

RADIO CONTROLLED ENGINE POWERED
OFF-ROAD RACING BUGGY

CIRCUIT 1000 SERIES

ADVANCE

- The simplest way to get into off-road gas cars
- "Zip" starter included; no need to buy an electric starter
- "Auto prime" fuel tank primes engine for convenient starting
- Quick clip glow-plug battery holder built in for convenience
- Strong, rigid square-section aluminum ladder-type chassis
- Rear differential for maximum traction
- Roll-cage protection for gear box and radio equipment

TECHNICAL DATA ● TOTAL WEIGHT / 3½ lbs. ● LENGTH / 17½" ● WIDTH / 9" ● HEIGHT / 6¼" ● WHEEL BASE / 10½"
● GROUND CLEARANCE / 1.2" ● FRONT TRACK / 7.2" ● REAR TRACK / 7.4" ● FRONT TIRE / 2.9" X .7" ● REAR TIRE
3.6" X 1.6" ● ENGINE / ENYA "QUICKY" .09 BB (INCLUDED) ● RADIO / 2 CHANNEL



KYOSHO
THE FINEST RADIO CONTROL MODELS

KIT NO. 3088

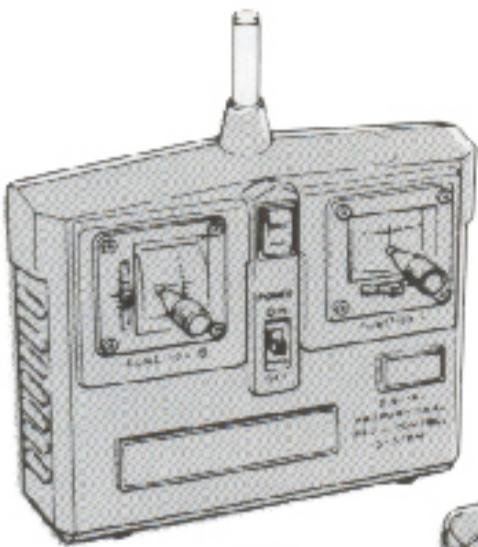
**THINGS YOU WILL NEED
BESIDES THIS KIT**

ADVANCE

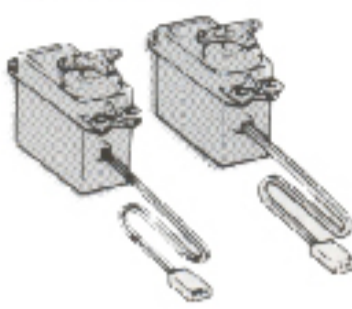
2 CHANNEL RADIO SYSTEM

A two channel, 2 servo radio control system is required for running the Advance. The various components are pictured below.

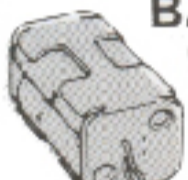
TRANSMITTER



SERVOS



BATTERY HOLDER



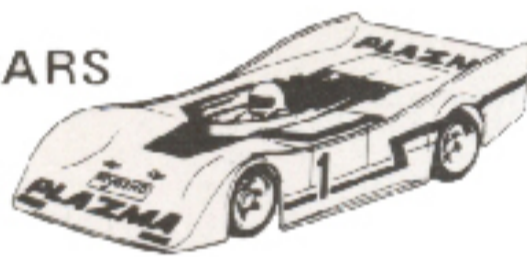
SWITCH



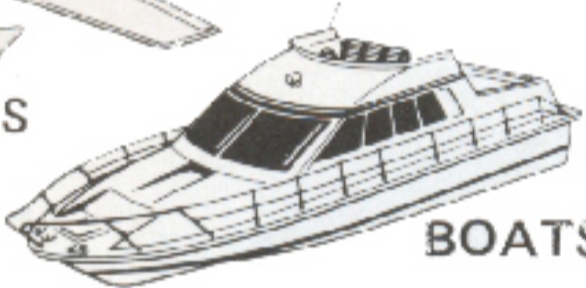
RECEIVER

This type of radio system can also be used for other models requiring only two channels of control.

CARS



AIRPLANES

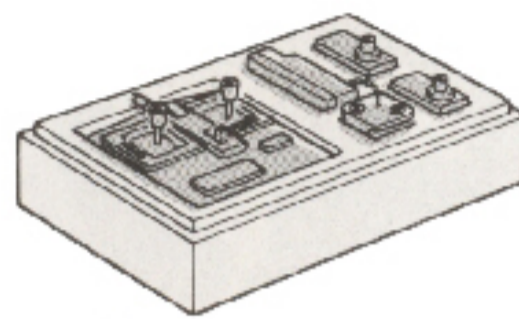


BOATS

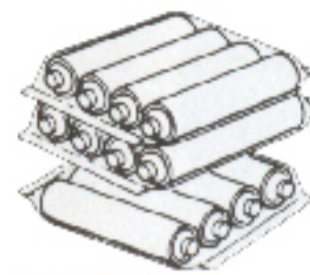
CHECK YOUR RADIO SYSTEM

Follow the instructions that came with your radio system to check out its operation.

You will also need to supply your radio with the proper number of batteries (usually 7 or 8 in the transmitter and 4 for the receiver.)



**2 CHANNEL
RADIO SYSTEM**



**BATTERIES
FOR RADIO**

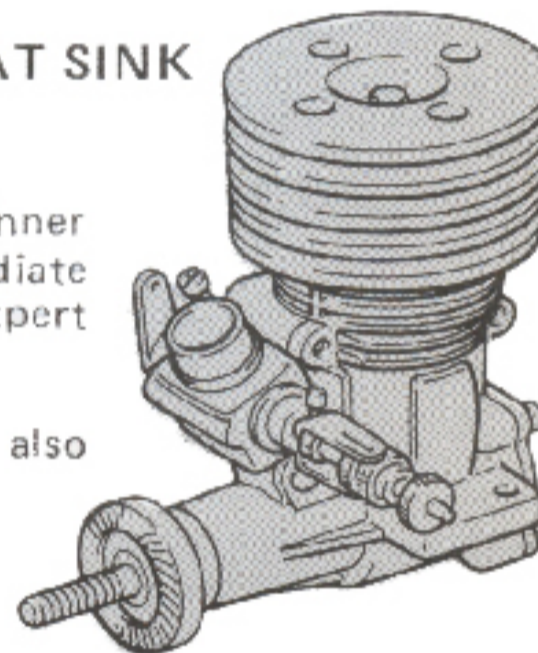
ENGINE

Depending on how you bought your Advance, an engine may have already been included. If not, the following list of engines are recommended on the basis of performance and ease of installation. Note that some engines have more speed and are recommended for more experienced drivers.

HEAT SINK

Enya .09 Quicky R/C. Beginner
O.S. Max .10 FSR. Intermediate
Enya .11 CX. Expert

A muffler for each engine is also required.



NOTE: If the engine you install is not specifically designed for car use, you must also use a HEAT SINK on the head for cooling. The optional Kyosho PN-59 Heatsink will fit the Enya .09 and the O.S. .10 FSR.

REQUIRED TOOLS

These ARE included with the Advance:

1.5mm allen wrench

2mm allen wrench

Open end wrench

Closed wrench (for shocks)

Screw locking compound

These ARE NOT included with the Advance:

Phillips screwdriver

5/16" nut driver

Scissors

Needle nose pliers

Awl

Sharp hobby knife

Standard pliers

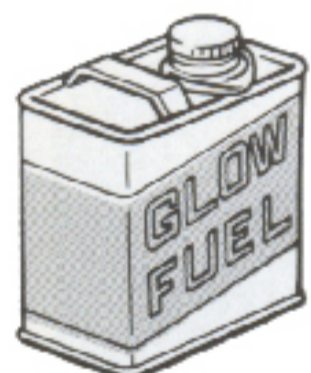
Cyanoacrylate glue (such as Jet, CA, Hot Stuff or Crazy Glue)

Polyurethane paint (such as Pactra Formula-U)

Masking tape

Paint brush

ITEMS YOU WILL NEED FOR RUNNING



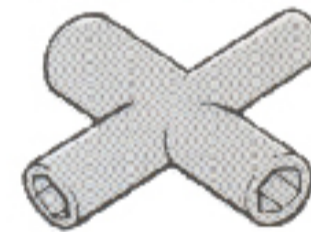
FUEL

A GOOD QUALITY glow fuel is very important. Choose a blend with 10-25% nitromethane content.



**'D' SIZE
BATTERY**

To initially start the engine's glow plug, you will need one 'D' size alkaline flashlight battery. The standard (non-alkaline) type will not work well.



GLOW PLUG WRENCH

A glow plug wrench allows you to take the plug from your engine. An 8mm or 5/16" nut driver can also be used.

IMPORTANT! BEFORE YOU BEGIN

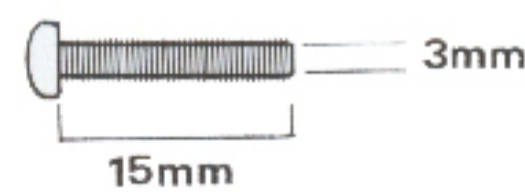
A WORD OF WARNING is necessary, especially if this happens to be your first gas-powered vehicle. Gas-powered cars are subjected to stress and strain due to high engine RPM, rough terrain and the racing/high performance usage that they receive. As a result, they need continual preventative maintenance to keep them in operating condition.

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 feel 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! Read through this entire manual thoroughly to familiarize yourself with the parts and methods of construction used before actually starting to build.

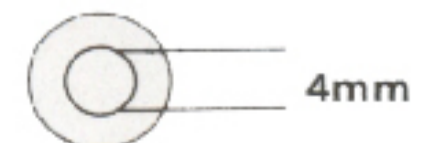
METRIC NUTS AND BOLTS

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 M3 x 15 screw is 15 mm long and 3mm in diameter. Some round parts may be labeled as a "4 Ø Washer"

M3 x 15 SCREW

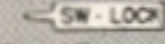


4 Ø WASHER







er" (this would be a washer with a 4mm inside diameter) or a "3 Ø 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.


In addition to the shock/gear box oil (red liquid) you will also find a small tube labeled "screw cement". This bluish-green locking compound should be used on all nuts and bolts in the car including those parts which are ALREADY ASSEMBLED to ensure reliability.

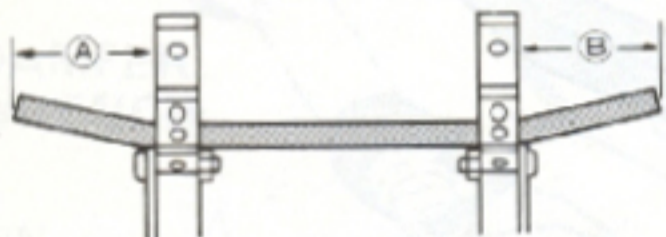
We have labeled those parts of the car where it is ESPECIALLY IMPORTANT to apply the compound with this symbol . Remember that these are not the only places to apply it. If you do not use the screw cement, all the nuts and bolts of the car WILL eventually fall out.

1 SMALL PARTS NEEDED:

- M2.6 X 12 SCREW (4) 
- M3 X 15 SCREW (2) 
- M2.6 NUT (4) 
- M3 NUT (2) 

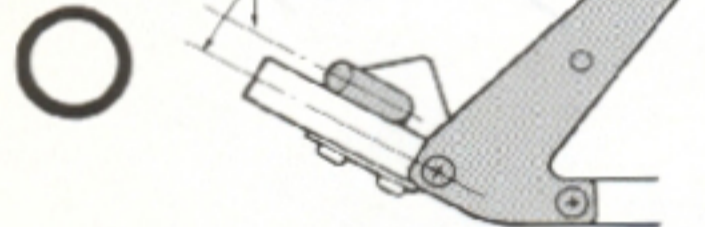
2 SMALL PARTS NEEDED:

- M3 X 12 SCREW (4) 



(Make sure A and B are the same length)

Set Arm Shaft this angle:





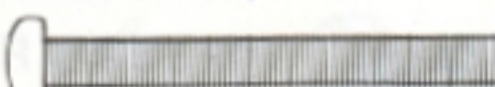



Arm Shaft is too high:

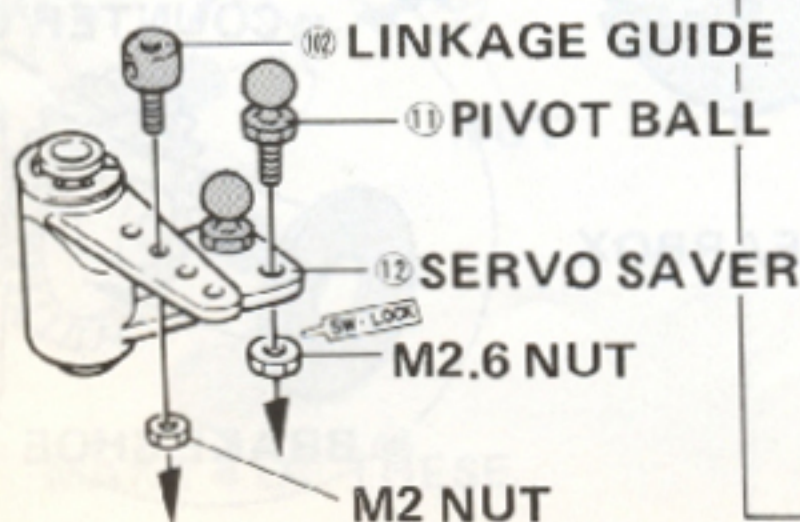


Arm Shaft is too low:

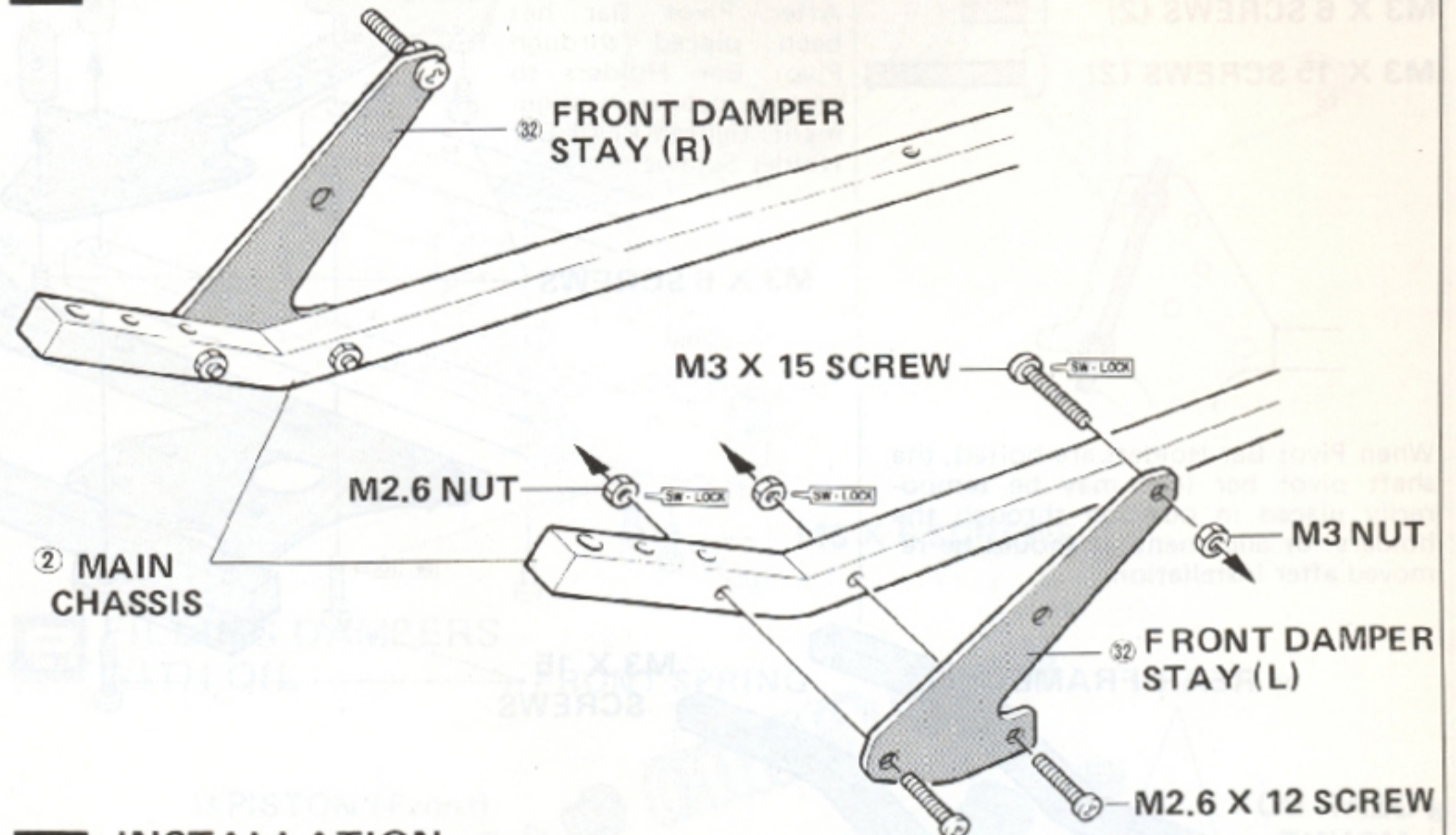


3 SMALL PARTS NEEDED:

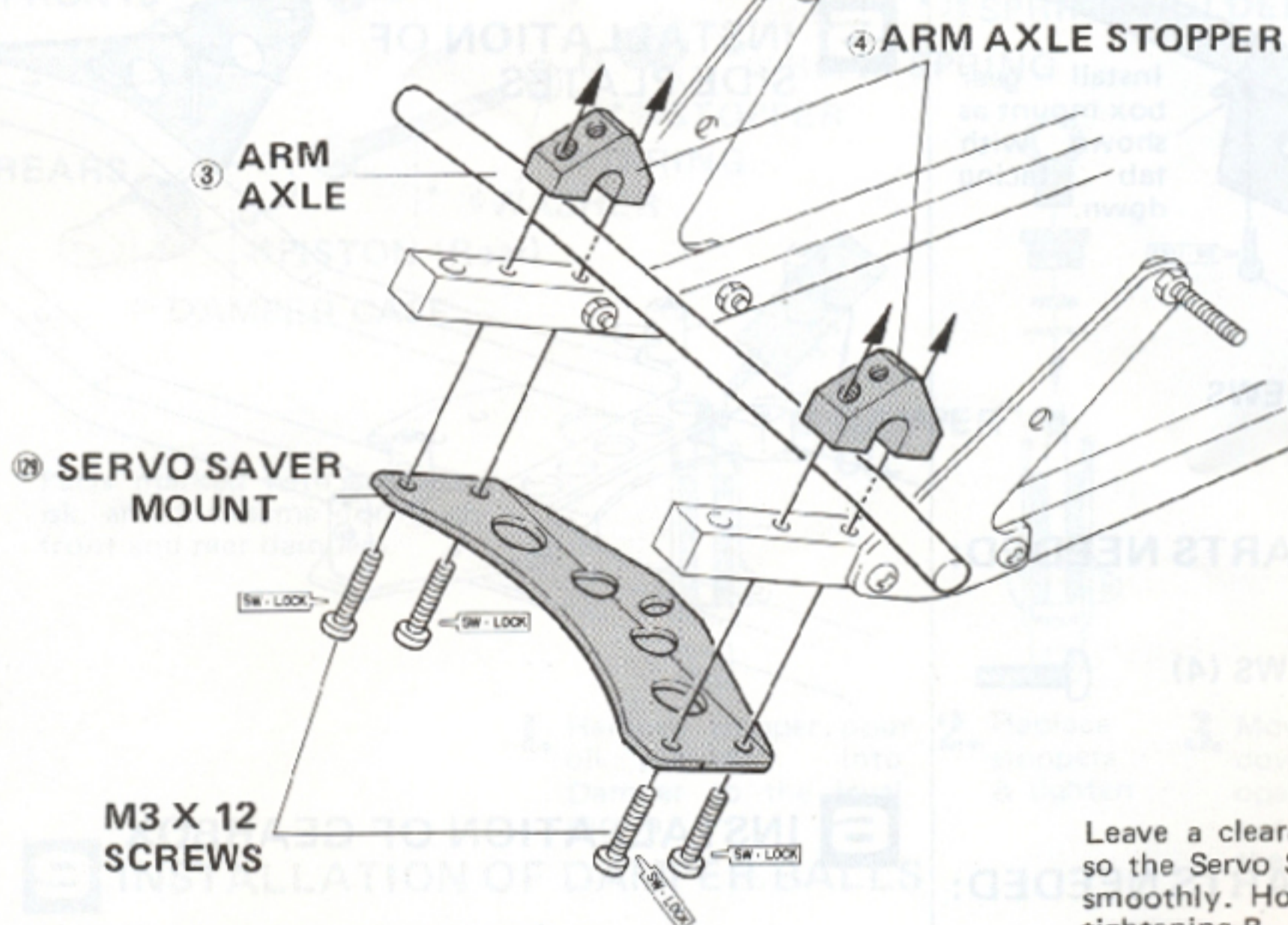
- PIVOT BALL (2) 
- LINKAGE GUIDE (2) 
- M4 X 30 SCREWS (1) 
- M2 NUT (1) 
- M2.6 NUT (2) 
- M4 NUT (2) 



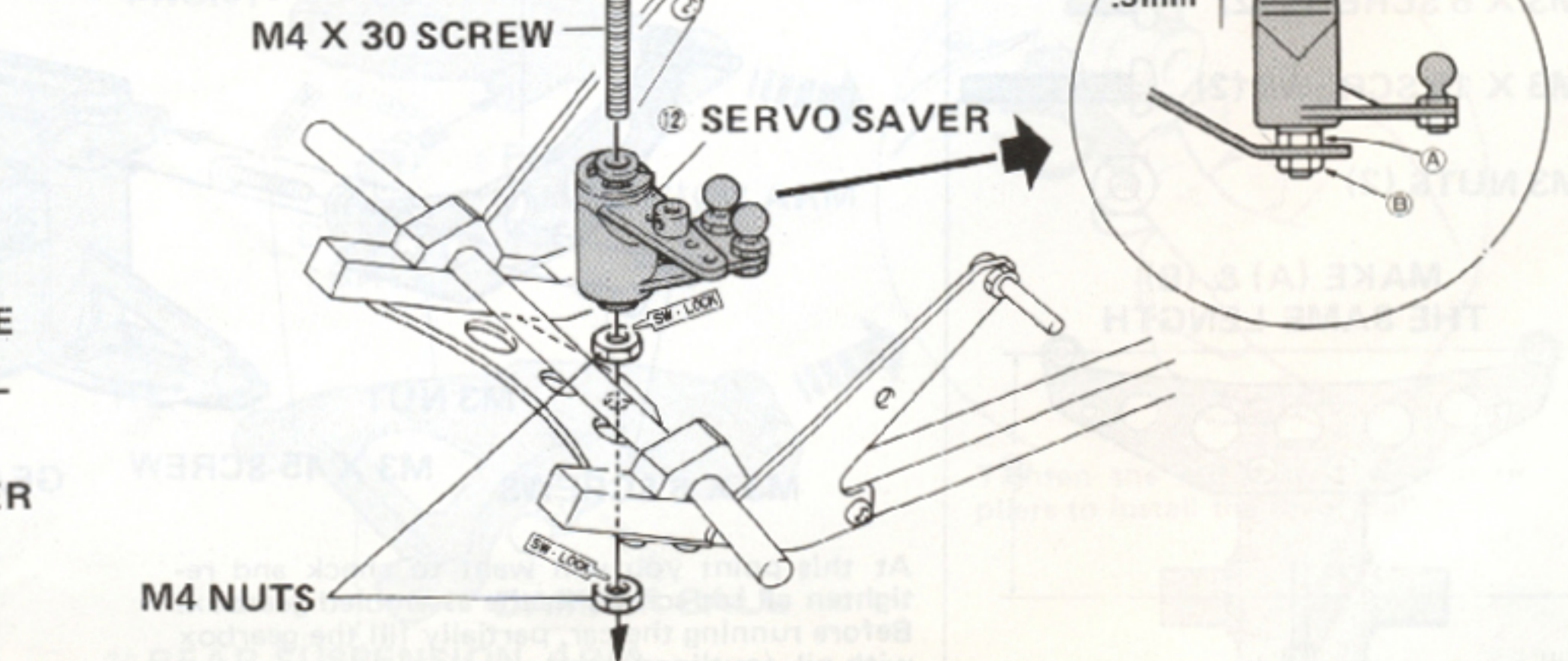
1 INSTALLATION OF FRONT DAMPER STAY



2 INSTALLATION OF ARM AXLE








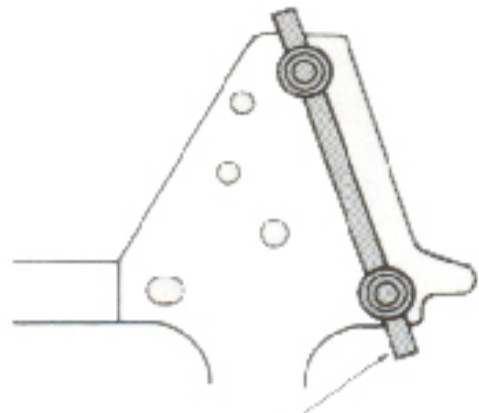
3 INSTALLATION OF SERVO SAVER



Leave a clearance of 0.5mm so the Servo Saver can swing smoothly. Hold nut A while tightening B.

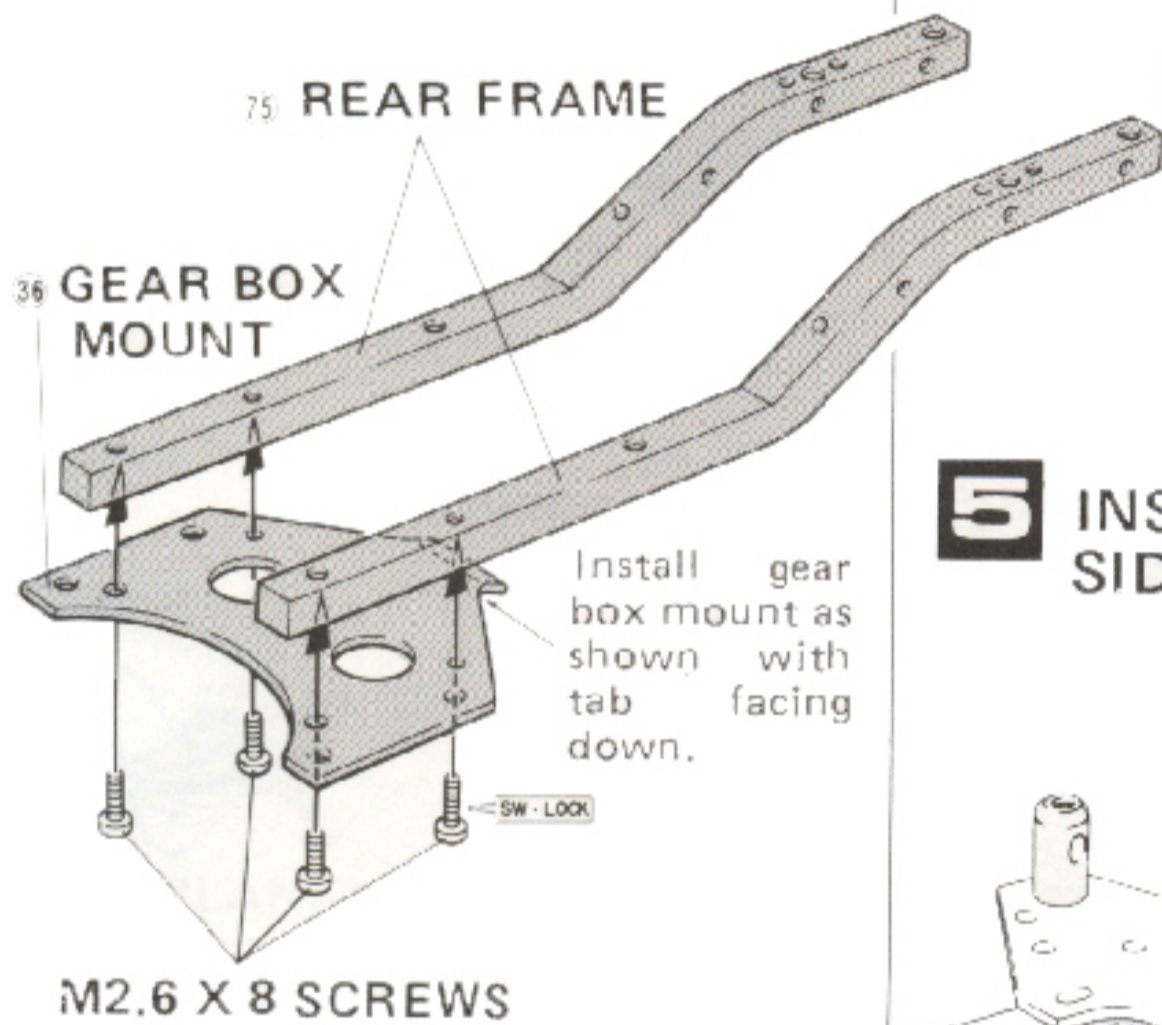
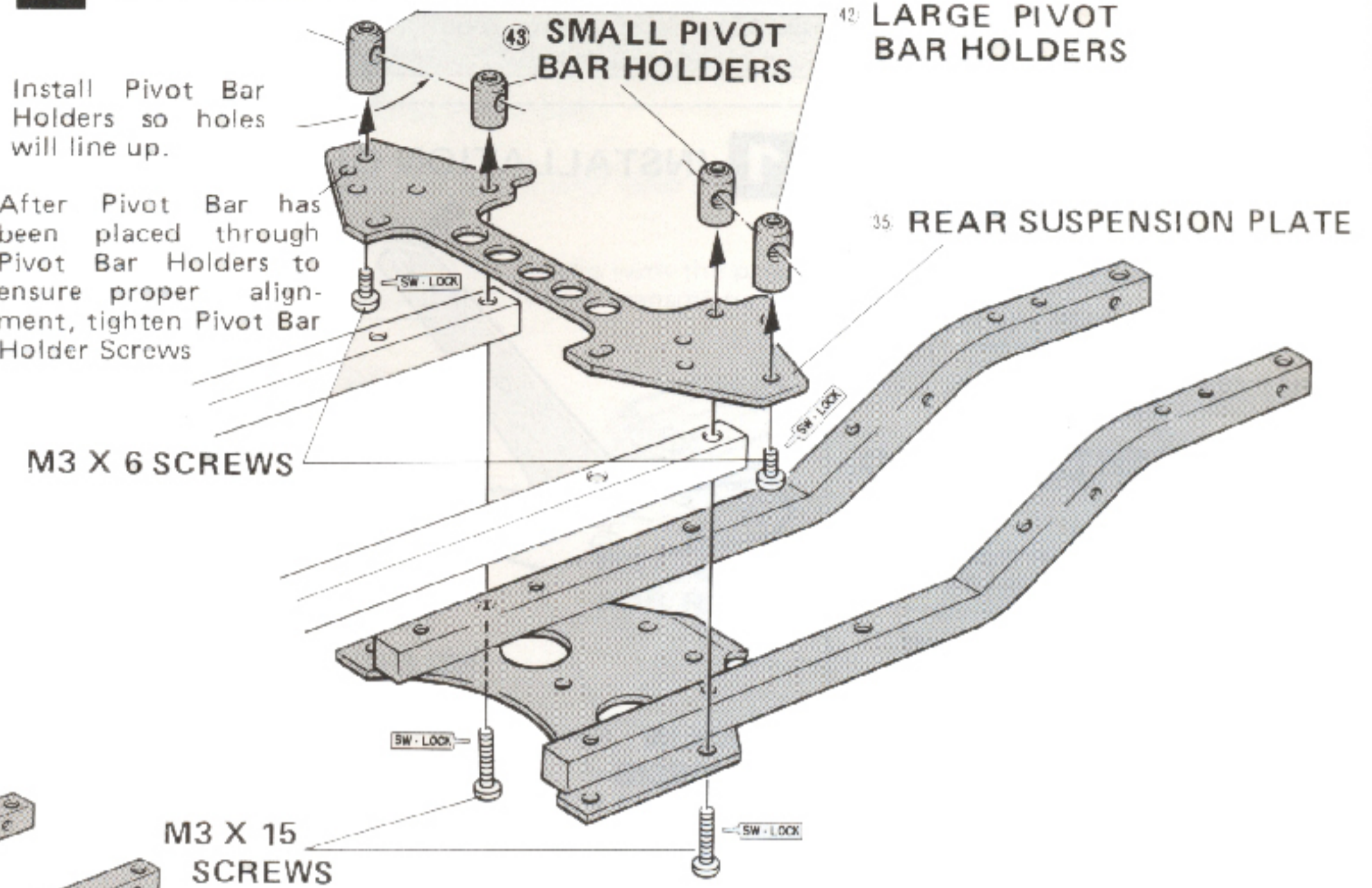
4 SMALL PARTS NEEDED:

