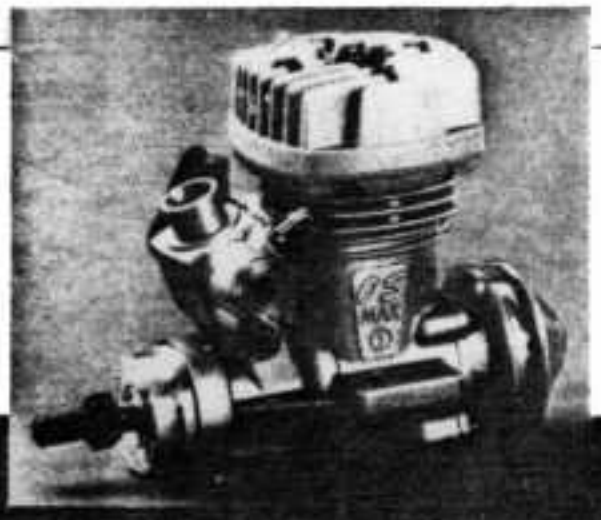
RADIO CONTROLLED ENGINE POWERED OFF-ROAD RACING BUGGY

ASSAULT®

- WIDE BUMPER IS DUAL-PURPOSE, HOLDING GLOW-PLUG CELL
- STRONG DIE-CAST ALUMINUM TRAILING-ARM SUSPENSION AND COIL-SPRING/OIL-FILLED SHOCKS FOR TOP OFF-ROAD HANDLING
- RACING-DEVELOPED ALLOY-ALUMINUM LADDER-TYPE FRAME
- PROTECTIVE RADIO BOX FOR RECEIVER AND BATTERIES
- PUSH-BUTTON AUTO-PRIME FUEL TANK
- FACTORY-ASSEMBLED GEAR BOX/DIFFERENTIAL UNIT
- ZIP/PULL-CORD/ELECTRIC STARTER COMBINATION START SYSTEM
- SPECIAL O.S. CZ ENGINE STARTS EASILY, REQUIRES LITTLE ADJUSTMENT
- MUFFLER, FILTER, GLOW PLUG, STARTER CONE, ZIP AND ROPE INCLUDED



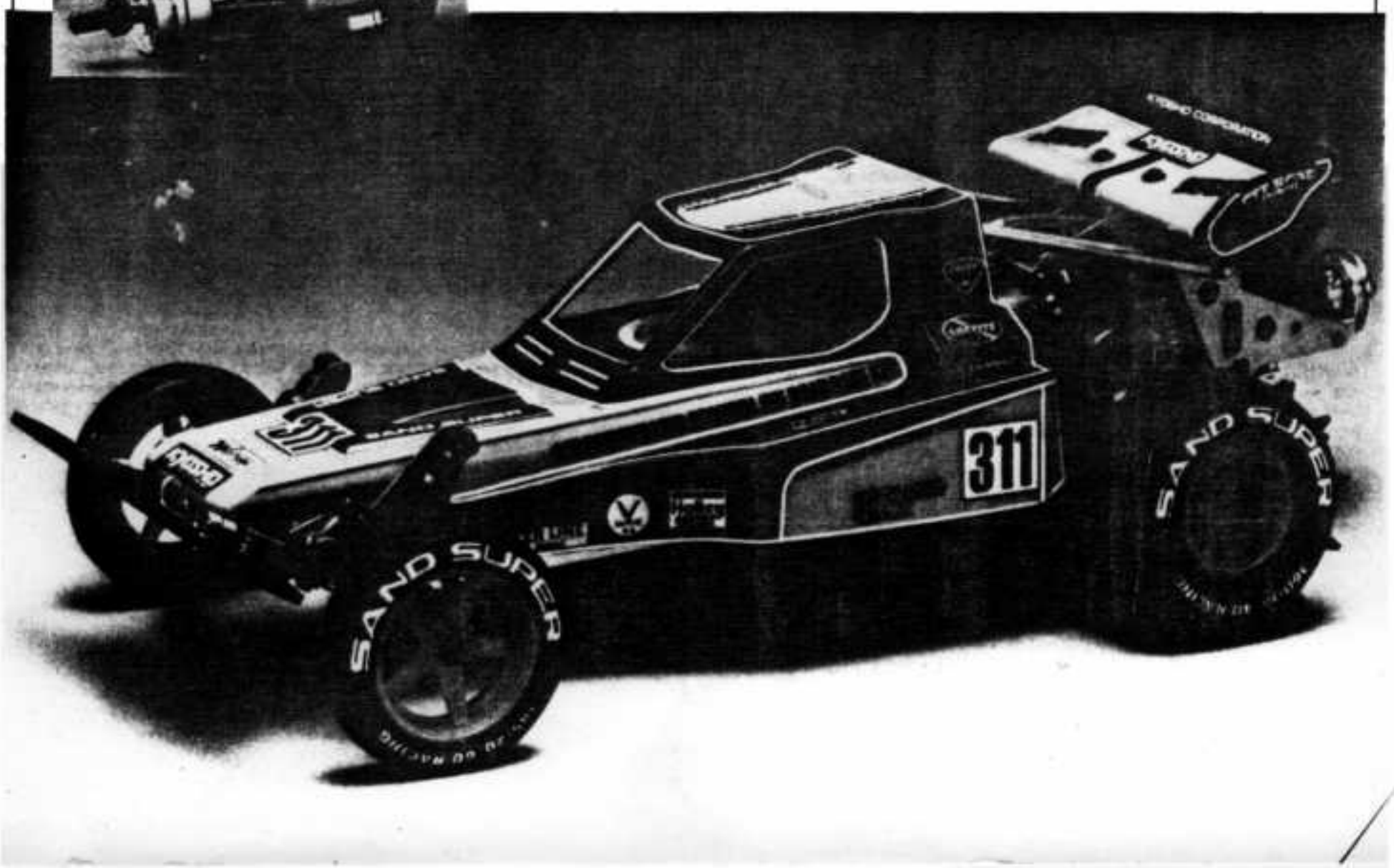
KYOSHO®

KIT No.3095

1:10 SCALE

★ O.S. CZ-1 ENGINE INCLUDED

★ REQUIRES 2-CHANNEL RADIO

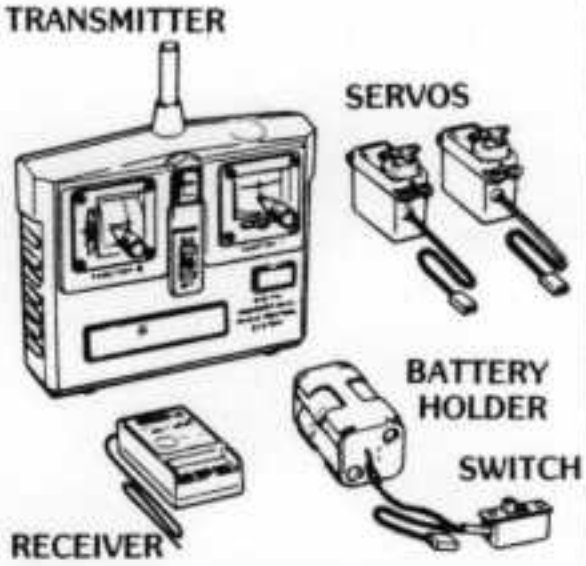


THINGS YOU WILL NEED BESIDES THIS KIT

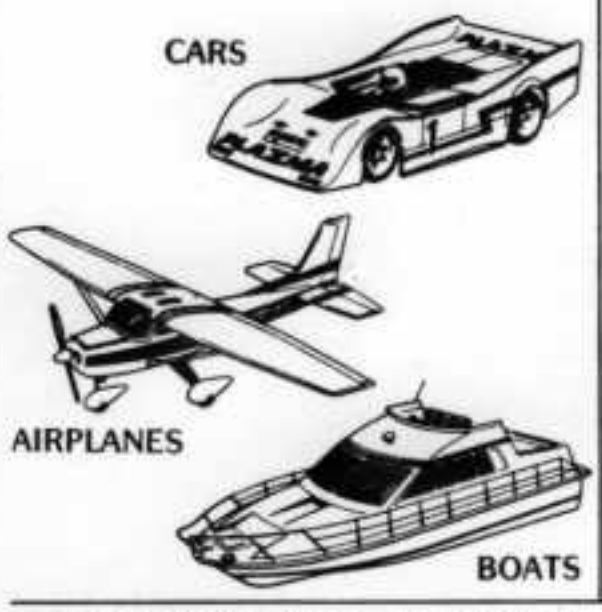
ASSAULT®

2 CHANNEL RADIO SYSTEM

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



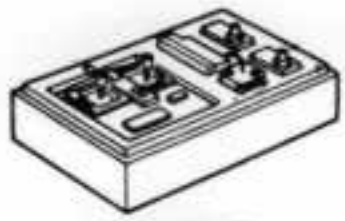
This type of radio system can also be used for other models requiring only two channels of control.



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

USING AN ELECTRIC STARTER

If you choose to use an electric starter instead of the "Zip-Starter" you will need the items shown below.

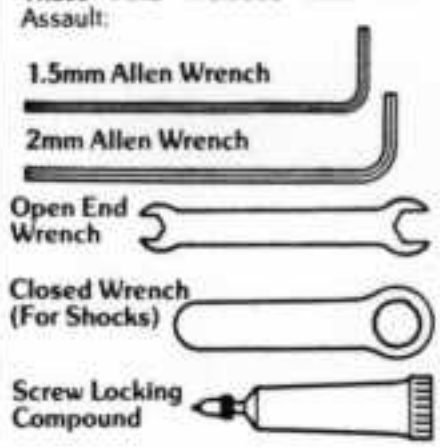

ELECTRIC STARTER


12V POWER SOURCE


12V CHARGER

REQUIRED TOOLS

These ARE included with the Assault:



These ARE NOT included with the Assault:

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

ITEMS YOU WILL NEED FOR RUNNING*

FUEL

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

The included glow plug wrench allows you to take the plug from your engine.

Paint suitable for plastic.


Masking Tape


Paint Brush

IMPORTANT! BEFORE YOU BEGIN

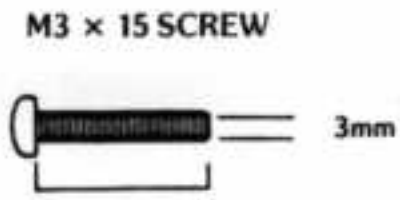
A WORD OF WARNING is necessary, especially if this happens to be your first gas-powered vehicle. Gas-powered cars are subjected to stress and strain due to high engine RPM, rough terrain and the racing/high performance usage that they receive. As a result, they need continual preventative maintenance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

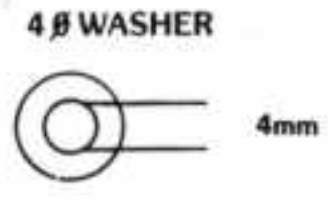
This is a sophisticated model with a large number of moving parts. Before you begin assembly, take a look through the box and these instructions carefully to decide whether or not you are ready for this challenge! If you do not feel that this type of model is for you, it may be returned to the dealer 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 before actually starting to build.

NOTE: Please refer to the instructions supplied by O.S. for your engine. Pay particular attention to the "Safety Instructions and Warnings".

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 × 15 screw is 15mm long and 3mm in diameter. Some round parts may be labeled as a "4 Ø Washer" (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/gearbox 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 × 12 SCREW (4)

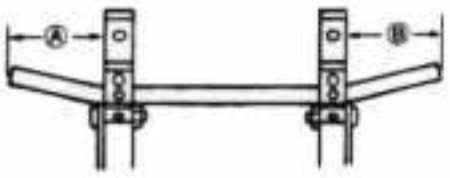
M3 × 15 SCREW (2)

M2.6 NUT (4)

M3 NUT (2)

2 SMALL PARTS NEEDED

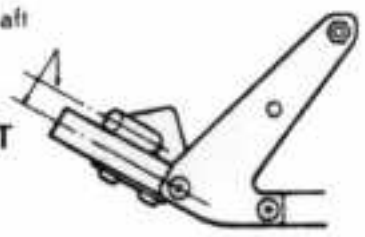
M3 × 12 SCREW (4)



Make sure A and B are the same length.

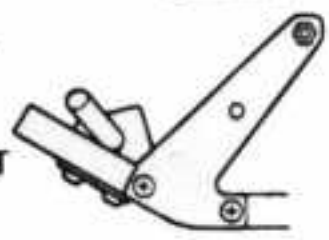
Set Arm Shaft at this angle.

CORRECT



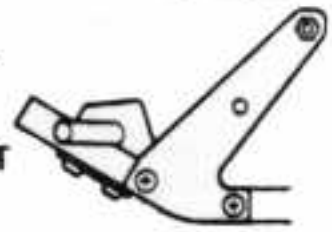
Arm Shaft is too high.

INCORRECT



Arm Shaft is too low.

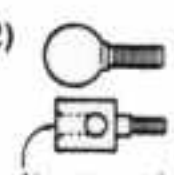
INCORRECT



3 SMALL PARTS NEEDED

⑪ PIVOT BALL (2) (Black)

⑫ LINKAGE GUIDE (1)



Note internal shape.

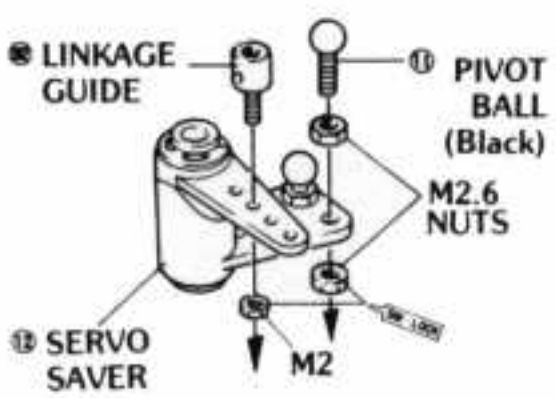
M4 × 35 SCREW (1)

M2 NUT (1)

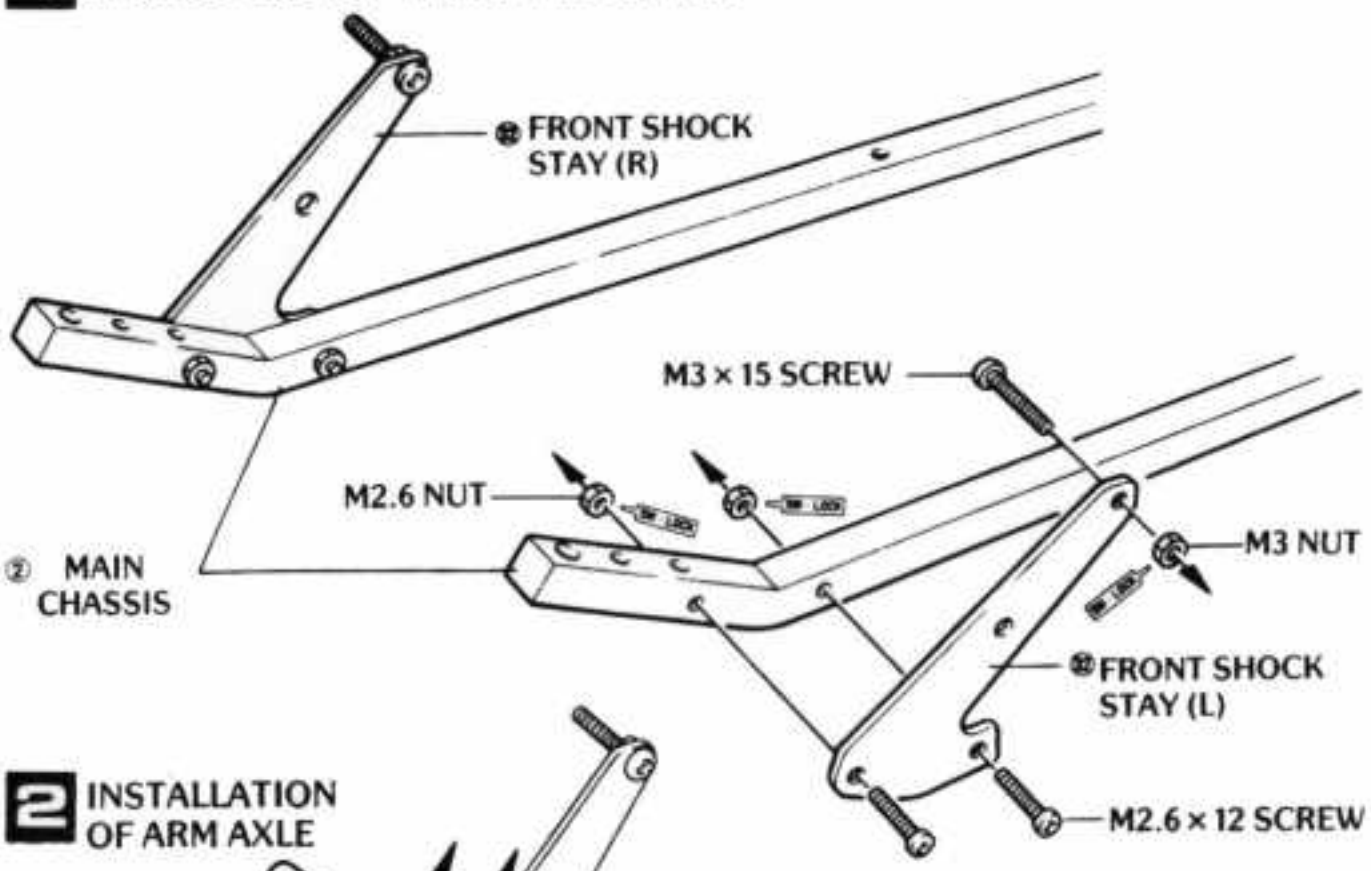
M2.6 NUT (4)

M4 NUT (2)

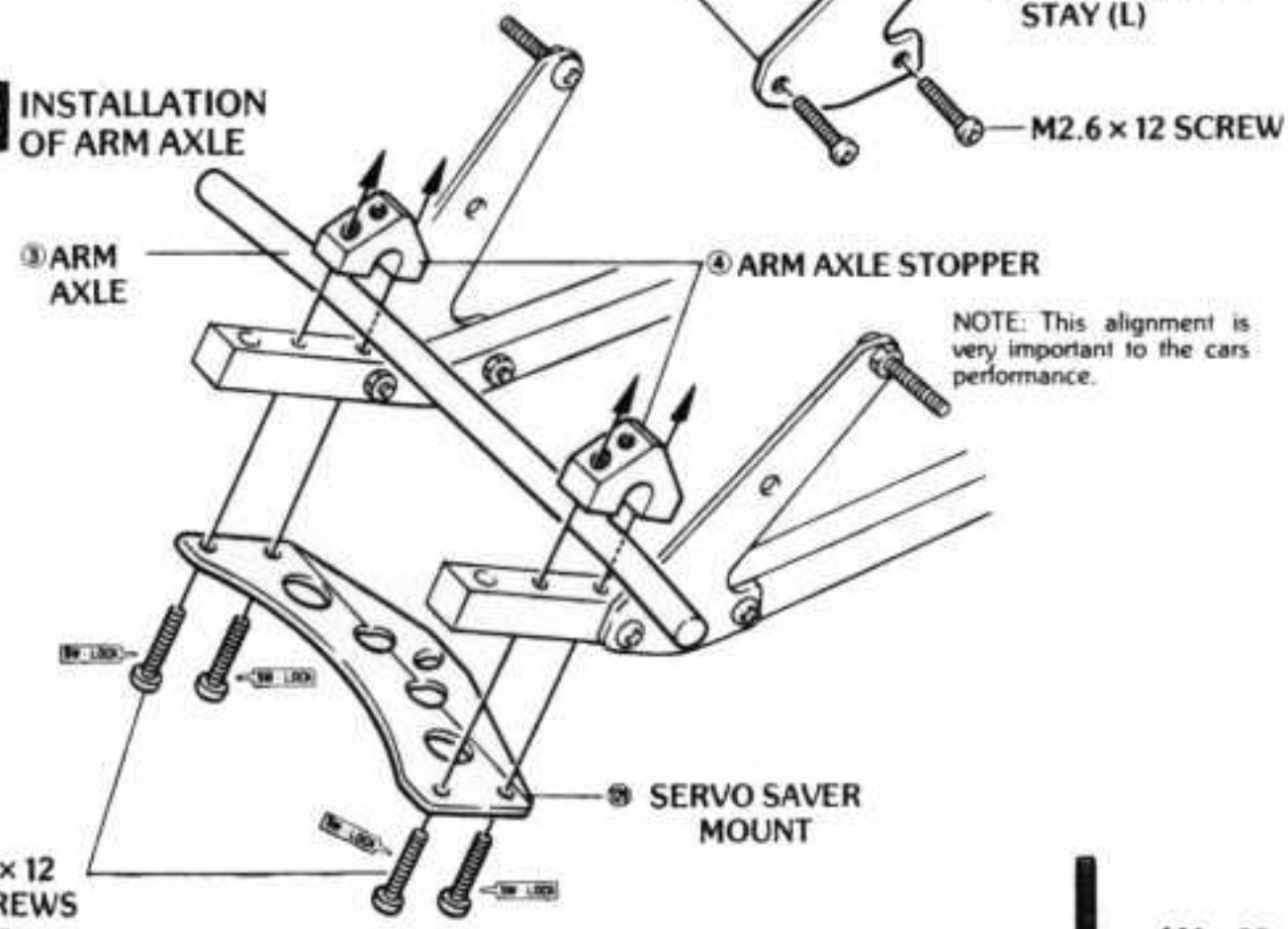
Assemble the servo saver as shown, below.



