-10	Collar Set	⑦ × 2
KYOC6304	UM-11	Upright Set	⑧ ⑨ × 1 ⑩ × 2
KYOC5653	UM-14	Servo Saver	⑪ ⑫ ⑬ ⑭ ⑮ ⑯ × 2 ⑰ ⑱ ⑲ × 4
KYOC2677	UM-21	Bumper	⑳ × 1
KYOC6319	UM-39	Front Wheels (Yellow)	㉑ × 2
KYOC6347	MA-17	Wheel Set	㉒ × 4
KYOC6223	W-5073	Front Pin Spike Tire	㉓ × 2
KYOC6222	SC-089	Tie Rod Set	㉔ × 2 ㉕ ㉖ × 4
KYOC6025	EF-037	Strap (Small)	㉗ × 6
KYOC6030	EF-038	Strap (Medium)	㉘ × 6
KYOC6020	EF-039	Strap (Large)	㉙ × 6
KYOC2055	SD-79	Antenna Tube	㉚ × 5
KYOC6141	1840	Double Sided Tape	㉛ × 1
KYOC5451	1878	Screw Cement	㉜ × 2
KYOC2520	EP-22	Body Pins (Small)	㉝ × 5
KYOC2021	RM-11	Air Filter	㉞ ㉟ ㊱ ㊲ × 1
KYOC4740	AB-14	Pilot Shaft	㊳ ㊴ ㊵ × 1
KYOC3005	AB-15	Clutch Shoe	㊶ × 2
KYOC2920	AB-16	Clutch Bell	㊷ × 1
KYOC3045	AB-17	Clutch Spring	㊸ × 4
KYOC2915	LD-70	Clutch Bearing	㊹ × 1 ㊺ × 6
KYOC3400	KC-20	E-Ring (E-4)	㊻ × 5
KYOC2297	FD-03	Beil	㊼ × 1
KYOC3507	FD-04	Final Differential Case	㊽ ㊾ × 1
KYOC3516	FD-06	Final Pinion	㊿ × 1
KYOC4860	FD-07	Pulley Set	① ② × 1 ③ × 2
KYOC5747	FD-13	Slider Set	④ × 1
KYOC5576	FD-17	Servo Mount Set	⑤ × 4

STOCK NO.	KYOSHO #	DESCRIPTION	CONSISTING OF
KYOC4959	FD-18	Rear Bulk Head	⑥ ⑦ ⑧ × 1
KYOC3453	FD-20	Engine Mount	⑨ × 2
KYOC3534	FD-21	Fly Wheel	⑩ ⑪ × 1
KYOC5963	FD-22	Starter Holder	⑫ × 1
KYOC5962	FD-23	Starter Assembly	⑬ × 1
KYOC4699	FD-24	One-way Assembly	⑭ × 1
KYOC4677	FD-25	Muffler Set	⑮ 1
KYOC2713	FD-26	5mmx10mm Bushing	⑯ × 10
KYOC3971	FD-28	Fuel Tank	⑰ 1
KYOC3972	FD-29	Fuel Tube	⑱ × 1
KYOC2163	FD-30	Battery Holder	⑲ 1
KYOC6131	FD-33	Tail Pipe	㉑ × 1
KYOC5721	FD-37	Shock Set (Front)	㉒ ㉓ ㉔ ㉕ ㉖ ㉗ ㉘ ㉙ × 2
KYOC5722	FD-38	Shock Set (Rear)	㉚ ㉛ ㉜ ㉝ ㉞ ㉟ ㊱ ㊲ ㊳ × 2
KYOC2701	1914	4mmx8mm Bushing	㊴ × 10
KYOC3395	CB-072	E-Ring (E-3)	㊵ × 4
KYOC2197	1901	5mmx10mm Bearing 2	㊶ × 2

OPTIONAL PARTS

STOCK NO.	KYOSHO #	DESCRIPTION	CONSISTING OF
KYOC3957	UM-17	Wheel Set	
KYOC5636	UM-43	Servo Saver Ring	
KYOC4708	1883	Bearing Oil	30cc
KYOC5736	1953	Silicone Oil (S)	
KYOC5737	1954	Silicone Oil (M)	
KYOC5738	1955	Silicone Oil (H)	
KYOC2197	1901	5mmx10mm Bearing	(2)
KYOC2207	1903	4mmx8mm Bearing	(2)
KYOC2217	1911	8mmx14mm Bearing	(2)
KYOC6366	OT-099	Wing Stay	
KYOC6363	OT-107	Wing	
KYOC5692	W-5001	Gold Shock (Short)	1 Pair
KYOC5693	W-5002	Gold Shock (Long)	1 Pair
KYOC5703	W-5003	Platinum Shock (Short)	1 Pair
KYOC5704	W-5004	Platinum Shock (Long)	1 Pair
KYOC5388	W-5005	Adjustable Rod Set	
KYOC6127	W-5061	Universal Swing Shaft	(Replaces) ① ②
KYOC3829	1875	Front Tire (Treaded)	
KYOC6236	W-5031	Low Profile Tire (Hard)	(2)
KYOC6237	W-5032	Low Profile Tire (Soft)	(2)
KYOC6253	W-5071	Front Tire (Soft Block)	(2)
KYOC6254	W-5072	Front Tire (Hard Block)	(2)
KYOC6224	W-5074	Front Tire (Hard Pin Spike)	(2)
KYOC6227	W-5077	Rear Tire (Low Prfl Pin Spike)	(2)
KYOC6228	W-5078	Rear Tire (Low Prfl Block)	(2)
KYOC6000	KC-18	3mm Stopper	(10)
KYOC2950	SD-53	Clutch Bell (12T)	
KYOC2955	SD-54	Clutch Bell (13T)	
KYOC2960	SD-55	Clutch Bell (14T)	
KYOC4735	AB-13	Pilot Shaft	Enya Engine

ENTIRE CONTENTS ©COPYRIGHT 1989, HOBBICO, INC.

PRINTED IN JAPAN