- 42 LARGE PIVOT BAR HOLDER - A (2) 
- 43 SMALL PIVOT BAR HOLDER - B (2) 
- M2.6 X 8 SCREWS (4) 
- M3 X 6 SCREWS (2) 
- M3 X 15 SCREWS (2) 

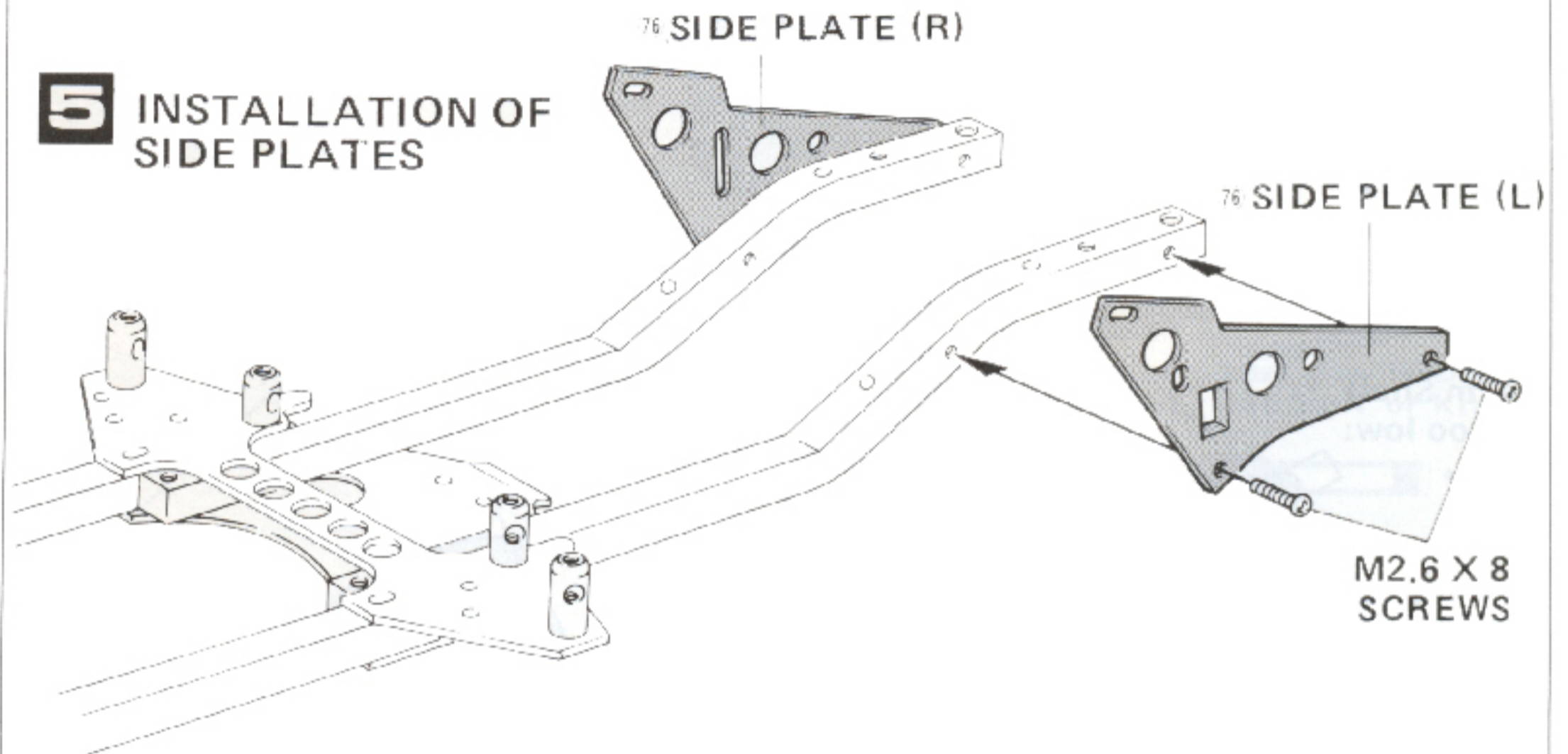


When Pivot Bar Holders are bolted, the shaft pivot bar (41) may be temporarily placed in position through the holders for alignment. It should be removed after installation.

4 ASSEMBLING THE REAR CHASSIS



5 INSTALLATION OF SIDE PLATES

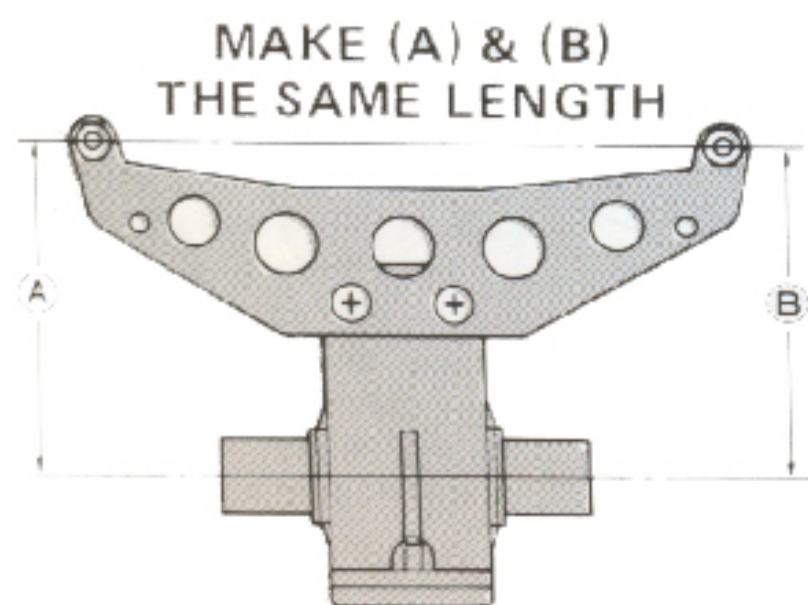


5 SMALL PARTS NEEDED:

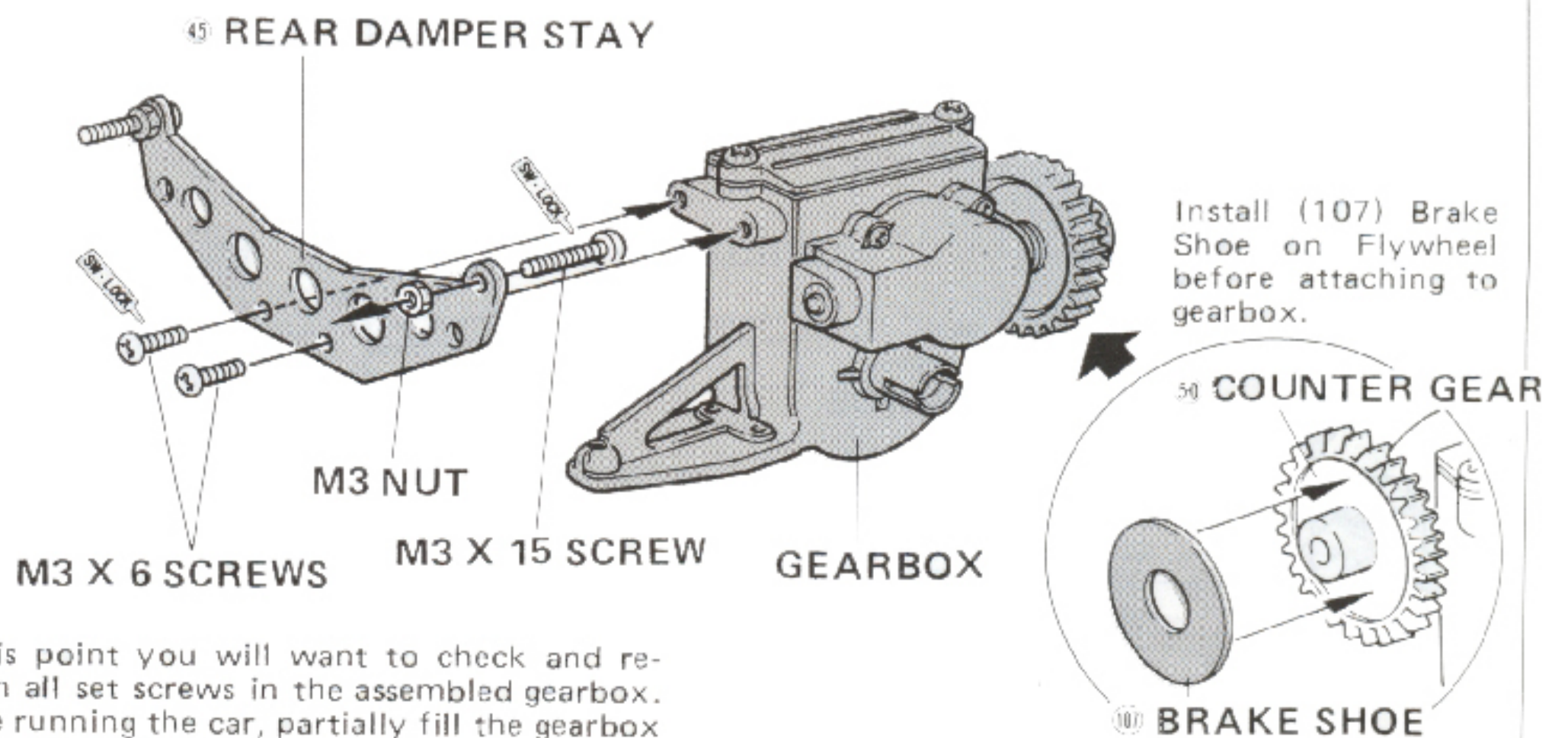
- M2.6 X 8 SCREWS (4) 

6 SMALL PARTS NEEDED:

- M3 X 6 SCREWS (2) 
- M3 X 15 SCREWS (2) 
- M3 NUTS (2) 




6 INSTALLATION OF GEARBOX

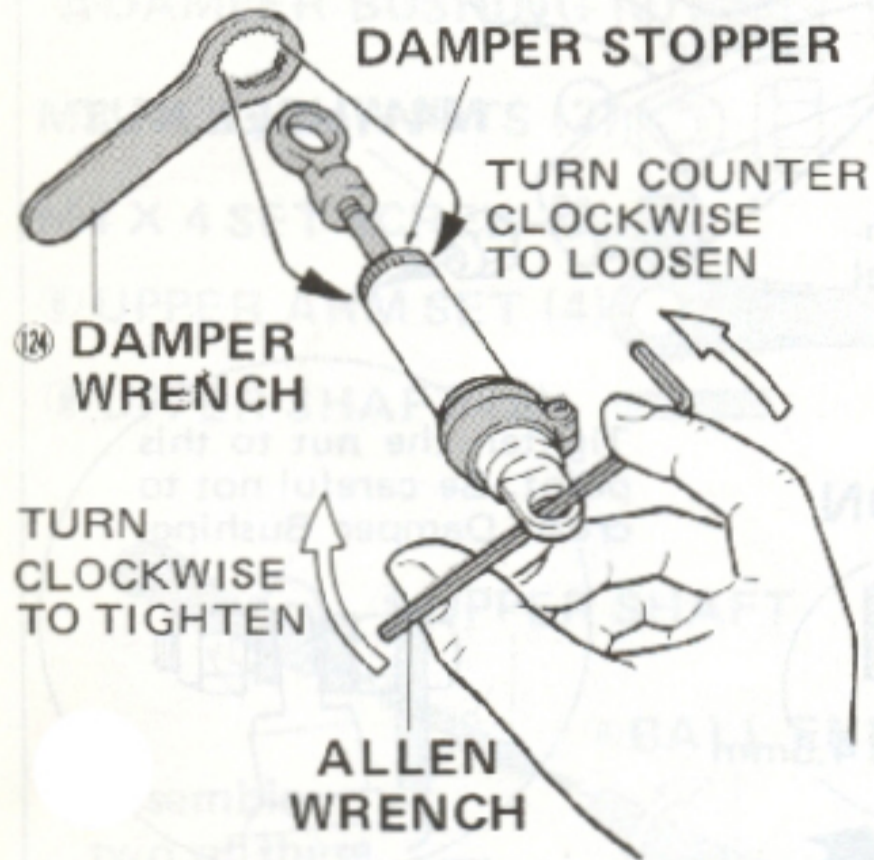


At this point you will want to check and re-tighten all set screws in the assembled gearbox. Before running the car, partially fill the gearbox with oil. (outlined later)

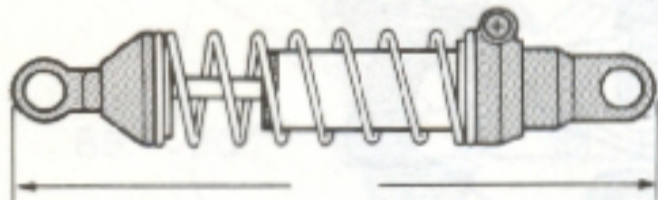
7 SMALL PARTS NEEDED:

M3 X 6 NUTS (3) 

8 The Damper (shocks) are already assembled, but they must be taken apart to fill them with oil. Use the (124) Damper wrench and an Allen Wrench for disassembly.



You may adjust the length of the damper by screwing the (15) damper end in and out.

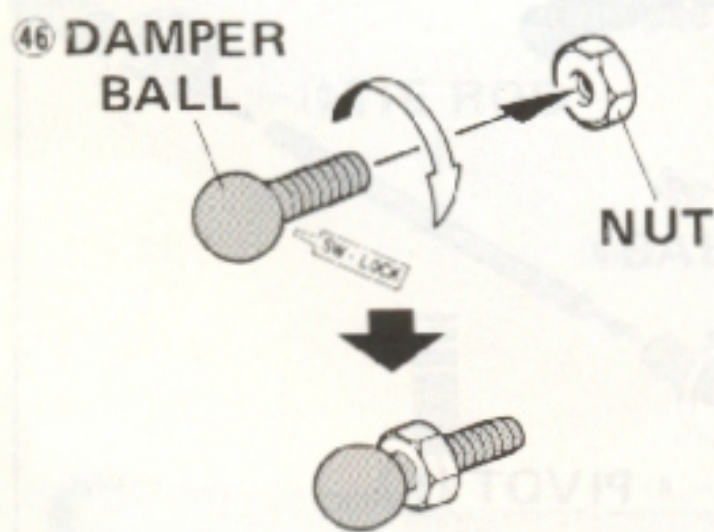


The assembled damper pairs should be uniform in length. Note that the rears are longer than the fronts.

9 SMALL PARTS NEEDED:

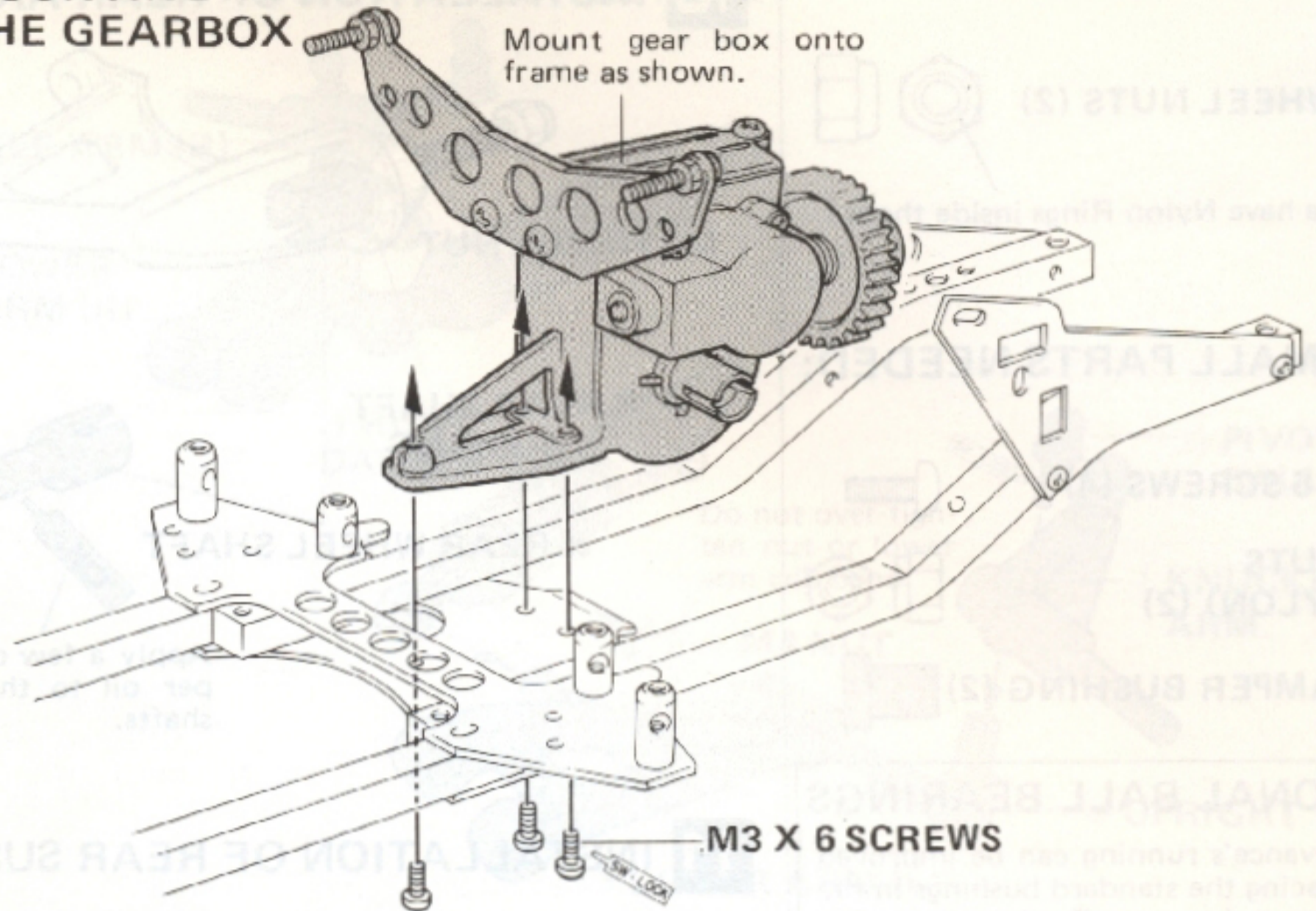
46 DAMPER BALL (4) 

M3 NUT (4) 

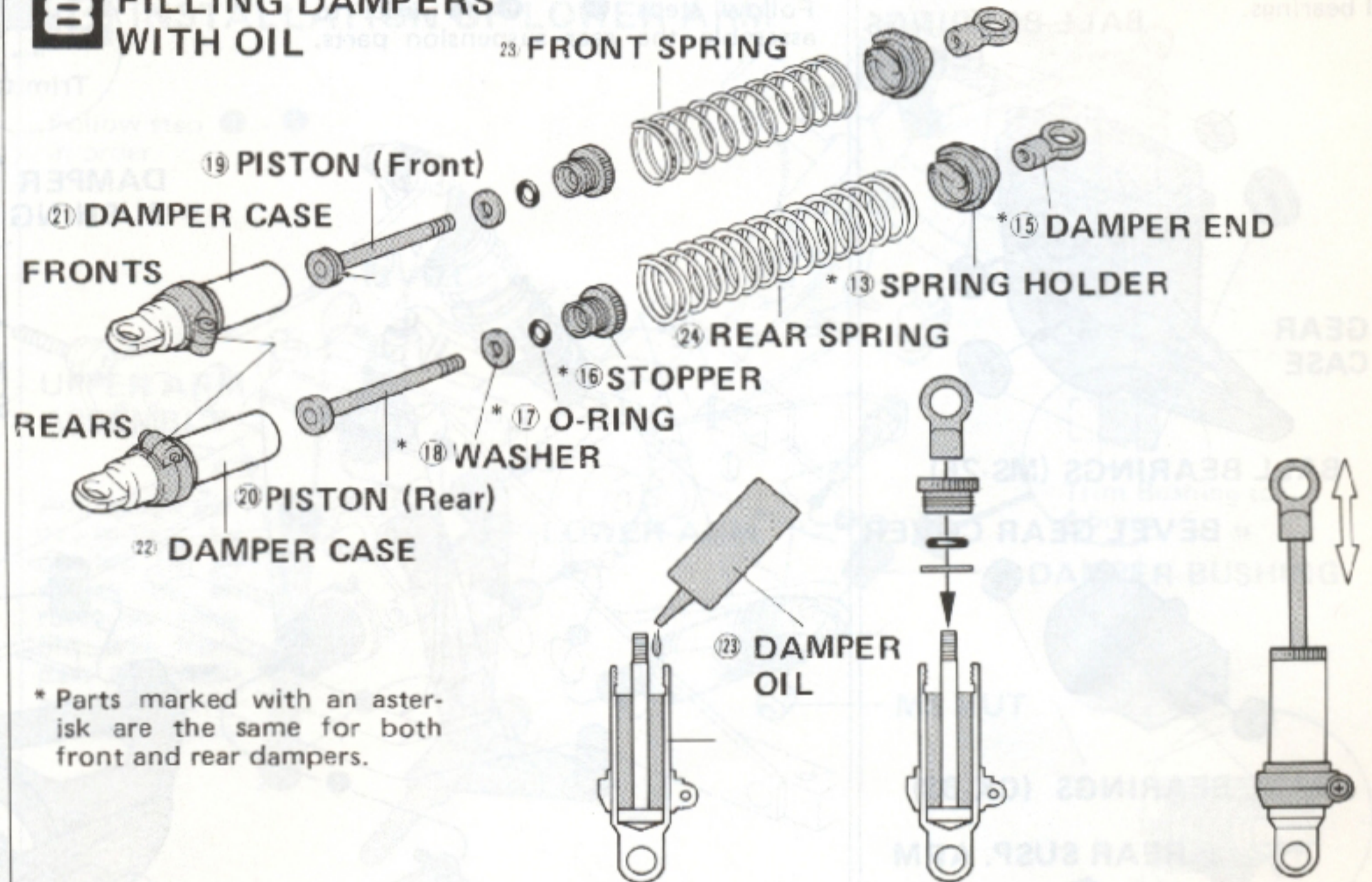


MAKE 4 OF THESE

7 MOUNTING THE GEARBOX



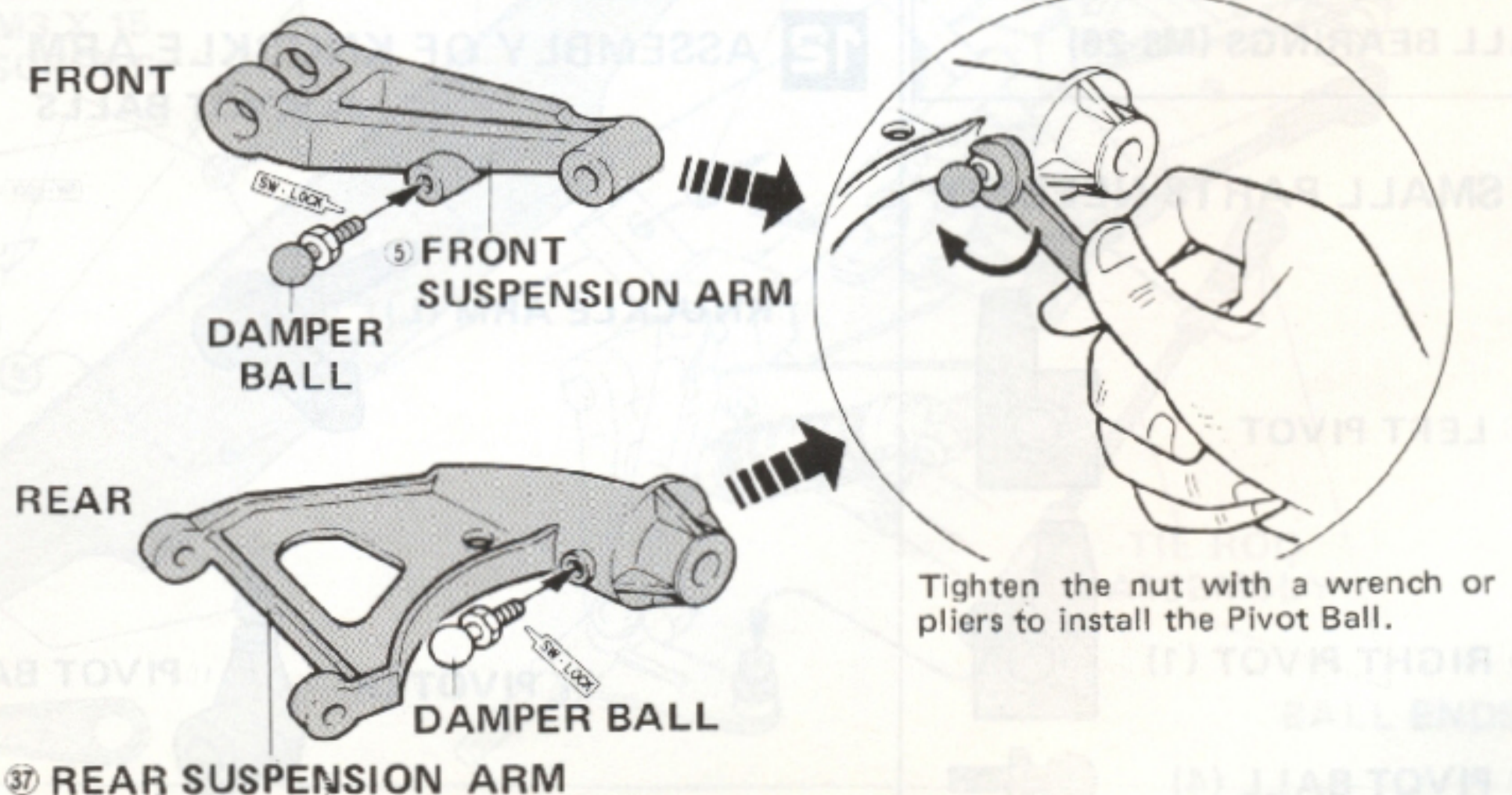
8 FILLING DAMPERS WITH OIL



* Parts marked with an asterisk are the same for both front and rear dampers.

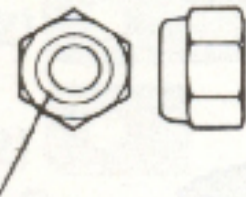
1. Remove stopper, pour oil provided into Damper to the level shown.
2. Replace stoppers & tighten
3. Move piston up and down to be sure it operates smoothly. If not, drain some of the oil.

9 INSTALLATION OF DAMPER BALLS



10 SMALL PARTS NEEDED:

M4 WHEEL NUTS (2)



(These have Nylon Rings inside them.)

11 SMALL PARTS NEEDED:

M3 X 6 SCREWS (4)



M3 NUTS (w/NYLON) (2)



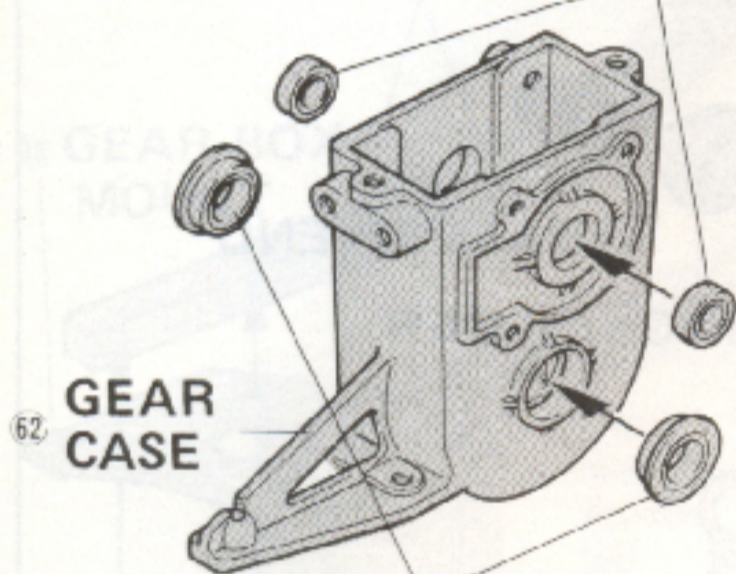
33 DAMPER BUSHING (2)



OPTIONAL BALL BEARINGS

The Advance's running can be improved by replacing the standard bushings in the gear case and rear suspension arms with ball bearings.