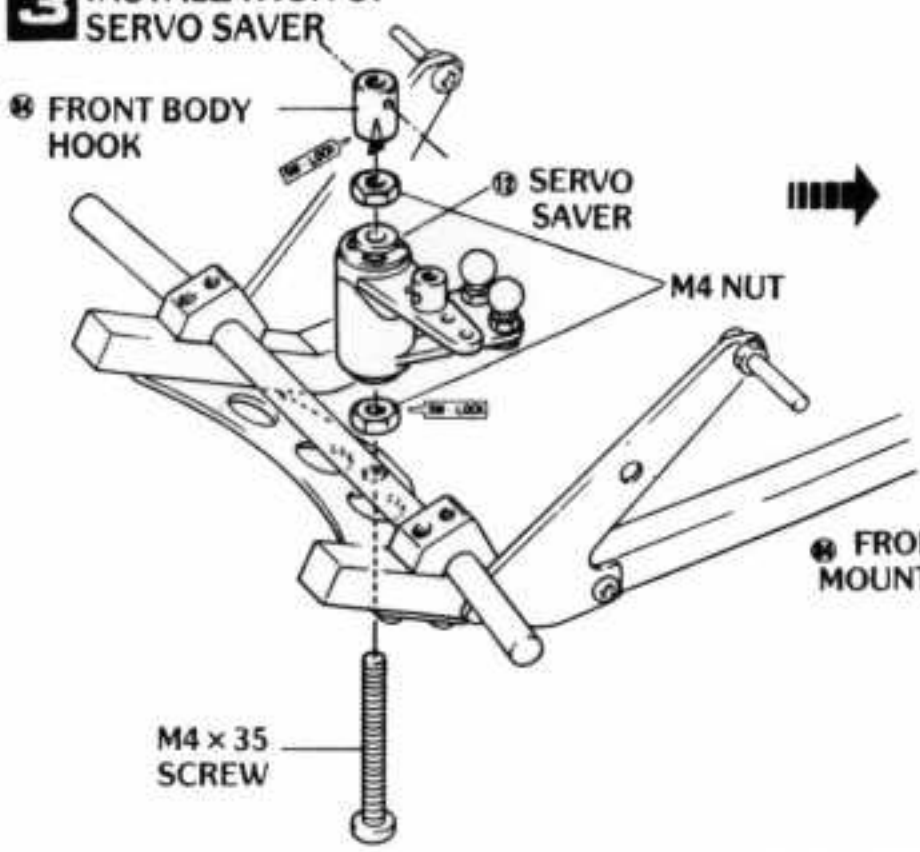
1 INSTALLATION OF FRONT SHOCK STAY

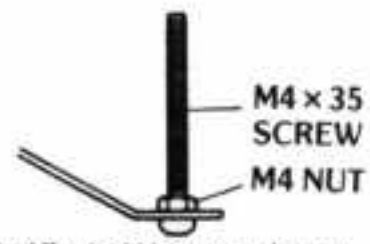


2 INSTALLATION OF ARM AXLE

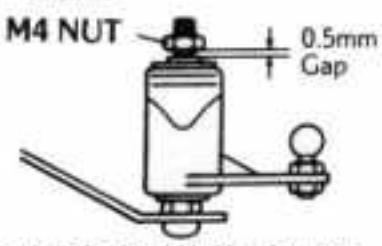


3 INSTALLATION OF SERVO SAVER





1. Affix the M4 screw and nut to the servo saver mount as shown.



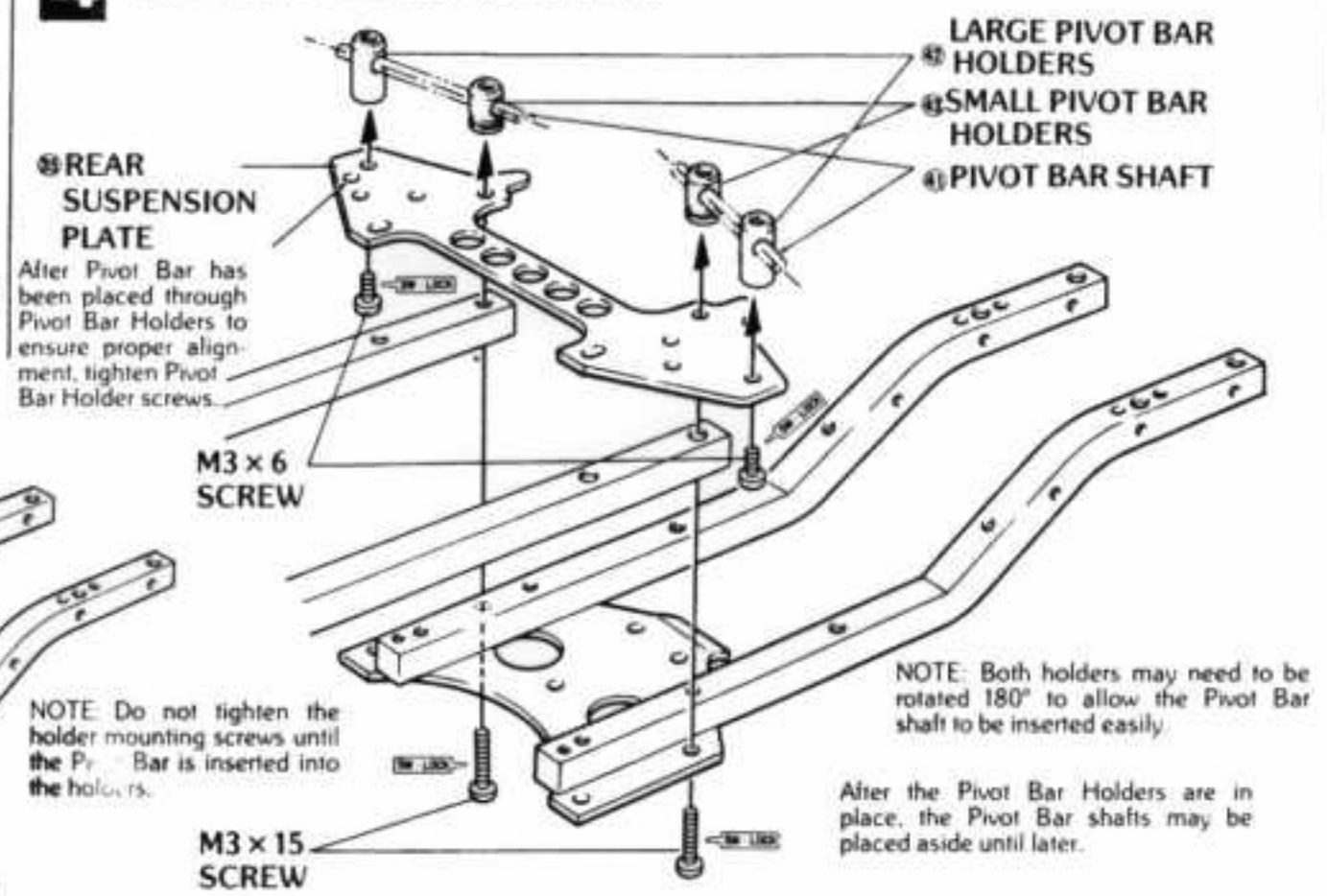
2. Attach the M4 Nut leaving 0.5mm gap.

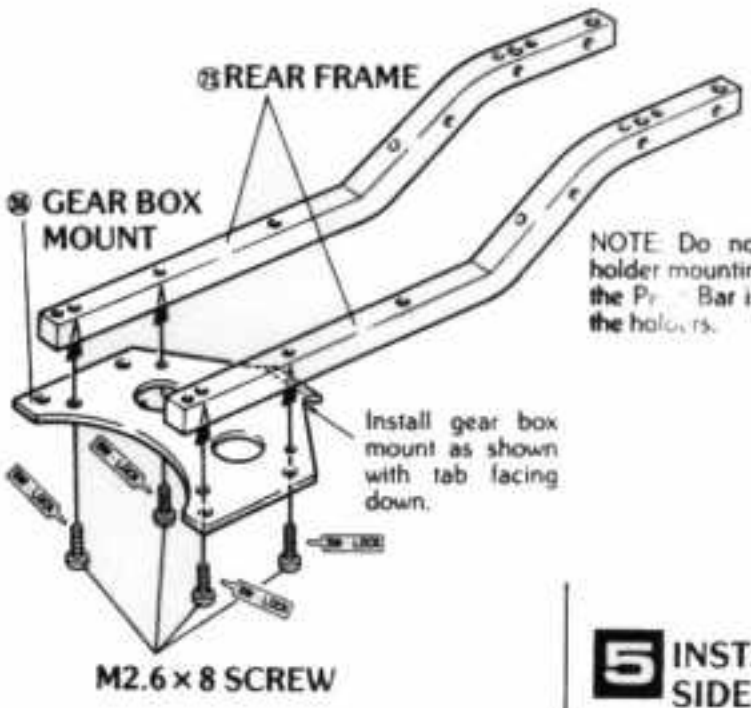
3. Hold the M4 Nut in place and affix the front body hook.

4 SMALL PARTS NEEDED

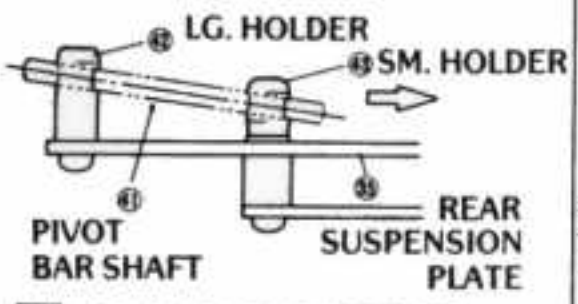
- ㊷ LARGE PIVOT BAR HOLDER - A (2)
- ㊸ SMALL PIVOT BAR HOLDER - B (2)
- M2.6 × 8 SCREW (4)
- M3 × 6 SCREW (2)
- M3 × 15 SCREW (2)

4 ASSEMBLING THE REAR CHASSIS





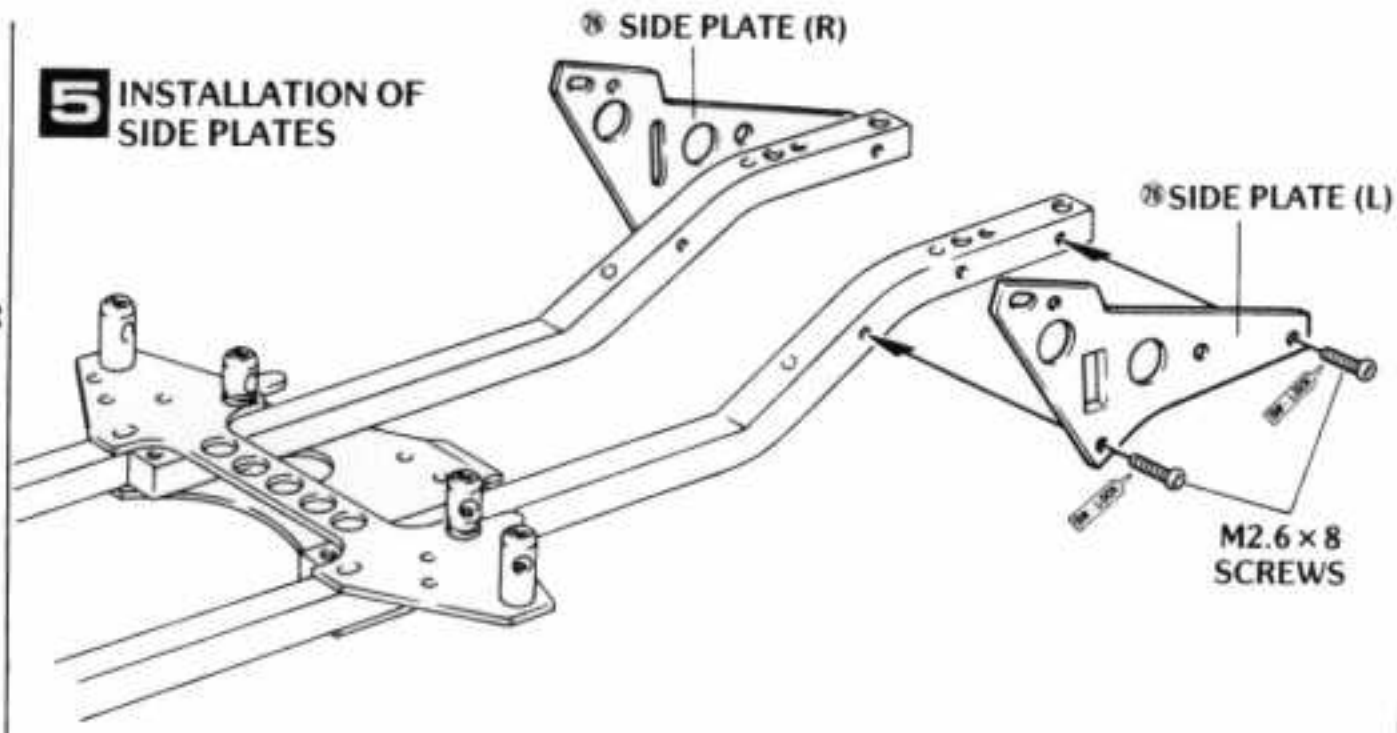
Note that ㊷㊸ should be positioned so that the holes in them are at the angle shown.



5 SMALL PARTS NEEDED

- M2.6 × 8 SCREW (4)

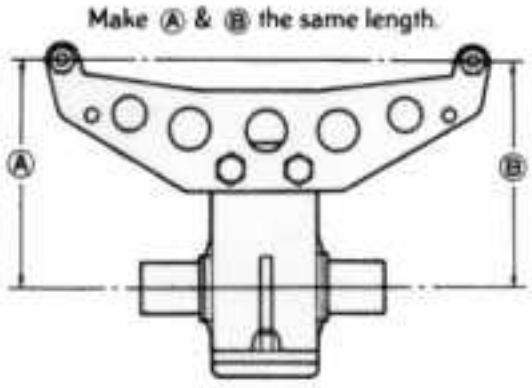
5 INSTALLATION OF SIDE PLATES



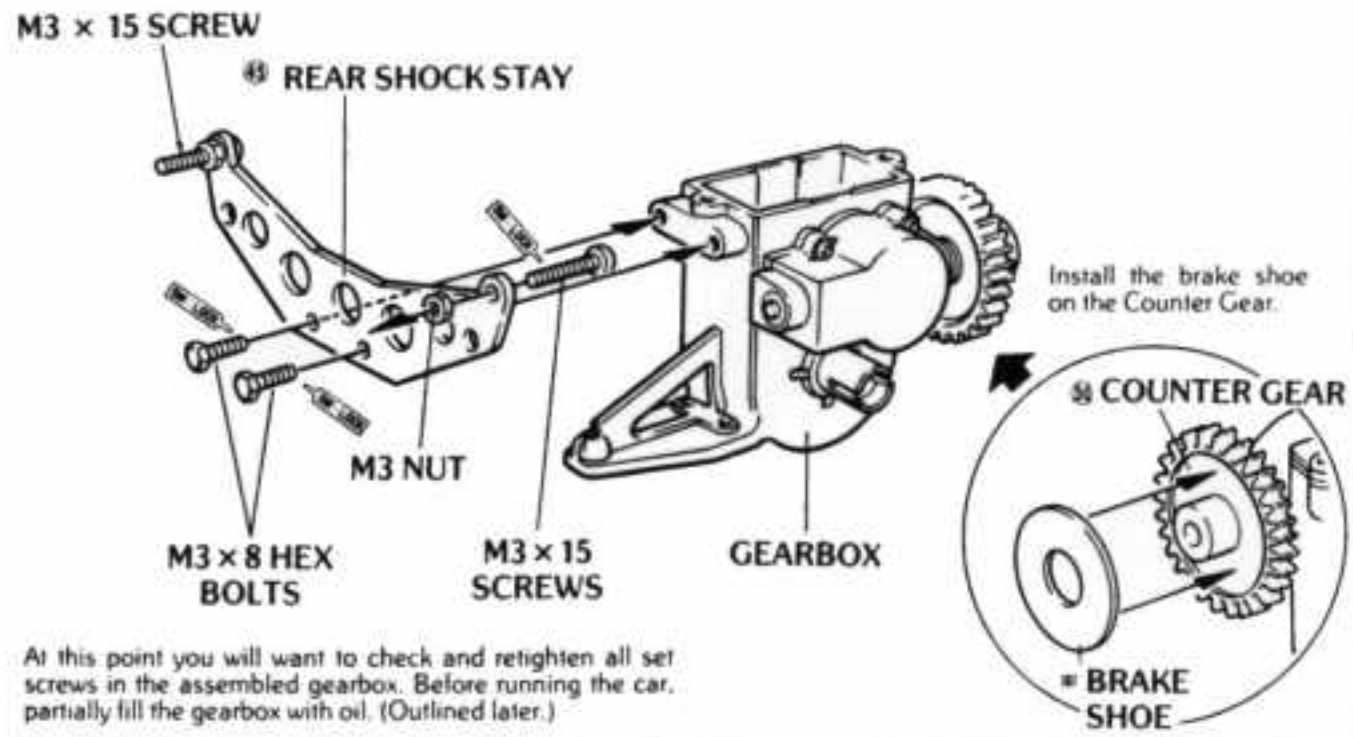
6 SMALL PARTS NEEDED

- M3 × 8 HEX BOLT (2)
- M3 × 15 SCREW (2)
- M3 NUT (2)

Make Ⓐ & Ⓑ the same length.



6 INSTALLATION OF GEAR BOX

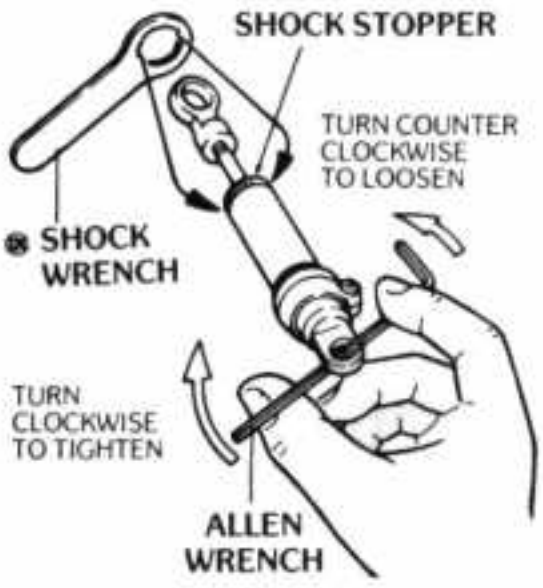


At this point you will want to check and retighten all set screws in the assembled gearbox. Before running the car, partially fill the gearbox with oil. (Outlined later.)

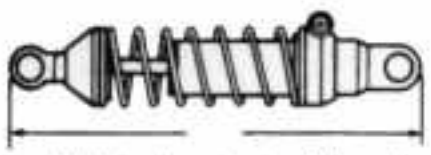
7 SMALL PARTS NEEDED

M3 × 6 NUT (3)

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



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



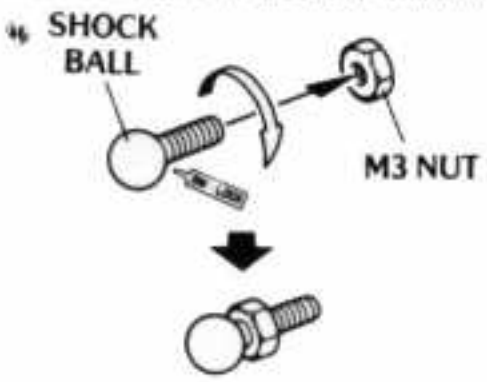
The assembled shock pairs should be uniform in length. Note that the rears are longer than the fronts.

9 SMALL PARTS NEEDED

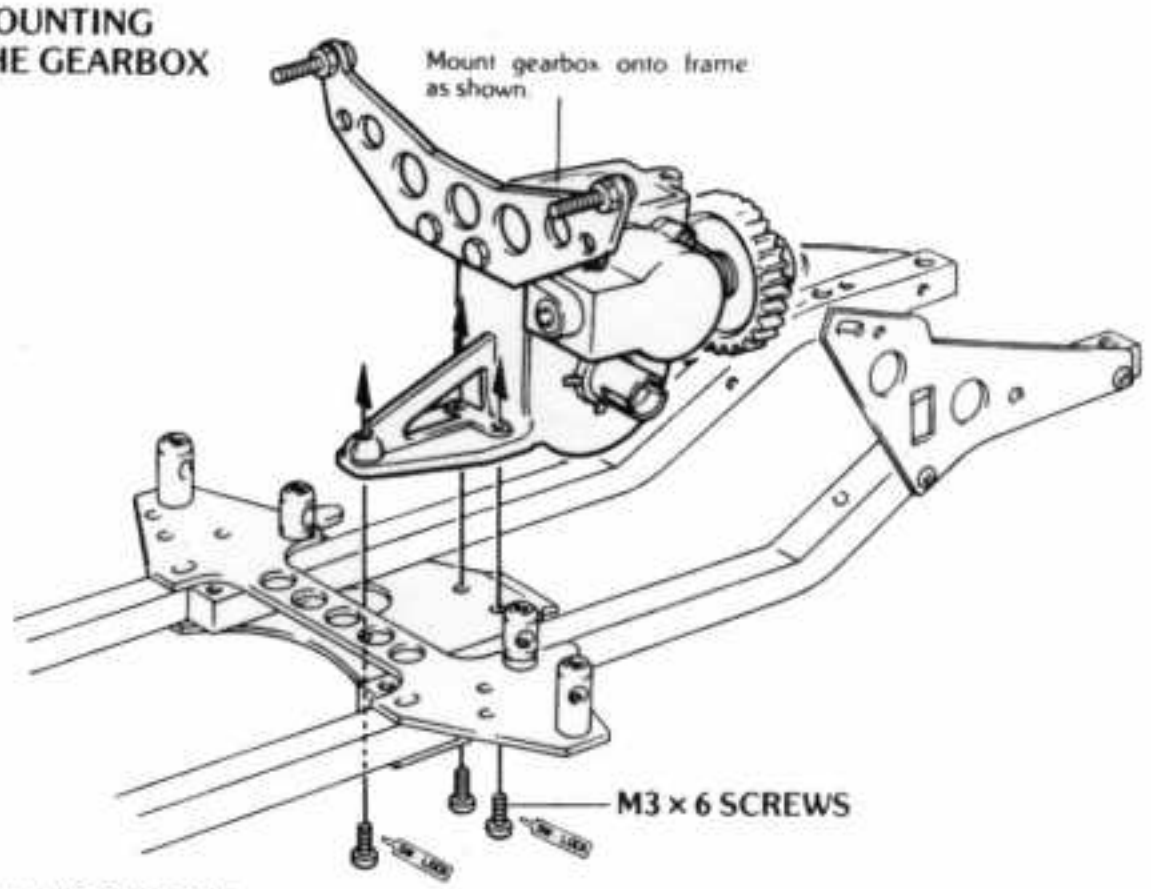
㊻ SHOCK BALL (4)

M3 NUT (2)

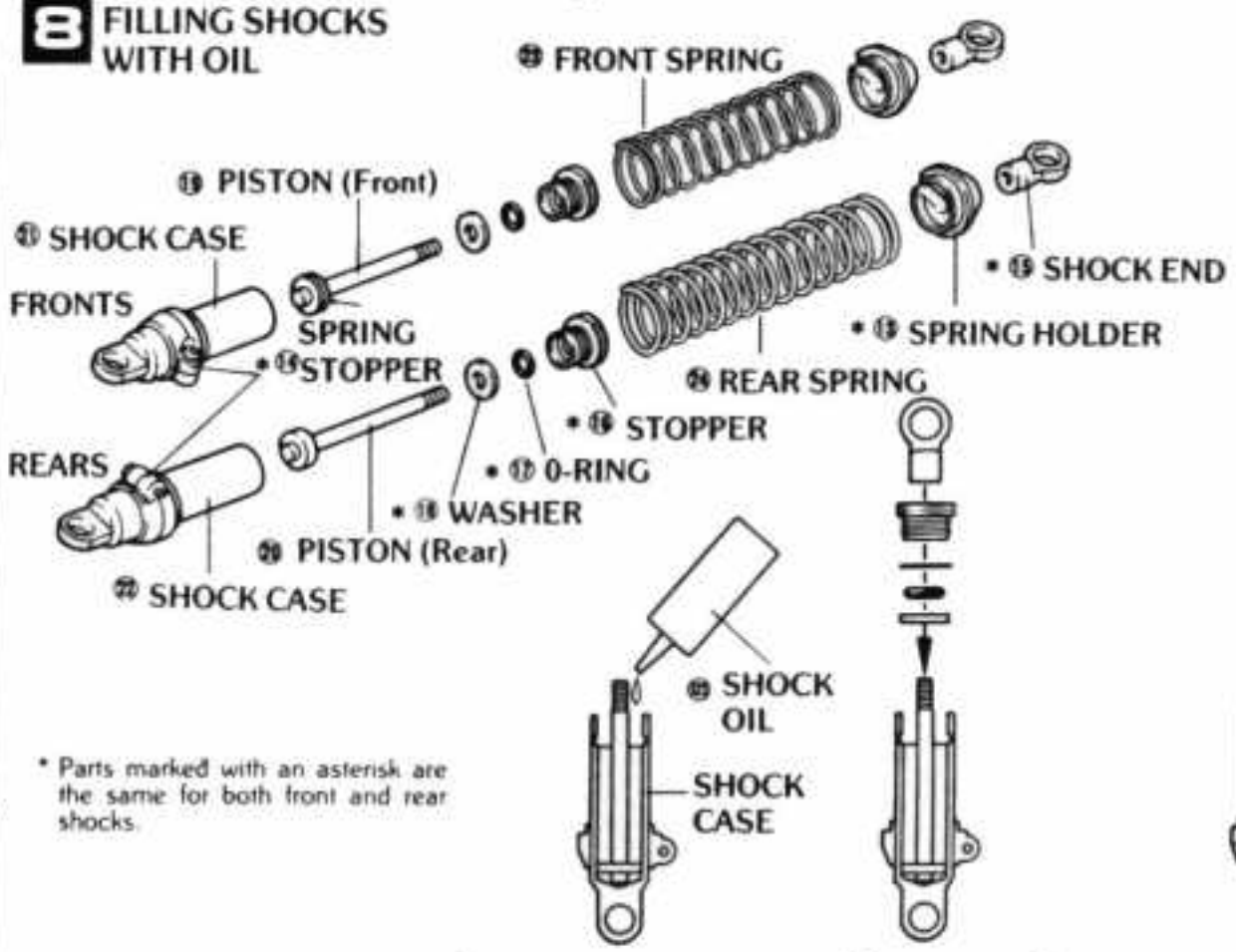
Make 2 of these for the Rear Suspension Arms.



7 MOUNTING THE GEARBOX



8 FILLING SHOCKS WITH OIL



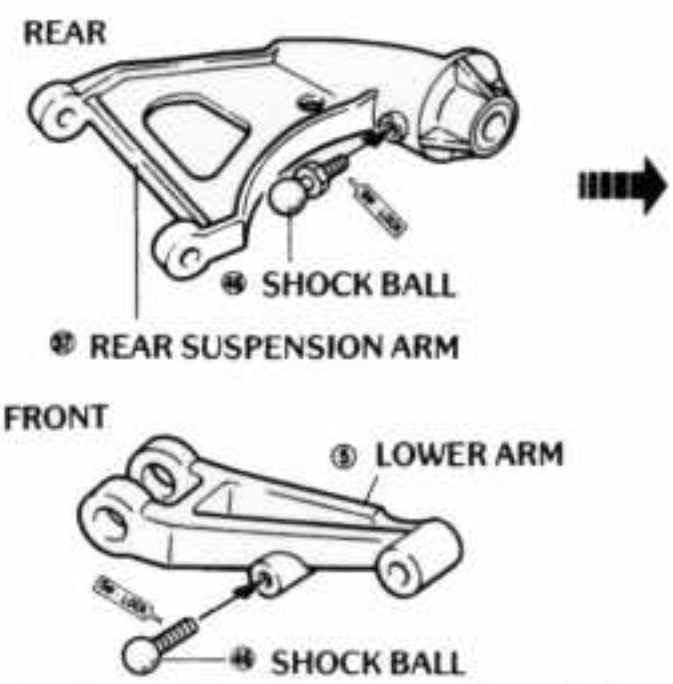
* Parts marked with an asterisk are the same for both front and rear shocks.

1. Remove stopper, pour oil provided into Shock 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 SHOCK BALLS



Tighten the nut with a wrench or pliers to install the Pivot Ball.

10 SMALL PARTS NEEDED

M4 WHEEL NUTS (2)

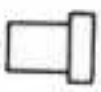
(These have Nylon Rings inside them.)

11 SMALL PARTS NEEDED

M3 × 6 SCREWS (4)

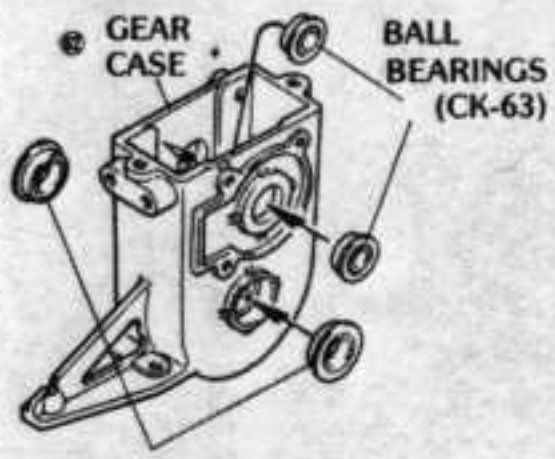
M3 NUT (2)
(W/NYLON)

㊽ SHOCK BUSHING (2)



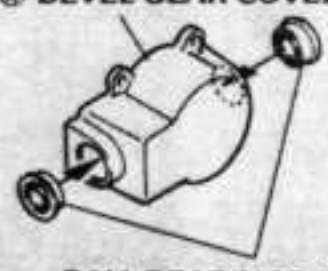
OPTIONAL BALL BEARINGS

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



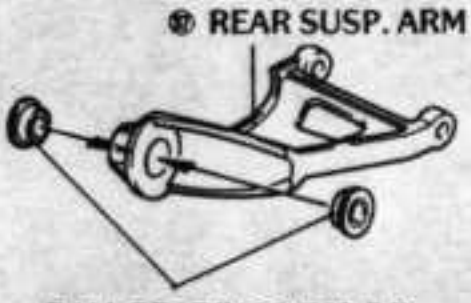
BALL BEARINGS (MS-26)

㊼ BEVEL GEAR COVER



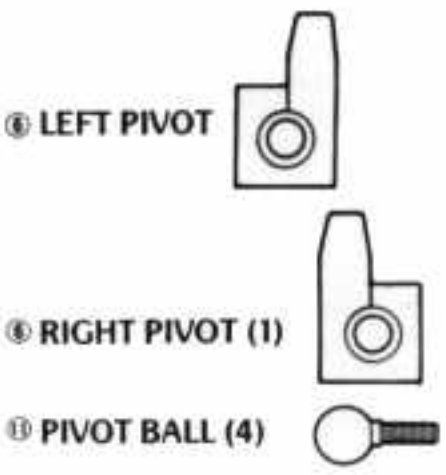
BALL BEARINGS (CK-63)

㊾ REAR SUSP. ARM

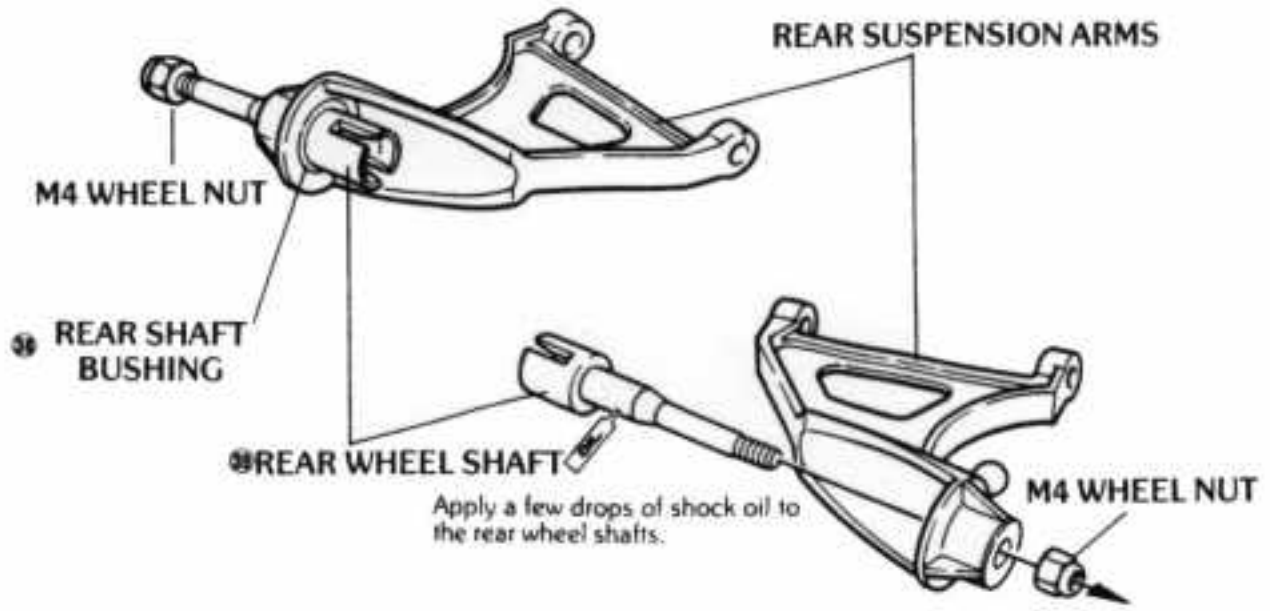


BALL BEARINGS (MS-26)

12 SMALL PARTS NEEDED

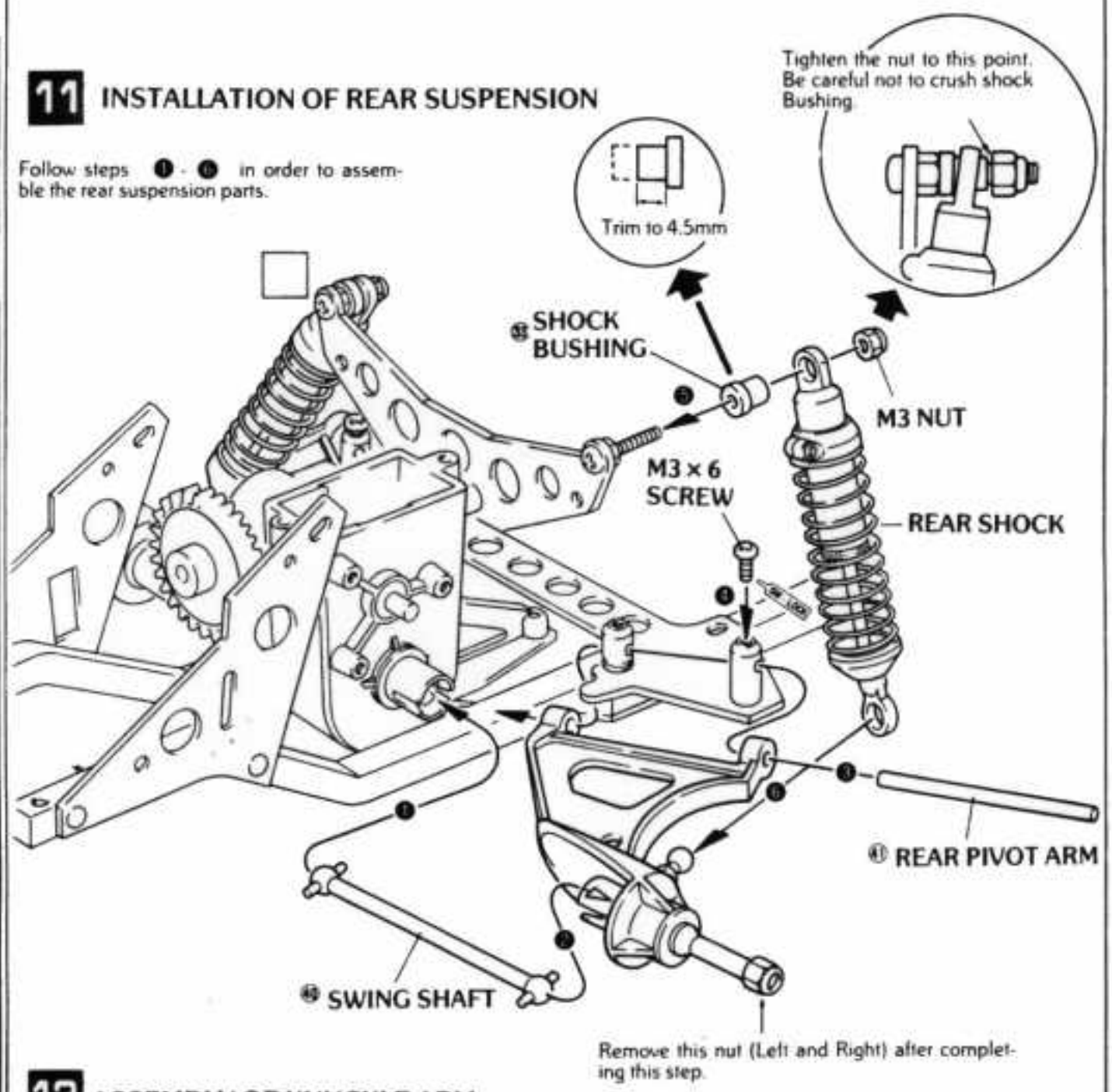


10 INSTALLATION OF REAR AXLE

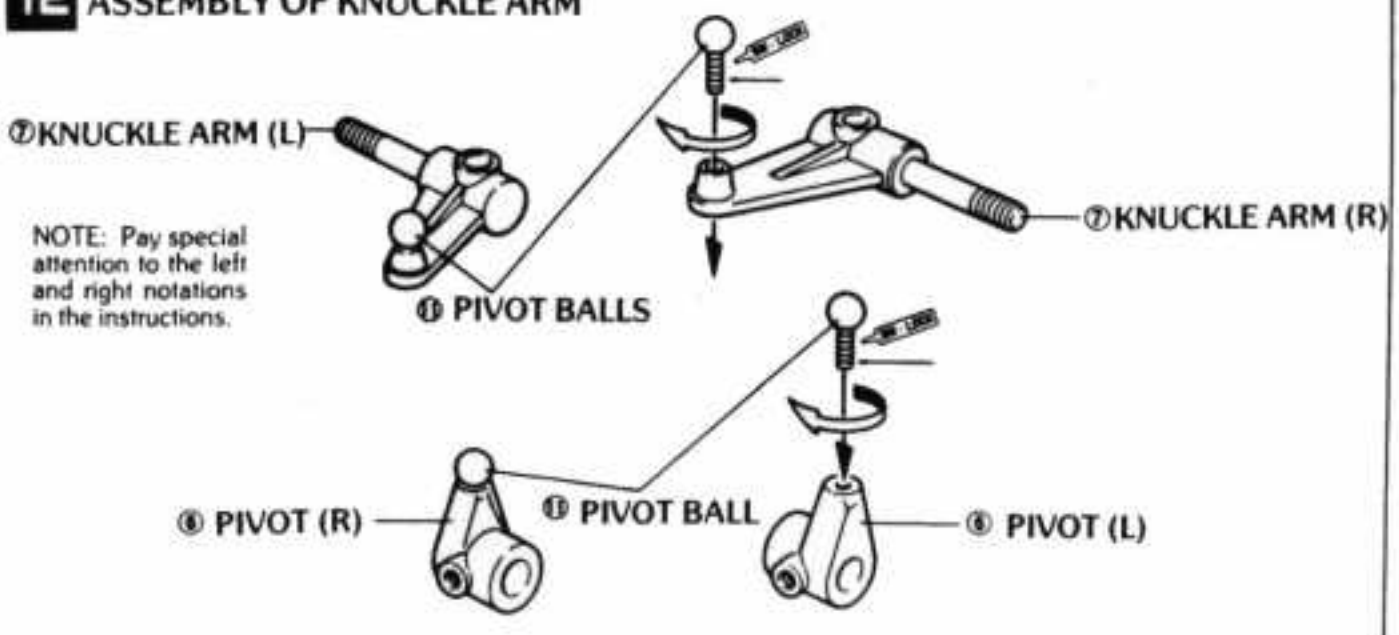


11 INSTALLATION OF REAR SUSPENSION

Follow steps ❶ - ❽ in order to assemble the rear suspension parts.



12 ASSEMBLY OF KNUCKLE ARM



13 SMALL PARTS NEEDED

⑪ PIVOT BALL (2)

M2.6 NUT (2)

M4 NUT (2)
(w/NYLON)

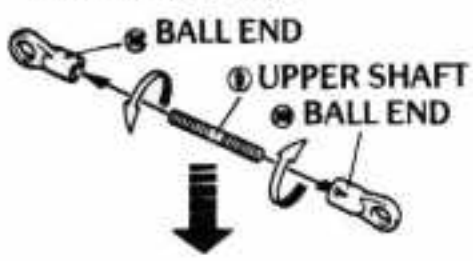
14 SMALL PARTS NEEDED

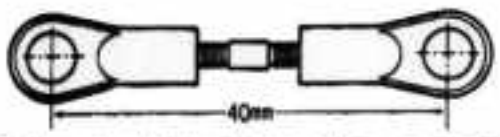
⑬ SHOCK BUSHING (2)

M3 NYLON NUT (2)

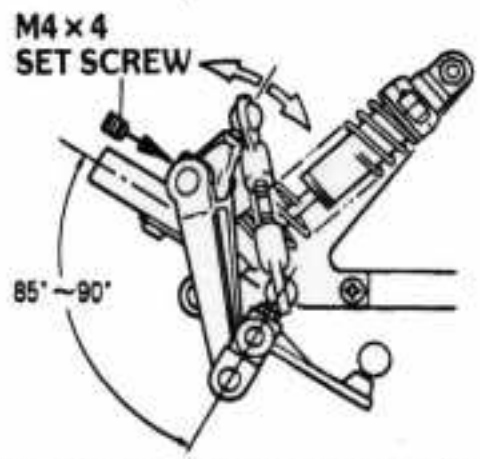
M4 x 4 SET
SCREW (2)

Assemble two of these.





Tighten two ball ends onto the upper shaft. Make them exactly the same size as shown here.



Adjust the pivot angle by moving it as shown by arrows so king-pin and front part of chassis are at the angle as shown. NOTE: Front end measurements may need to be adjusted slightly to obtain smooth operation.

15 SMALL PARTS NEEDED

⑩ GROUND PLATE (1)

M2.6 x 8 SCREW (2)

M3 x 15 SCREW (2)

M2.6 NUT (2)

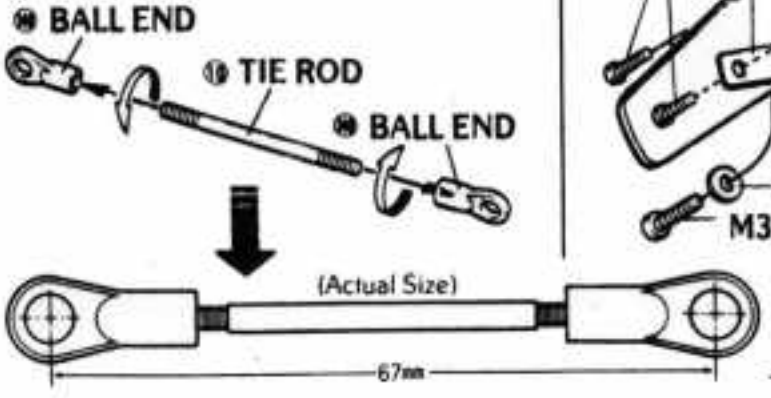
M3 NUT (2)

3 ø WASHER (2)