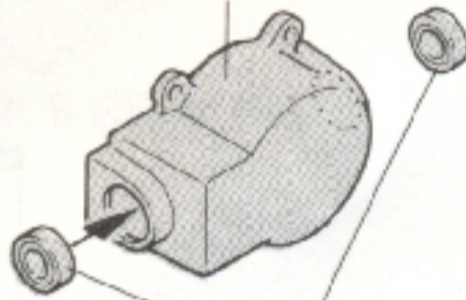
BALL BEARINGS (CK-63)



62 GEAR CASE

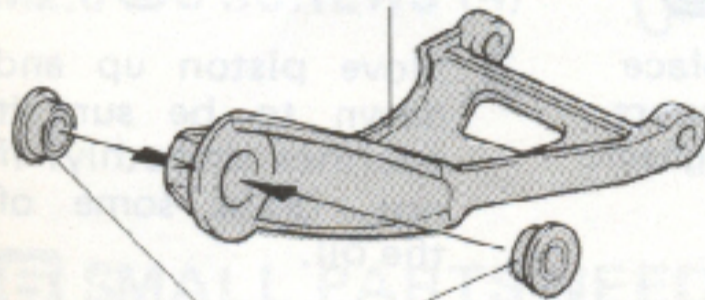
BALL BEARINGS (MS-26)

47 BEVEL GEAR COVER



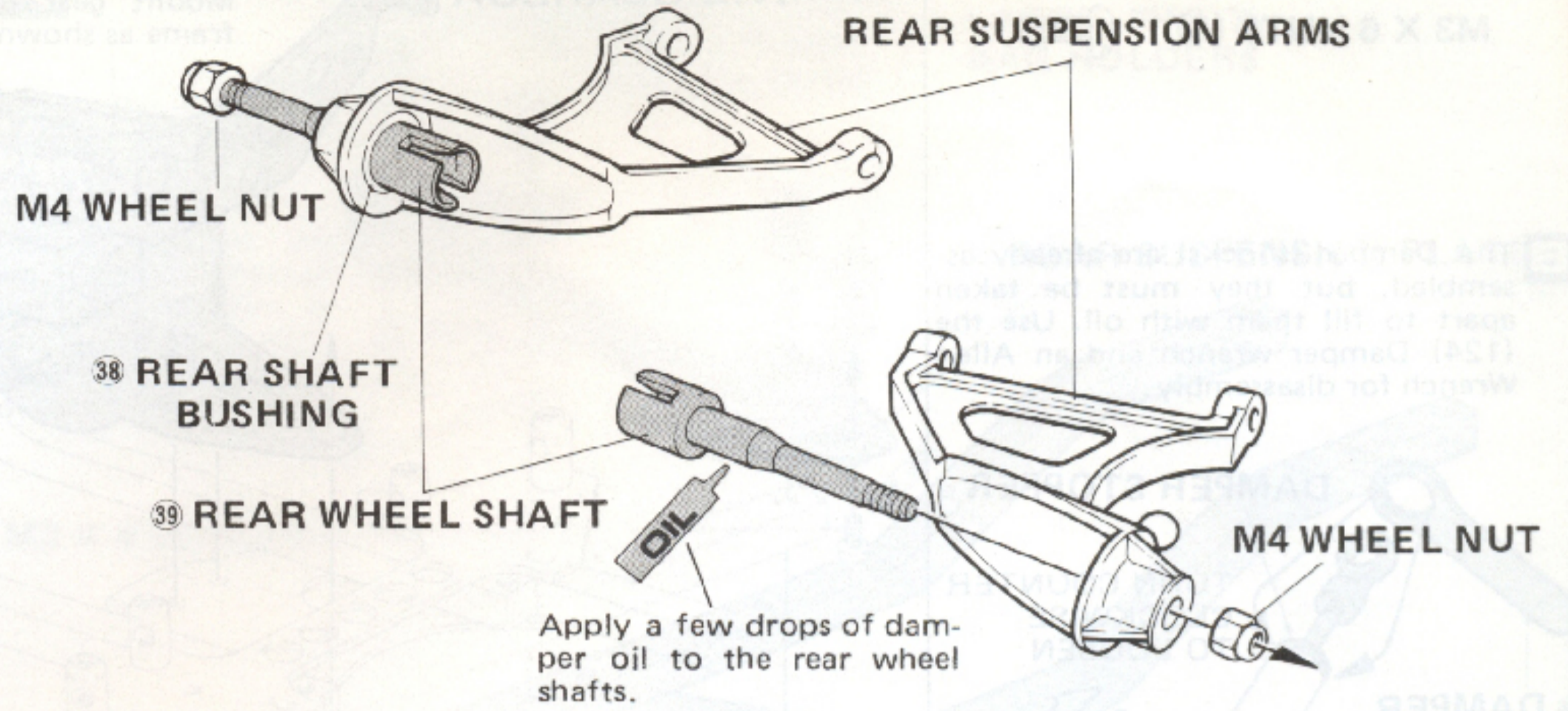
BALL BEARINGS (CK-63)

37 REAR SUSP. ARM



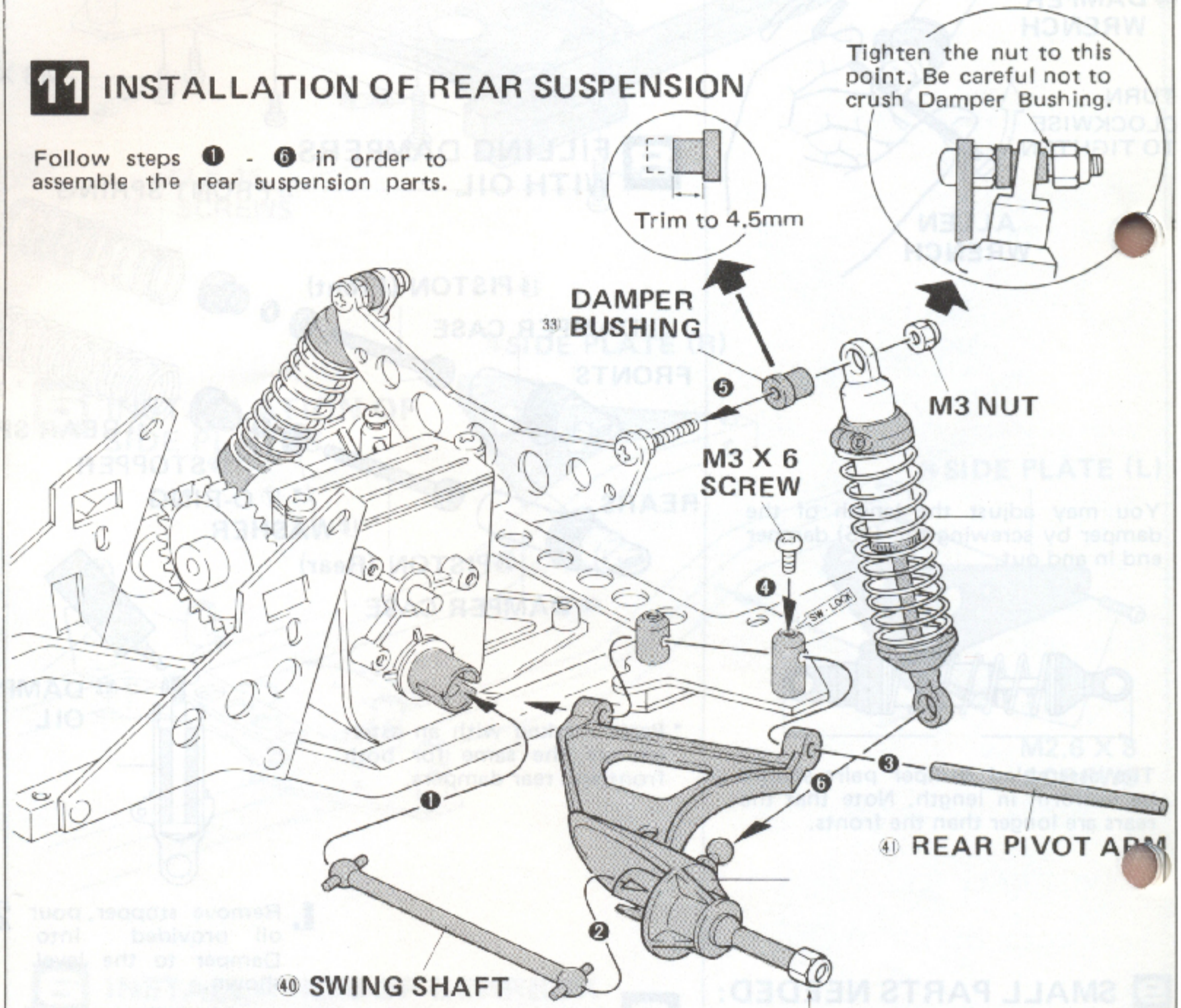
BALL BEARINGS (MS-26)

10 INSTALLATION OF REAR AXLE



11 INSTALLATION OF REAR SUSPENSION

Follow steps 1 - 6 in order to assemble the rear suspension parts.



Remove this nut (Left and Right) after completing this step

12 ASSEMBLY OF KNUCKLE ARM

11 PIVOT BALLS

7 KNUCKLE ARM (L)

7 KNUCKLE ARM (R)

6 LEFT PIVOT

6 RIGHT PIVOT (1)

11 PIVOT BALL (4)

6 PIVOT (R)

11 PIVOT BALL

6 PIVOT (L)

13 SMALL PARTS NEEDED:

- 11 PIVOT BALL (2)

Leave enough play so upright will move w/o binding



14 SMALL PARTS NEEDED:

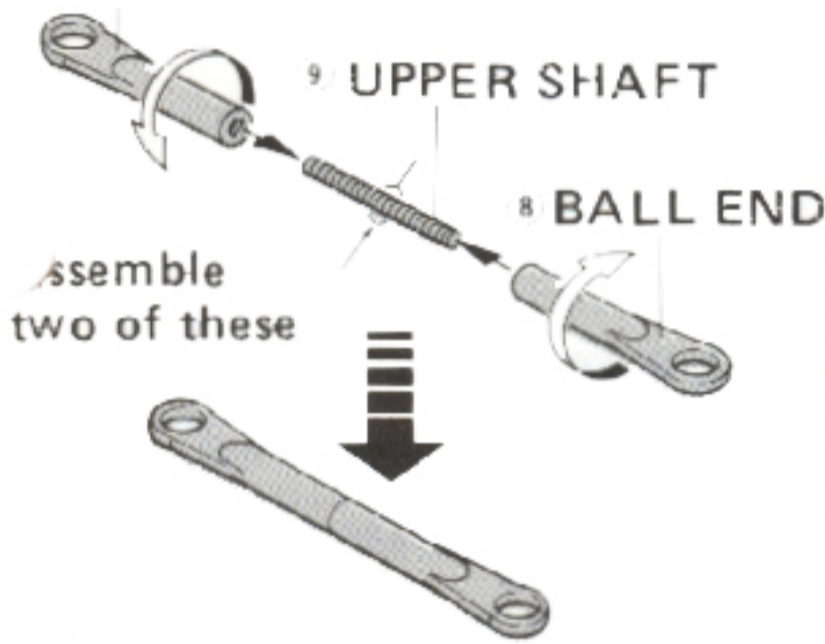
- 33 DAMPER BUSHING (2)

- M3 (w/Nylon) NUTS (2)

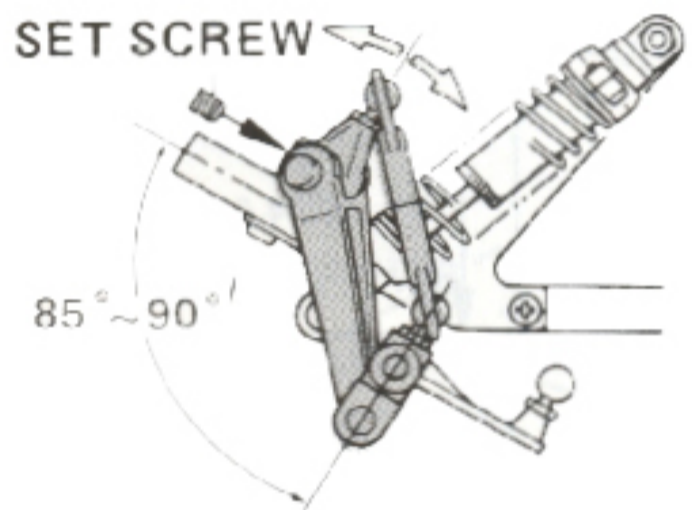
- M4 X 4 SET SCREW (2)

- 8 UPPER ARM SET (4)

- 9 UPPER SHAFT (2)



Tighten two ball ends onto the upper shaft halfway from both ends.



15 SMALL PARTS NEEDED:

- M3 X 15 SCREWS (2)

- M3 NUTS (2)

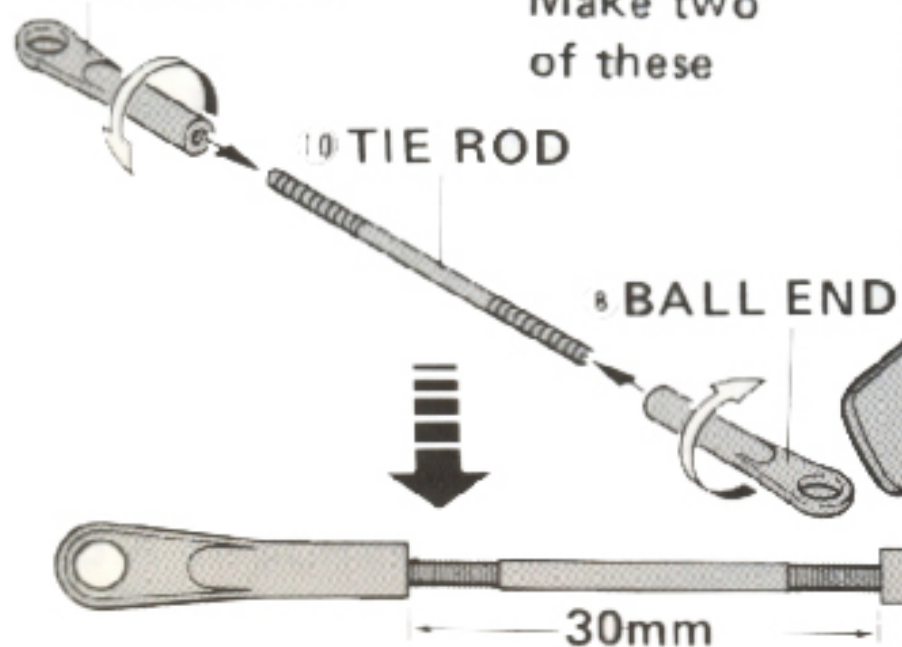
- M3 WASHERS (2)

- 8 BALL ENDS (4)

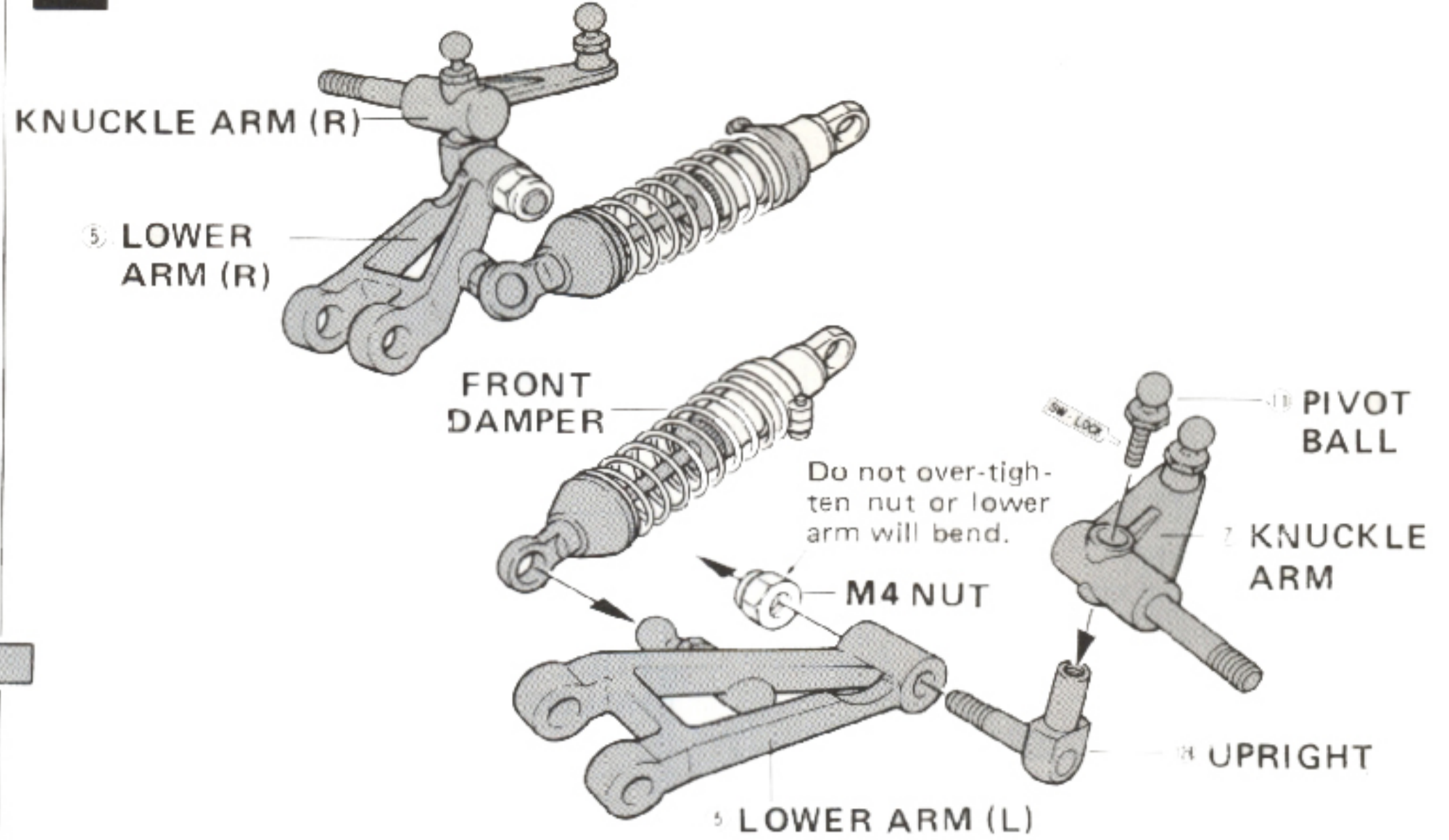
- 10 TIE RODS (2)

- 8 BALL END

Make two of these

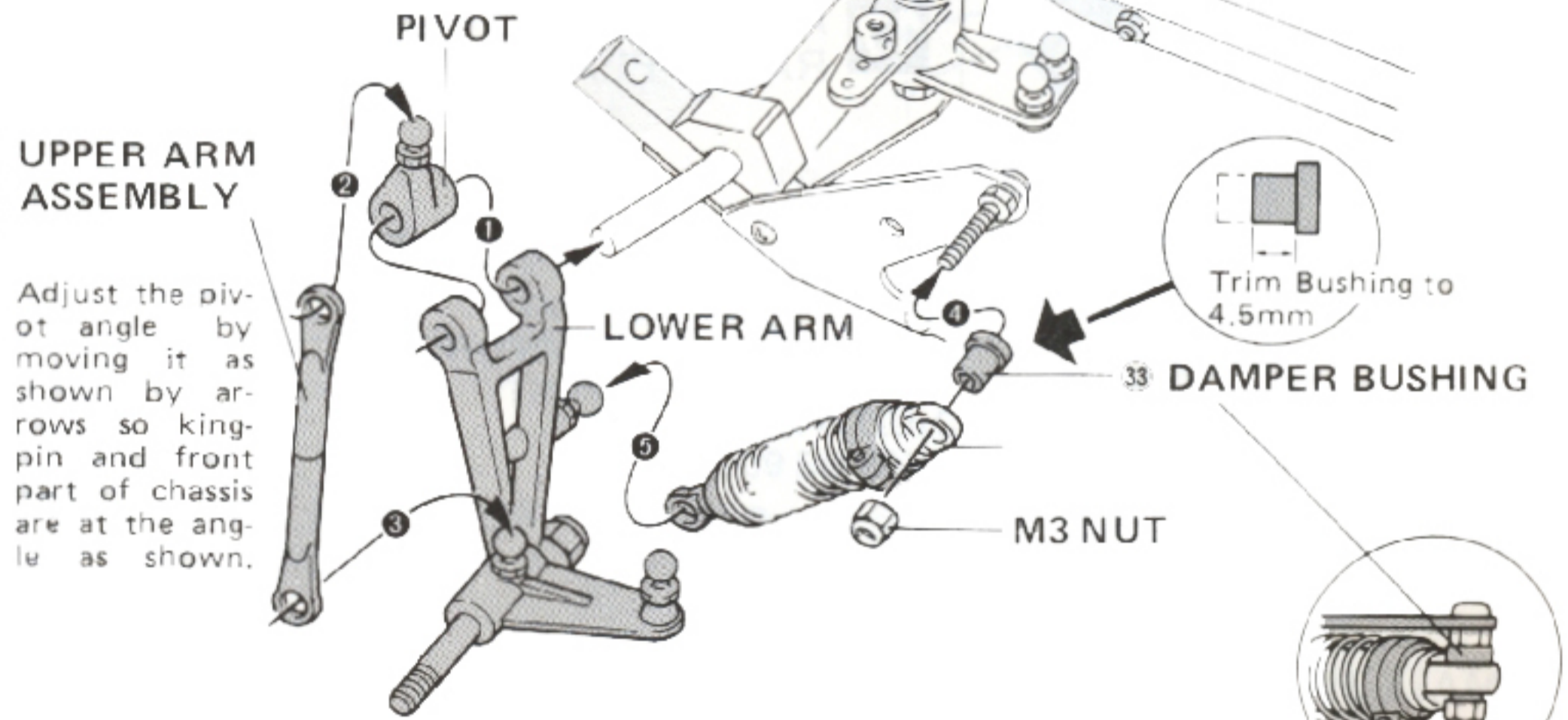


13 INSTALLATION OF KNUCKLE ARM

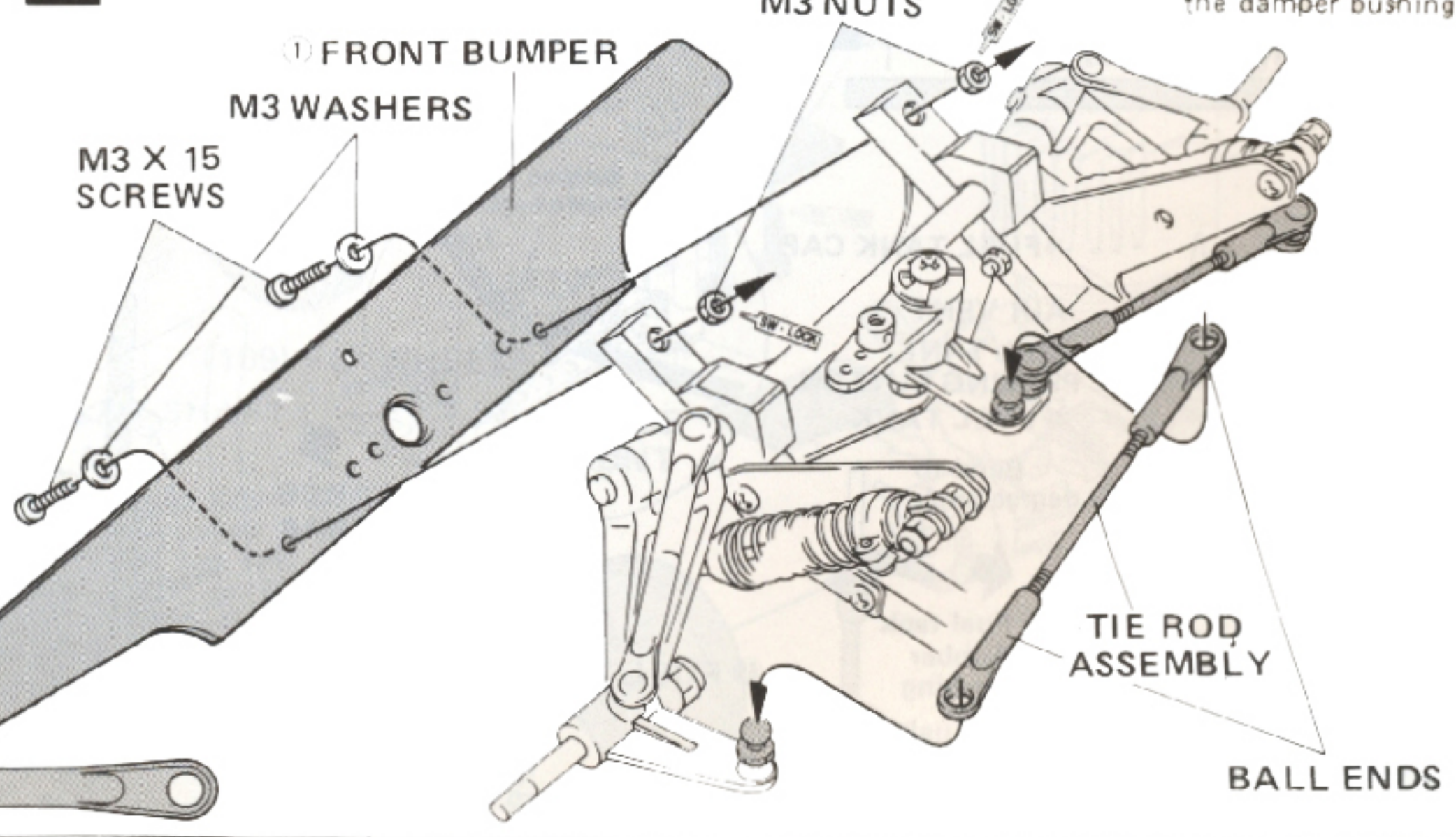


14 INSTALLATION OF LOWER ARM


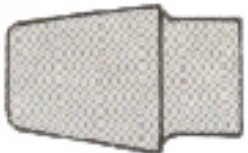



Follow step 1 - 5 in order






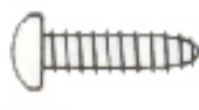

15 INSTALLATION OF TIE ROD



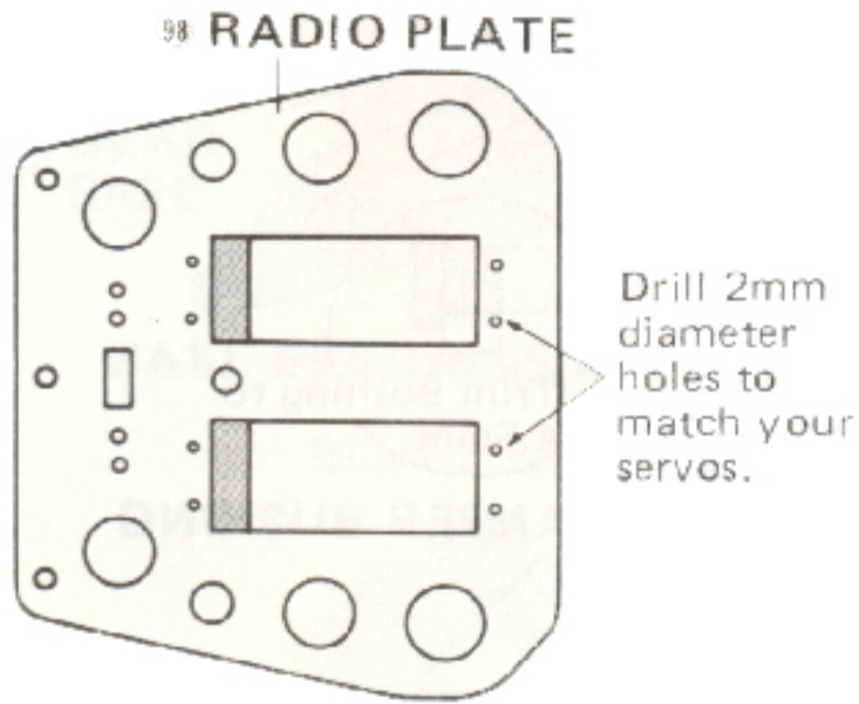
16 SMALL PARTS NEEDED:

- ANTENNA CAP (1) 
- ANTENNA BASE (1) 
- M3 X 6 SCREWS (4) 
- M3 X 14 SCREW (1) 
- M3 NUTS (2) 



17 SMALL PARTS NEEDED:

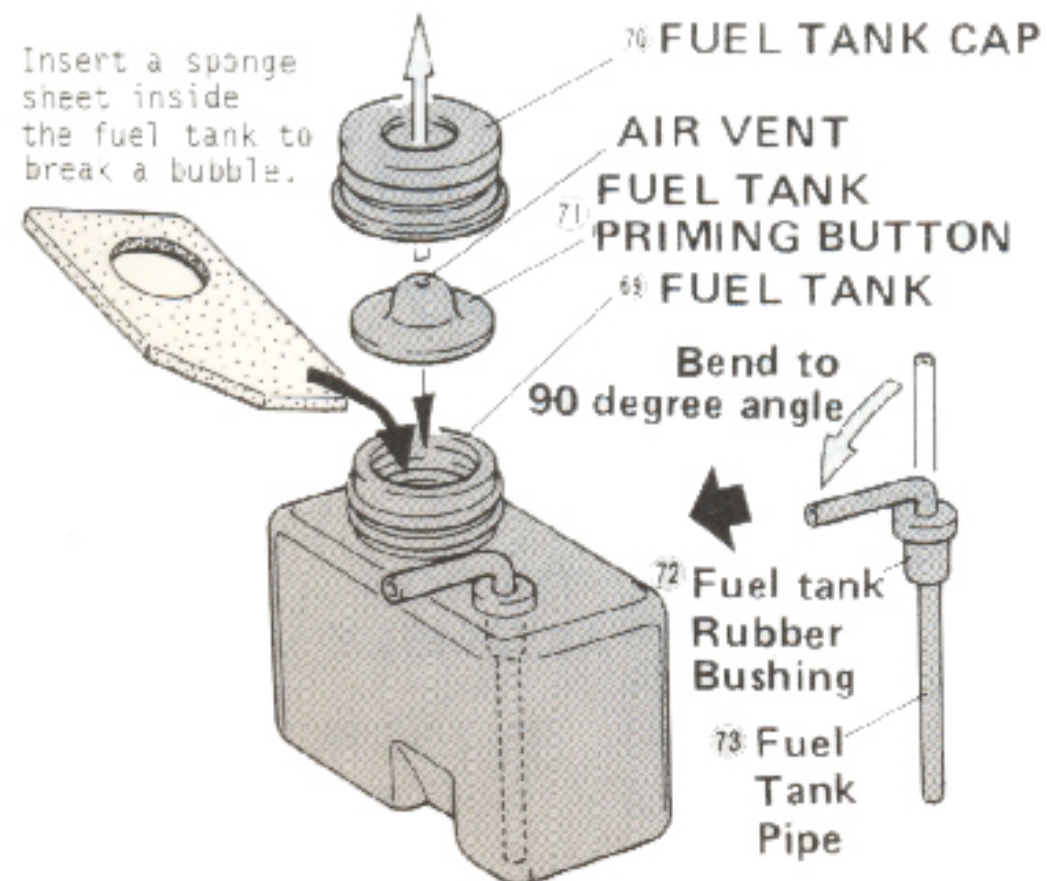
-  BODY SUPPORT POST (1) 
- M3 X 30 SCREW (1) 
- M3 X 10 SCREWS (8) (self tapping) 
- M3 NUT (1) 

If you are using larger servos you may trim away the shaded area.