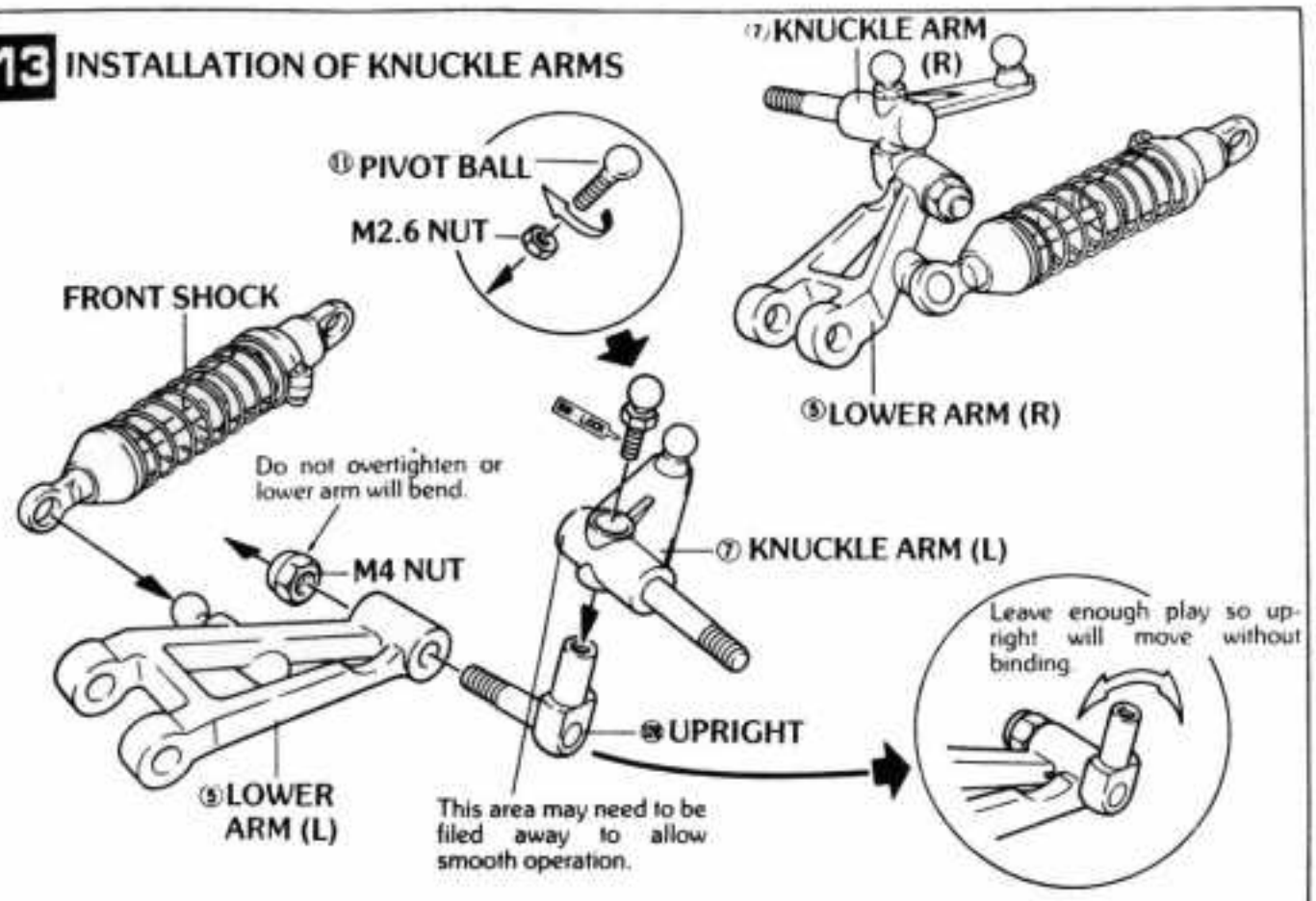
⑧ BALL END

⑩ TIE ROD

⑧ BALL END

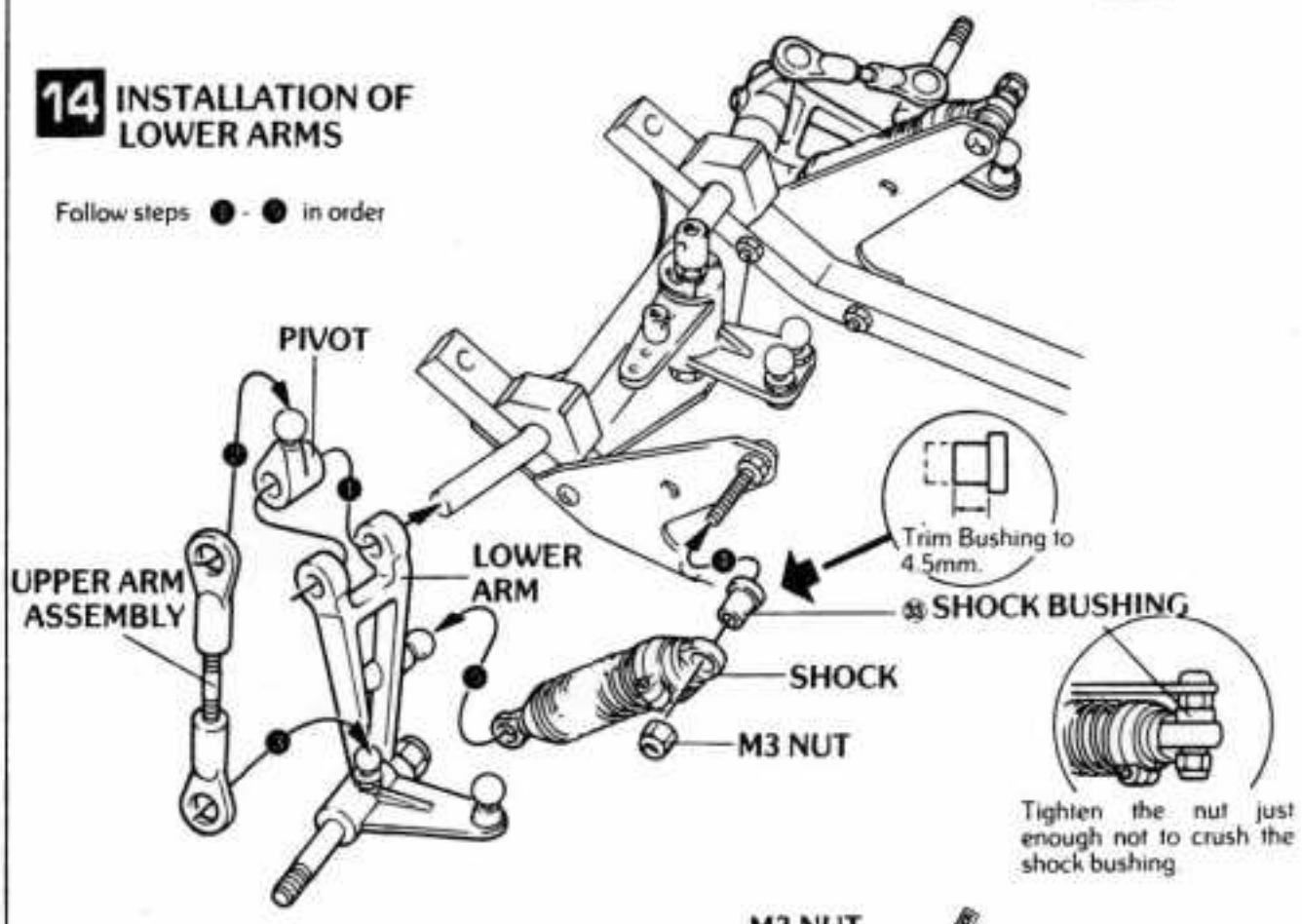


13 INSTALLATION OF KNUCKLE ARMS



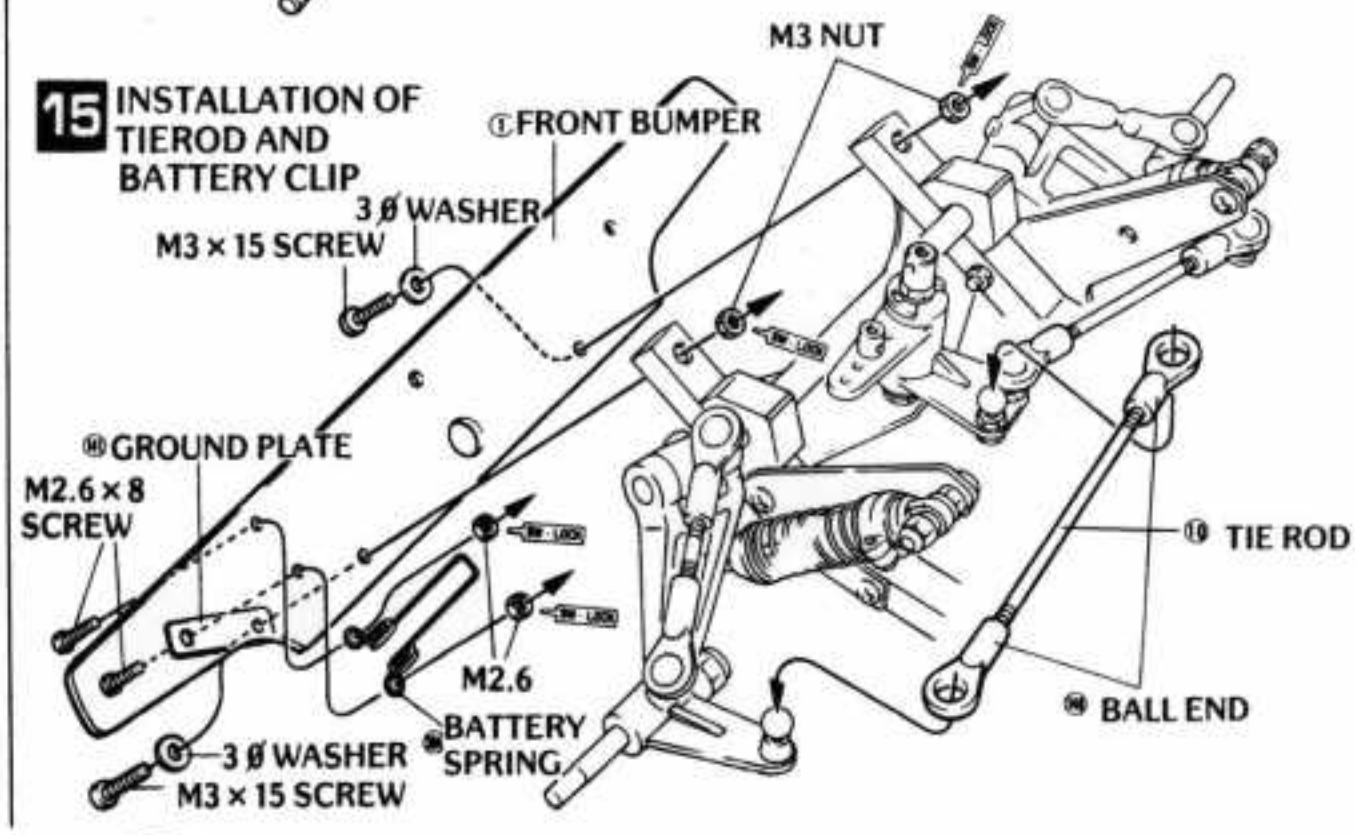
14 INSTALLATION OF LOWER ARMS

Follow steps ❶ - ❽ in order



Tighten the nut just enough not to crush the shock bushing

15 INSTALLATION OF TIEROD AND BATTERY CLIP



16 SMALL PARTS NEEDED

ANTENNA CAP (1)

ANTENNA BASE (1)

M3 × 6 SCREW (4)

M3 × 14 SCREW (1)

M3 NUT (2)

17 SMALL PARTS NEEDED

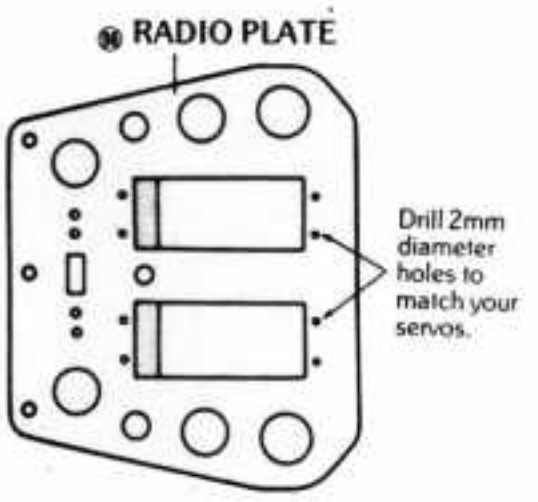
⑱ BODY SUPPORT POST (1)

M3 × 30 SCREW (1)

M3 × 30 SCREW (8) (Self Tapping)

M3 NUT (1)

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

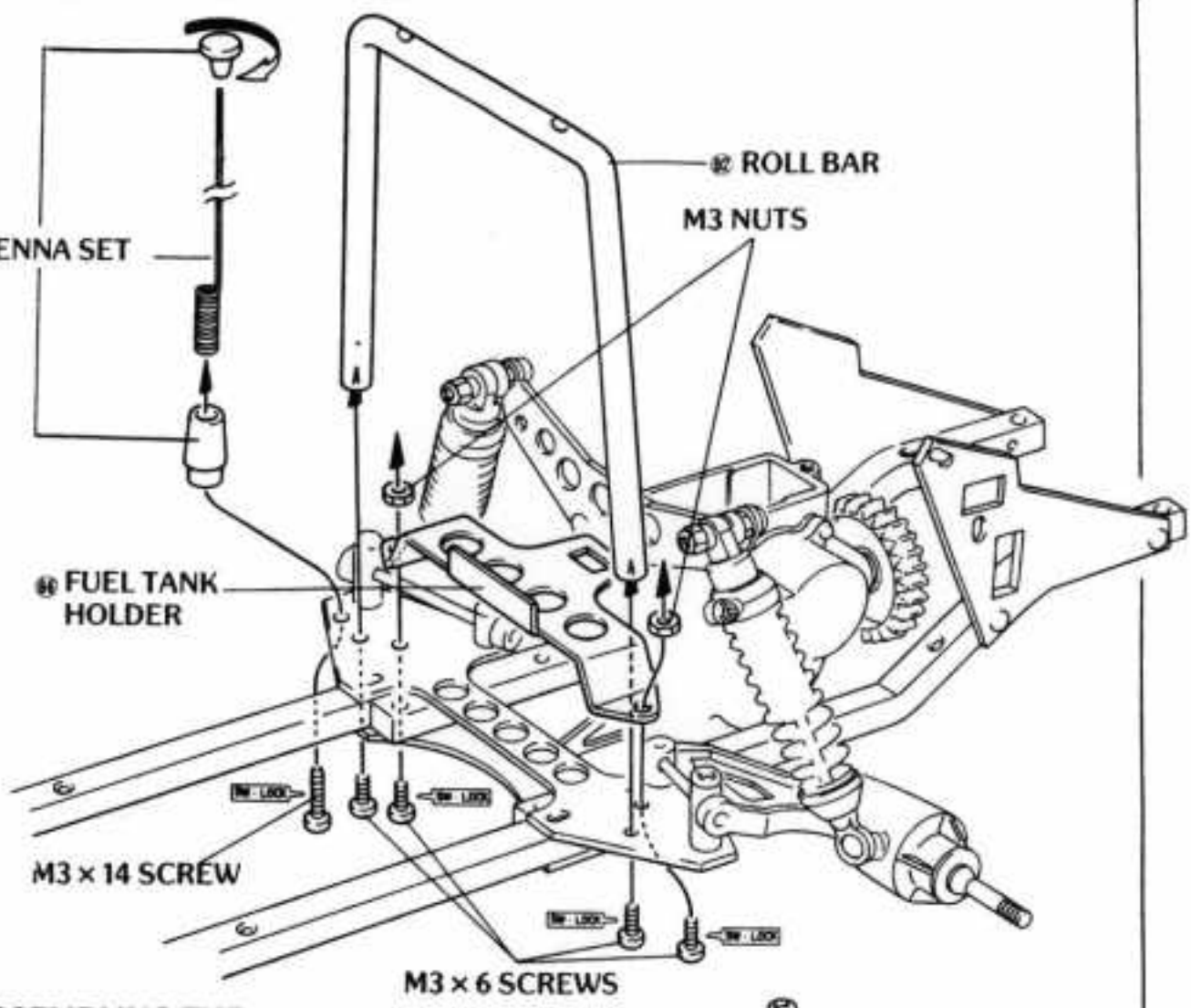


18 SMALL PARTS NEEDED

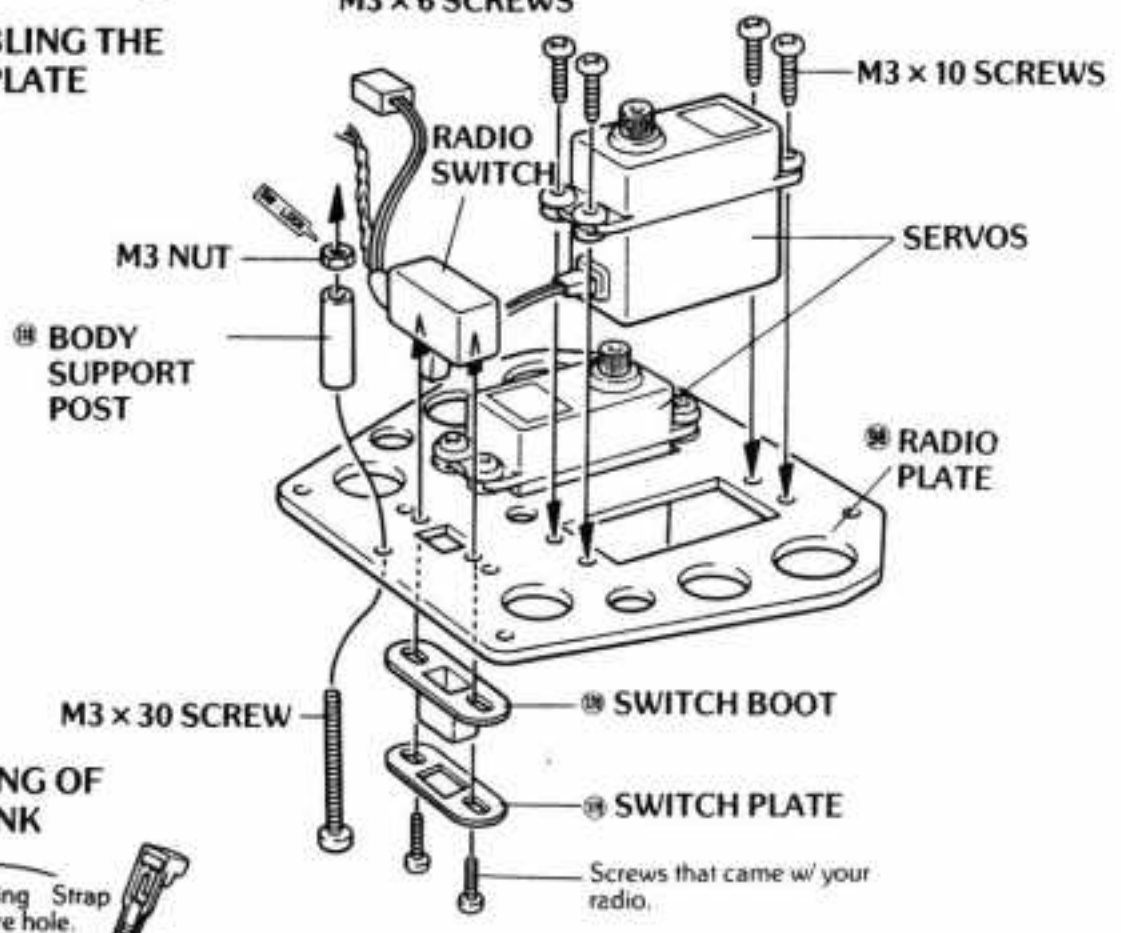
⑫ FUEL TANK BUSHING (1)

⑬ FUEL TANK PIPE (1)

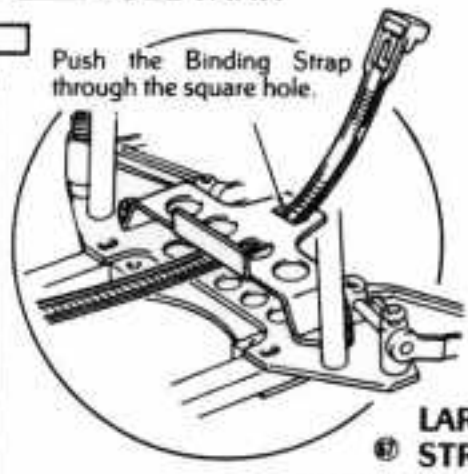
16 INSTALLATION OF ROLL BAR

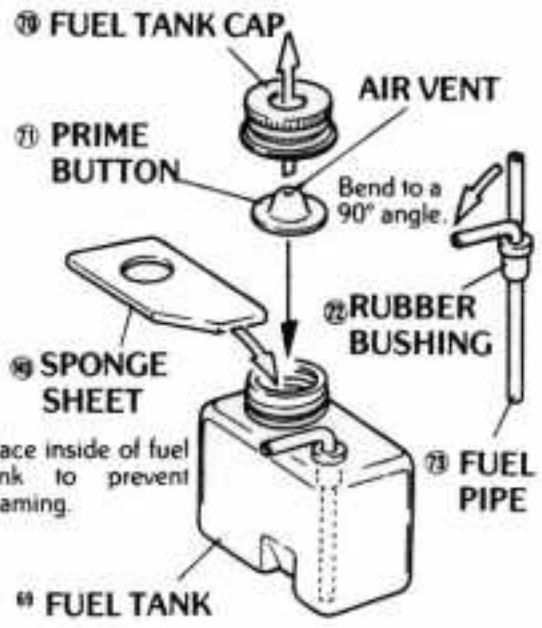


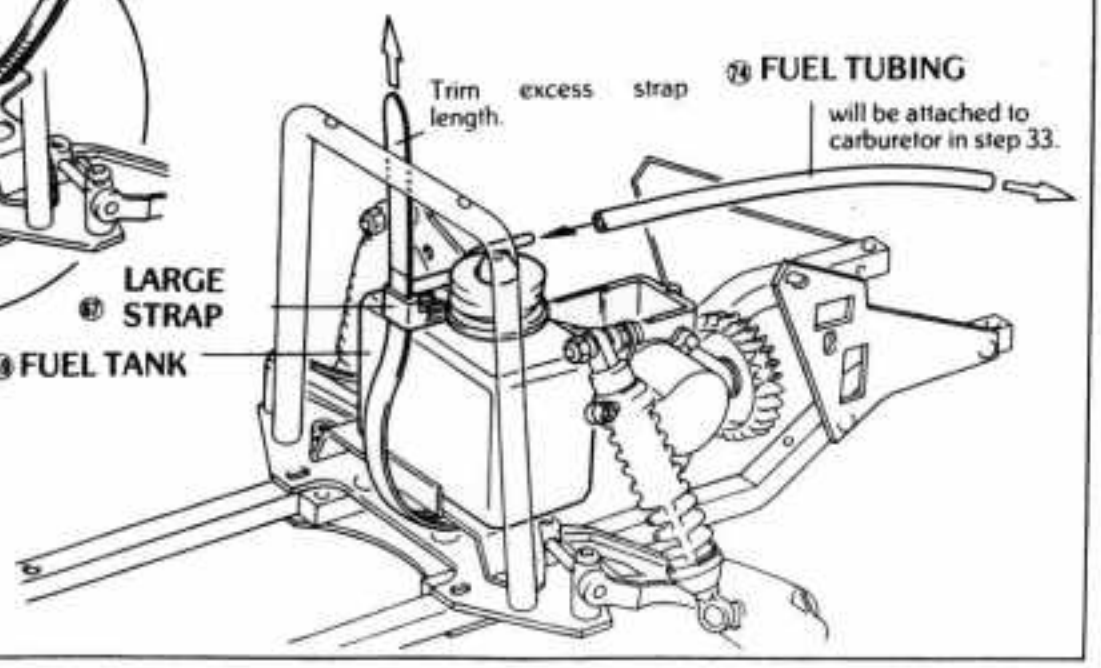
17 ASSEMBLING THE RADIO PLATE



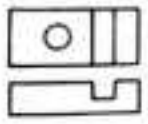
18 MOUNTING OF FUEL TANK





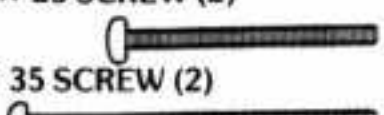


19 SMALL PARTS NEEDED



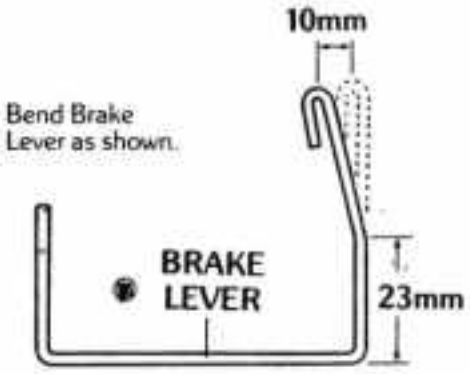
- ⑧ BRAKE LEVER HOLDERS (2)
- ⑨ RADIO PLATE MOUNTS (4)

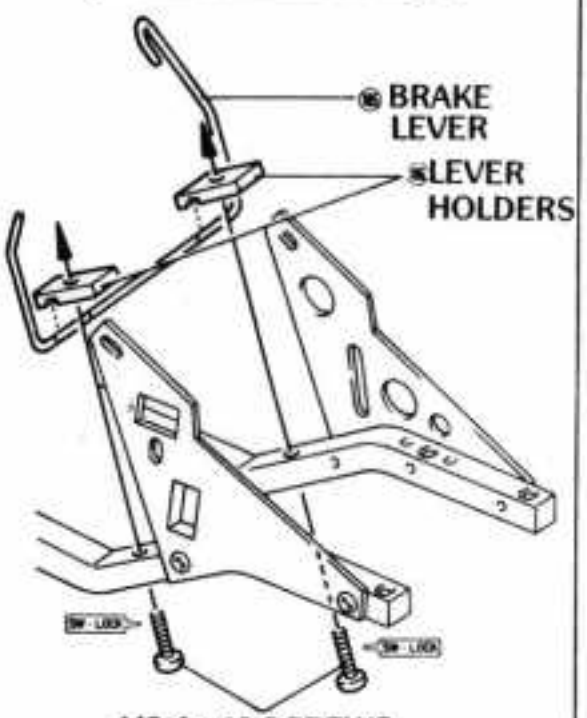
- M2.6 × 10 SCREW (2)
- M2.6 × 25 SCREW (2)



- M3 × 35 SCREW (2)

- M3 NUT (2)

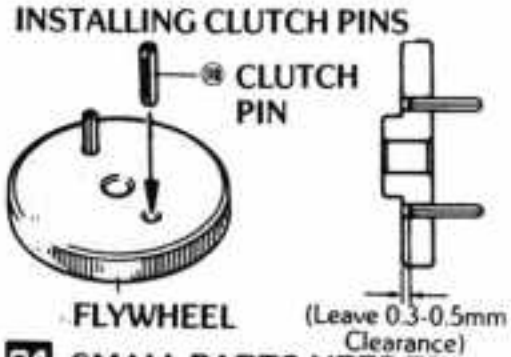




20 SMALL PARTS NEEDED

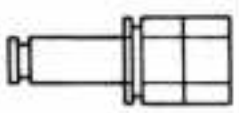
- ⑮ CLUTCH PINS (2)
- ⑪ STARTER PAWL (2)
- ⑯ RATCHET SPRING (1) (1 Spare Included)

INSTALLING CLUTCH PINS

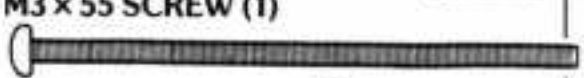


21 SMALL PARTS NEEDED

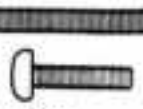
- ⑮ PILOT SHAFT



- M3 × 55 SCREW (1)

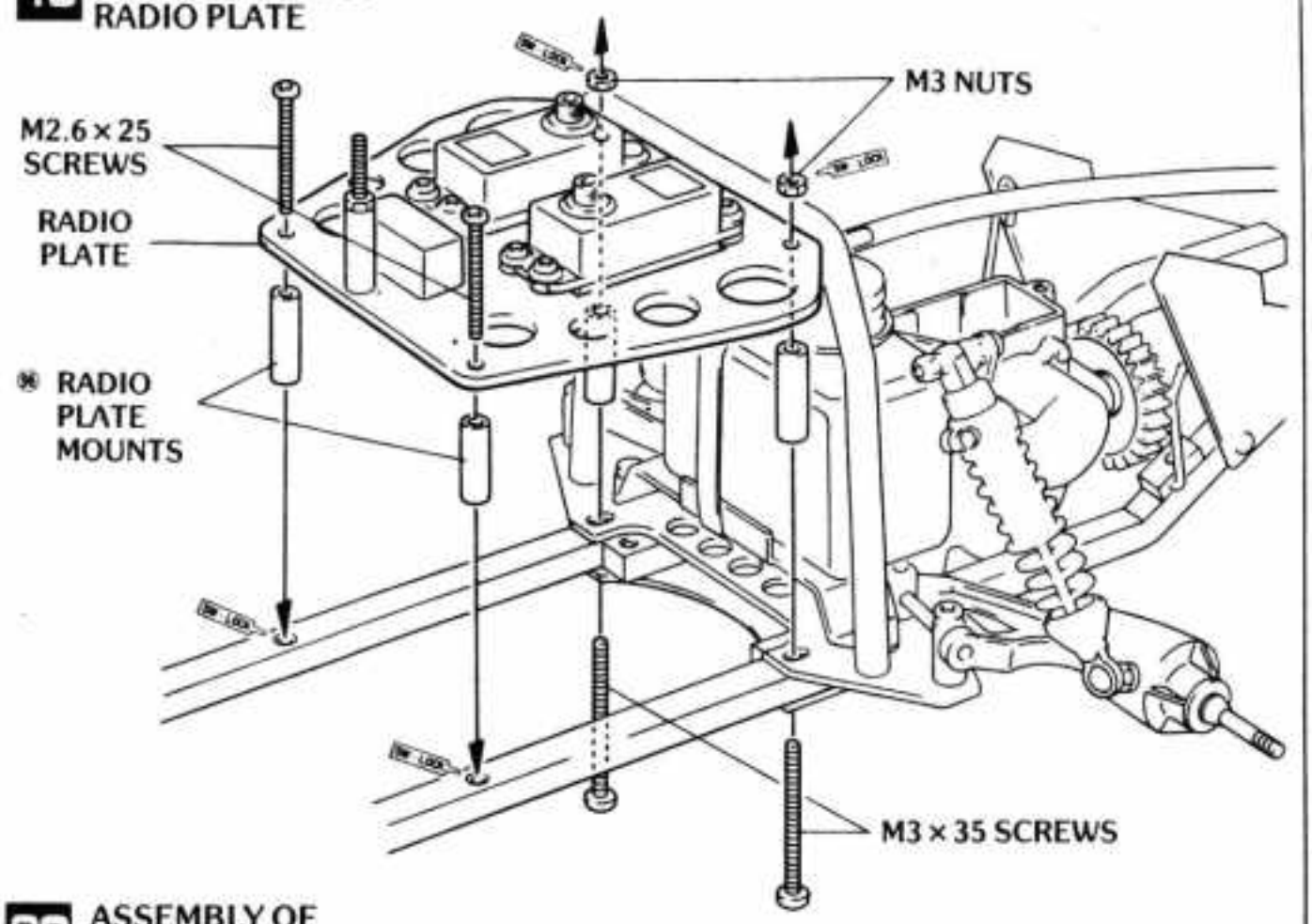


- M3 × 10 SCREW (4)

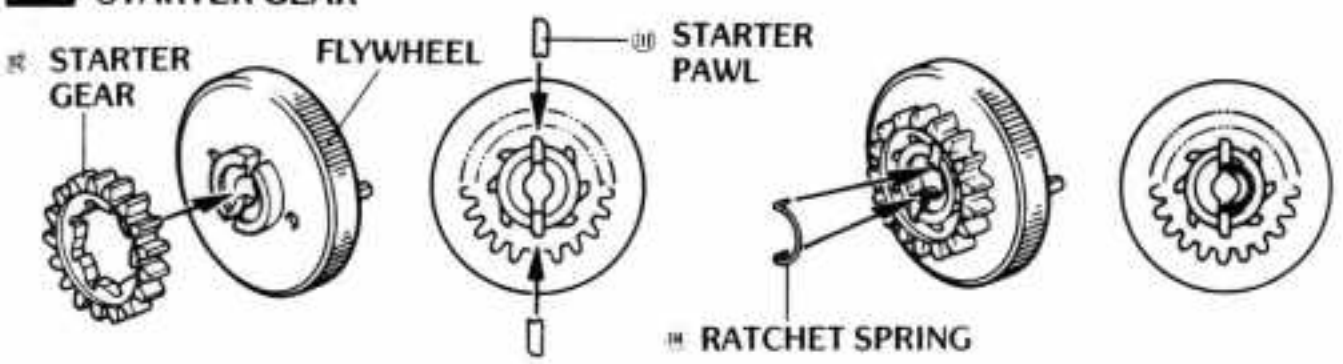


- M3 NUT (4)

19 INSTALLATION OF RADIO PLATE



20 ASSEMBLY OF STARTER GEAR

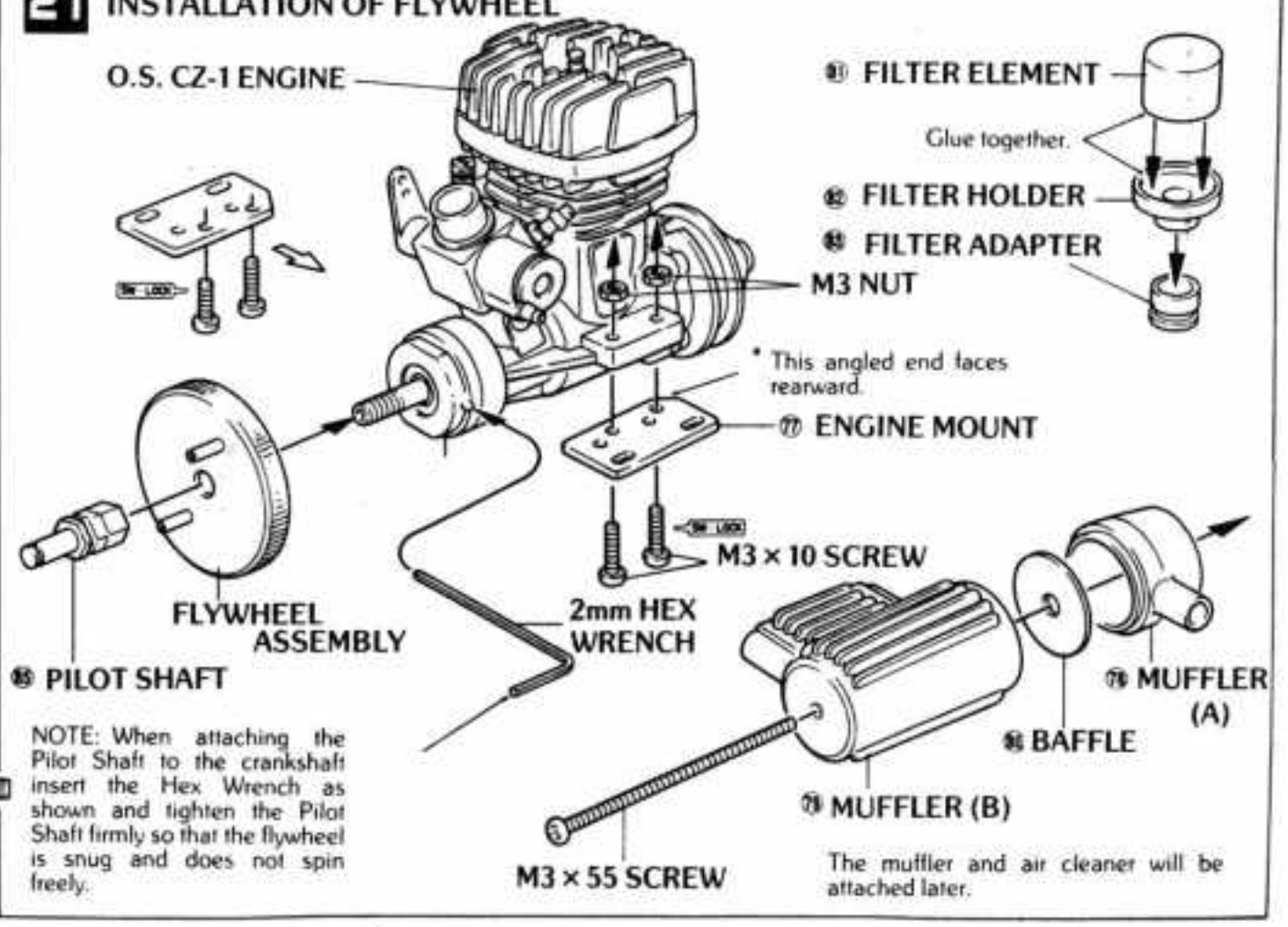


1. Place Starter Gear on Flywheel.

2. Insert Starter Pawls into grooves on Flywheel. Re-check the direction of the Pawl.

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

21 INSTALLATION OF FLYWHEEL



NOTE: When attaching the Pilot Shaft to the crankshaft insert the Hex Wrench as shown and tighten the Pilot Shaft firmly so that the flywheel is snug and does not spin freely.

The muffler and air cleaner will be attached later.

22 SMALL PARTS NEEDED

⑧ CLUTCH SHOES (2)

23 SMALL PARTS NEEDED

⑨ CLUTCH SPRING (1)

⑩ CLUTCH BEARING (1)

NEEDLE BEARINGS (6)

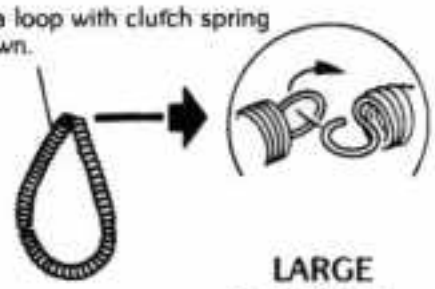
⑪ SMALL E-RING (E-3) (1)

⑫ LARGE E-RING (E-7)

5mm WASHER (1)

8mm WASHER (1)

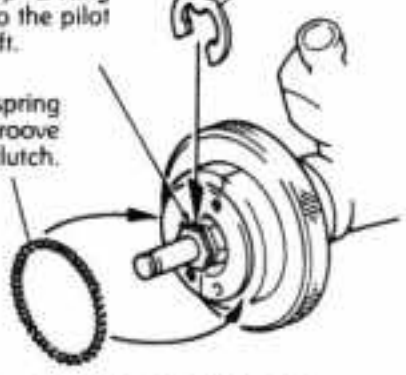
Make a loop with clutch spring as shown.



LARGE ⑫ E-RING

Snap E-Ring onto the pilot shaft.

Place spring along groove on the clutch.



24 SMALL PARTS NEEDED

M2.6×8 SCREW (4)

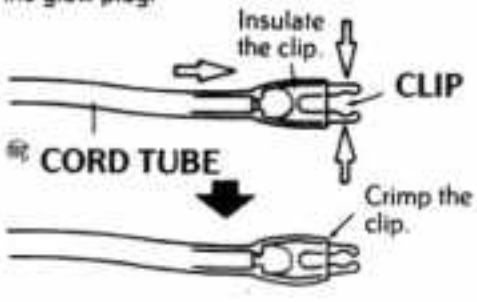
25 SMALL PARTS NEEDED

⑬ SPACER (2)

M2.6×10 SCREW (2)

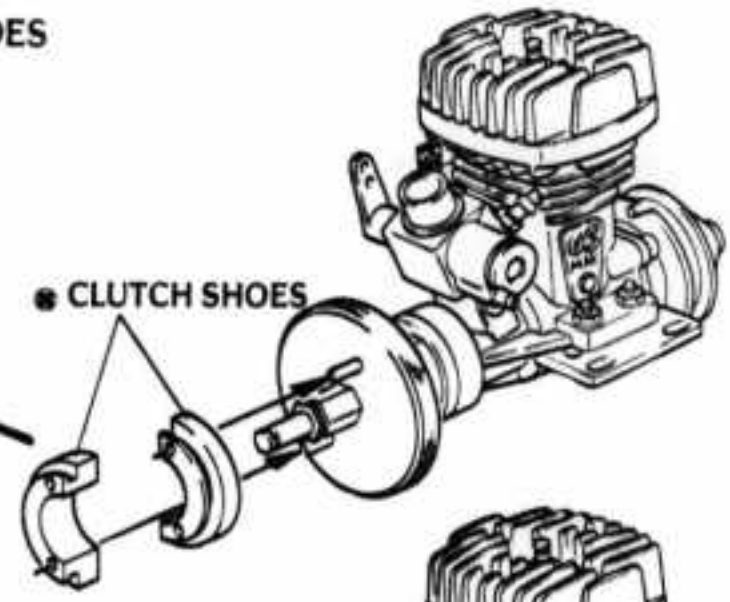
M3×6 SCREW (2)

Insulate the plug heating cord with the cord tube. Crimp the clip as shown with pliers. Do not allow the clip to touch anything other than the tip of the glow plug.

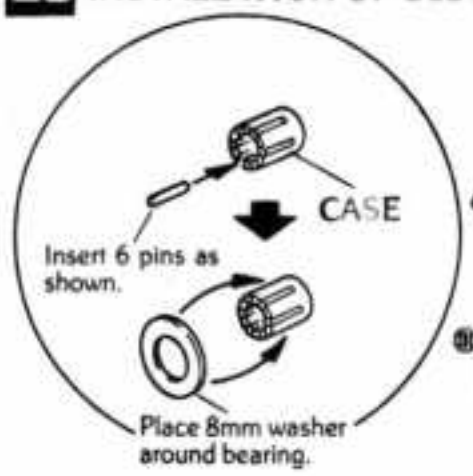


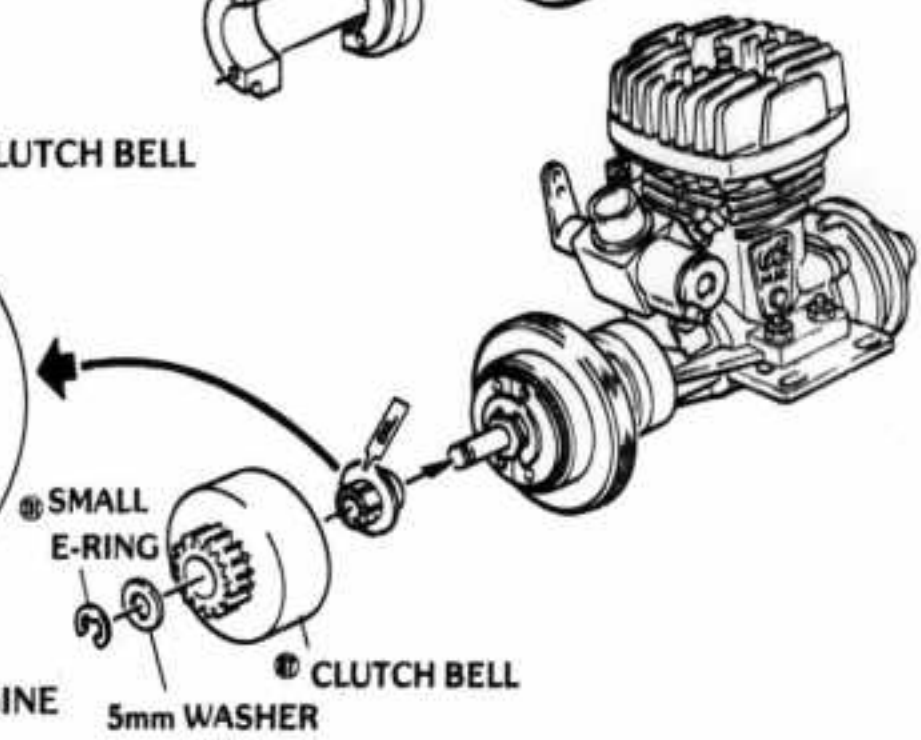
22 INSTALLATION OF CLUTCH SHOES

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

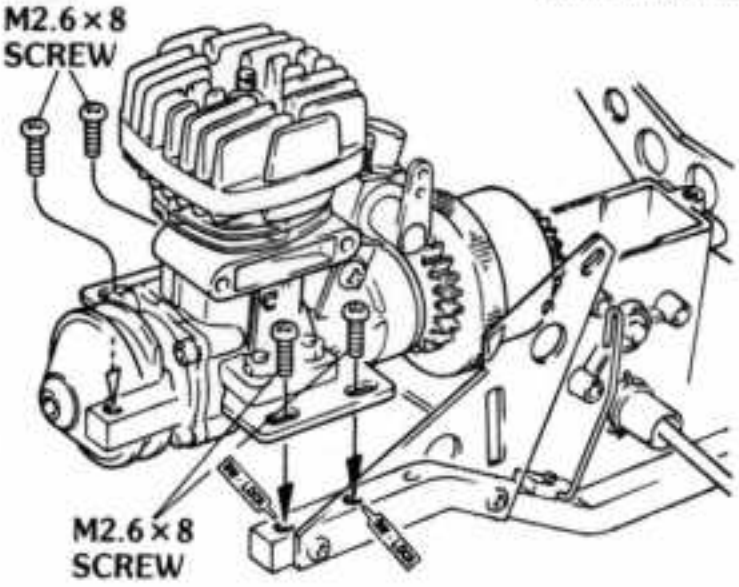


23 INSTALLATION OF CLUTCH BELL

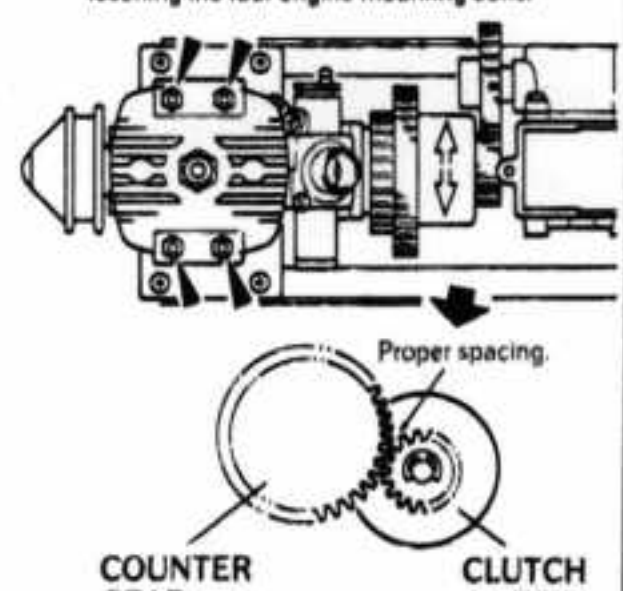




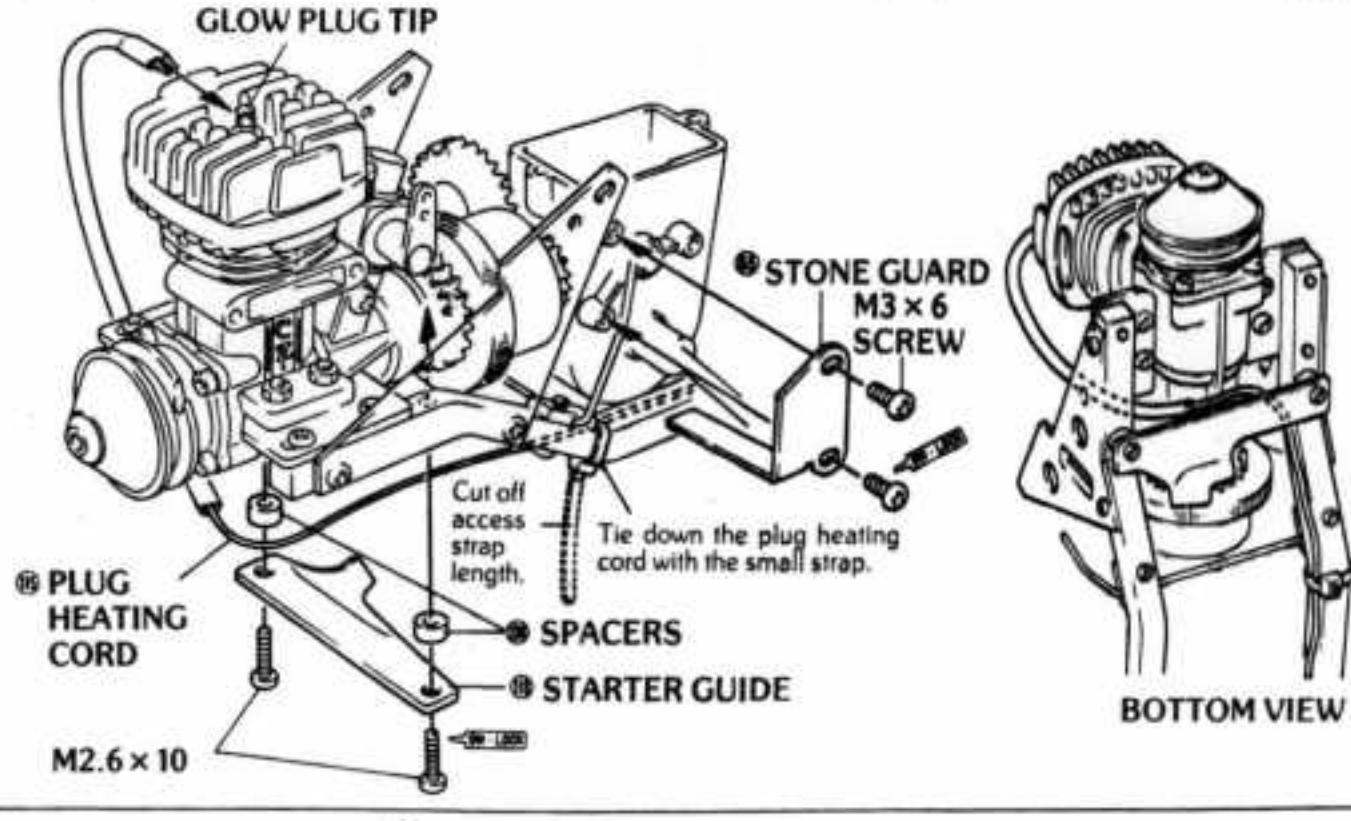
24 MOUNTING THE ENGINE



Adjust the meshing of the gear teeth by losening the four engine mounting bolts.