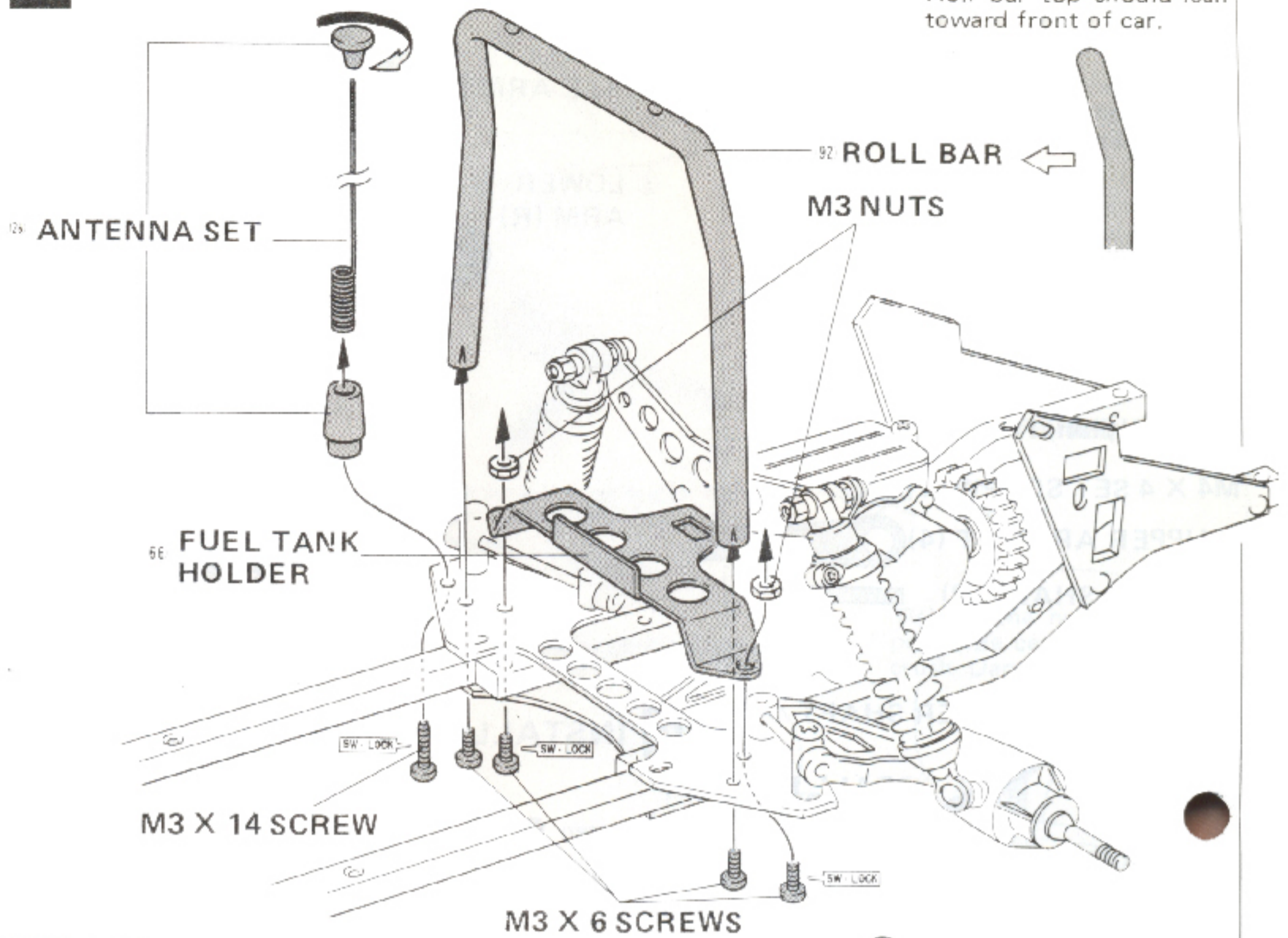


18 SMALL PARTS NEEDED:

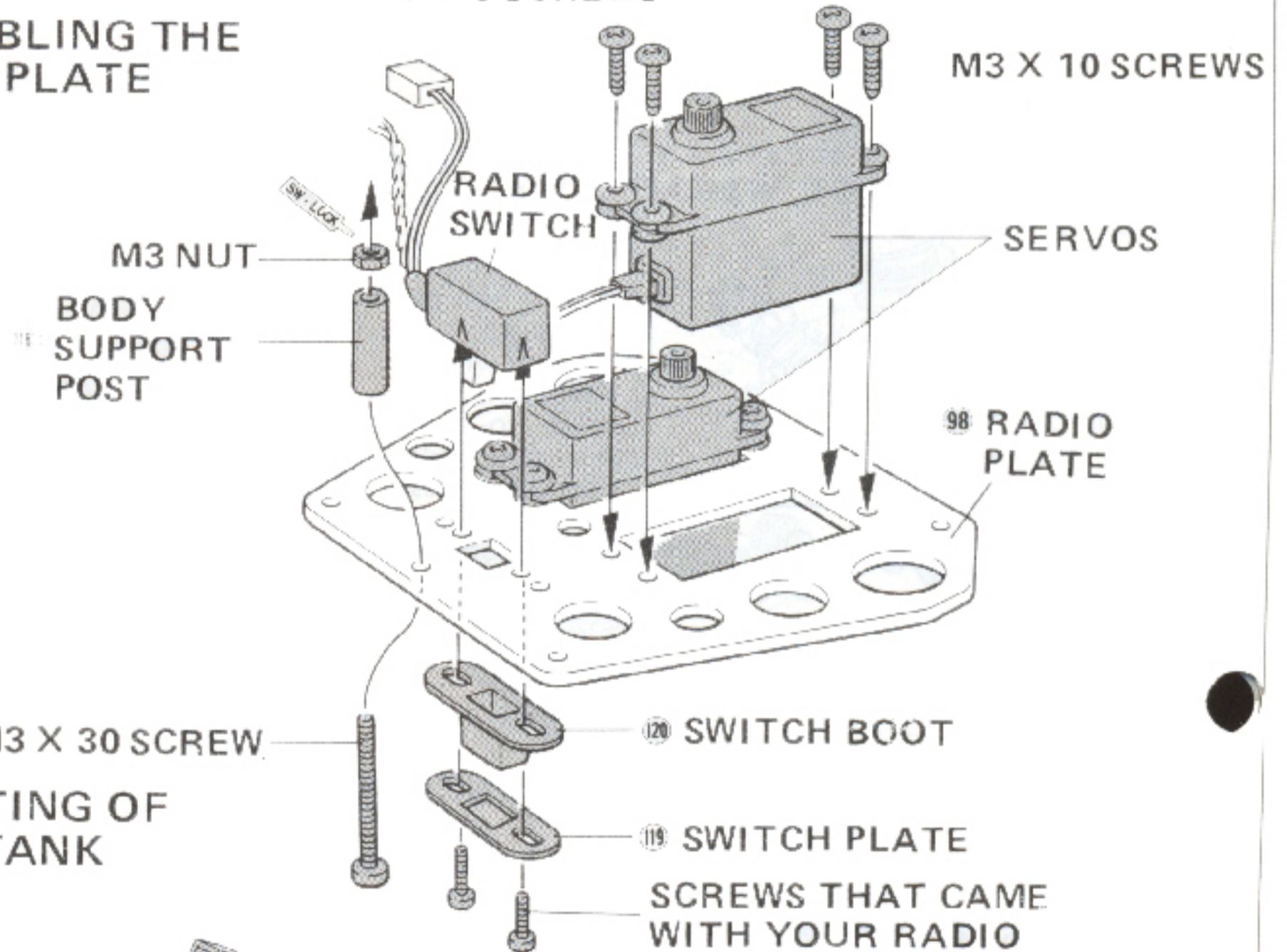
- 72 FUEL TANK BUSHING (1) 
- 73 FUEL TANK PIPE (1) 



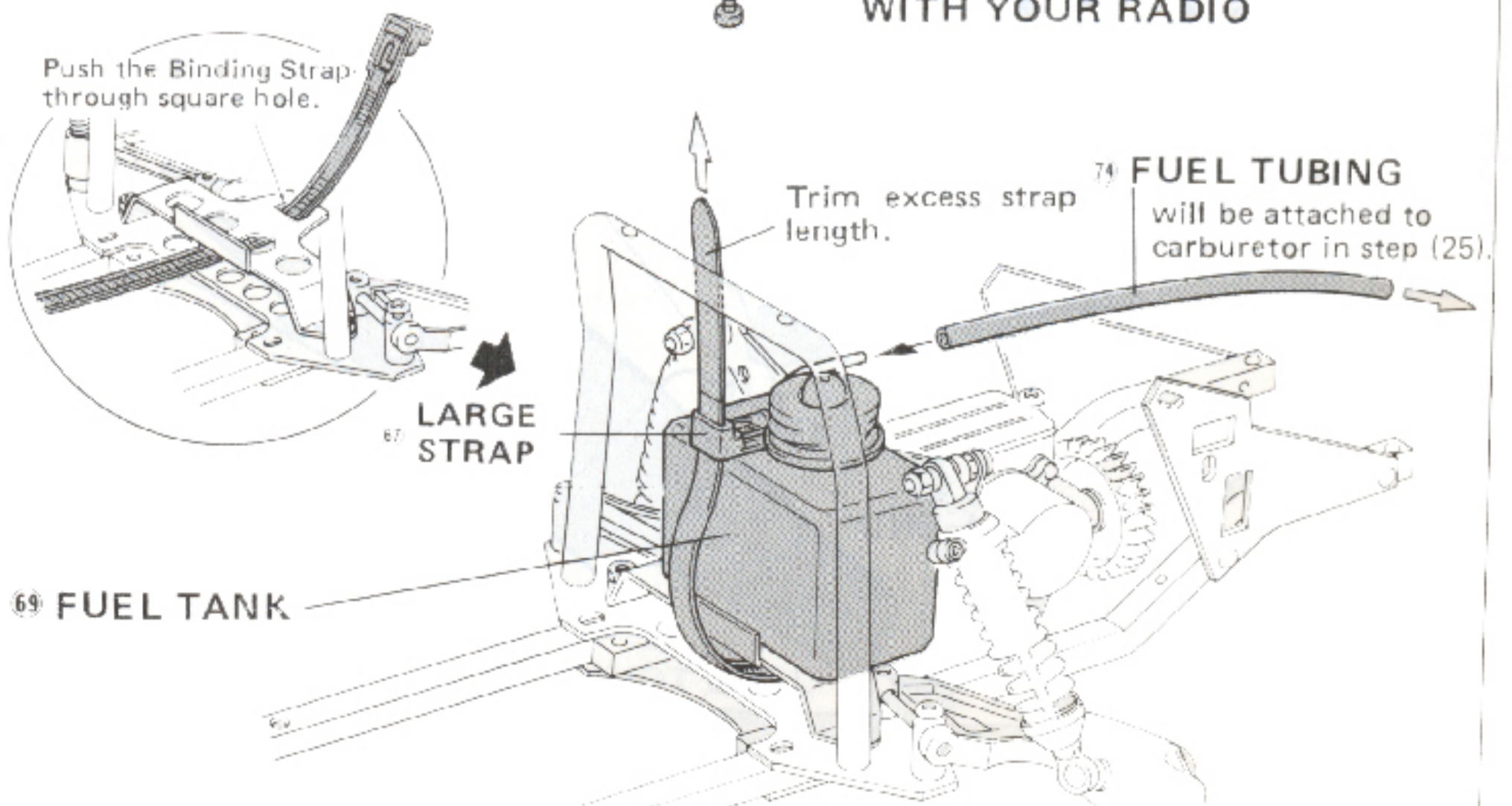
16 INSTALLATION OF ROLL BAR



17 ASSEMBLING THE RADIO PLATE

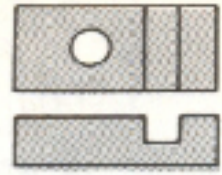


18 MOUNTING OF FUEL TANK



19 SMALL PARTS NEEDED:

106 BRAKE LEVER
HOLDERS (2)



96 RADIO PLATE
MOUNTS (4)



M2.6 X 10 SCREWS (2)



M2.6 X 25 SCREWS (2)



M3 X 35 SCREWS (2)



M3 NUTS (2)



Bend Brake
Lever as shown

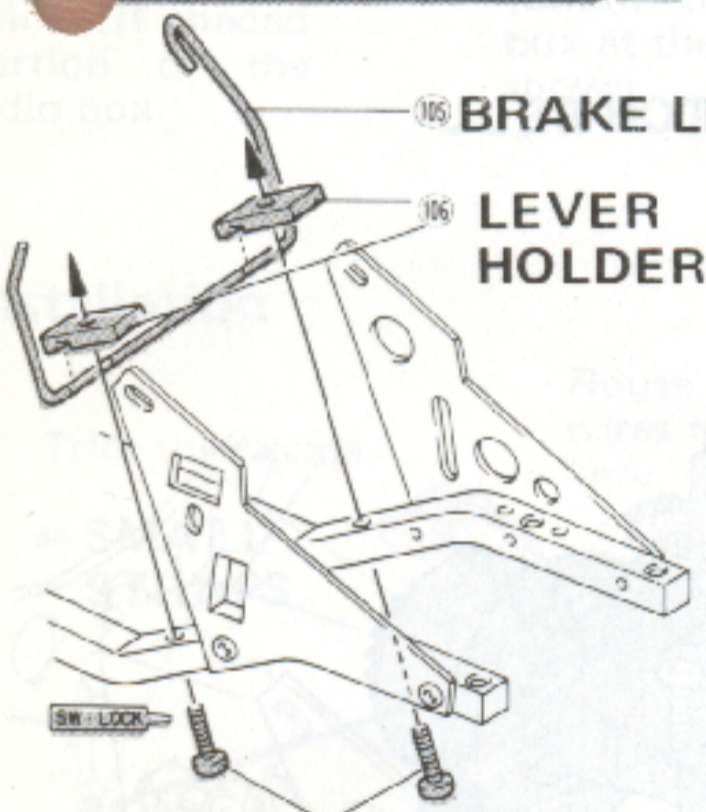
10mm

23mm

105 BRAKE
LEVER

106 BRAKE LEVER

106 LEVER
HOLDERS



M2.6 X 10 SCREWS

20 SMALL PARTS NEEDED:

110 CLUTCH PINS (2)



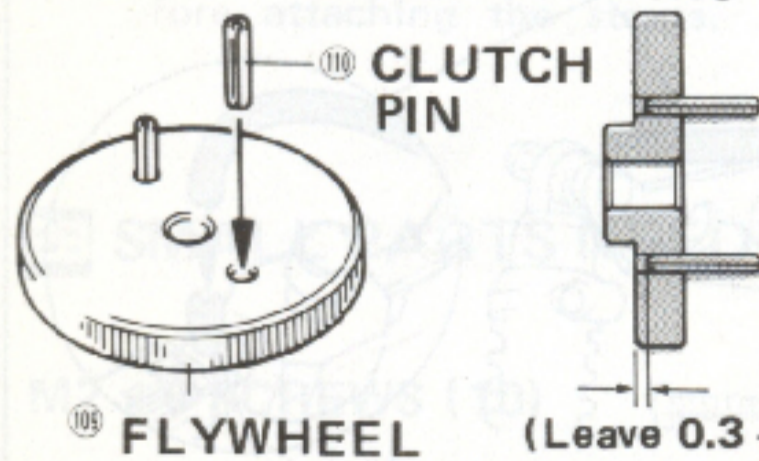
111 STARTER PAWLS (2)



114 RATCHET SPRING (1)
(Spare is included)

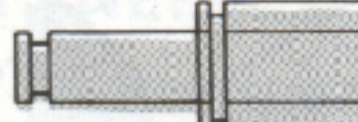


INSTALLING CLUTCH PINS

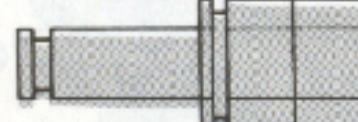


21 SMALL PARTS NEEDED:

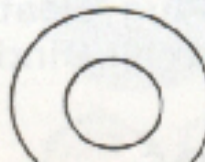
84 PILOT SHAFT
(For Enya) (1)



85 PILOT SHAFT
(For O.S. .10) (1)



134 BRASS WASHER
(For 11CX Enya)



M3 X 10 SCREWS (4)



M3 NUTS (4)

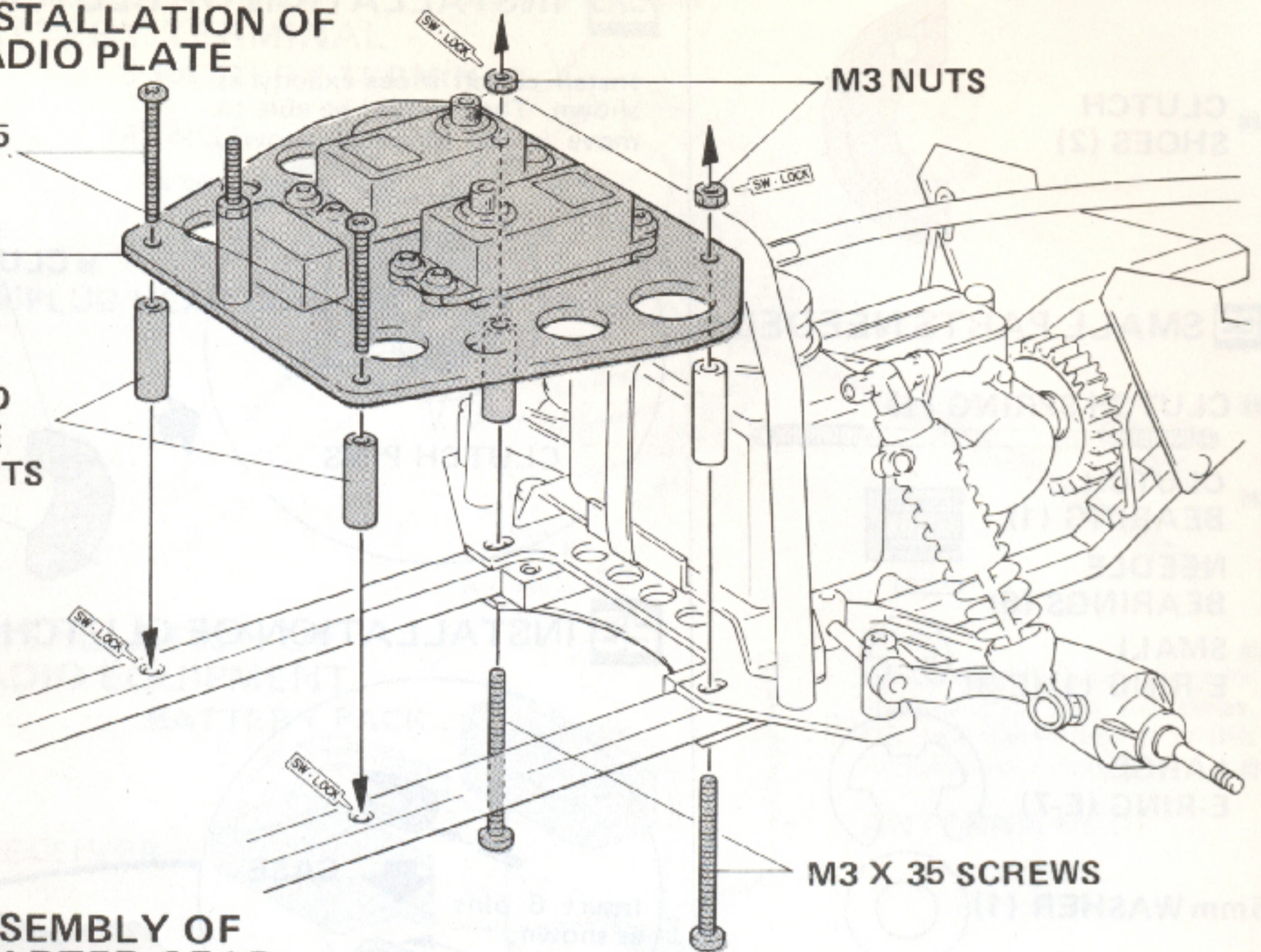


19 INSTALLATION OF RADIO PLATE

M2.6 X 25
SCREWS

RADIO
PLATE

96 RADIO
PLATE
MOUNTS

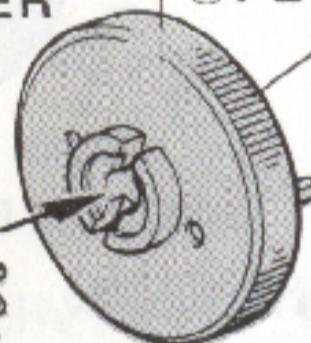


20 ASSEMBLY OF STARTER GEAR

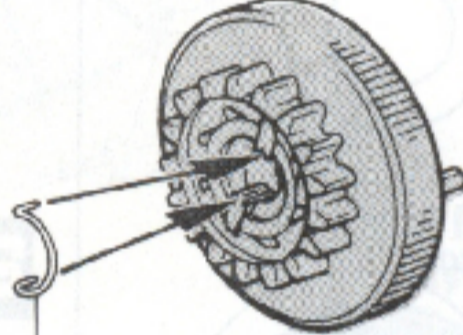
112 STARTER
GEAR



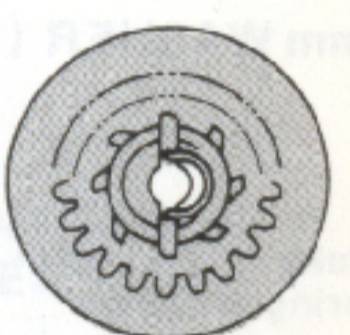
109 FLYWHEEL



111 STARTER
PAWL



114 RATCHET SPRING



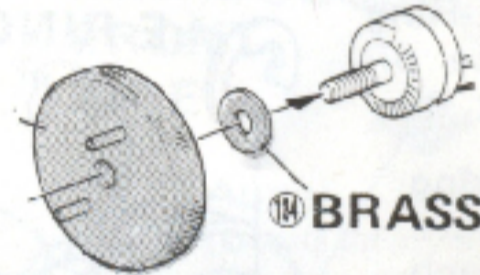
1. Place Starter Gear
on Flywheel

2. Insert Starter Pawls
into grooves on Fly-
wheel. Recheck the
direction of the Pawl.

3. Fit Ratchet Spring into
dent on Starter Pawls as
shown

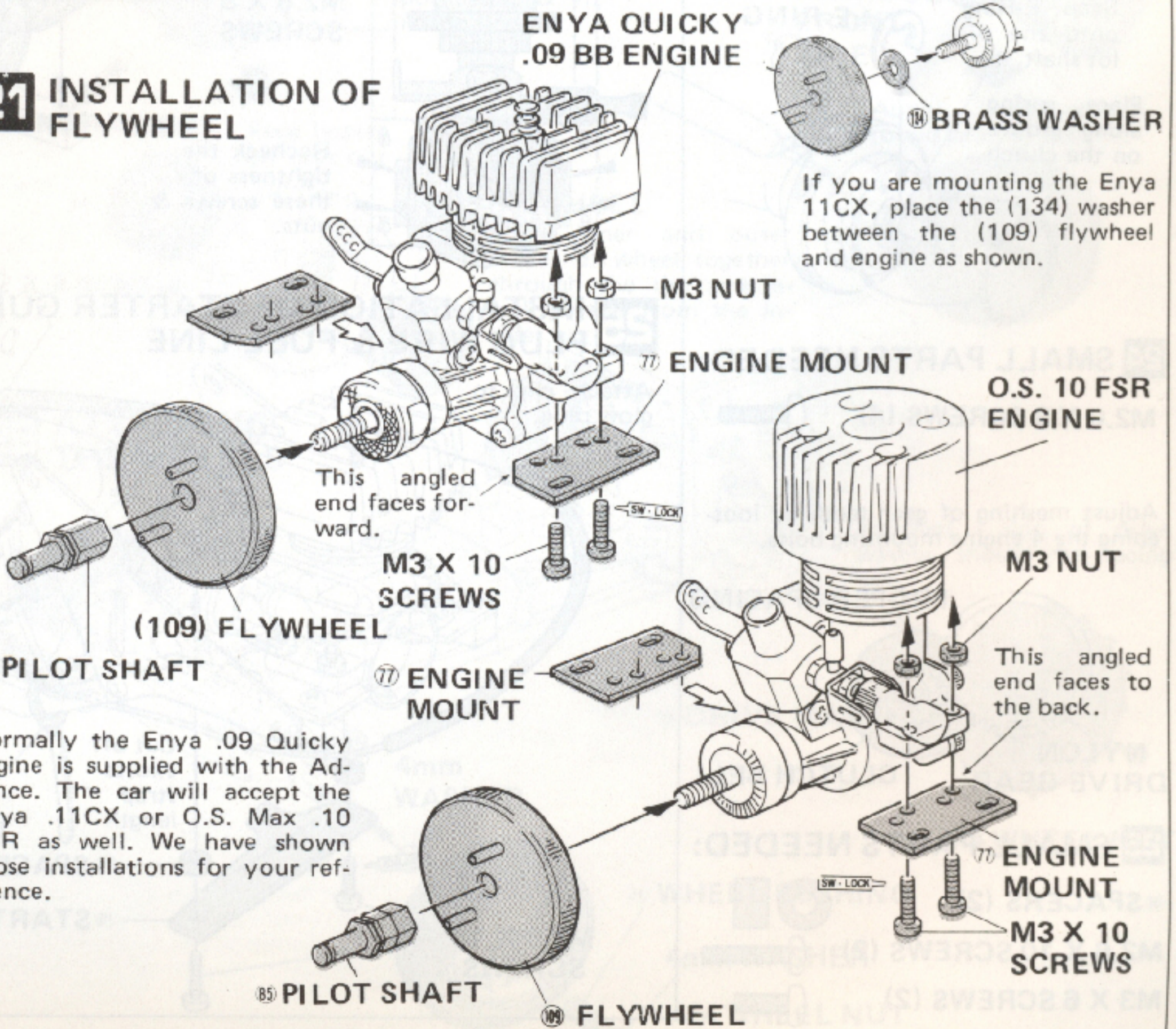
21 INSTALLATION OF FLYWHEEL

ENYA QUICKY
.09 BB ENGINE



134 BRASS WASHER

If you are mounting the Enya
11CX, place the (134) washer
between the (109) flywheel
and engine as shown.



84 PILOT SHAFT

117 ENGINE
MOUNT

Normally the Enya .09 Quicky
engine is supplied with the Ad-
vance. The car will accept the
Enya .11CX or O.S. Max .10
FSR as well. We have shown
those installations for your re-
ference.

85 PILOT SHAFT

109 FLYWHEEL

M3 X 10
SCREWS

M3 NUT

117 ENGINE MOUNT

O.S. 10 FSR
ENGINE

M3 NUT

This angled
end faces to
the back.

117 ENGINE
MOUNT

M3 X 10
SCREWS

22 SMALL PARTS NEEDED:

88 CLUTCH SHOES (2)



23 SMALL PARTS NEEDED:

89 CLUTCH SPRING (1)



86 CLUTCH BEARING (1)



NEEDLE BEARINGS (6)



91 SMALL E-RING (1) (E-3)



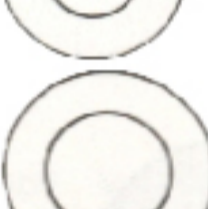
95 LARGE E-RING (E-7)



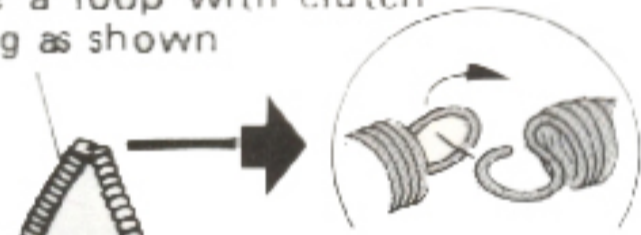
5mm WASHER (1)



8mm WASHER (1)



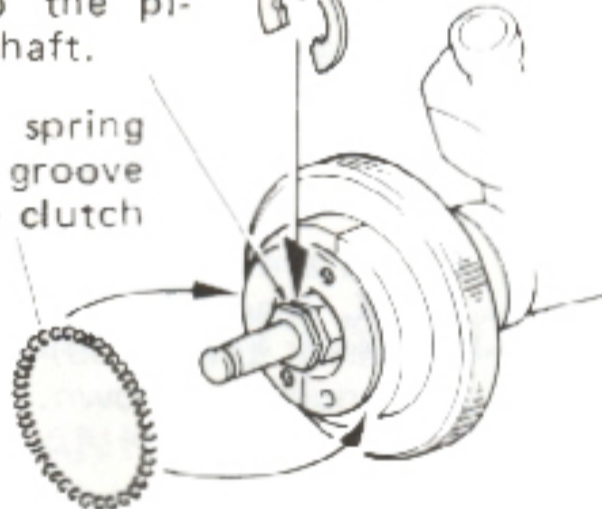
Make a loop with clutch spring as shown



Snap E-Ring onto the pilot shaft.

96 LARGE E-RING

Place spring along groove on the clutch



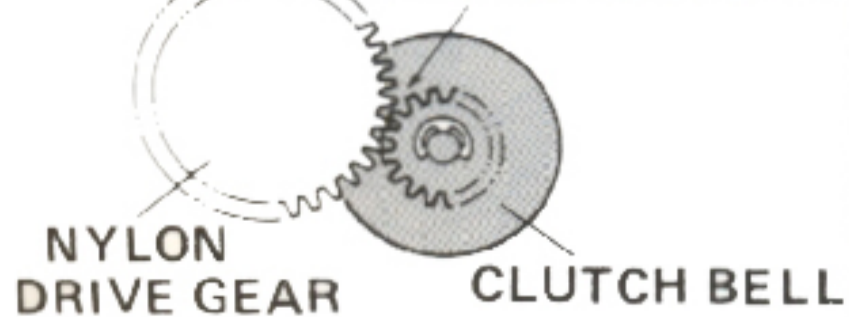
24 SMALL PARTS NEEDED:

M2.6 X 8 SCREWS (4)



Adjust meshing of gear teeth by loosening the 4 engine mounting bolts.

PROPER SPACING



NYLON DRIVE GEAR

CLUTCH BELL

25 SMALL PARTS NEEDED:

98 SPACERS (2)



M2.6 X 10 SCREWS (2)



M3 X 6 SCREWS (2)



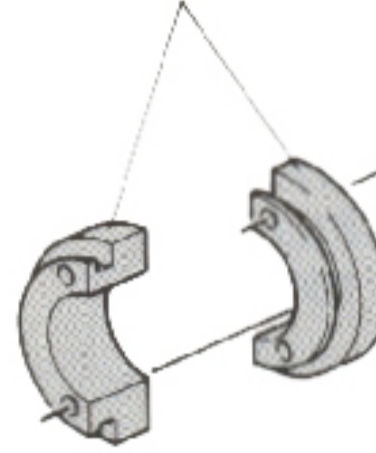
22 INSTALLATION OF CLUTCH SHOES

Install clutch shoes exactly as shown. They should be able to move in the direction shown.

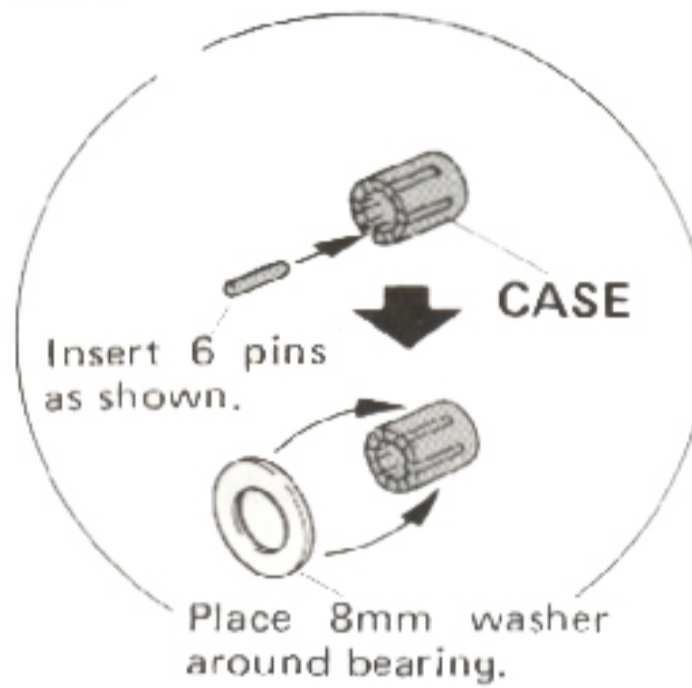


CLUTCH PINS

88 CLUTCH SHOES



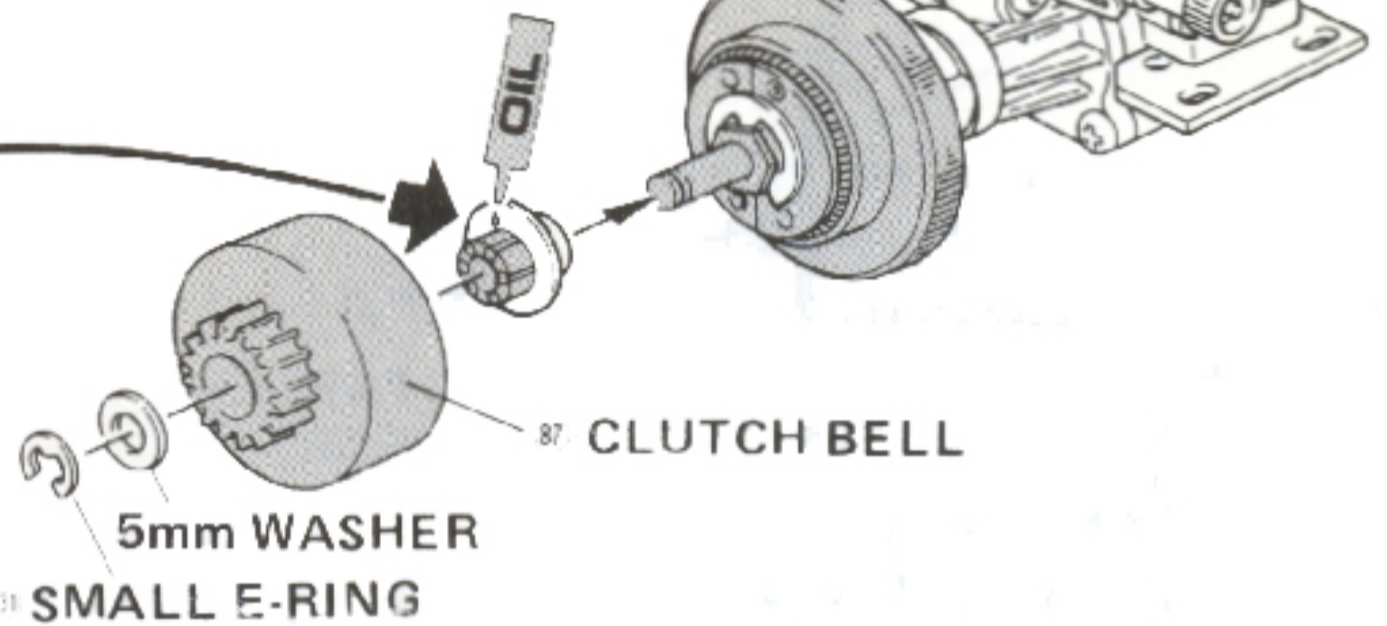
23 INSTALLATION OF CLUTCH BELL



Insert 6 pins as shown.

CASE

Place 8mm washer around bearing.

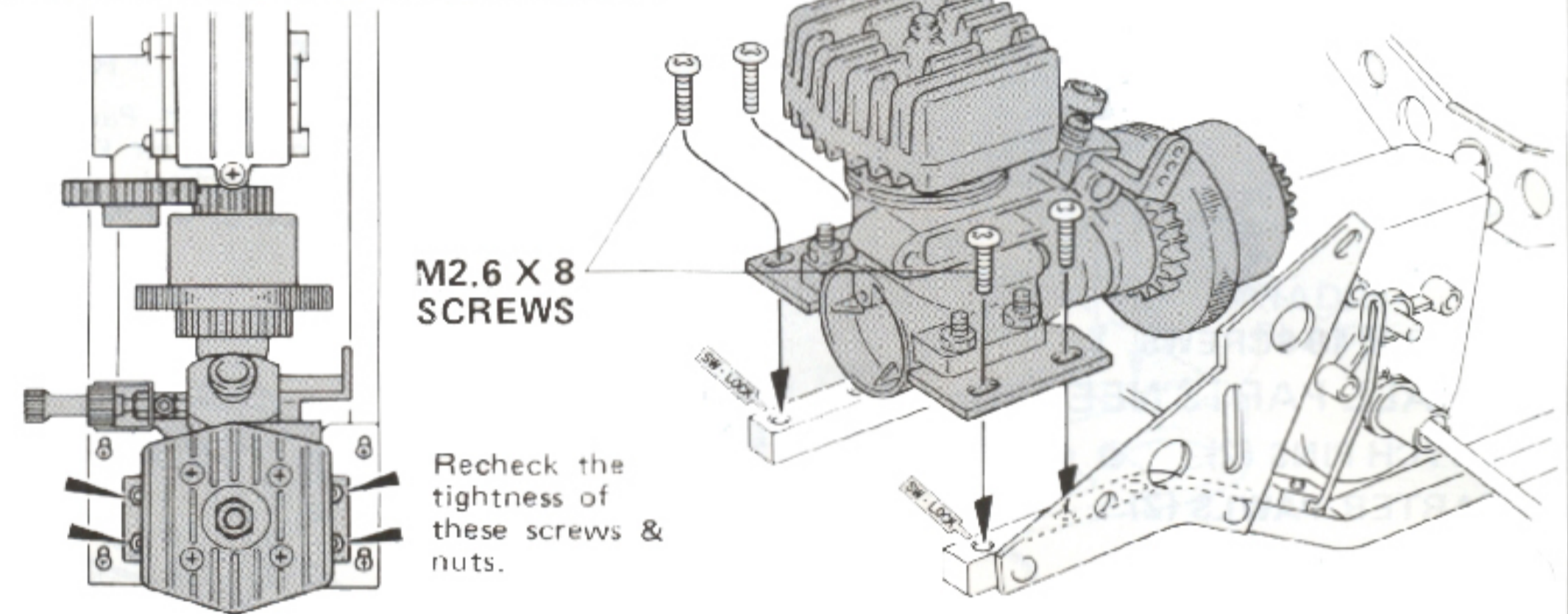


87 CLUTCH BELL

5mm WASHER

91 SMALL E-RING

24 MOUNTING THE ENGINE

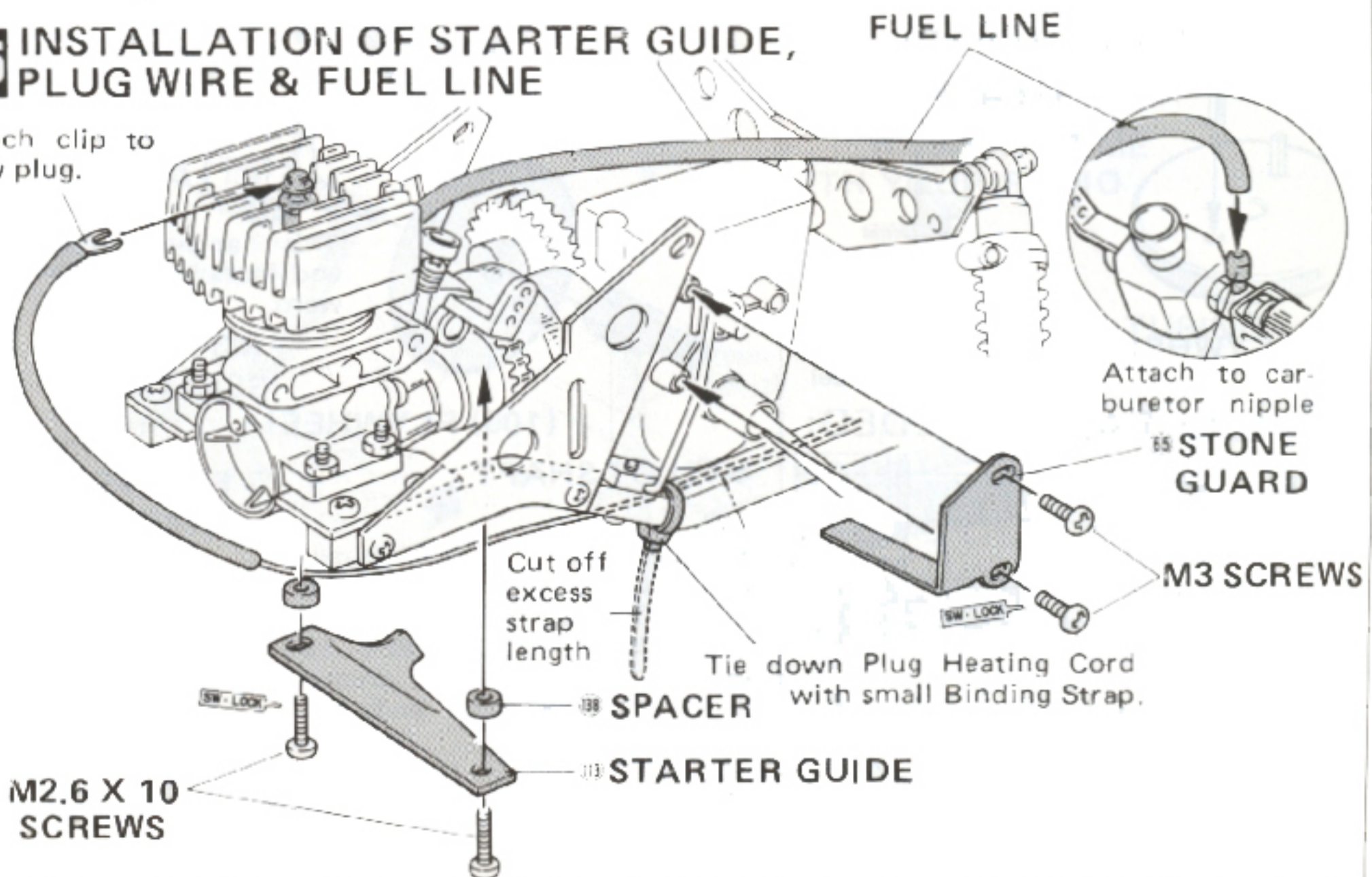


M2.6 X 8 SCREWS

Recheck the tightness of these screws & nuts.

25 INSTALLATION OF STARTER GUIDE, PLUG WIRE & FUEL LINE

Attach clip to glow plug.



FUEL LINE

Attach to carburetor nipple

95 STONE GUARD

M3 SCREWS

Cut off excess strap length


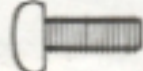

Tie down Plug Heating Cord with small Binding Strap.

98 SPACER

99 STARTER GUIDE

M2.6 X 10 SCREWS

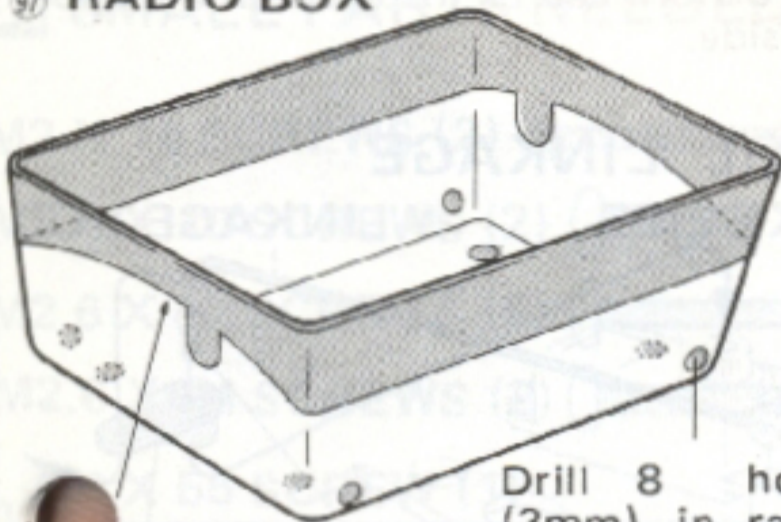
26 SMALL PARTS NEEDED:

- BATTERY TERMINAL (1)** 
- M3 X 6 SCREW (1)** 
- M3 NUT (1)** 

27 PREPARING THE RADIO BOX

Trimming

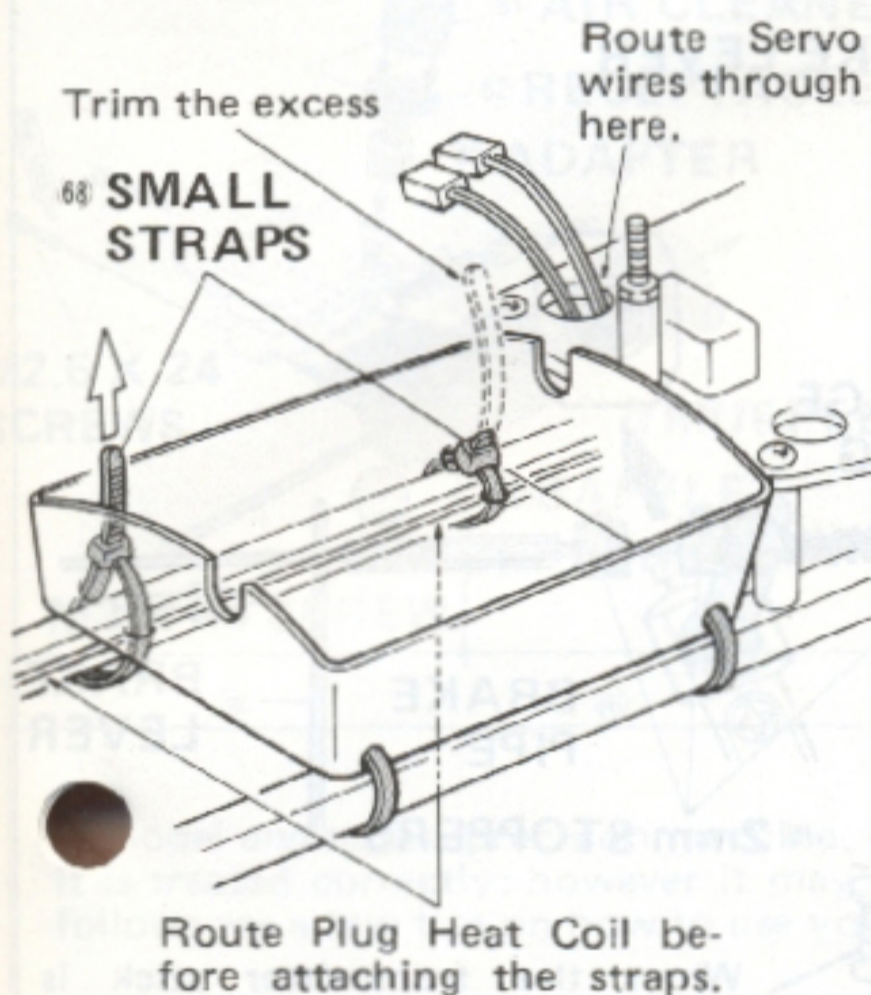
97 RADIO BOX



Trim off shaded portion of the radio box

Drill 8 holes (3mm) in radio box at the points shown

Installation



Route Servo wires through here.

Trim the excess

68 SMALL STRAPS

Route Plug Heat Coil before attaching the straps.

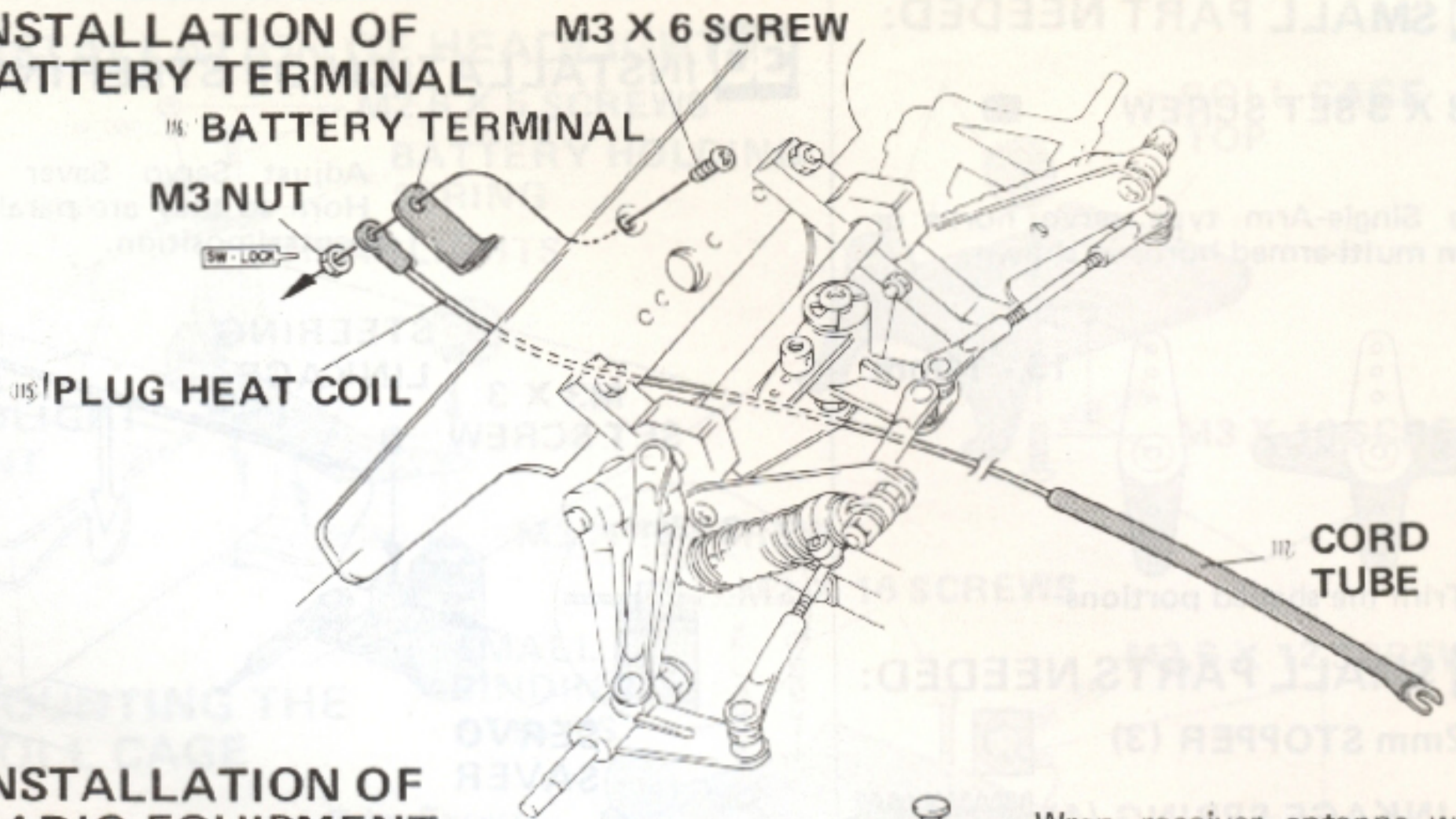
28 SMALL PARTS NEEDED:

- M2 x 8 SCREWS (10)** 

29 SMALL PARTS NEEDED:

- FRONT WHEEL BUSHINGS (2)** 
- DRIVE WASHERS (2)** 
- M4 WHEEL NUTS (Nylon Type) (4)** 
- 4mm WASHERS (4)** 

26 INSTALLATION OF BATTERY TERMINAL



M3 X 6 SCREW

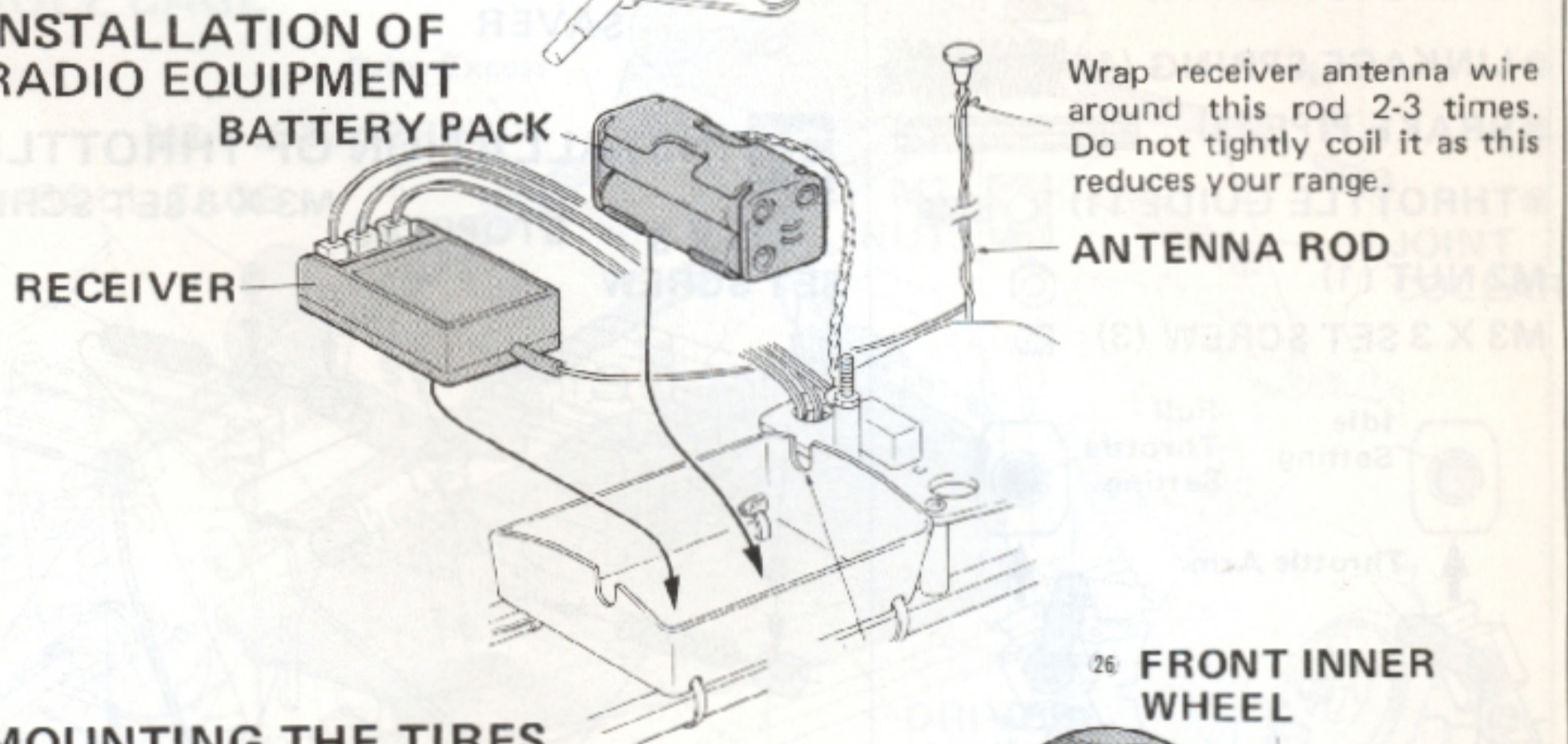
BATTERY TERMINAL

M3 NUT

PLUG HEAT COIL

CORD TUBE

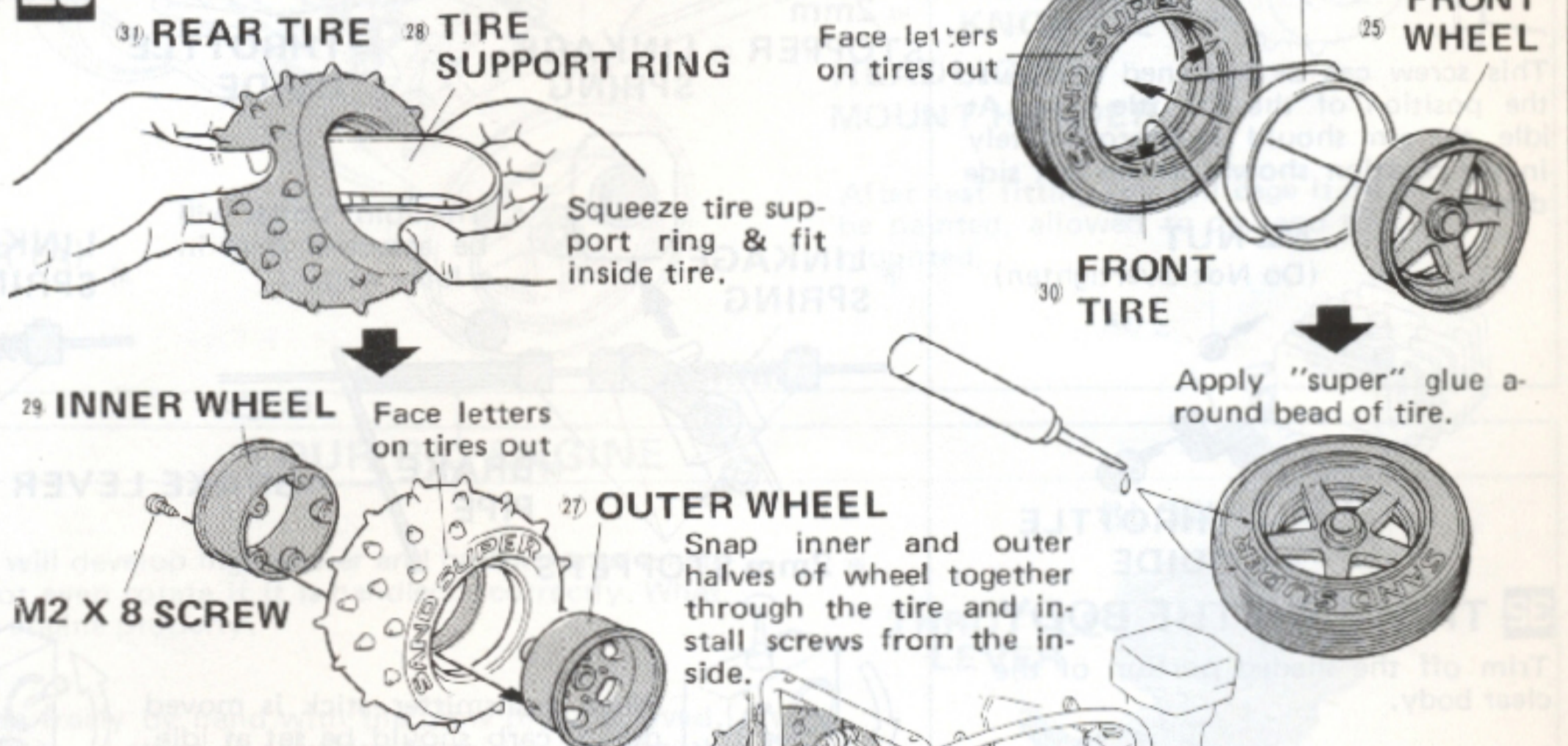
27 INSTALLATION OF RADIO EQUIPMENT



Wrap receiver antenna wire around this rod 2-3 times. Do not tightly coil it as this reduces your range.

ANTENNA ROD

28 MOUNTING THE TIRES



REAR TIRE

TIRE SUPPORT RING

Face letters on tires out

FRONT WHEEL

Squeeze tire support ring & fit inside tire.

FRONT TIRE

Apply "super" glue around bead of tire.