25 INSTALLATION OF PLUG WIRE



26 SMALL PARTS NEEDED

⑱ BATTERY TERMINAL (1)

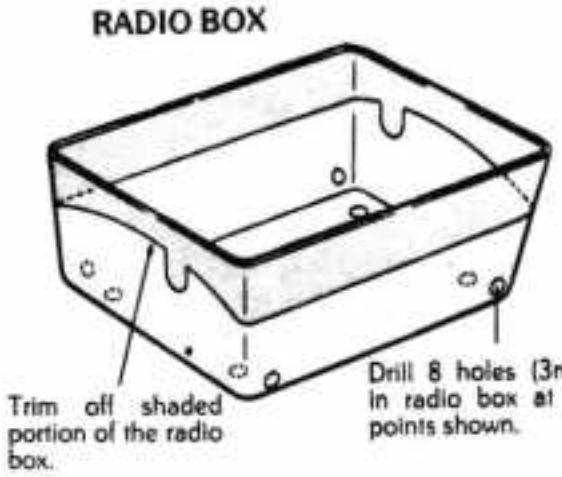
M3 × 6 SCREW (1)

M3 NUT (1)

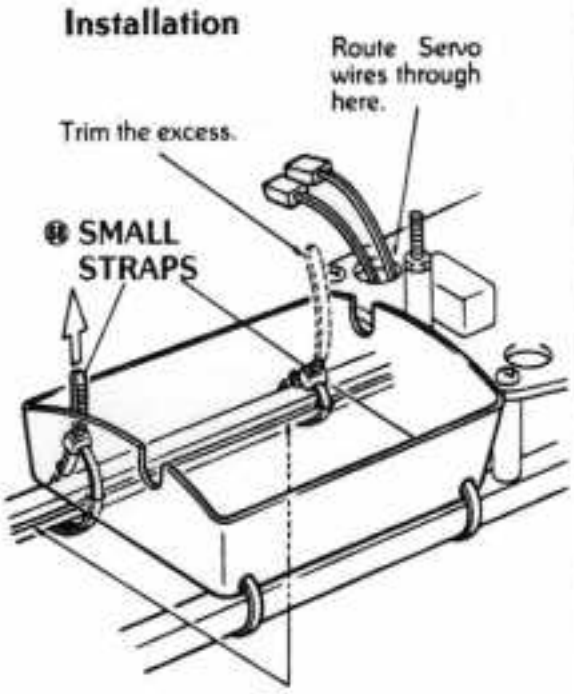
27 PREPARING THE RADIO BOX

Trimming

RADIO BOX



Installation



28 SMALL PARTS NEEDED

M2 × 8 SCREW (10)

29 SMALL PARTS NEEDED

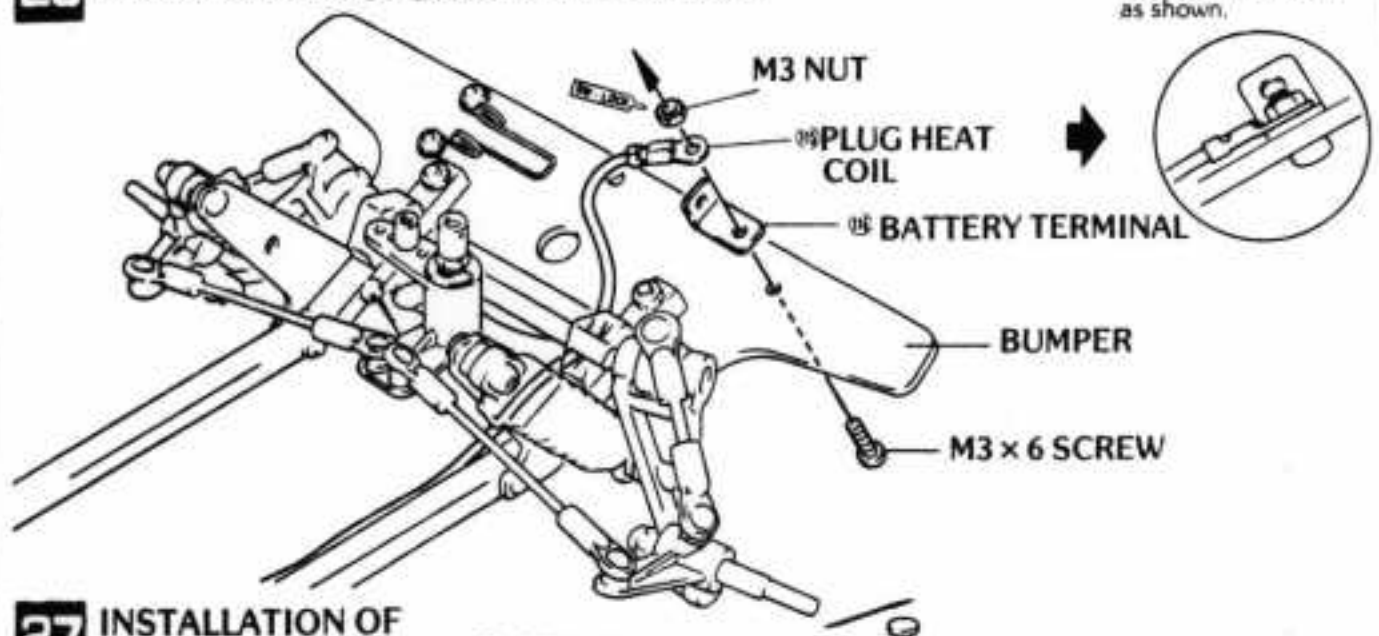
㉞ FRONT WHEEL BUSHING (2)

㊹ DRIVE WASHER (2)

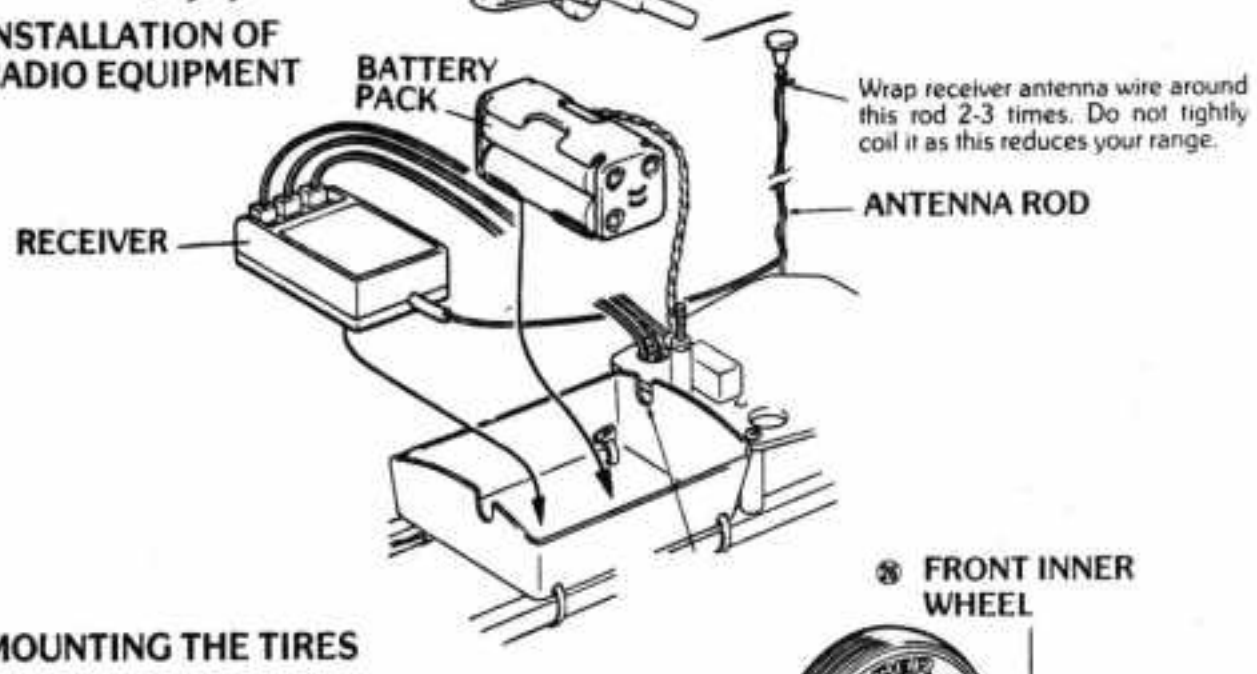
M4 WHEEL NUT (4) (Nylon Type)

4mm WASHER (4)

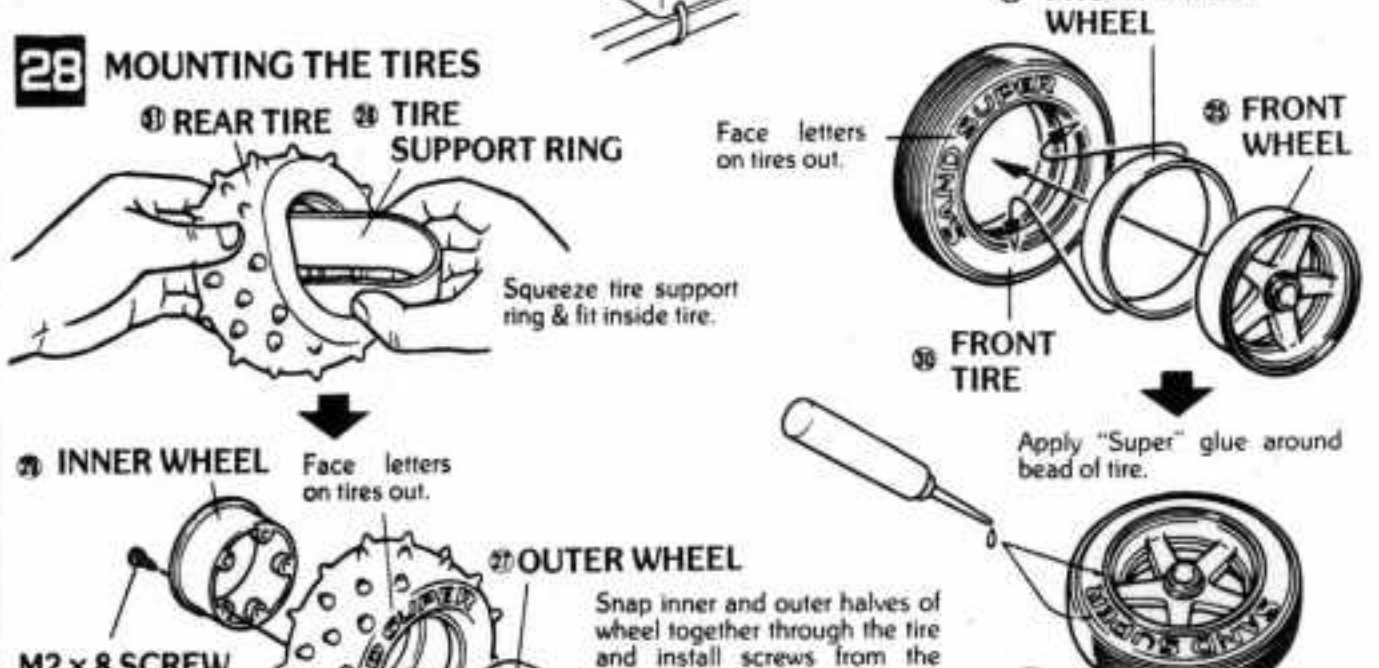
26 INSTALLATION OF BATTERY TERMINAL



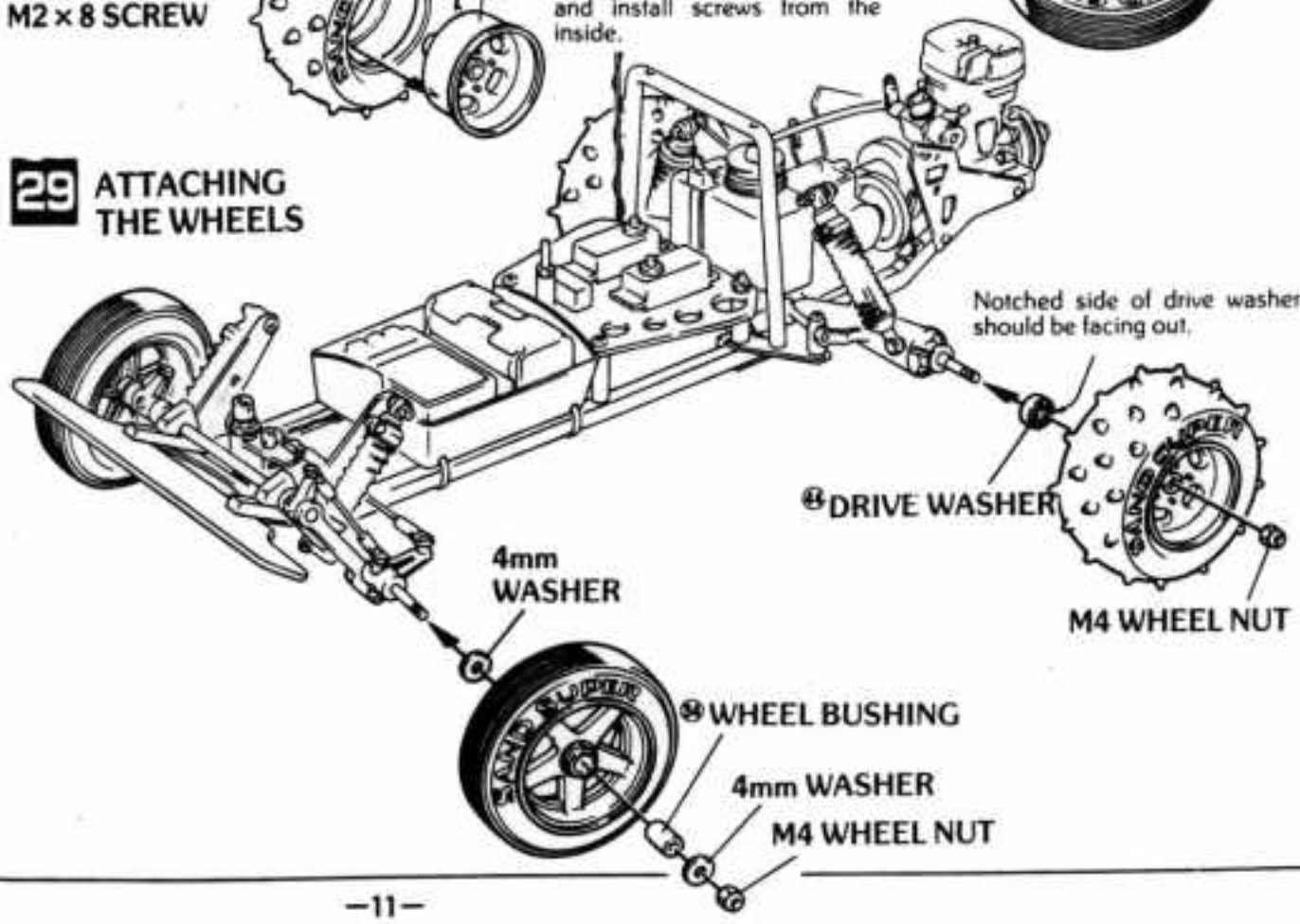
27 INSTALLATION OF RADIO EQUIPMENT



28 MOUNTING THE TIRES



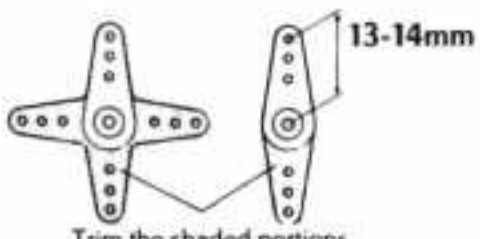
29 ATTACHING THE WHEELS



30 SMALL PARTS NEEDED

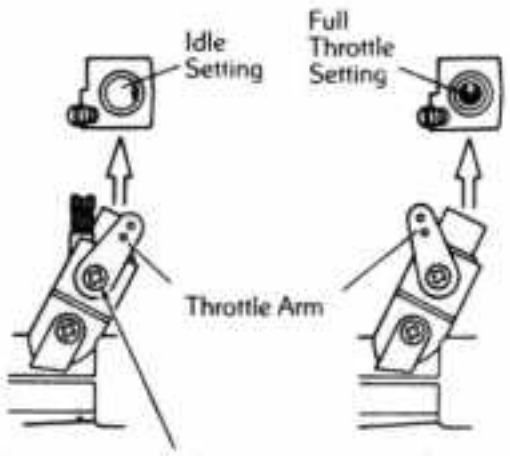
M3 × 3 SET SCREW (1)

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

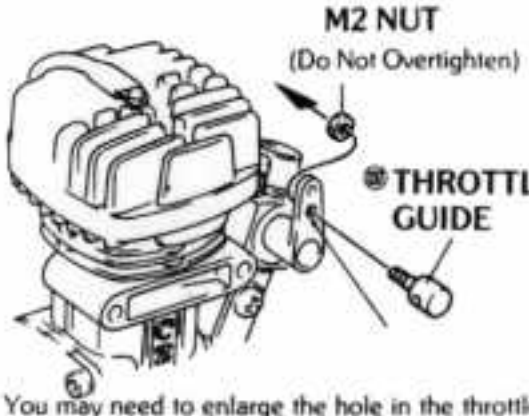


31 SMALL PARTS NEEDED

- ⑧ 2mm STOPPER (3)
- ⑭ LINKAGE SPRING (1)
- ⑯ BRAKE PIPE (1)
- ⑰ THROTTLE GUIDE (1)
- M2 NUT (1)
- M3 × 3 SET SCREW (3)

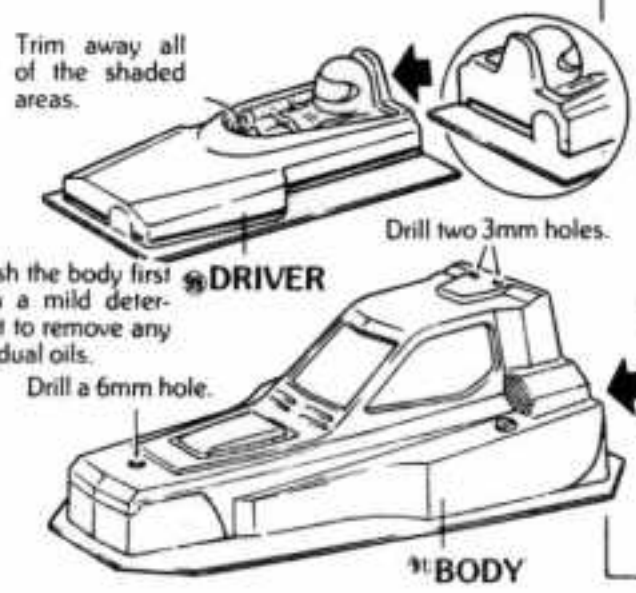


This screw can be loosened to adjust the position of the throttle arm. At idle, the arm should be approximately in the position shown, in the left side drawing.

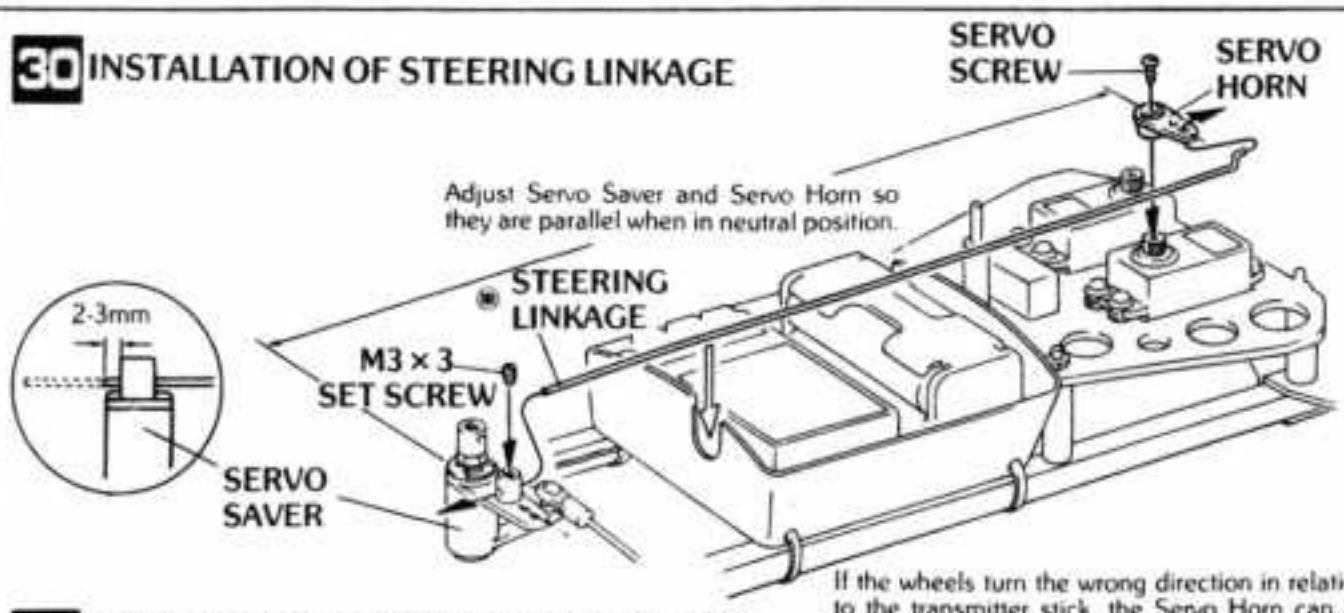


You may need to enlarge the hole in the throttle arm for smooth operation.