INNER WHEEL

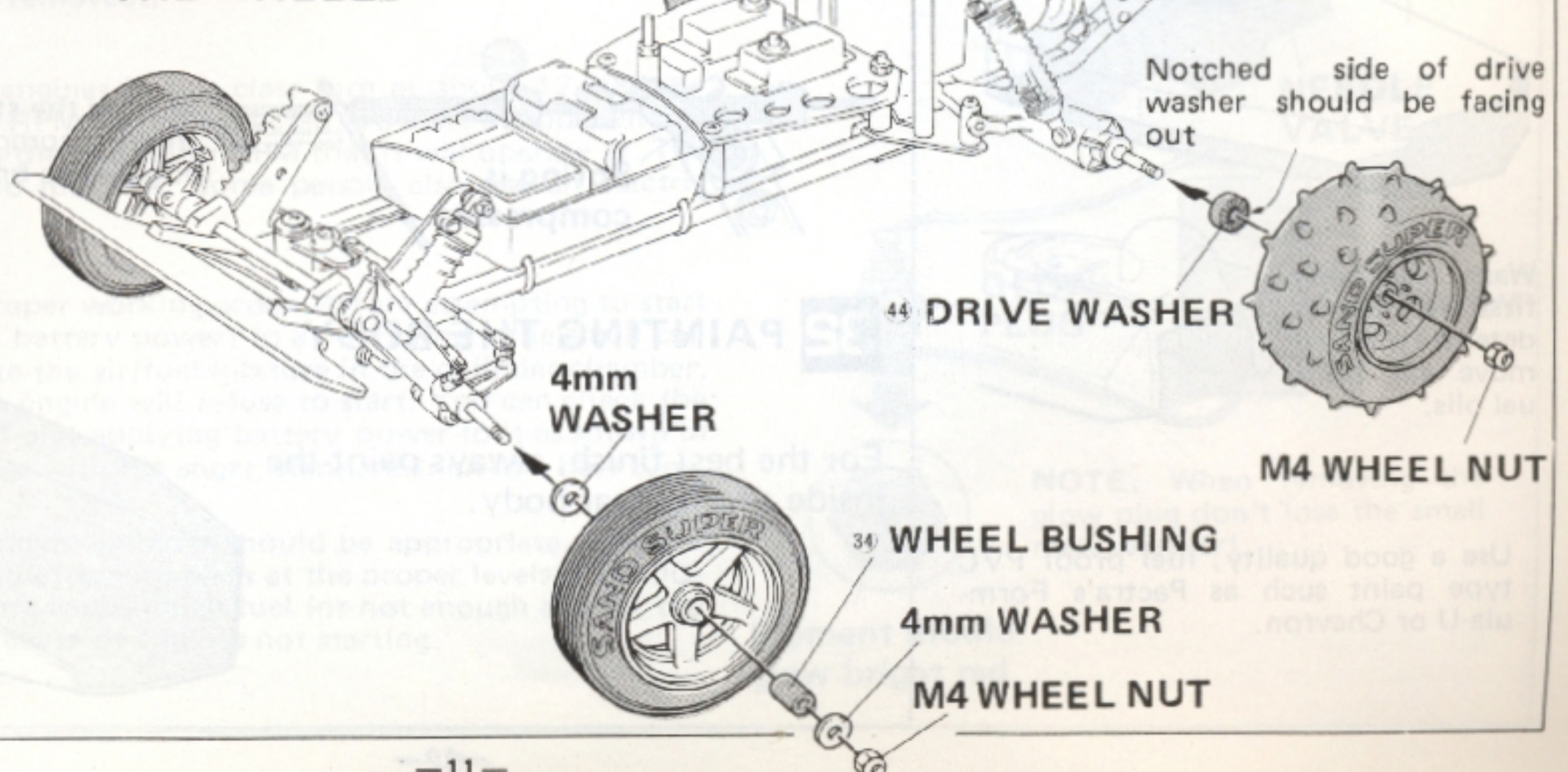
Face letters on tires out

OUTER WHEEL

Snap inner and outer halves of wheel together through the tire and install screws from the inside.

M2 X 8 SCREW

29 ATTACHING THE WHEELS



Notched side of drive washer should be facing out

DRIVE WASHER

M4 WHEEL NUT

4mm WASHER

WHEEL BUSHING

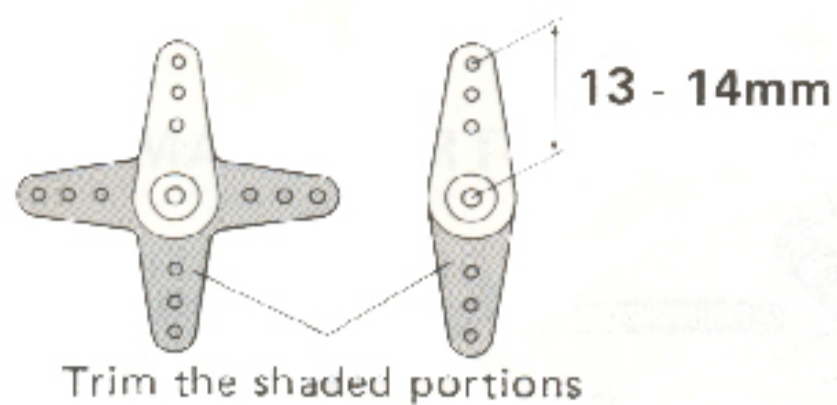
4mm WASHER

M4 WHEEL NUT

30 SMALL PART NEEDED:

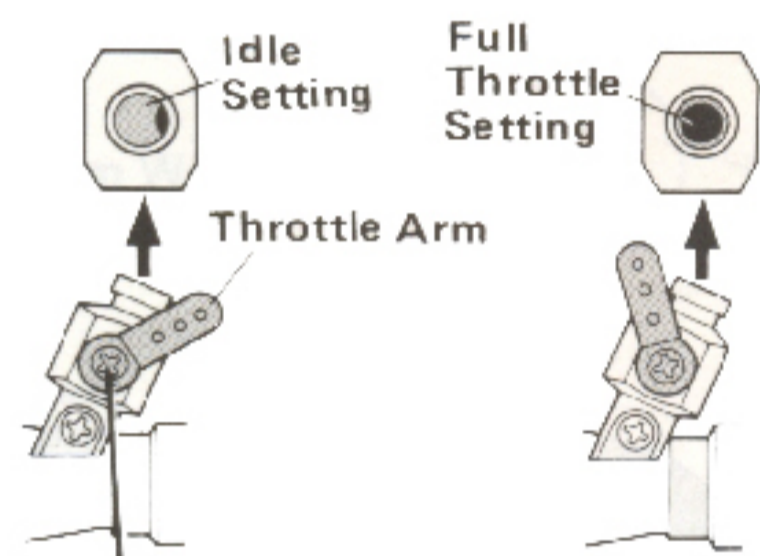
M3 X 3 SET SCREW

Use Single-Arm type servo horns or trim multi-armed horns as shown.

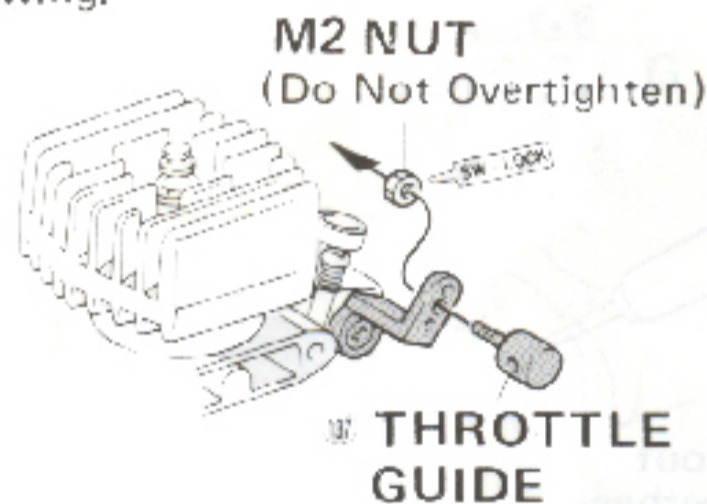


31 SMALL PARTS NEEDED:

- 2mm STOPPER (3)
- LINKAGE SPRING (1)
- BRAKE PIPE (1)
- THROTTLE GUIDE (1)
- M2 NUT (1)
- M3 X 3 SET SCREW (3)

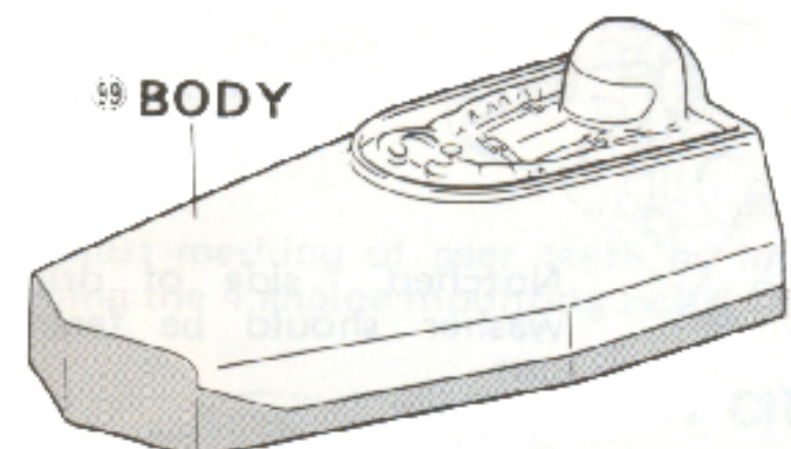


This screw can be loosened to adjust the position of the throttle arm. At idle, the arm should be approximately in the position shown, in the left side drawing.

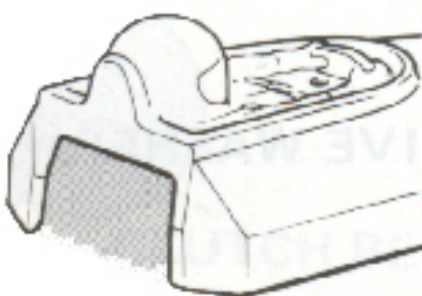


32 TRIMMING THE BODY

Trim off the shaded portion of the clear body.

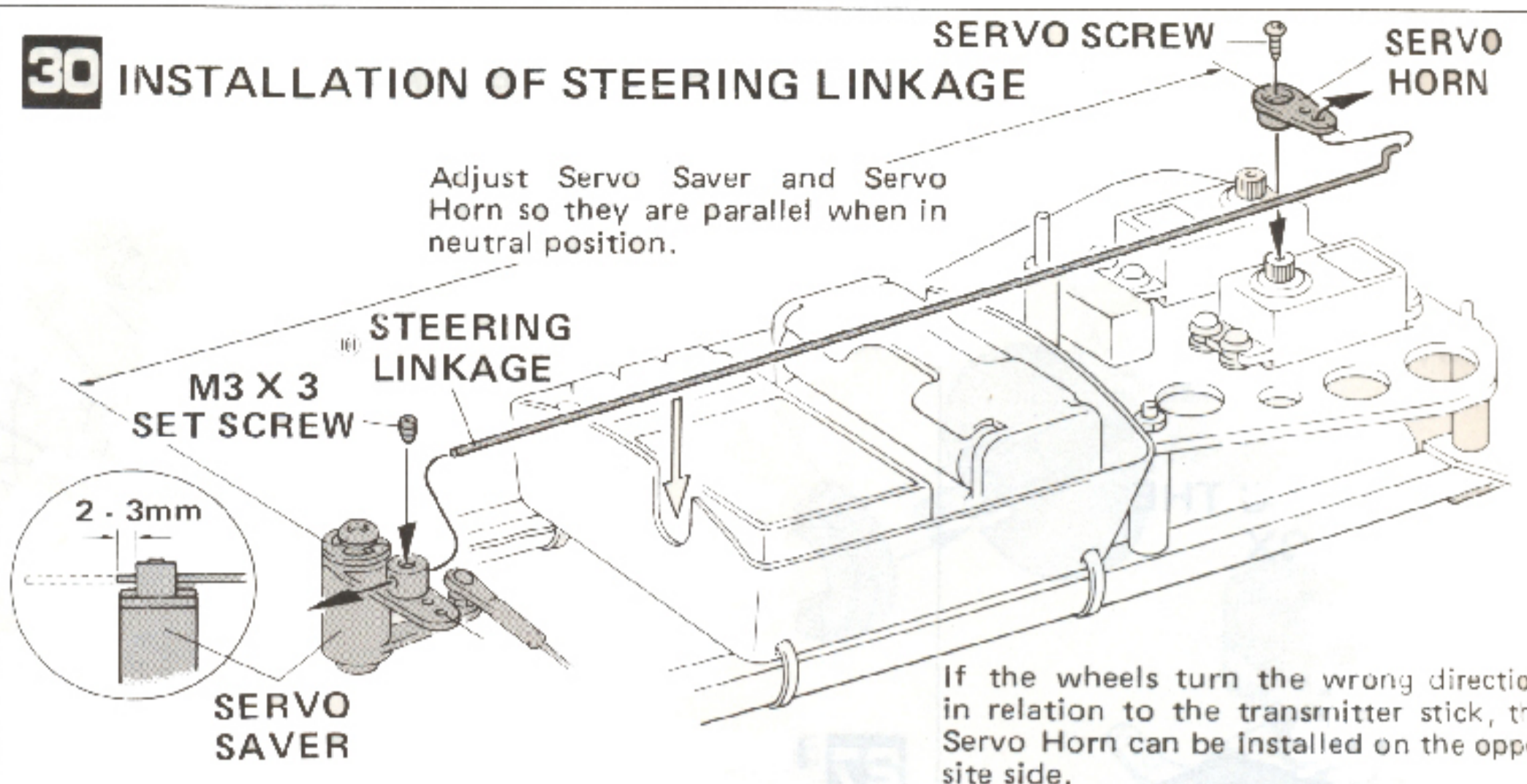


Wash the body first with a mild detergent to remove any residual oils.



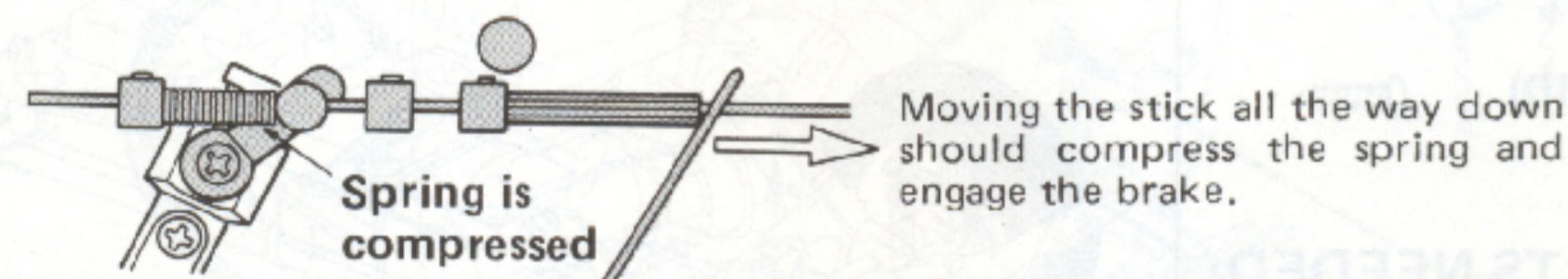
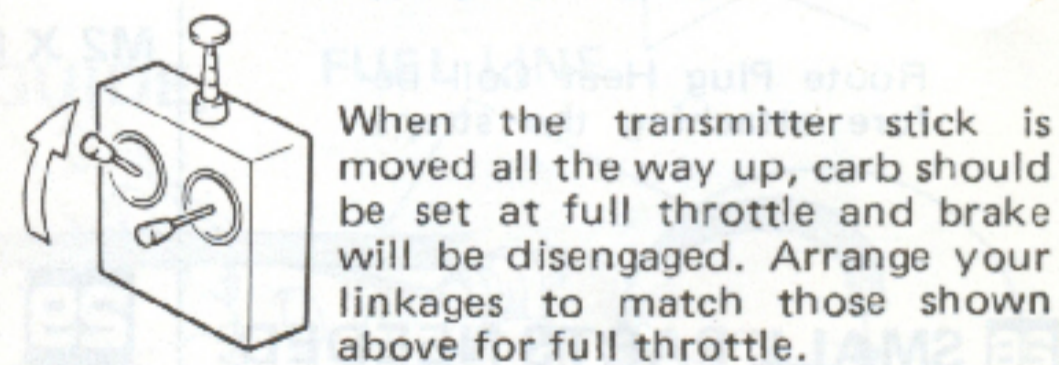
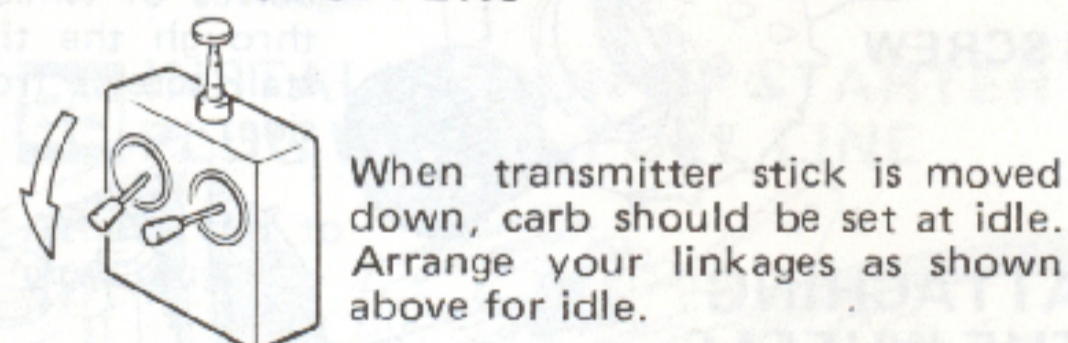
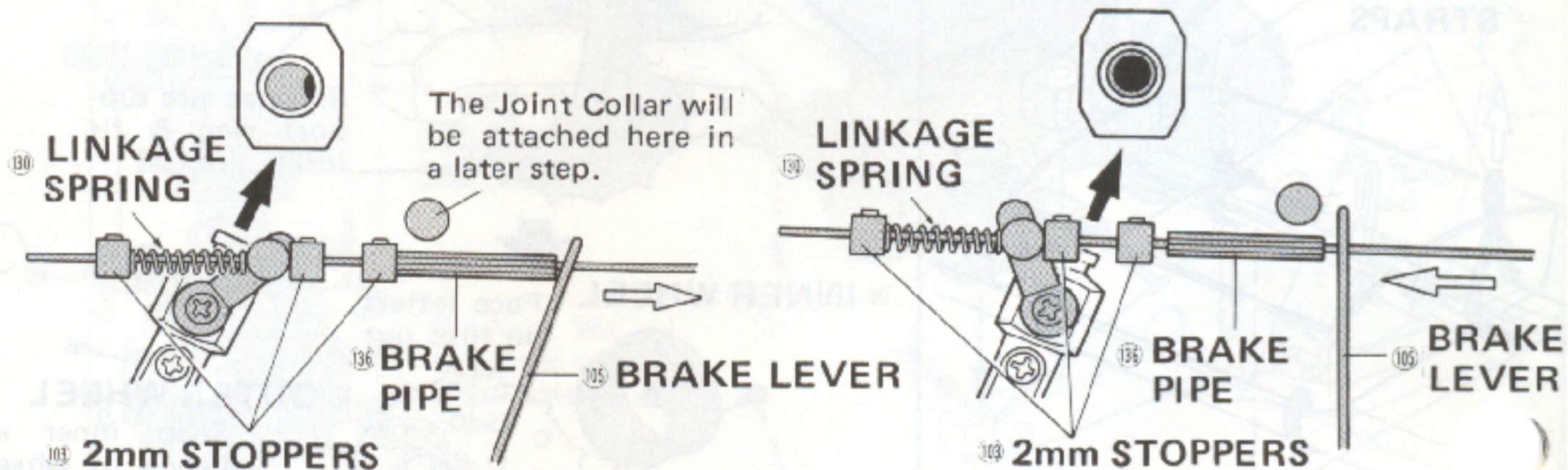
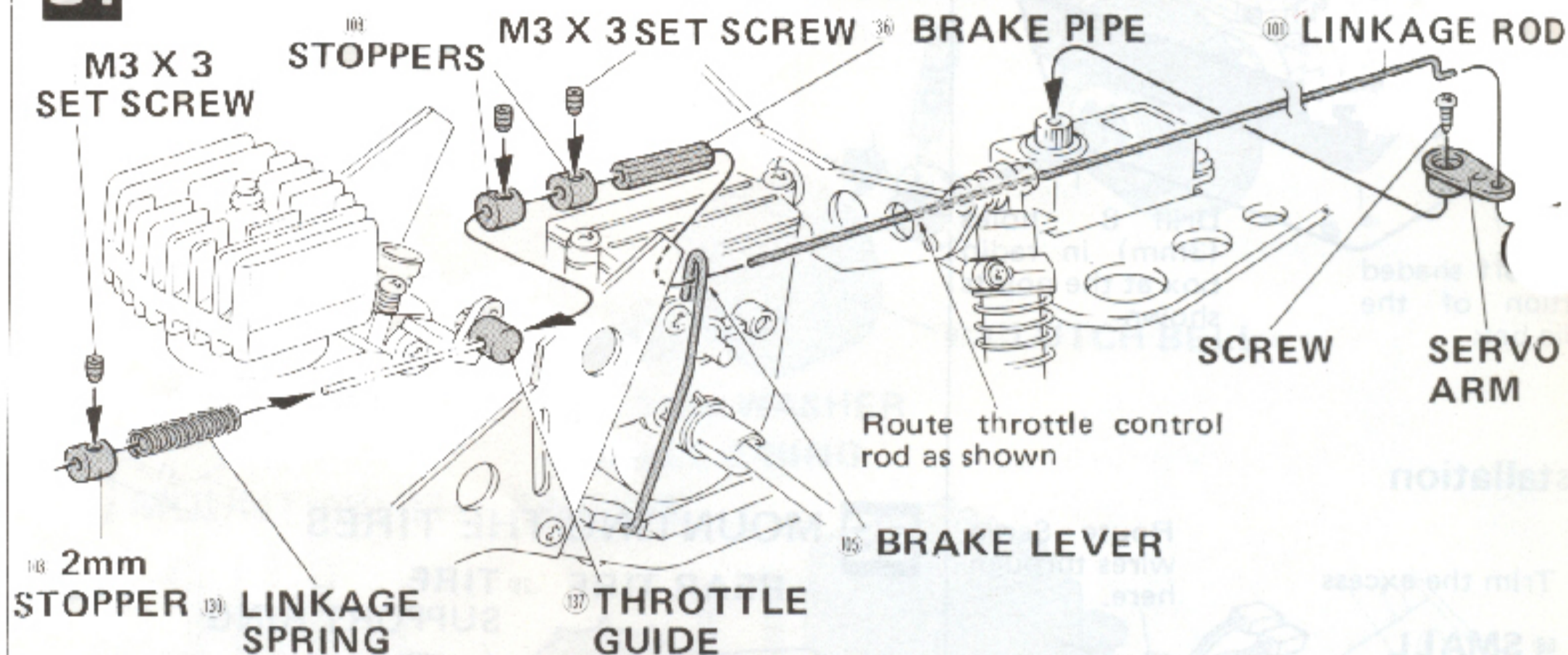
Use a good quality, fuel proof PVC type paint such as Pactra's Formula-U or Chevron.

30 INSTALLATION OF STEERING LINKAGE



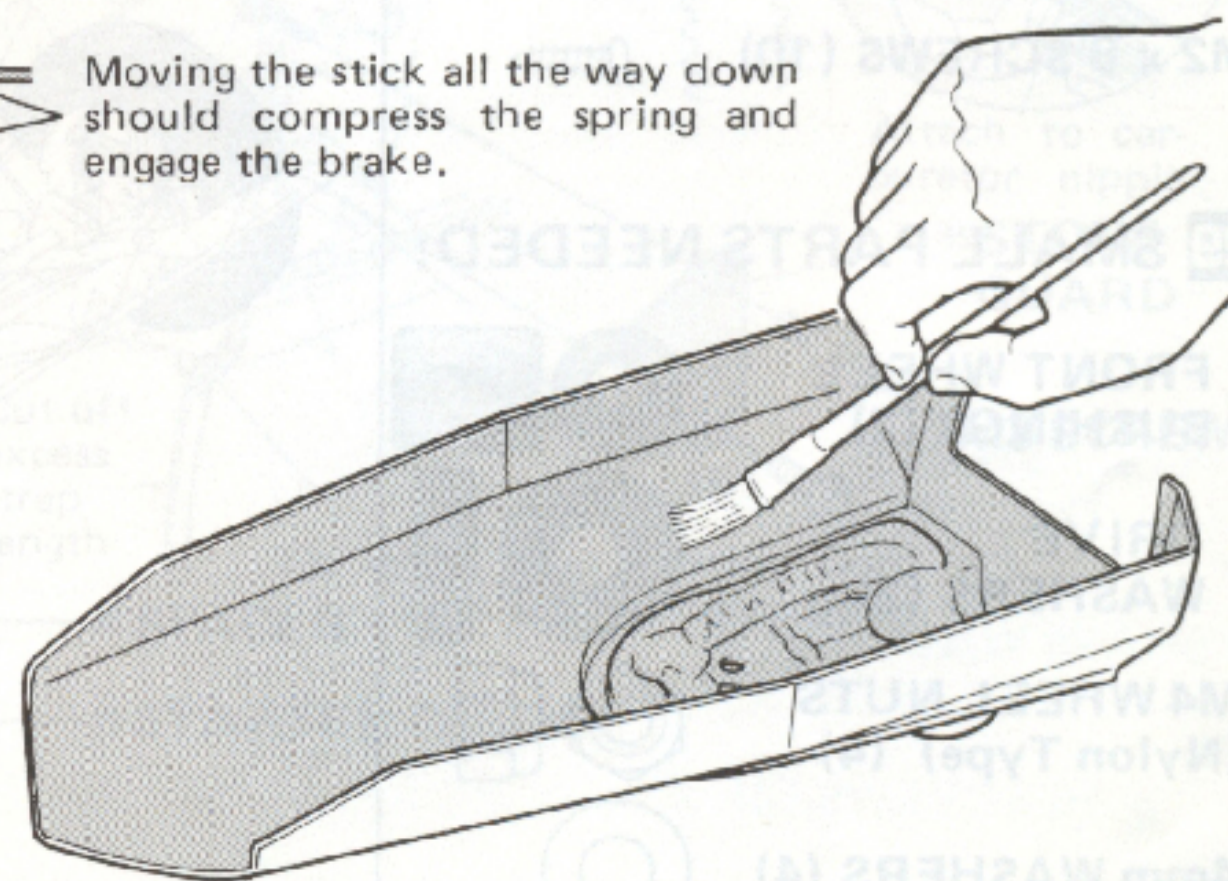
If the wheels turn the wrong direction in relation to the transmitter stick, the Servo Horn can be installed on the opposite side.

31 INSTALLATION OF THROTTLE CONTROL LINKAGE



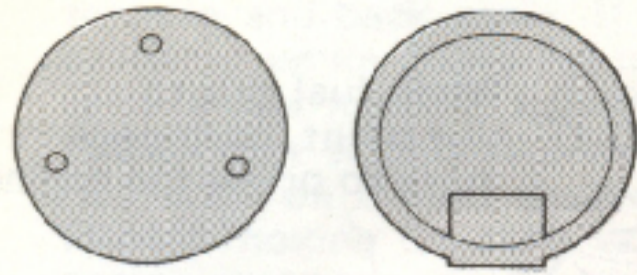
32 PAINTING THE BODY

For the best finish, always paint the inside of the clear body.



33 SMALL PARTS NEEDED:

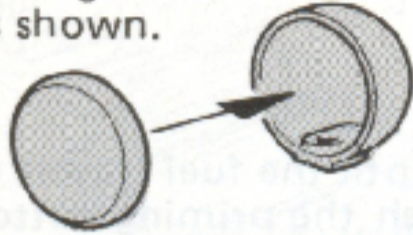
95 HEADLIGHTS (4 sets)



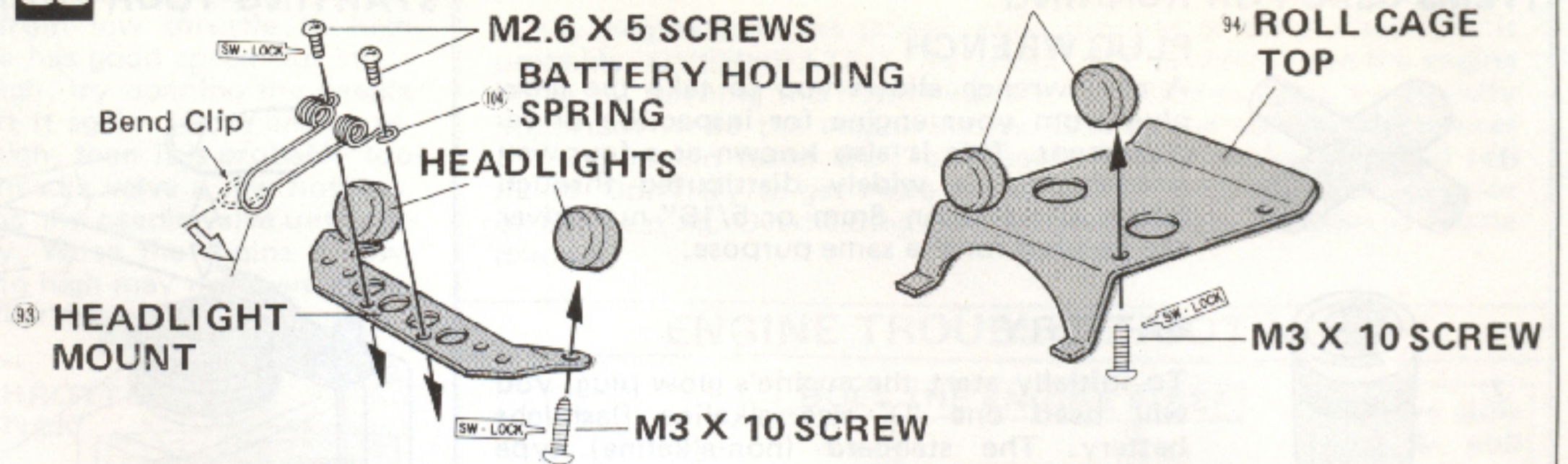
M2.6 X 5 SCREWS (2)

M3 X 10 SCREWS (4)

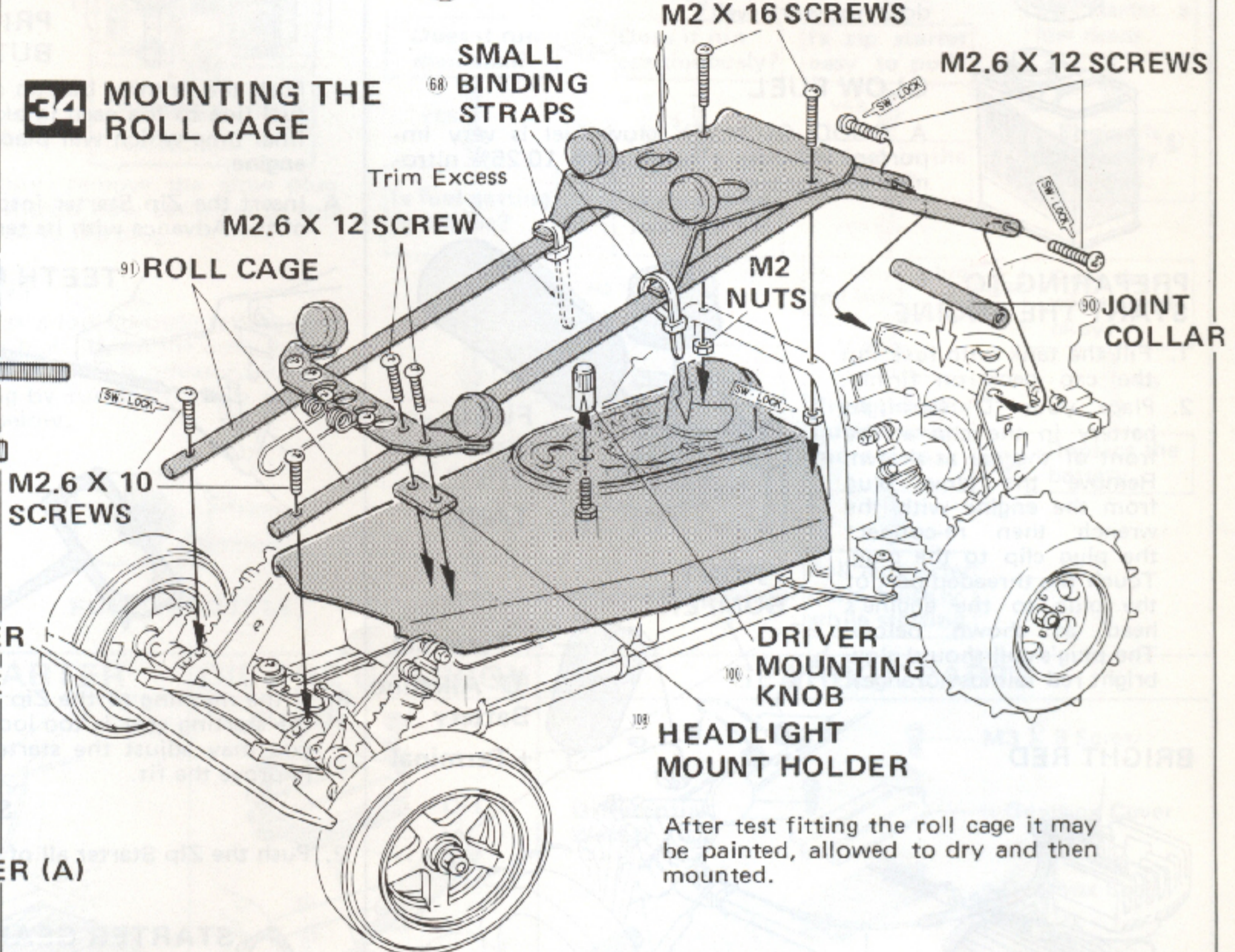
Glue Headlights together as shown.