32 TRIMMING THE BODY AND DRIVER

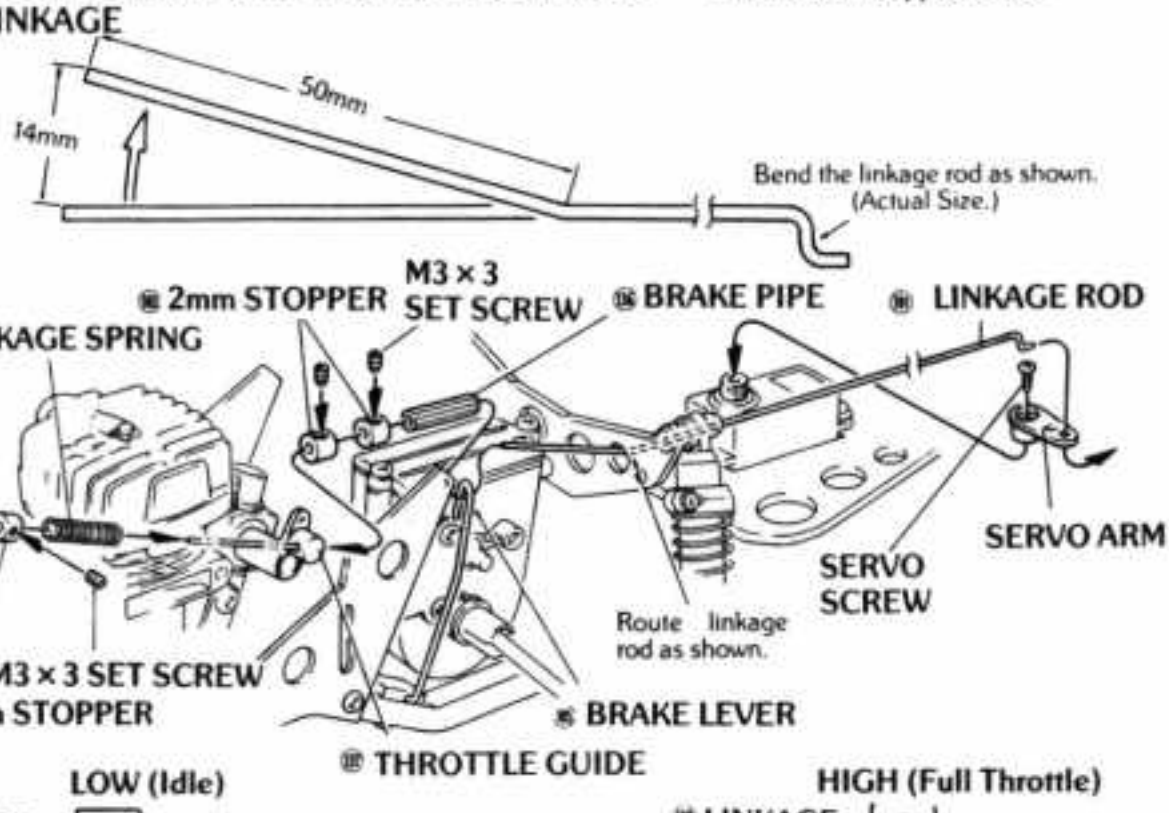


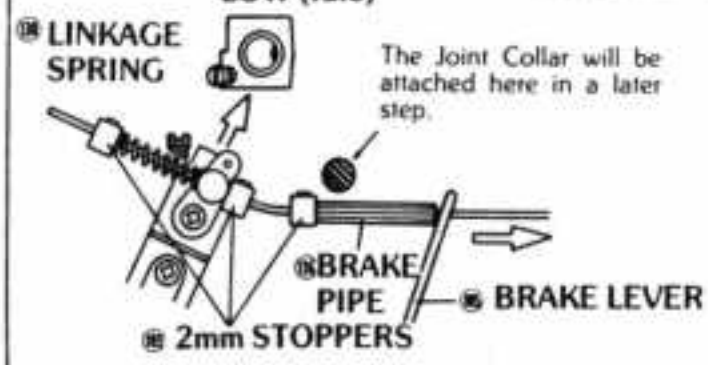
30 INSTALLATION OF STEERING LINKAGE

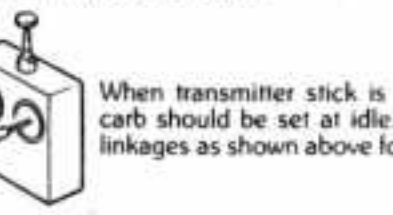


If the wheels turn the wrong direction in relation to the transmitter stick, the Servo Horn can be installed on the opposite side.

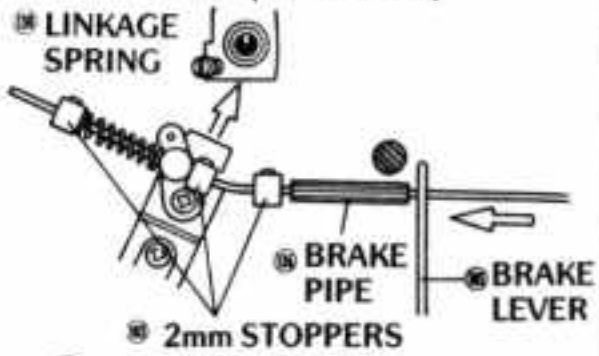
31 INSTALLATION OF THROTTLE CONTROL LINKAGE



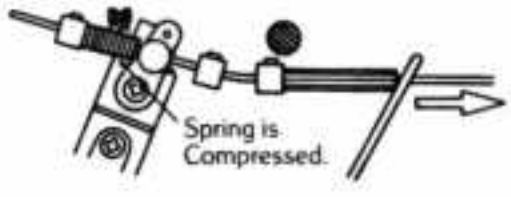




When transmitter stick is moved down, carb should be set at idle. Arrange your linkages as shown above for idle.



When the transmitter stick is moved all the way up, carb should be set at full throttle and brake will be disengaged. Arrange your linkages to match those shown above for full throttle.



Moving the stick all the way down should compress the spring and engage the brake.

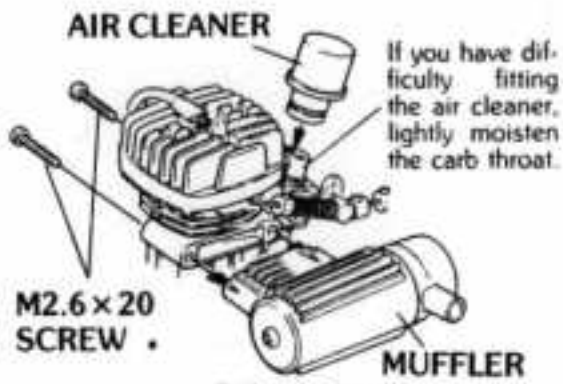
32 PAINTING THE BODY AND DRIVER

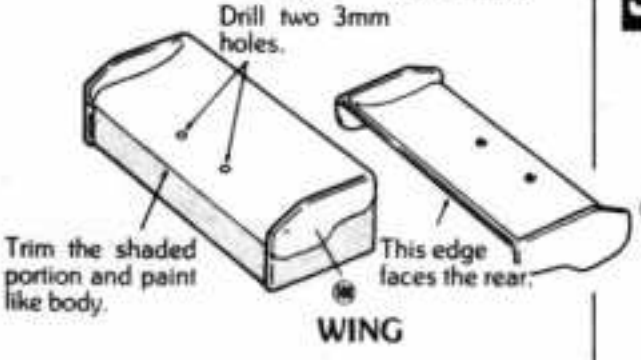
Always paint the **INSIDE** of the clear plastic.

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

33 SMALL PARTS NEEDED

M2 × 16 SCREW (2)
M2.6 × 12 SCREW (2)
M2.6 × 20 SCREW (2)
M3 × 8 SCREW (Self Tapping) (2)
M3 × 8 SCREW (2)
M3 × 28 SCREW (1)
M3 NYLON NUT (1)
M2 NUT (2)
M3 WASHER (2)

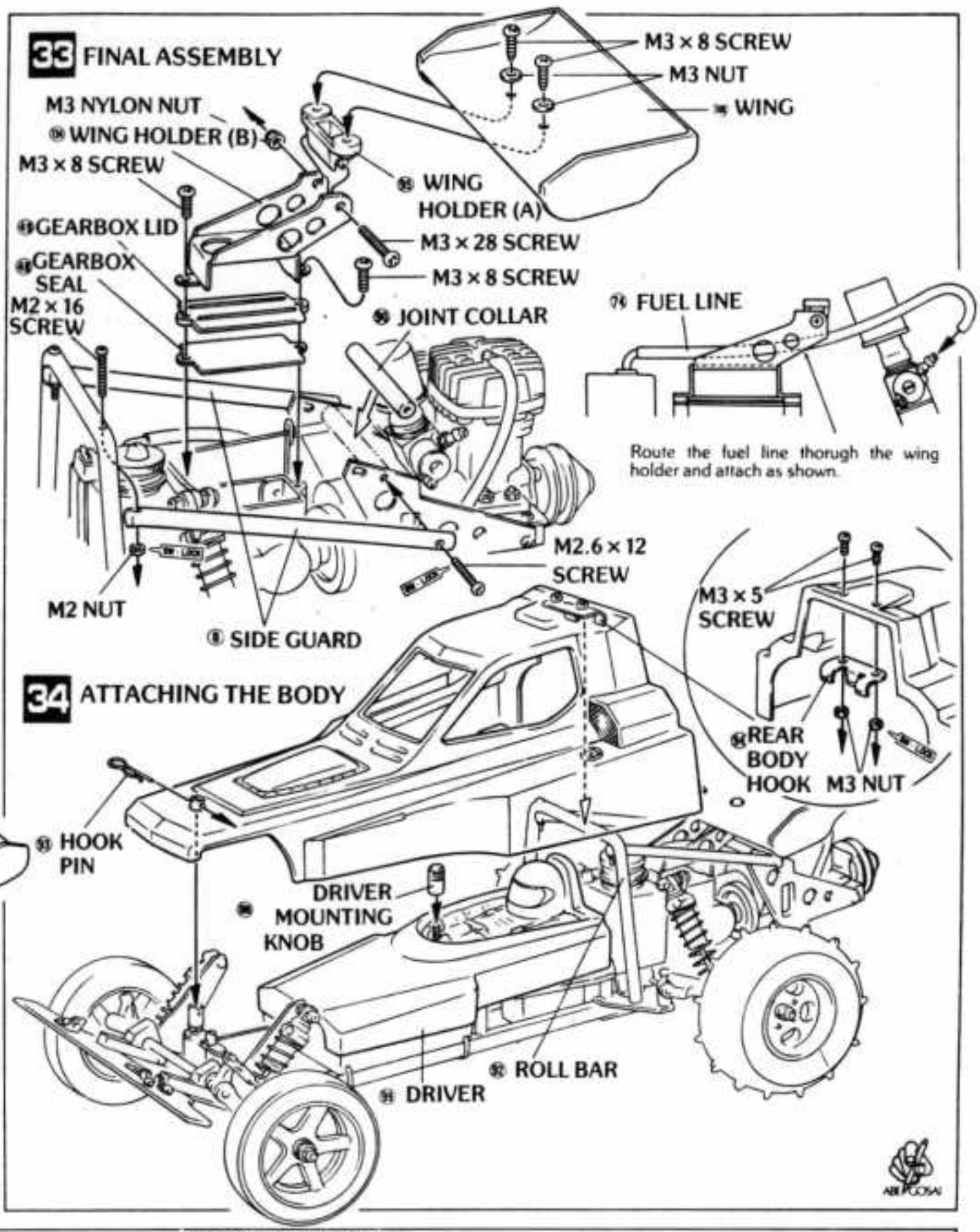




34 SMALL PARTS NEEDED

HOOK PIN (1)
DRIVER MOUNTING KNOB (1)
M3 × 5 SCREW (2)
M3 NUT (2)

33 FINAL ASSEMBLY



Route the fuel line thorugh the wing holder and attach as shown.

34 ATTACHING THE BODY

YOUR R/C ENGINE

Please read through the instructions supplied by O.S. for your engine before actually trying to run the Assault.

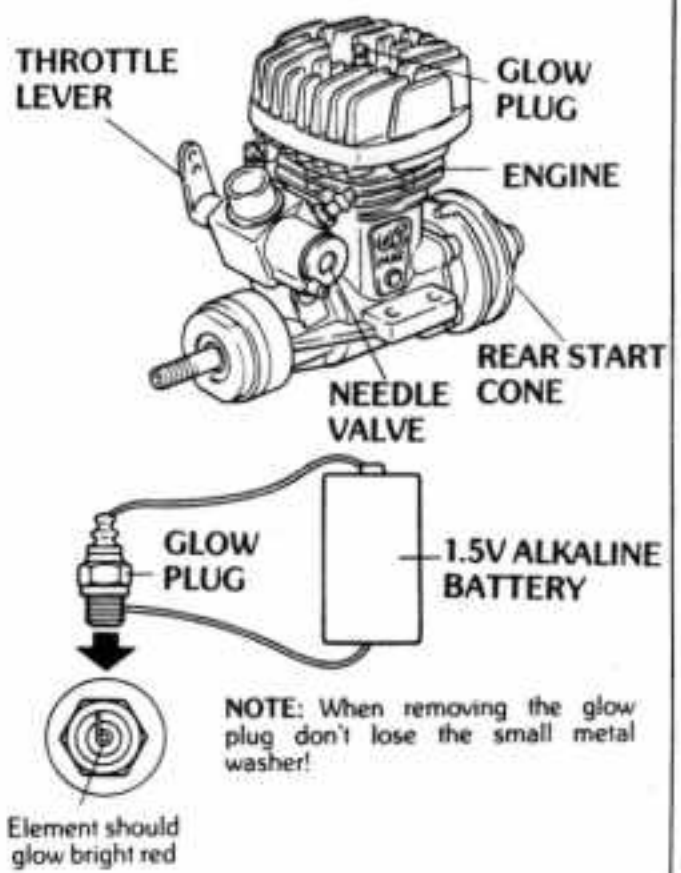
A model engine is a precision machine. It will develop high power and performance when it is treated correctly; however it may not even rotate if it is handled incorrectly. What follows are a few tips on how to use your engine properly.

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 pressed onto the rear cone.

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 O.S. #8 plug is recommended.

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.



NOTE: When removing the glow plug don't lose the small metal washer!

ITEMS USED FOR RUNNING

PLUG WRENCH

The plug wrench allows you to take the glow plug from your engine for inspection or replacement.

BATTERY

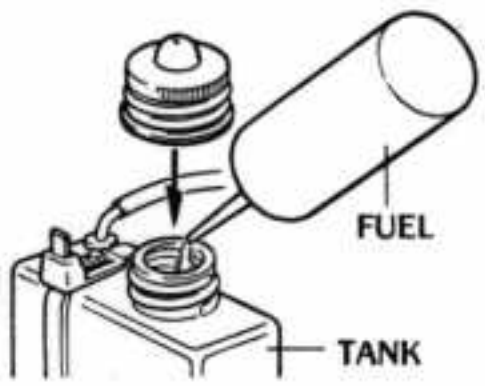
To initially start the engine's glow plug, you will need one "D" size alkaline flashlight battery. The standard (non-alkaline) type does not work well.

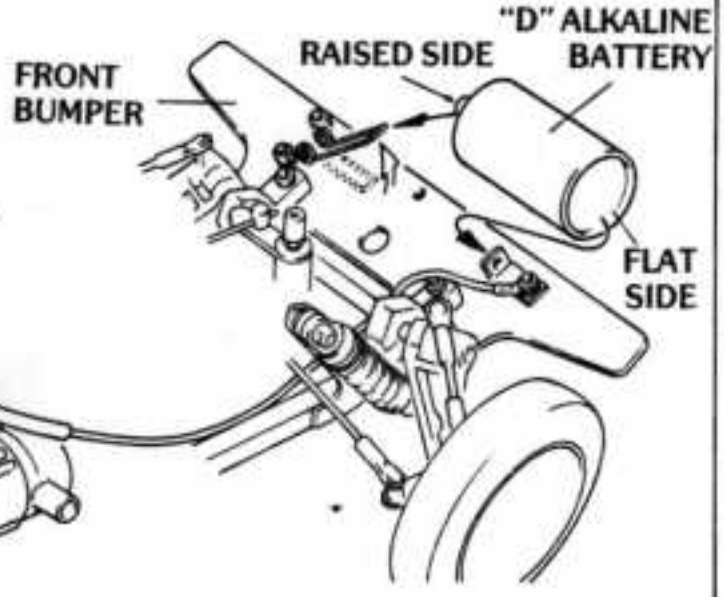
GLOW FUEL

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

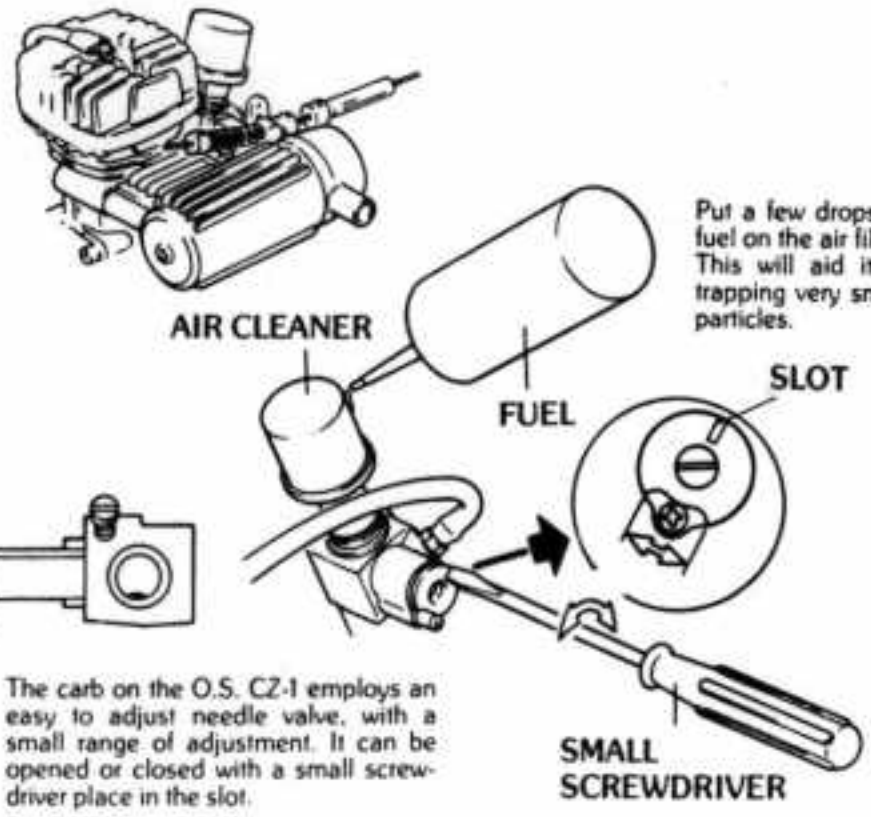
PREPARING TO START THE ENGINE

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).





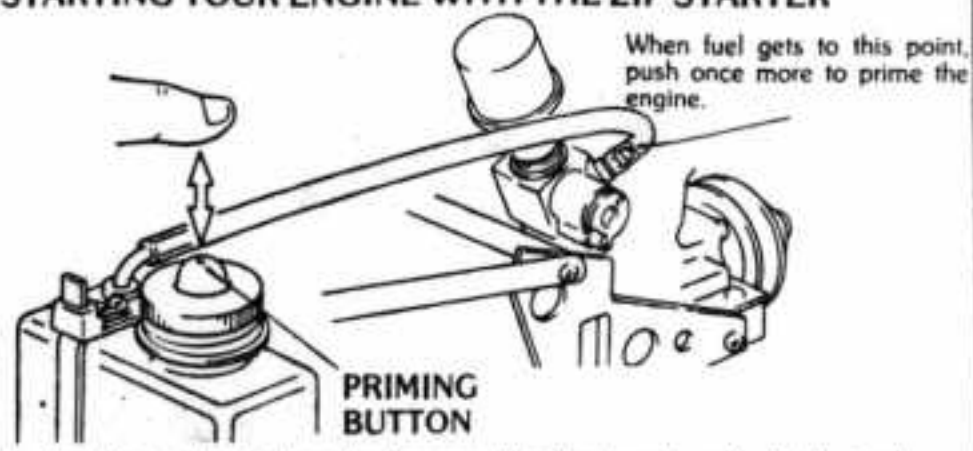
3. Once you have confirmed that the plug and electrical system are functioning properly, disconnect the clip from the plug and install the plug (and its washer) back into the engine. Reinstall the clip as shown below.



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

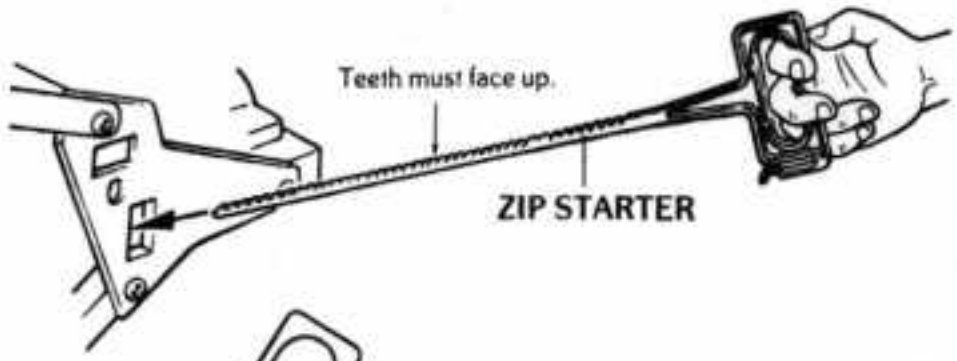
4. The carb on the O.S. CZ-1 employs an easy to adjust needle valve, with a small range of adjustment. It can be opened or closed with a small screwdriver place in the slot.

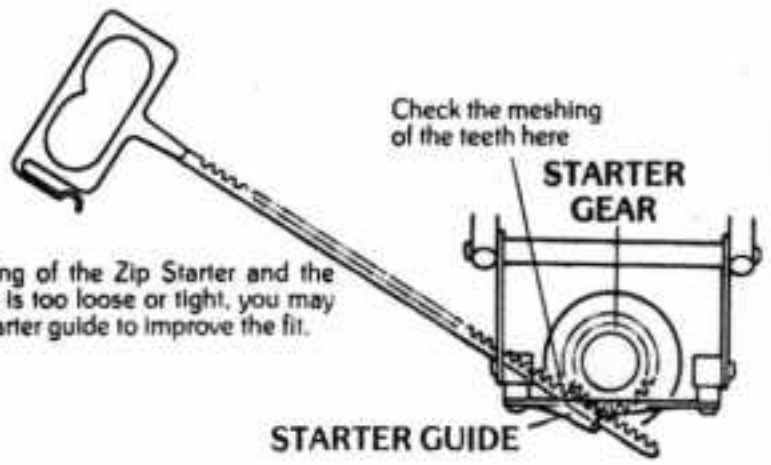
STARTING YOUR ENGINE WITH THE ZIP STARTER



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. Once pressed down, your finger must be removed before pressing again. This is to allow air to enter the tank.

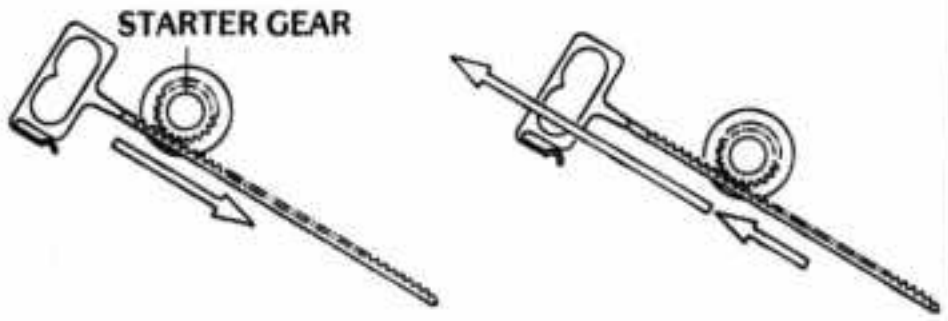
A. Insert the Zip Starter into the starting slot on the left, rear side of the Assault with its teeth facing up.





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 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.

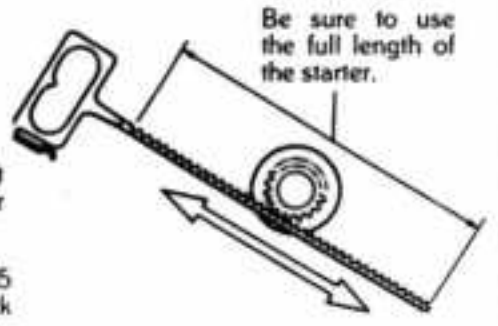
REMEMBER:

A. Push the Zip Starter in slowly, and draw it out quickly.

B. Don't stop in the middle of a pull.

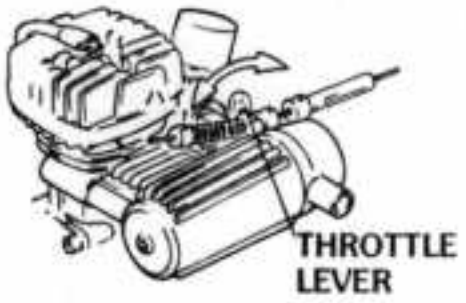
C. Pull the Zip Starter out in a straight line. Don't allow it to jerk to the left or right.

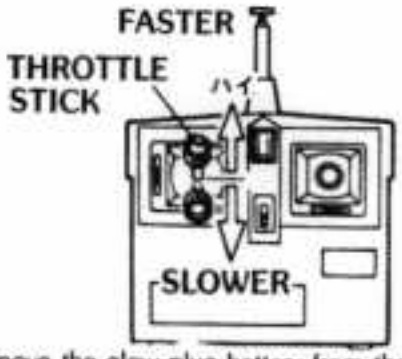
D. If the engine doesn't start within 15 attempts it is not going to start. Check previous steps to make sure that procedure was followed.



ONCE THE ENGINE HAS STARTED

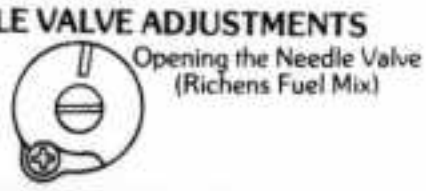
1. Lift the rear end of the car off the ground and move your radio's throttle control stick slowly from low throttle to high throttle and back again. If the engine has good speed but stops suddenly while going from low to high, try opening the needle valve a little (see diagram) and start it again. If the engine responds very sluggishly from low to high, then it is probably too rich and you should try closing the needle valve a bit (see B). 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.





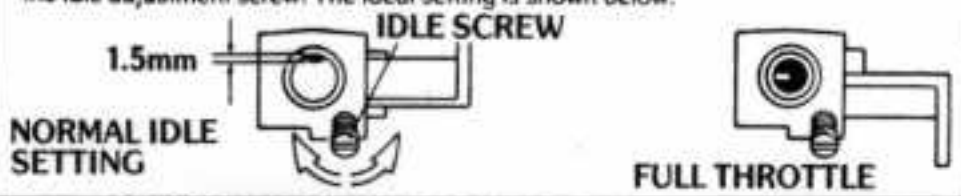
2. Once the engine is running smoothly, remove the glow plug battery from the clip. The engine should now continue to run smoothly without power being applied to the plug.

NEEDLE VALVE ADJUSTMENTS



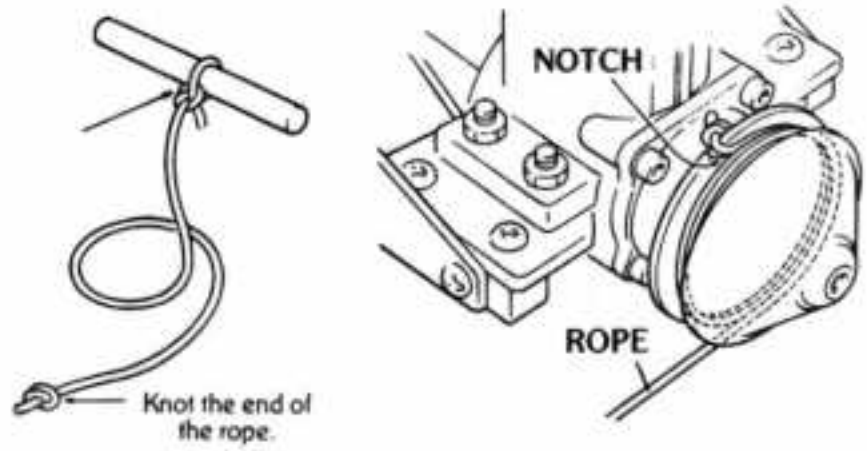
THROTTLE LEVER ADJUSTMENT

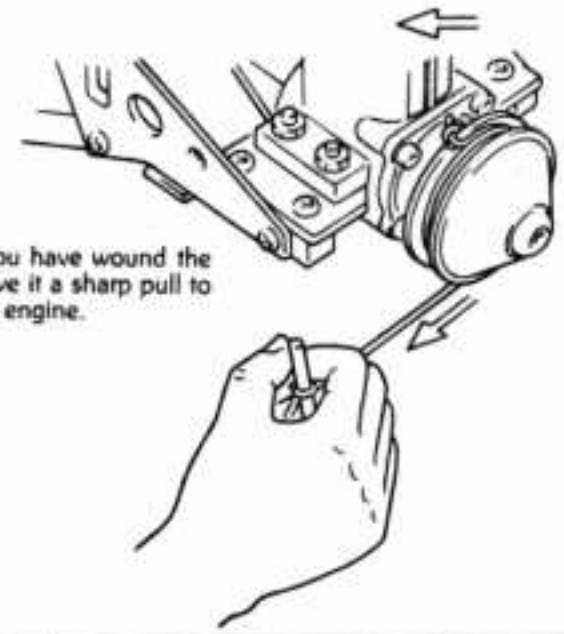
If the engine is running very fast even at a low throttle setting, the idle adjustment of the engine is set too high. If, on the other hand, the engine dies at a low throttle setting, the idle is probably set too low. You can adjust the low idle setting by turning the idle adjustment screw. The ideal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



USING THE STARTER ROPE

① Put a knot in the end of the rope and slip it into the notch in the start cone. Wind the rope 2-3 turns clockwise.

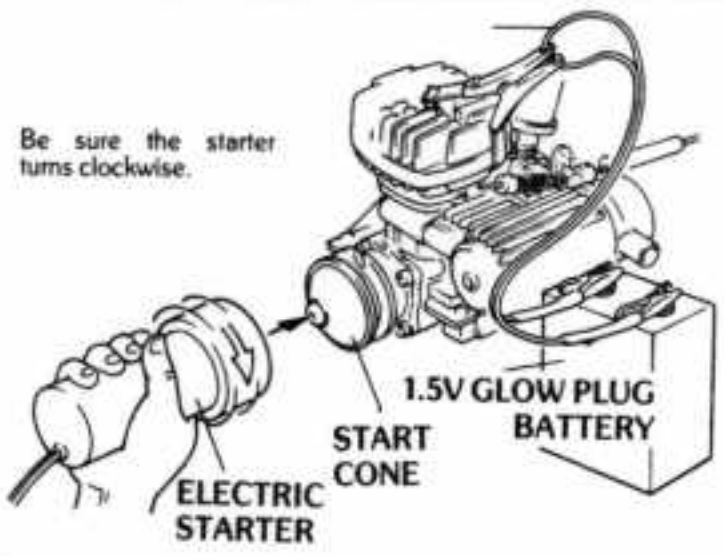




② Once you have wound the rope, give it a sharp pull to start the engine.

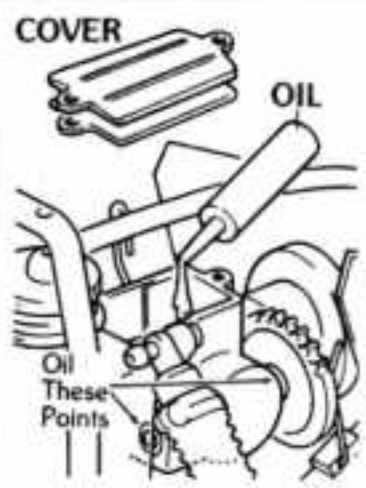
USING AN ELECTRIC STARTER

Be sure the starter turns clockwise.



While the Zip Start method is easier, you may wish to use an electric starter. This is easy on the Assault because of the engine's built-in start cone. If you find it difficult to keep the "D" battery in place, use a separate glow plug battery and clip.

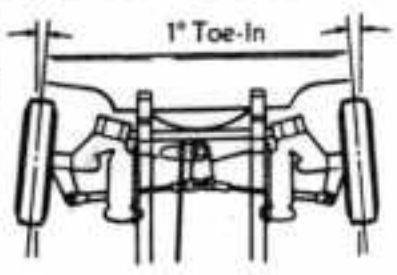
OIL THE GEARBOX

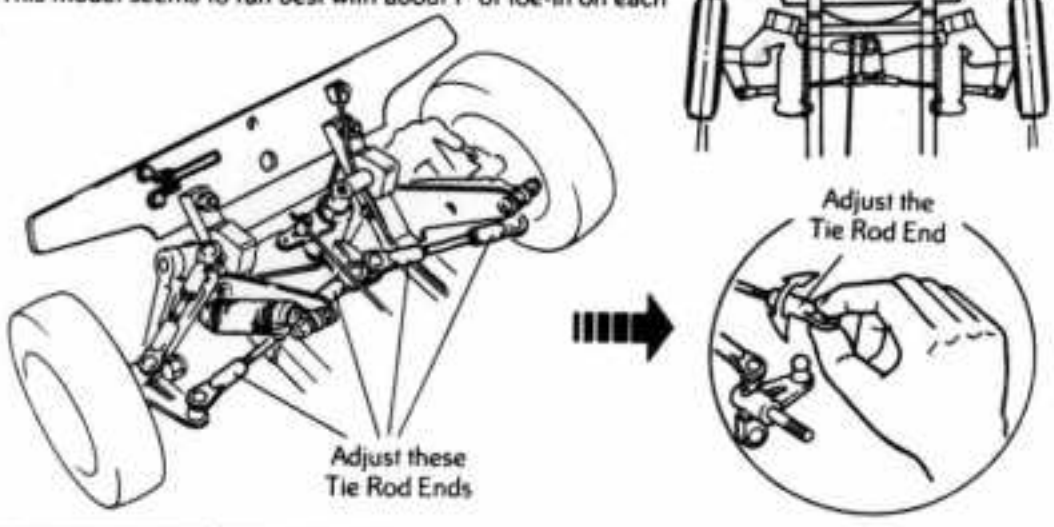


Remove the gearbox cover and pour in 1/2 teaspoon of the red oil. Occasionally check the gearbox to make sure it is lubricated. Apply oil to the bearings shown after EVERY RUN.

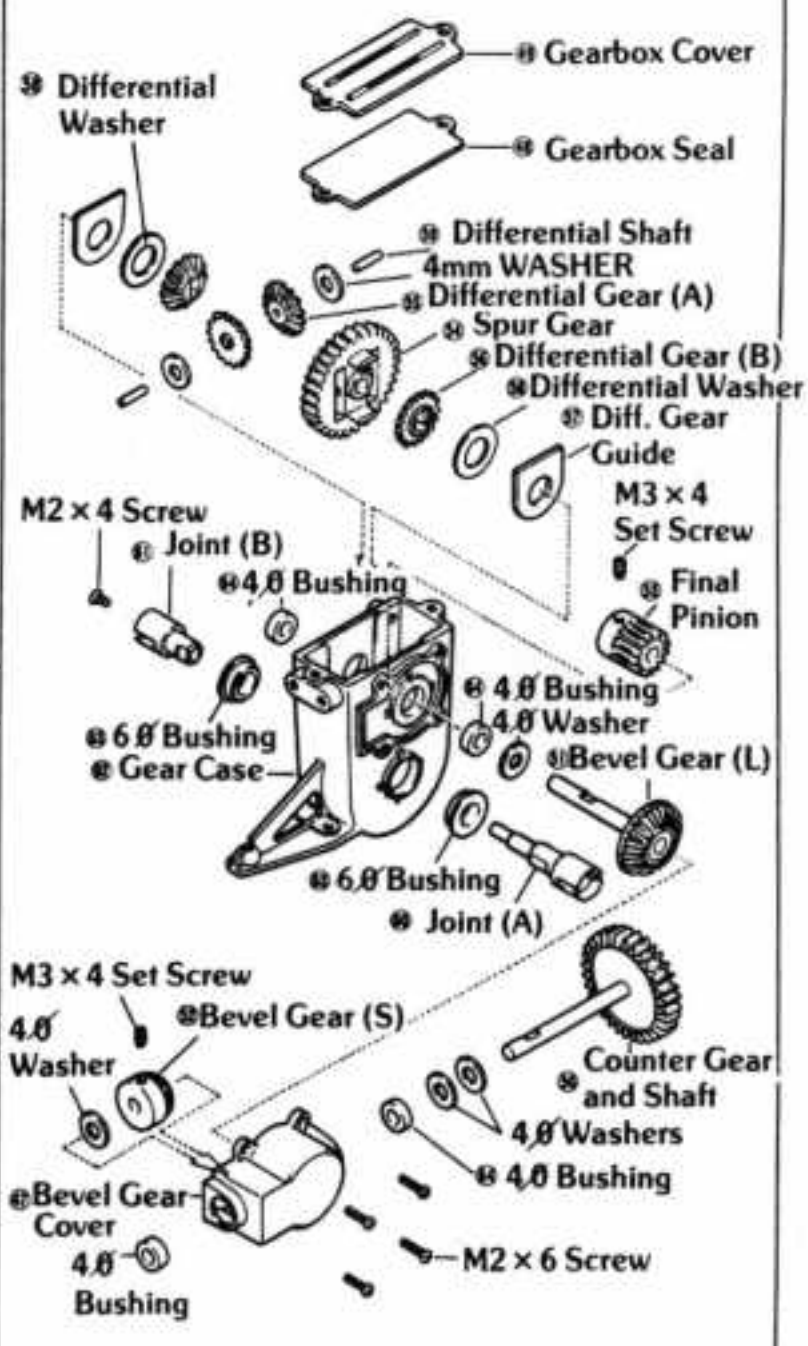
ADJUSTING THE STEERING

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° of toe-in on each side.





GEARBOX PARTS



KEY NUMBERS LIST

No.	Parts Name	Q'ty.
①	Bumper	1
②	Main Chassis	2
③	Arm Axle	1
④	Arm Axle Stopper	2
⑤	Lower Arm (L&R)	1 Set
⑥	Pivot (L&R)	1 Set
⑦	Knuckle Arm (L&R)	1 Set
⑧	Side Guard (2)	2
⑨	Upper Shaft	2
⑩	Tie Rod	2
⑪	Pivot Ball	8
⑫	Servo Saver	1 Set
⑬	Spring Receptacle	4
⑭	Spring Stopper	4
⑮	Shock End	4
⑯	Shock Stopper	4
⑰	Shock O-Ring	4
⑱	Shock Washer	4
⑲	Front Shock Piston	2
⑳	Rear Shock Piston	2
㉑	Front Shock Case	2
㉒	Rear Shock Case	2
㉓	Front Spring	2
㉔	Rear Spring	2
㉕	Front Wheel	2
㉖	Front Inner Wheel	2
㉗	Rear Wheel (R-1)	2
㉘	Rear Wheel (R-2)	2
㉙	Rear Wheel (R-3)	2
㉚	Front Tire	2
㉛	Rear Tire	2
㉜	Front Shock Stay	2
㉝	Shock Bushing	4
㉞	Front Wheel Bushing	2
㉟	Rear Suspension Plate	1
㊱	Gear Box Mount	1
㊲	Rear Suspension Arm	2
㊳	Rear Wheel Shaft Bushing	2
㊴	Rear Wheel Shaft	2
㊵	Swing Shaft	2
㊶	Rear Suspension Shaft	2
㊷	Large Pivot Bar Holder (A)	2
㊸	Small Pivot Bar Holder (B)	2
㊹	Drive Washer	2
㊺	Rear Shock Stay	1
㊻	Shock Ball	4
㊼	Bevel Gear Cover	1
㊽	Gear Box Seal	1
㊾	Gear Box Cover	1
㊿	Counter Gear (w/Shaft)	1
(51)	Bevel Gear (L)	1
(52)	Bevel Gear (S)	1
(53)	Final Pinion Gear	1
(54)	Spur Gear	1
(55)	Differential Gear (A)	2
(56)	Differential Gear (B)	2
(57)	Differential Gear Guide	2
(58)	Differential Washer	2
(59)	Differential Shaft	2
(60)	Joint (A)	1
(61)	Joint (B)	1
(62)	Gear Case	1
(63)	6 Ø Bushing	2
(64)	4 Ø Bushing	4
(65)	Stone Guard	1
(66)	Fuel Tank Holder	1
(67)	Strap (L)	1
(68)	Strap (S)	7
(69)	Fuel Tank	1
(70)	Fuel Tank Cap	1
(71)	Fuel Tank Priming Button	1
(72)	Fuel Tank Rubber Bushing	1
(73)	Fuel Tank Pipe	1
(74)	Fuel Tank Tube	1
(75)	Rear Frame	2
(76)	Side Plate	1 Set
(77)	Engine Mount	2
(78)	Muffler (A)	1
(79)	Muffler (B)	1
(80)	Muffler Ball	1
(81)	Air Filter Element	1
(82)	Air Filter Receptacle	1
(83)	Air Filter Adapter	1
(84)	Front Body Hook	1
(85)	Pilot Shaft (For O.S.)	1
(86)	Clutch Bearing	1 Set
(87)	Clutch Bell (w/Bushing)	1
(88)	Clutch Shoe	2
(89)	Clutch Spring	1
(90)	Joint Collar	1
(91)	Body	1
(92)	Roll Bar	1
(93)	Hook Pin	2
(94)	Rear Body Hook	1
(95)	Wing Holder (A)	1
(96)	Servo Mount Collar	4
(97)	Radio Box	1
(98)	Radio Mount Plate	1
(99)	Driver	
(100)	Driver Mounting Knob	1
(101)	Linkage Rod	2
(102)	Linkage Guide	1
(103)	2 Ø Stopper	3
(104)	Battery Holding Spring	1
(105)	Brake Lever	1
(106)	Brake Lever Holder	2
(107)	Brake Shoe	1
(108)	Wing	1
(109)	Flywheel	1
(110)	Clutch Pin	2
(111)	Starter Pawl	2
(112)	Starter Guide	1
(113)	Starter Gear	1
(114)	Ratcher Spring	1
(115)	Plug Heat Coil (w/Coil)	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)	Fuel Pump	1
(123)	Shock Oil	1
(124)	Shock 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)	Hex Wrench (1.5mm)	1
(133)	Hex Wrench (2.0mm)	1
(134)	Wing Holder (B)	
(135)	E-Ring (E-7)	
(136)	Brake Pipe	1
(137)	Throttle Guide	1
(138)	Spacer	2
(139)	Eng. (O.S.-CZ-1)	1
(140)	Ball End (L)	8
(141)	Ground Plate	1
(142)	Shock Seal	4
(143)	Sponge Sheet	1

PURCHASING PARTS FOR YOUR ASSAULT

You can purchase replacement parts for your Assault. 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 Spur Gear (Key #54) ask your dealer for Kyosho Parts Pack SC-056 (Differential Gear Set).

Parts Pack No.	Description	Includes these parts:
SC-002	Main Chassis	②×2
SC-004	Lower Arm Set	⑤ ⑥×1
SC-007	Knuckle Arm	⑦×1
SC-009	Servo Saver Mount	⑫×1
SC-012	Front Shock Stay	㉜×1
SC-013	Rear Shock Stay	㊺×1
SC-014	Gear Box Mount	㊱×1
SC-017	Swing Shaft	㊵×1
SC-018	Rear Wheel Shaft	㊴×1
SC-020	Drive Washer	㊹×1
SC-026	Front Tire	㉚×1
SC-041	Servo Saver	⑫×1
SC-042	Rear Suspension Arm	㊲ ㊳×2
SC-048	Front Wheel	㉕ ㉖×2
SC-049	Rear Wheel	㉗ ㉘ ㉙×2
SC-056	Differential Gear Set	㊿ (51) (52)×1 (53) (54) (55) (56) (57) (58) (59)×2
SC-059	Joint Set for Differential	(60) (61)×1
SC-063	Front Wheel Bushing	(64)×2
SC-083	Final Pinion Gear	(53)×1
SC-084	Special Rear Tire	(31)×2
SC-086	Rear Sus. Plate Set	(35)×1 (41) (42) (43)×2
SC-087	Upper Arm Set	⑨×2 ⑪ (98)×4
SC-088	Upright Set	⑪ (128)×2
SC-089	Tie Rod	⑩×2 ⑪ (98)×4
SC-100	Wing Set	(95) (96) (97)×1
EF-037	Strap (Small)	(68)×6
EF-039	Ni-Cad Strap	(67)×6
LD-070	Clutch Bearing	(86)×1
CB-124	Linkage Boots	(115) (116)×1
1885	Antenna Set	(126)×1
MB-063	Zip Starter	(121)×4
AB-01	Bumper	①×1
AB-02	Arm Shaft Set	③×1 ④×2
AB-03	Gear Case Set	(47) (48) (49)×1
AB-04	Counter Gear	(50)×1

Parts Pack No.	Description	Includes these parts:
AB-05	Bevel Gear Set	(51) (52)×1
AB-06	Gearbox Bushing Set	(63)×2 (64)×4
AB-07	Fuel Tank	(66) (69) (70) (71) (72) (73) (74) (140)×1
AB-08	Rear Frame	(75)×1
AB-09	Side Plate	(76)×1 (76)×2
AB-10	Engine Mount	(77)×2
AB-11	Muffler	(78) (79) (80)×1
AB-12	Air Filter	(81) (82) (83)×1
AB-14	Pilot Shaft	(85) (115) (116)×1
AB-15	Clutch Shoe	(88)×2
AB-16	Clutch Bell	(87)×1
AB-17	Clutch Spring	(89)×4
AB-21	Radio Box Set	(97) (98) (99) (100)×1 (96)×4
AB-25	Linkage Set	(90) (101) (102)×1 (101)×2 (103)×3
AB-26	Brake Set	(105) (107) (106)×1 (106)×2
AB-27	Flywheel	(109)×1 (108)×2
AB-28	Starter Gear Set	(112) (113)×1 (111)×2
AB-29	Starter Guide	(112) (114)×1 (113)×2
AB-30	Front Shock Set	(13) (14) (15) (16) (17) (18) (19) (20) (33) (34) (35) (36)×2
AB-31	Rear Shock Set	(13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (33) (34) (35) (36)×2
AB-34	Body	(91)×1
AB-35	Driver	(99)×1
AB-36	Roll Bar Set	(92)×1 (8)×2
AB-37	Body Hook Set	(84) (94)×1
AB-38	Decal	(127)×1
AB-39	Screw, Nut, Wrench Set	
AB-40	Plug Heat Set	(115) (116) (117) (118) (119)×1
EP-22	Hook Pin	(93)×5
	Optional Parts	
CK-63	4 Ø Ball Bearing (2 pcs.)	Replaces 4 Ø Bushing
MS-26	6 Ø Ball Bearing (2 pcs.)	Replaces 6 Ø bushing
1951	Shock Oil Set	S, M, H, Set

To order parts for your engine, refer to last page of the engine's instructions and use the O.S. "Code Numbers" when refering to these engine parts.

KYOSHO®

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