33 INSTALLATION OF HEADLIGHTS



34 MOUNTING THE ROLL CAGE



After test fitting the roll cage it may be painted, allowed to dry and then mounted.

34 SMALL PARTS NEEDED:

M2 X 16 SCREWS (2)

M2.6 X 10 SCREWS (2)

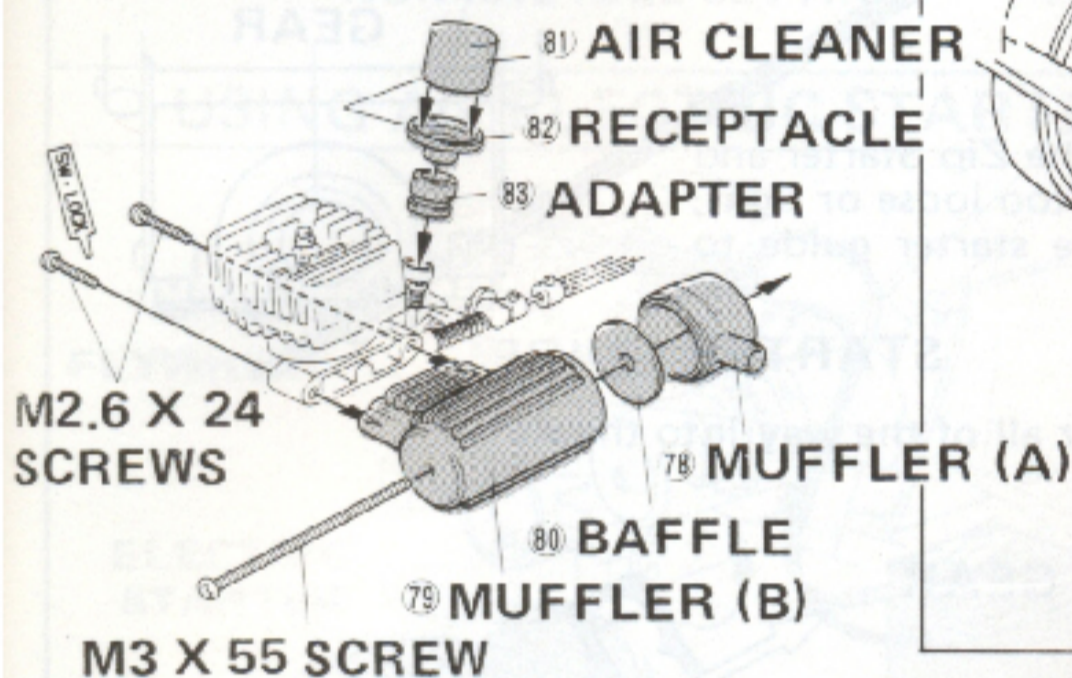
M2.6 X 12 SCREWS (6)

M2.6 X 24 SCREWS (2)

M3 X 55 SCREW (1)

M2 NUTS (2)

ASSEMBLING AIR CLEANER & MUFFLER



YOUR R/C ENGINE

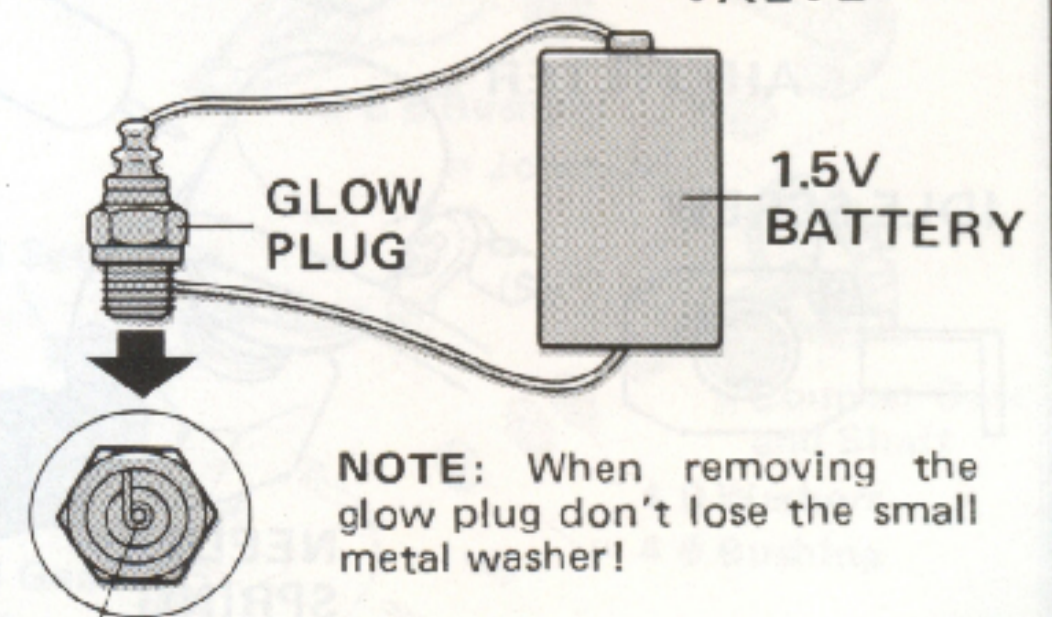
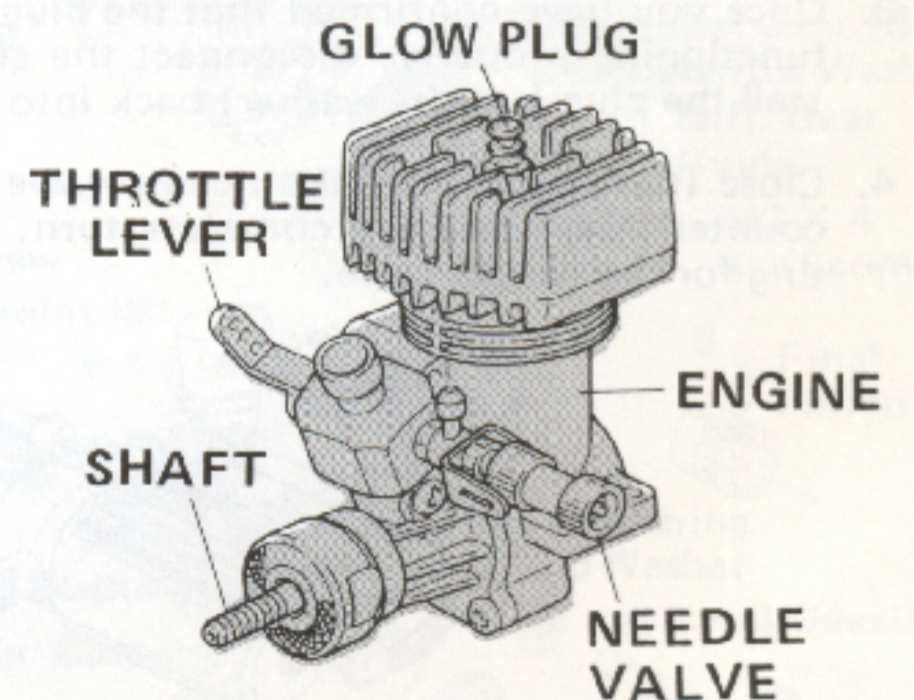
Model engine is a precision machine. It will develop high power and performance when it is treated correctly; however it may not even rotate if it is handled incorrectly. What follows are a few tips on how to use your engine properly.

The engine's shaft must be able to rotate freely by hand with the glow plug removed. The engine is started by spinning the shaft. If there is anything impairing its smooth movement it will not start. When you install the engine be certain that the clutch and gears operate smoothly and don't bind. You should be able to spin the flywheel of the car with your hand (when the glow plug is removed.)

Engines run FAST. At their peak, most engines in this class turn at about 12,000 revolutions per minute (RPM); at idle 2,000 RPM can be expected. To start a model engine you must spin the shaft at least as fast as the minimum RPM that it will operate at. The ZIP-START system will allow you to do just this. Some people also use an electric starter.

The glow plug must be installed and in proper working order. Before attempting to start the engine, the plug must be heated (with battery power) to a point where the small coil becomes RED-HOT. This allows it to ignite the air/fuel mixture in the cylinder chamber. If the plug does not heat sufficiently, the engine will refuse to start. You can check the plug by removing it from the engine head and applying battery power to it as shown in the drawing to the right. Replace bad plugs with the short, standard (non-idle bar) type.

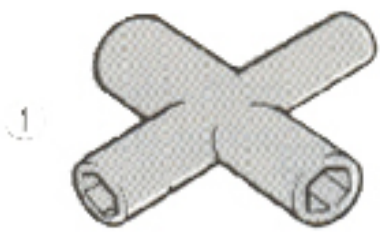
The amount of air-fuel mixture in the engine cylinder should be appropriate. Smooth operation is guaranteed only when the ratio of fuel to air is at the proper levels. FLOODING is the term used to describe when there is too much fuel (or not enough air) for the engine to run. This is probably the biggest cause of engines not starting.



Element should glow bright red

RUNNING YOUR KYOSHO ADVANCE

ITEMS USED FOR RUNNING



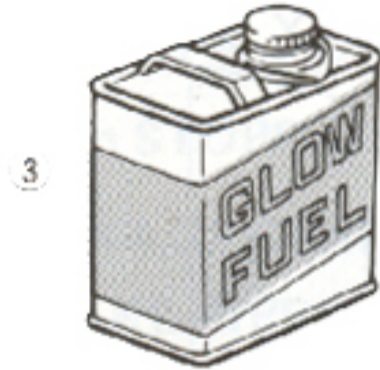
PLUG WRENCH

A plug wrench allows you to take the glow plug from your engine for inspection or replacement. This is also known as a four-way wrench and is widely distributed through hobby dealers. An 8mm or 5/16" nut driver can be used for the same purpose.



BATTERY

To initially start the engine's glow plug, you will need one 'D' size alkaline flashlight battery. The standard (non-alkaline) type does not work well.

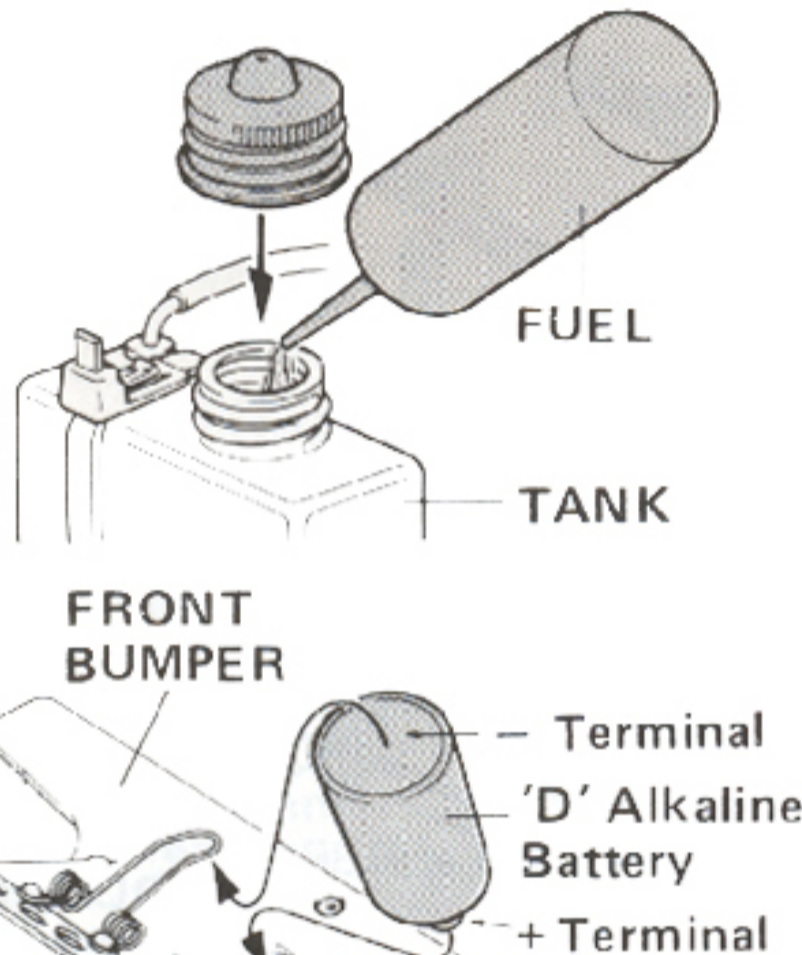


GLOW FUEL

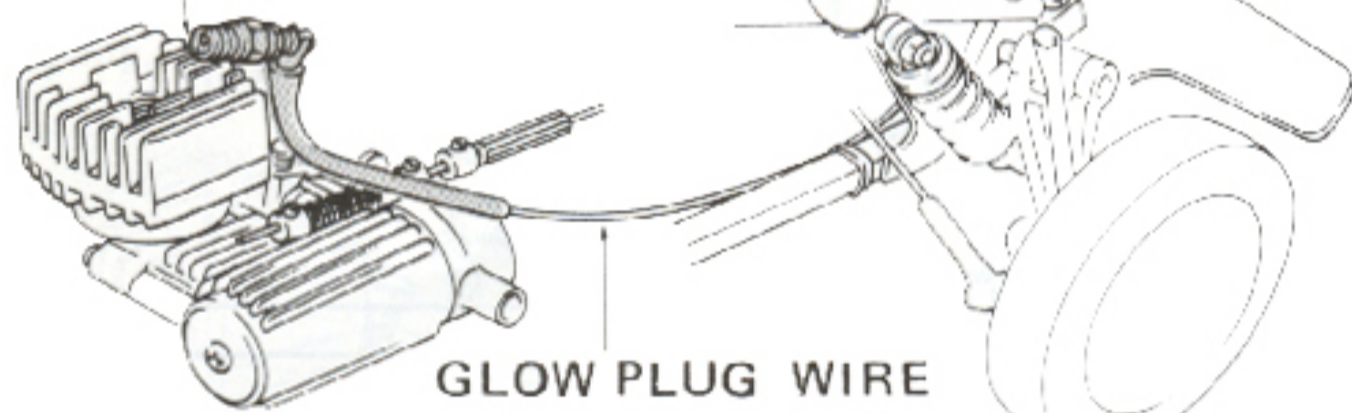
A GOOD QUALITY glow fuel is very important. Choose a blend with 10-25% nitromethane content.

PREPARING TO START THE ENGINE

1. Fill the tank with fuel. Put the cap back on firmly.
2. Place your 'D' flashlight battery in the clip at the front of the car as shown. Remove the glow plug from the engine with the wrench then re-connect the plug clip to the plug. Touch the threaded part of the plug to the engine's head as shown below. The plug's coil should glow bright red (almost orange).

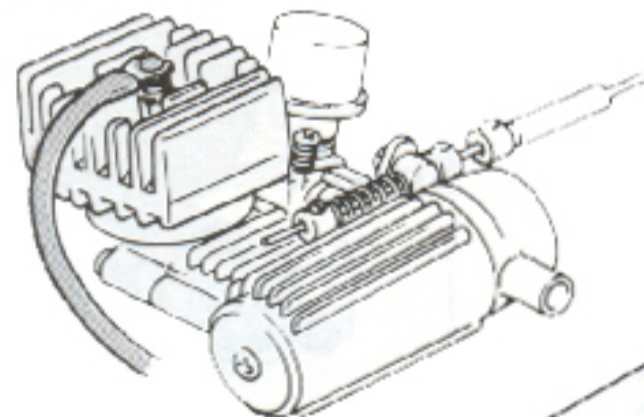


BRIGHT RED

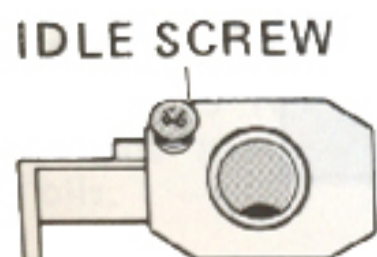


3. Once you have confirmed that the plug and electrical system are functioning properly, disconnect the clip from the plug and install the plug (and its washer) back into the engine.

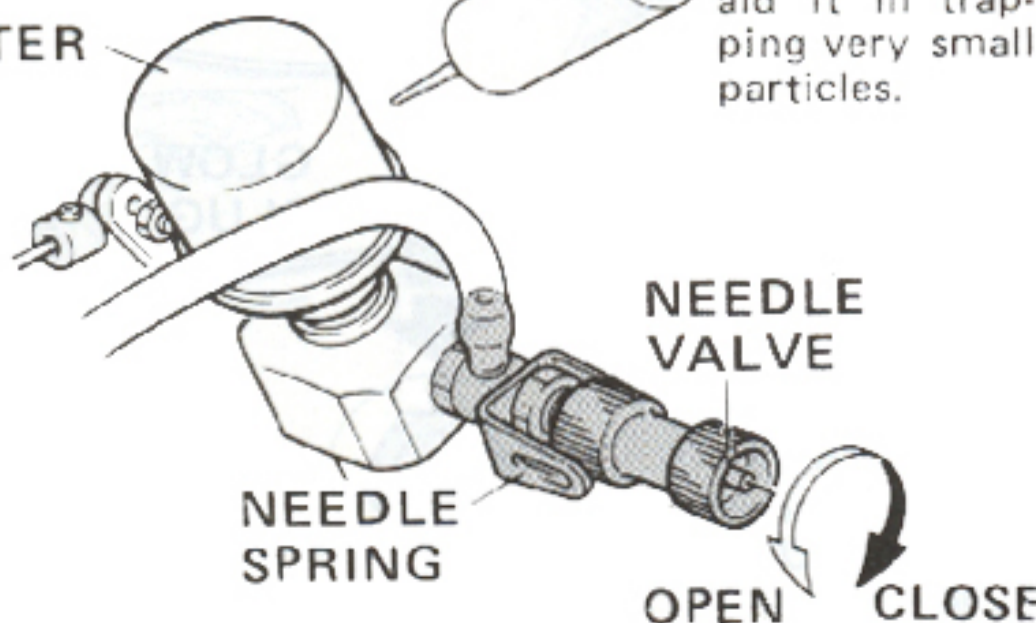
4. Close (turn clockwise) the needle valve fully. Now open it (turn counter-clockwise) one complete turn. This is the "normal" setting for the needle valve.



Put a few drops of fuel on the air filter. This will aid it in trapping very small particles.

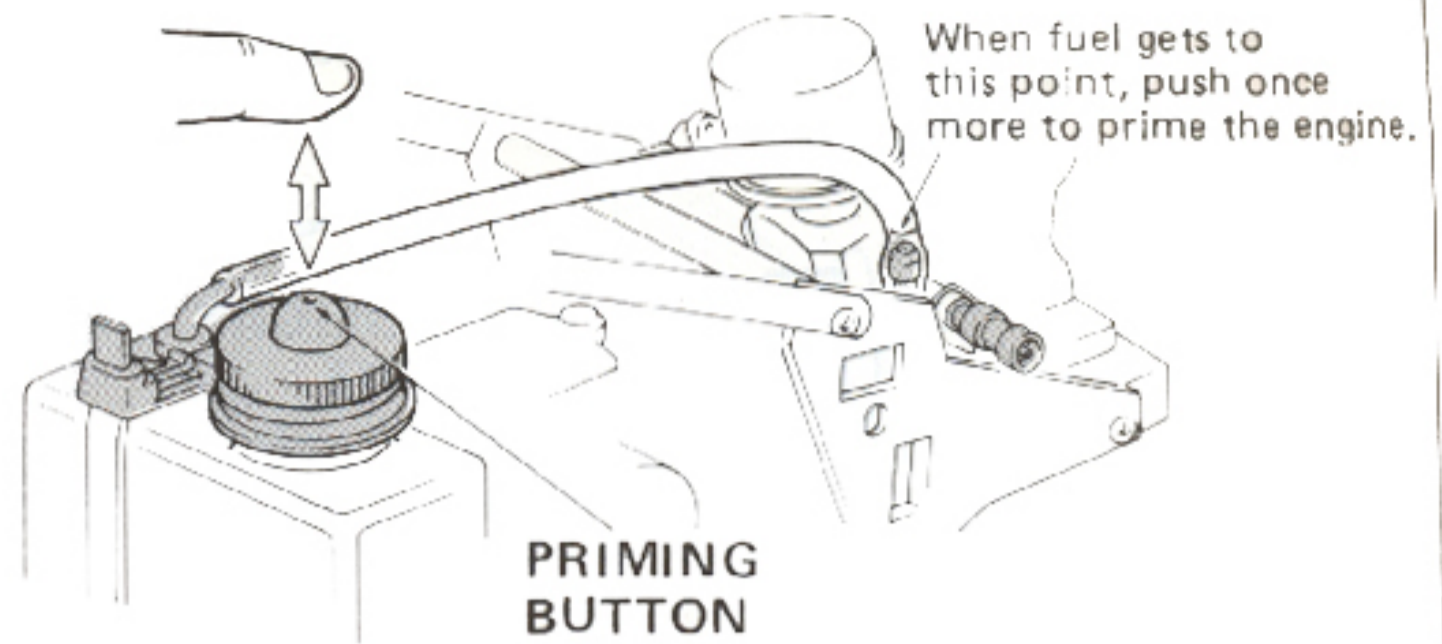


IDLE SCREW



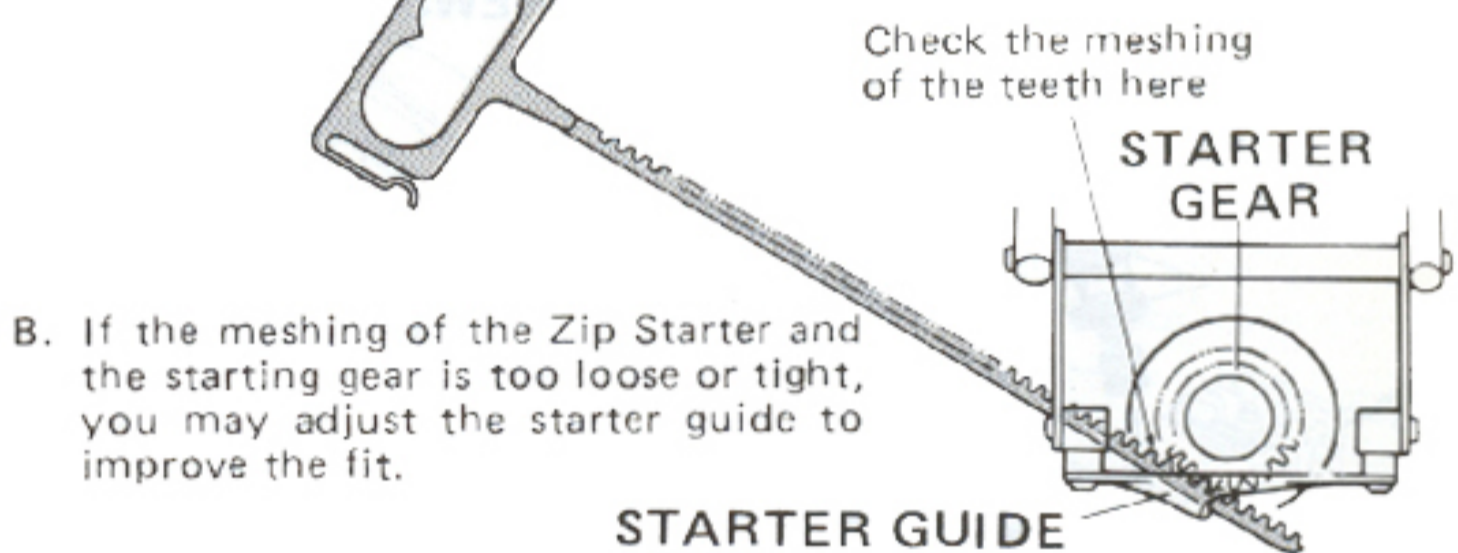
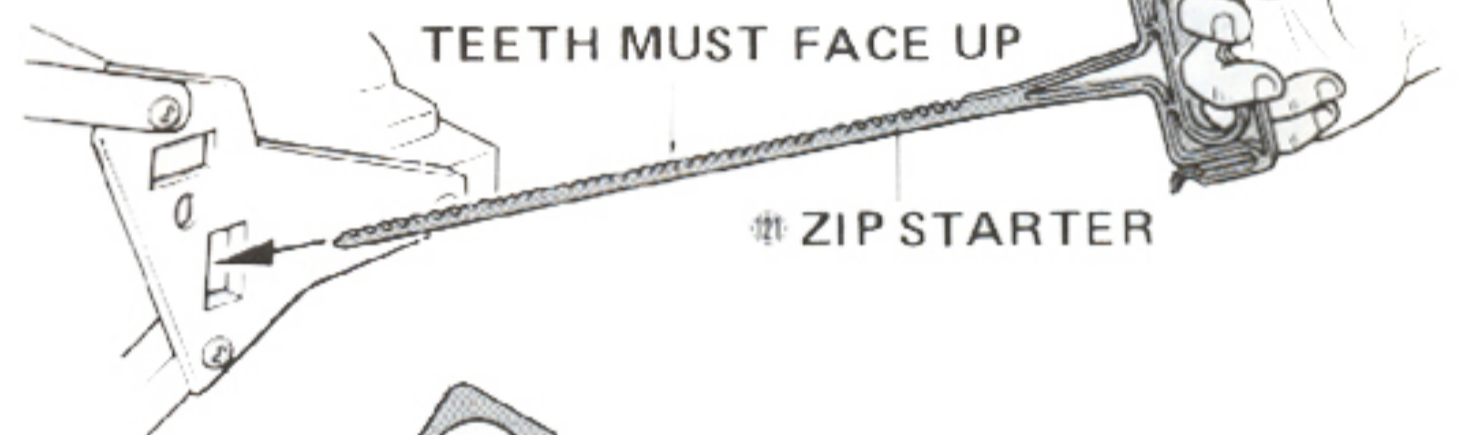
Set the idle (lowest throttle setting) by adjusting the idle set screw. At the lowest throttle setting, the opening should be the same as shown above.

STARTING YOUR ENGINE



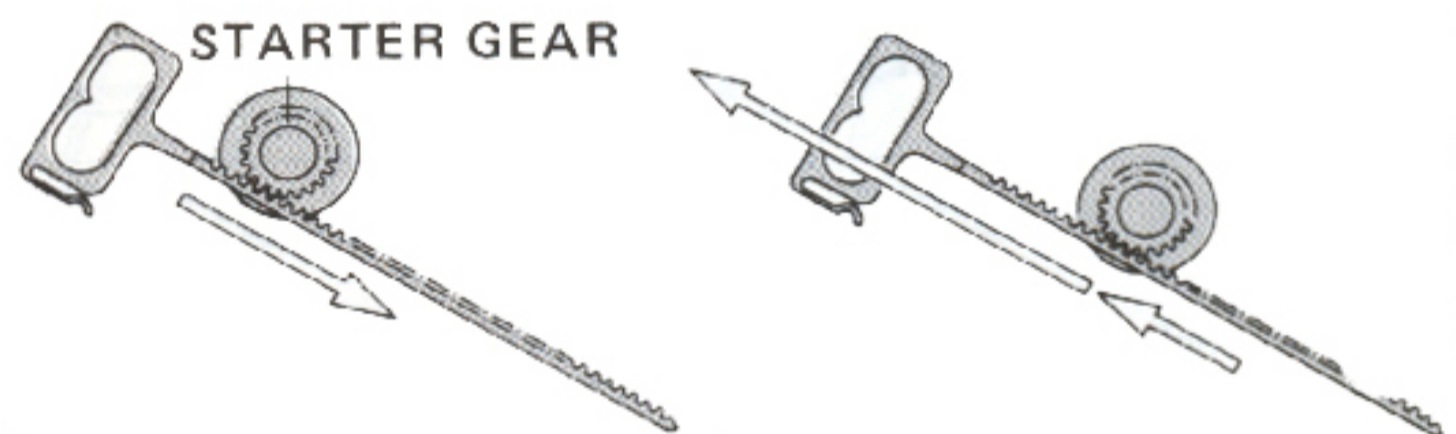
1. Push the priming button a few times until the fuel travels up the fuel line to the carb intake nipple. Push the priming button one final time which will place the fuel into the carb and prime the engine.

- A. Insert the Zip Starter into the starting slot on the left, rear side of the Advance with its teeth facing up.



- B. If the meshing of the Zip Starter and the starting gear is too loose or tight, you may adjust the starter guide to improve the fit.

2. Push the Zip Starter all of the way into the slot.

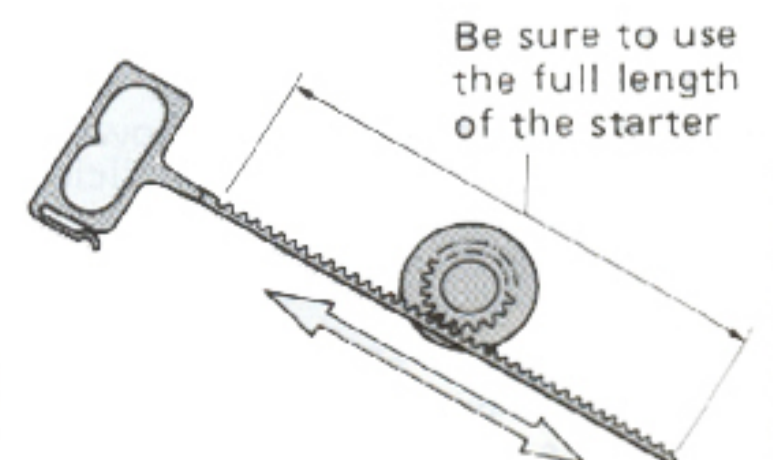


3. Turn on your receiver, then the transmitter. Move the throttle stick to the middle of its travel.
4. Slowly pull the Zip Starter out until you feel a slight resistance from the engine. Pause a moment, then pull the Zip Starter out sharply.

While repeating this several times, you should hear popping sounds from the engine. This tells you that the fuel is igniting and the engine should start shortly. When the engine is new, the time required to start it will be longer than once it has been run a few times. If the engine refuses to fire or makes the popping sounds, prime it a bit more but don't FLOOD the engine by giving it too much fuel.

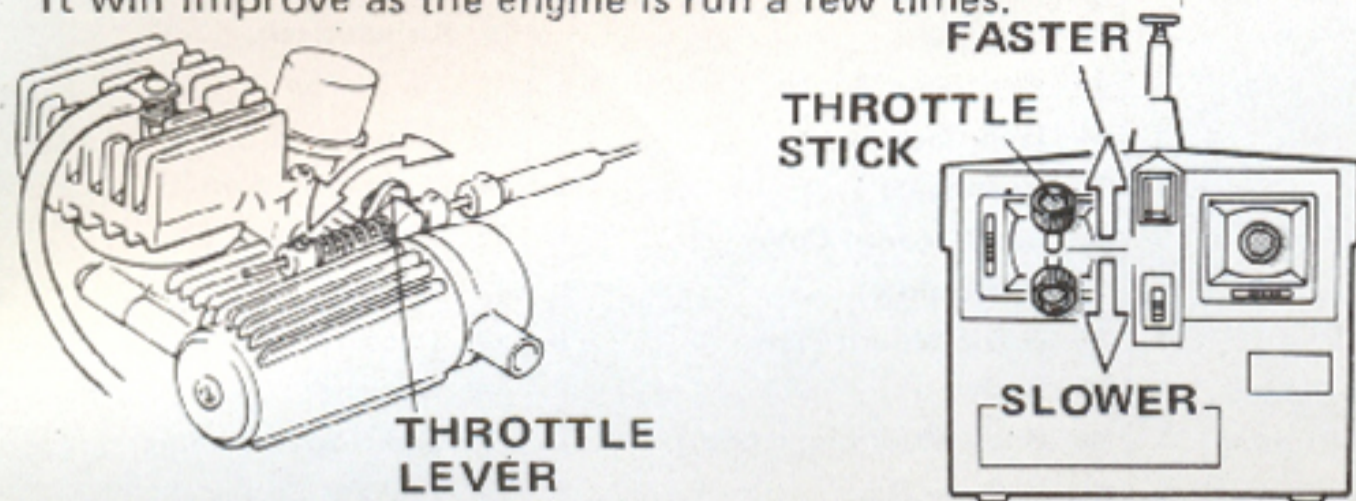
REMEMBER:

- A. Push the Zip Starter in slowly, and draw it out quickly.
- B. Don't stop in the middle of a pull.
- C. Pull the Zip Starter out in a straight line. Don't allow it to jerk to the left or right.
- D. Use the troubleshooting guide on the opposite page.



ONCE THE ENGINE HAS STARTED

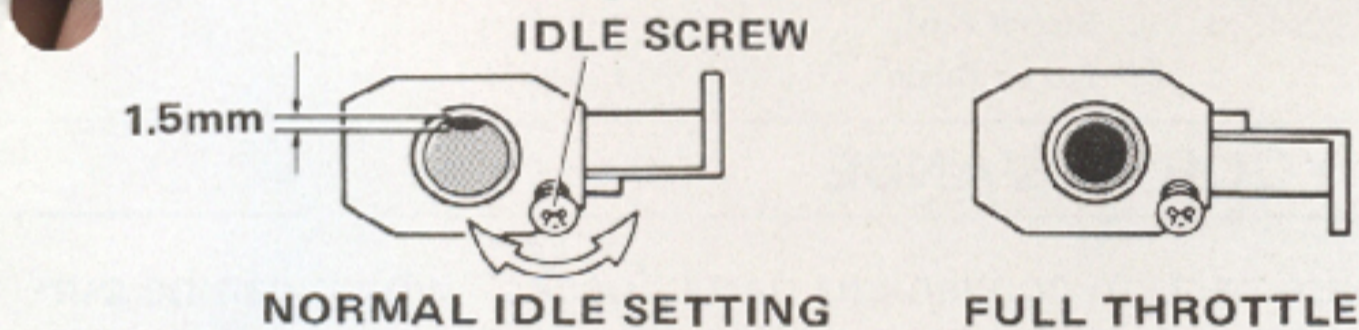
- Lift the rear end of the car off the ground and move your radio's throttle control stick slowly from low throttle to high throttle and back again. If the engine has good speed but stops suddenly while going from low to high, try opening the needle valve a few notches (clicks) and start it again. If the engine responds very sluggishly from low to high, then it is probably too rich and you should try closing the needle valve a few notches. Repeat moving the stick and adjusting the needle valve until the engine responds reasonably smoothly. When the engine is new, the smoothness of control from low to high may not seem great. It will improve as the engine is run a few times.



- Once the engine is running smoothly, remove the glow plug battery from the clip. The engine should now continue to run smoothly without power being applied to the plug.

THROTTLE LEVER ADJUSTMENT

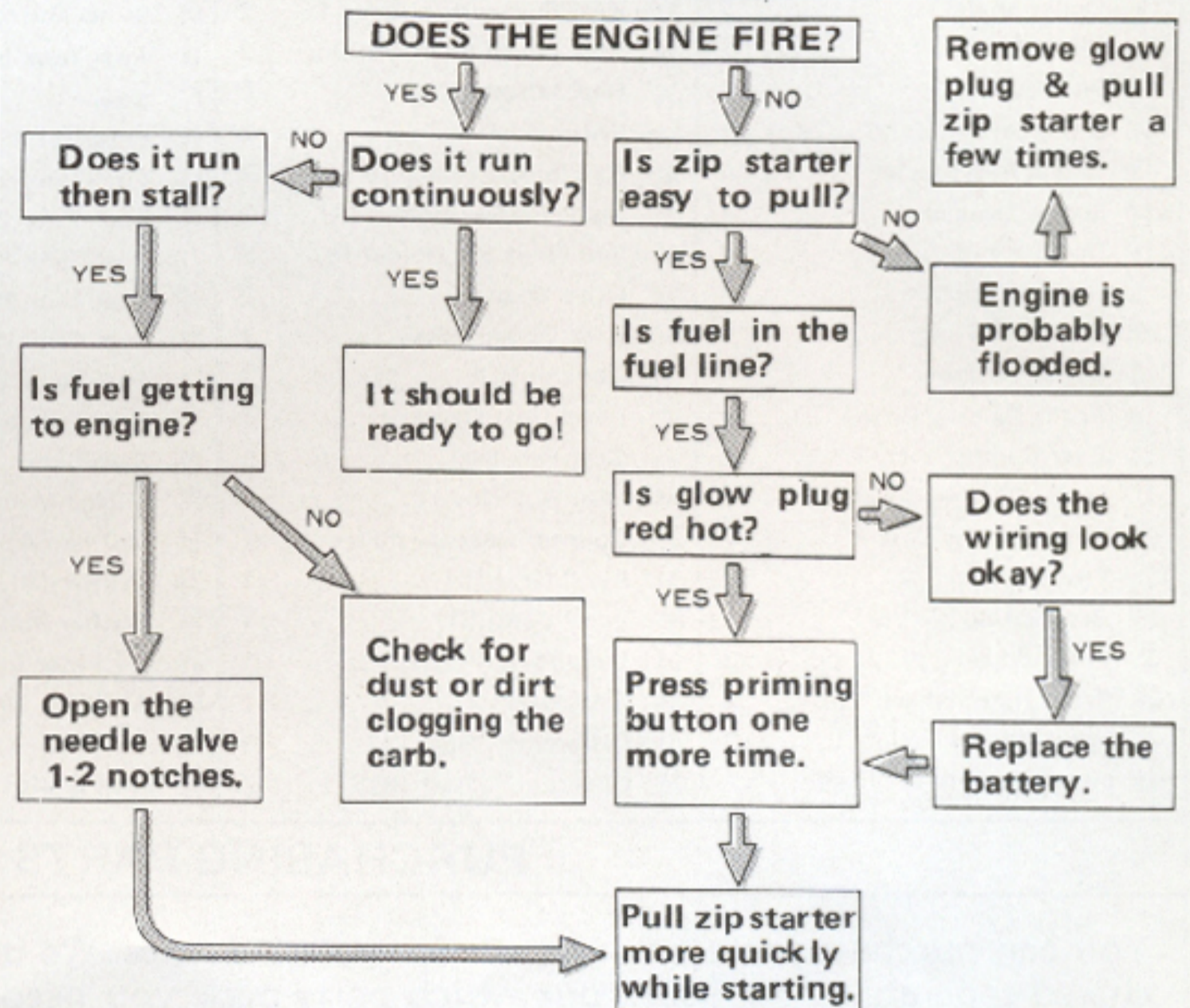
If the engine is running very fast even at a low throttle setting, the idle adjustment of the engine is set too high. If, on the other hand, the engine dies at a low throttle setting, the idle is probably set too low. You can adjust the low idle setting by turning the idle adjustment screw. The ideal setting is shown below.



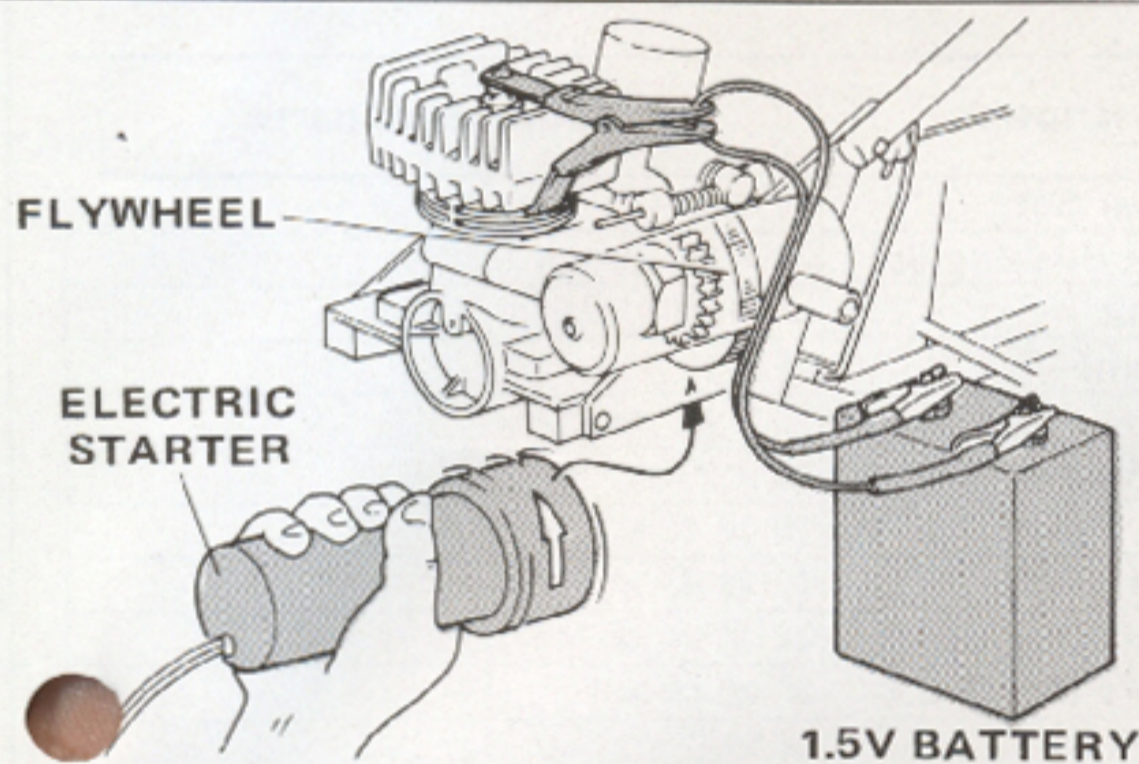
OVERHEATING

If the engine loses its power while running or simply stalls, it is probably OVERHEATED. To avoid this problem, run the engine richer by opening the needle valve a few notches. This is especially important while the engine is new. Closing the needle valve makes the engine run faster BUT can result in overheating if closed too much. Don't try to get more power out of your engine at the price of overheating. Overheating can rob performance and lead to engine damage.

ENGINE TROUBLE SHOOTING



USING AN ELECTRIC STARTER



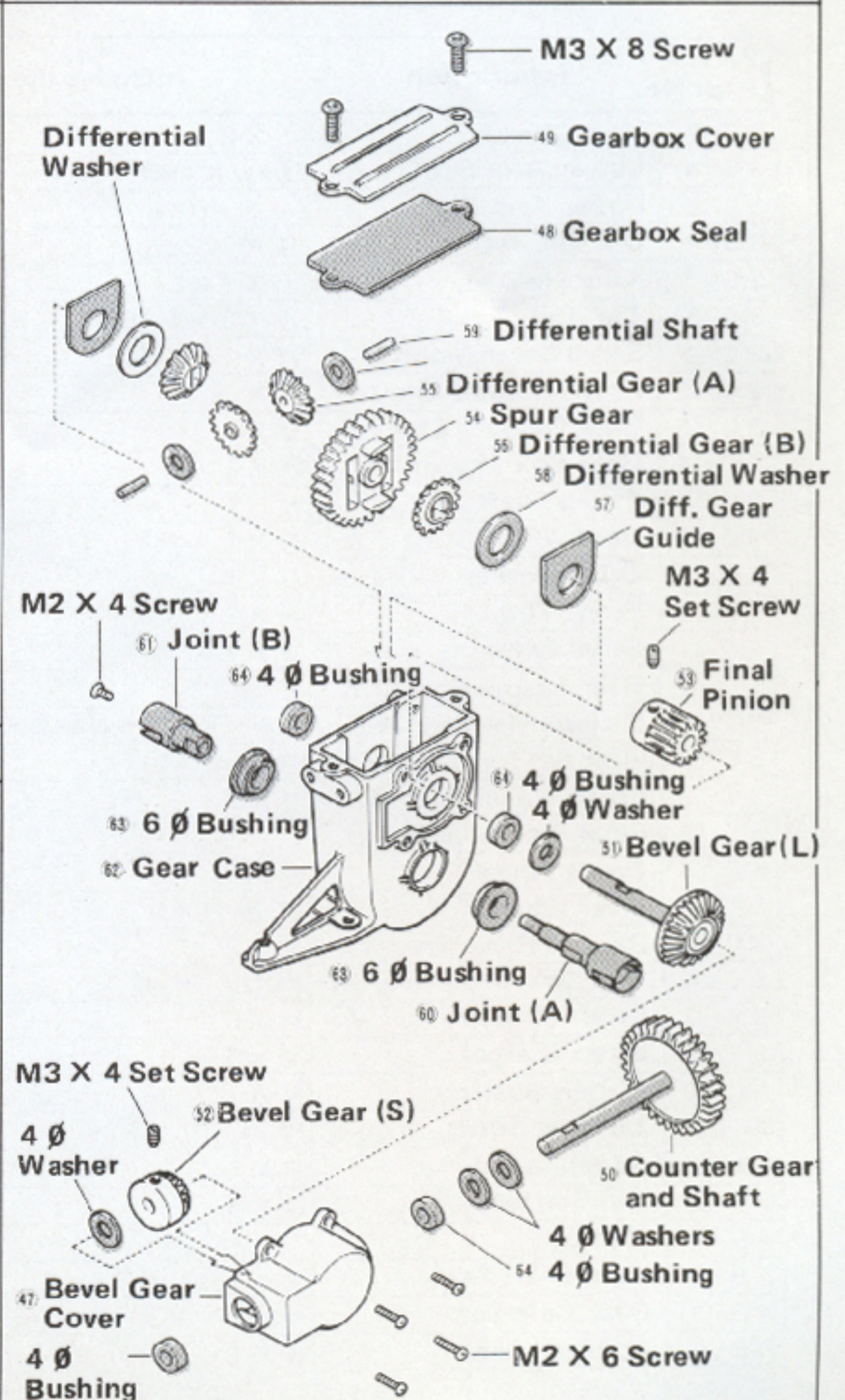
While the Zip Start method is easier, the Advance may be started with an electric starter. Use a standard 1.5 volt glow plug battery wired to the plug as shown in the drawing and turn the flywheel with the rubber "donut" of the electric starter.

OIL THE GEARBOX



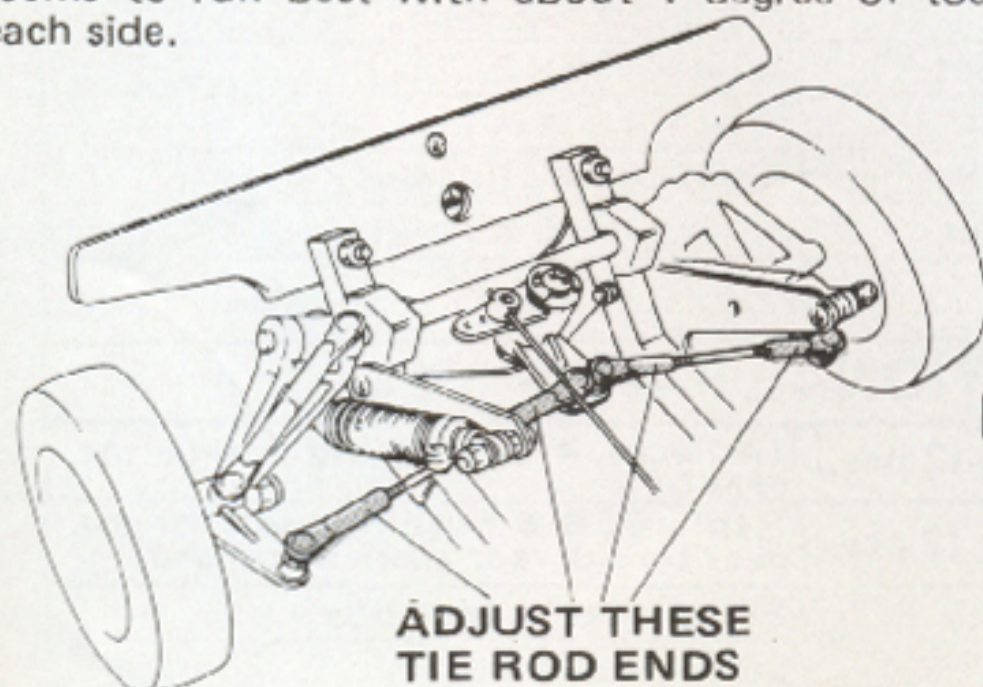
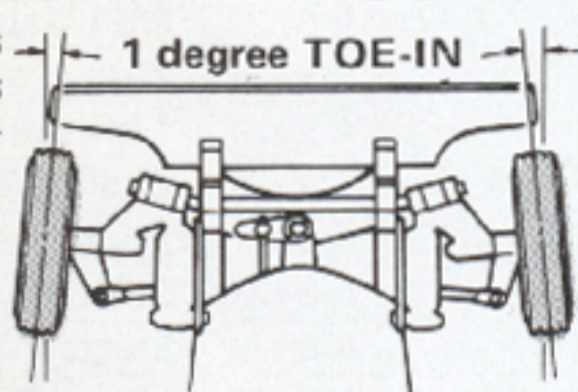
Remove the gearbox cover and pour in 1/2 teaspoon of the red oil. Occasionally check the gearbox to make sure it is lubricated. Apply oil to the bearings shown after EVERY RUN.

GEARBOX PARTS



ADJUSTING THE STEERING

Toe-in is an adjustment of the front wheels that makes them converge slightly toward the front. This helps the model run in a straight line. Toe-in can be adjusted by changing the threaded tie rods. This model seems to run best with about 1 degree of toe-in on each side.



KEY NUMBERS LIST

Key No.	Part Name	Qty.	Key No.	Part Name	Qty.	Key No.	Part Name	Qty.	Key No.	Part Name	Qty.		
1	Bumper	1	29	Rear Inner Wheel	2	57	Differential Gear Guide	2	85	Pilot Shaft (For O.S.)	1		
2	Main Chassis	2	30	Front Tire	2	58	Differential Washer	2	86	Clutch Bearing	1 set		
3	Arm Axle	1	31	Rear Tire	2	59	Differential Shaft	2	87	Clutch Bell (w/Bushing)	1		
4	Arm Axle Stopper	2	32	Front Damper Stay	2	60	Joint (A)	1	88	Clutch Shoe	2		
5	Lower Arm (L & R)	1 set	33	Damper Bushing	4	61	Joint (B)	1	89	Clutch Spring	1		
6	Pivot (L & R)	1 set	34	Front Wheel Bushing	2	62	Gear Case	1	90	Joint Collar	1		
7	Knuckle Arm (L & R)	1 set	35	Rear Suspension Plate	1	63	6 Ø Bushing	1	91	Roll Cage	2		
8	Ballend	8	36	Gear Box Mount	1	64	4 Ø Bushing	4	92	Roll Bar	1		
9	Upper Shaft	2	37	Rear Suspension Arm	2	65	Stone Guard	1	93	Headlight Mount	1		
10	Tie rod	2	38	Rear Wheel Shaft Bushing	2	66	Fuel Tank Holder	1	94	Roll Cage Top	1		
11	Pivot Ball	6	39	Rear Wheel Shaft	2	67	Strap (L)	1	95	Headlights	4		
12	Servo Saver	1 set	40	Swing Shaft	2	68	Strap (S)	7	96	Servo Mount Collar	4		
13	Spring Receptacle	4	41	Rear Suspension Shaft	2	69	Fuel Tank	1	97	Radio Box	1		
14	Spring Stopper	4	42	Lg. Pivot Bar Holder (A)	2	70	Fuel Tank Cap	1	98	Radio Mount Plate	1		
15	Damper end	4	43	Sm. Pivot Bar Holder (B)	2	71	Fuel Tank Priming Button	1	99	Body	1		
16	Damper stopper	4	44	Drive Washer	2	72	Fuel Tank Rubber Bushing	1	100	Body Mounting Knob	1		
17	Damper O-Ring	4	45	Rear Damper Stay	1	73	Fuel Tank Pipe	1	101	Linkage Rod	2		
18	Damper Washer	4	46	Damper Ball	4	74	Fuel Tank Tube	1	102	Linkage Guide	1		
19	Front Damper Piston	2	47	Bevel Gear Cover	1	75	Rear Frame	2	103	2 Ø Stopper	3		
20	Rear Damper Piston	2	48	Gear Box Seal	1	76	Side Plate	1	104	Battery Holding Spring	1		
21	Front Damper Case	2	49	Gear Box Cover	1	77	Engine Mount	2	105	Brake Lever	1		
22	Rear Damper Case	2	50	Counter Gear (w/shaft)	1	78	Muffler (A)	1	106	Brake Lever Holder	2		
23	Front Spring	2	51	Bevel Gear (L)	1	79	Muffler (B)	1	107	Brake Shoe	1		
24	Rear Spring	2	52	Bevel Gear (S)	1	80	Muffler Baffle	1	108	Headlight Mount Holder	2		
25	Front Wheel	2	53	Final Pinion Gear	1	81	Air Filter Element	1	109	Flywheel	1		
26	Front Inner Wheel	2	54	Spur Gear	1	82	Air Filter Receptacle	1	110	Clutch Pin	2		
27	Rear Outer Wheel	2	55	Differential Gear (A)	2	83	Air Filter Adapter	1	111	Starter Pawl	2		
28	Rear Tire Support Ring	2	56	Differential Gear (B)	2	84	Pilot Shaft (For Enya)	1	112	Starter Guide	1		
											113	Starter Gear	1
											114	Ratchet Spring	1
											115	Plug Heat Coil (w/clip)	1 set
											116	Plug Heat Terminal	1
											117	Cord Tube	1
											118	Body Stopper Collar	1
											119	Switch Plate	1
											120	Switch Boots	1
											121	Zip Starter	1
											122	Damper Oil	1
											124	Damper Wrench	1
											125	Wrench	1
											126	Antenna Set	1 set
											127	Decal	1
											128	Upright	2
											129	Servo Saver Mount	1
											130	Linkage Spring	1
											131	E-Ring (E-3)	1
											132	Hexagonal Wrench (1.5mm)	1
											133	Hexagonal Wrench (2.0mm)	1
											134	Brass Washer for Enya CX-1	1
											135	E-Ring (E-7)	1
											136	Brake Pipe	1
											137	Throttle Guide	1
											138	Spacers	2

PURCHASING PARTS FOR YOUR ADVANCE

You can purchase replacement parts for your Advance. We offer these parts in convenient parts "packs" which can be purchased separately. To figure out which parts pack you need, find the part in the key number list at the top of this page. 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 Pivot Ball (Key No. 11) ask your dealer for Kyosho Parts Pack SC-6 (Upright Set).

Parts Pack No.	Description	Includes these parts:	Parts Pack No.	Description	Includes these parts:
SC-2	Main Chassis	2 X 2	AB-5	Bevel Gear Set	51 52 X 1
SC-4	Lower Arm Set	5 6 X 1 set	AB-6	Gear Box Bushing Set	63 X 2 64 X 4
SC-5	Upper Arm Set	8 9 11 X 2	AB-7	Fuel Tank	66 69 70 71 72 73 74 X 1
SC-6	Upright Set	11 12 X 2	AB-8	Rear Frame	75 X 1
SC-7	Knuckle Arm	7 X 1 set	AB-9	Side Plate	90 X 1 76 X 2
SC-8	Tie Rod Set	10 X 2 8 11 X 4	AB-10	Engine Mount	77 X 2
SC-9	Servo Saver Mount	12 X 1	AB-11	Muffler	78 79 80 X 1
SC-12	Front Damper Stay	32 X 1	AB-12	Air Filter	81 82 83 X 1
SC-13	Rear Damper Stay	45 X 1	AB-13	Pilot Shaft (for Enya)	84 11 134 135 X 1
SC-14	Gear Box Mount	36 X 1	AB-14	Pilot Shaft (for O.S.)	85 11 135 X 1
SC-17	Swing Shaft	40 X 1	AB-15	Clutch Shoe	88 X 2
SC-18	Rear Wheel Shaft	39 X 1	AB-16	Clutch Bell	87 X 1
SC-20	Drive Washer	44 X 1	AB-17	Clutch Spring	89 X 4
SC-26	Front Tire	30 X 1	AB-18	Roll Cage	91 X 2
SC-41	Servo Saver	12 X 1	AB-19	Roll Cage Top Set	93 94 X 1 108 X 2
SC-42	Rear Suspension Arm	37 38 X 2	AB-20	Headlight Set	95 X 4
SC-56	Differential Gear Set	54 60 61 X 1 55 56 57 58 59 X 2	AB-21	R/C Unit Box Set	97 98 100 118 X 1 96 X 4
SC-59	Joint Set for Differential	60 61 X 1	AB-22	Body (Driver Figure)	99 X 1
SC-63	Front Wheel Bushing	34 X 2	AB-23	Roll Bar	92 X 1
SC-83	Final Pinion Gear	53 X 1	AB-24	Plug Heat Set	104 115 116 117 X 1
SC-48	Front Wheel	25 26 X 2	AB-25	Linkage Set	102 103 107 X 1 101 X 2 106 X 3
SC-49	Rear Wheel	27 28 29 X 2	AB-26	Brake Set	105 106 107 X 1 108 X 2
SC-84	Special Rear Tire	31 X 2	AB-27	Flywheel	105 X 1 110 X 2
SC-86	Rear Suspension Plate Set	35 X 1 41 42 43 X 2	AB-28	Starter Guide Set	112 114 X 1 111 X 2
EF-37	Strap (Small)	68 X 6	AB-29	Starter Gear Set	65 113 X 1 138 X 2
EF-39	Strap (Large)	67 X 6	AB-30	Front Damper Set	13 14 15 16 17 18 19 21 23 33 46 X 2
LD-70	Clutch Bearing	86 X 1	AB-31	Rear Damper Set	13 14 15 16 17 18 20 22 24 33 46 X 2
CB-124	Linkage Boots	109 128 X 1	AB-32	Decal	127 X 1
1885	Antenna Set	126 X 1			
MB-63	Zip Starter	121 X 4			

OPTIONAL PARTS

AB-1	Bumper	1 X 1	CK-63	4 Ø Ball Bearing (2 pcs.)	Replaces 4 Ø bushing inside the gear box
AB-2	Arm Shaft Set	3 X 1 4 X 2	MS-26	6 Ø Ball Bearing (2 pcs.)	Replaces 6 Ø bushing used for the gear box & rear suspension arm
AB-3	Gear Case Set	47 48 49 52 X 1	1886	Damper Oil	For shocks & gear box
AB-4	Counter Gear	50 X 1			