DeAGOSTINI MODEL SPACE™

Red Bull Racing
FORMULA ONE TEAM

RB7

RADIO CONTROLLED • BUILD IT YOURSELF • NITRO ENGINE

Pack 3

Stages 9-12

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SAFETY FIRST

BECAUSE SAFETY IN MODEL CAR RACING IS PARAMOUNT, JUST AS IT IS IN FULL-SIZE MOTORSPORT, HERE ARE SOME PRECAUTIONS THAT YOU SHOULD ALWAYS BEAR IN MIND WHEN HANDLING AND OPERATING YOUR RB7 OR ANY OTHER NITRO-FUELLED RC MODEL.

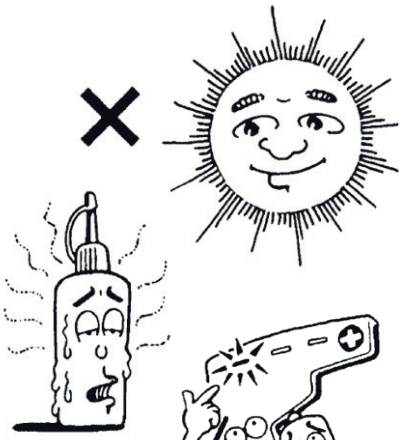
- Your model is not a toy and is intended only for users at least 14 years old.
- Use the finished model only for its intended purpose.
- Assemble the model strictly in accordance with the instructions provided. If you want to make any modifications, use only original spare parts recommended by Kyosho.
- When using additional components (such as remote control units) obtained from other sources, always refer to the instructions provided with them.
- Do not use the model unless it is completely assembled according to the instructions.
- Check the operational safety of the model before running it, and to avoid interference use a radio channel frequency that is not already being used by another modeller.
- Operate the model only where there are no people or animals nearby and avoid possible damage to property. Act responsibly, and check the suitability of the site for your type of model.
- Stop the model immediately if a fault occurs in case you lose control of it, and fix the fault before you use the model again.
- Check your model after each use and replace any parts subject to wear in good time, to ensure safe operation.
- If you pick up the model when it is running, always do so in such a way that you do not come into contact with any parts of the drive train.

You may be familiar with many of the safety tips listed or you may have taken them for granted for a long time. However, we still want to point out to you that RC models are not toys and careless actions can cause great harm: you can actually put yourself and other people at significant risk! Check that all components used together are fully compatible. This is particularly important when combining components from different manufacturers in the radio control system.

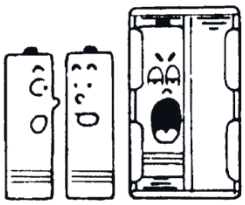
Choose an appropriate place for operating your model. Do not drive your car model on public roads, where it will be a danger both to you and to other road users. Never endanger people or animals, and always remember how quickly a model can get out of control.

Keep model engine fuel away from children. The fuel contains methanol and nitromethane, and if swallowed, it can cause blindness and permanent damage to health. If fuel is accidentally swallowed, seek medical attention immediately and take a sample of the fuel with you to show the doctor what it is that you've ingested. If fuel gets into your eyes, flush them immediately with water. Again, seek medical attention and take a sample of the fuel with you.

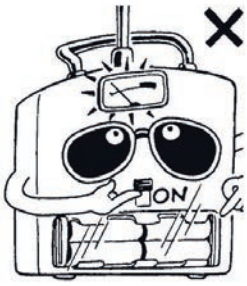
- Remember that at low ambient temperatures plastic parts become more brittle, and so their load-bearing capacity declines.



Never leave fuel in the sun, where it might overheat and explode.

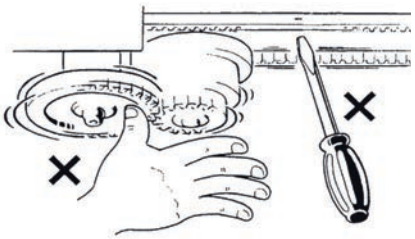


Always check the batteries before using your model, and unless you can be sure that they are not about to run out, recharge them. Never connect the two poles of a battery without a load in between, or you will cause a short circuit, and never throw batteries in the fire, because there is a risk of explosion.



Note that electric motors and internal combustion engines can get very hot during operation, and be careful not to burn yourself.

Always check that your model is safe before operating it. Please remember that you are solely responsible for it, and check regularly to make sure that all the bolts are tight. Never touch any moving parts, because you risk injuring yourself.



- If you don't have much knowledge of working models, contact an experienced modeller or a model club for advice before running your model.
- During test runs, protect yourself from materials such as stones that may be thrown up by rotating parts.
- For trouble-free operation, we recommend using fuel and air filters.
- Do not touch any rotating and/or hot engine parts while the model is operating or cooling down.
- After running the model, give the engine enough time to cool down thoroughly before you touch it.
- Never force the engine to stop (for instance with a cloth on the flywheel), but cut off the fuel or air supply as indicated in the instruction manual.
- Screw in the glow plug carefully.
- Do not run the model engine in enclosed spaces, since it can give off toxic fumes. Do not breathe the exhaust fumes!
- Model engine fuel is toxic and highly flammable.
- The fuel must not be warmed and it must be protected from fire and ignition sources – no smoking when handling the fuel or the model.
- Store model engine fuel only in tightly closed containers in a cool, dry, dark place, and make sure that it does not fall into the hands of children.
- Avoid skin contact with model fuel and do not swallow it or inhale the fumes it gives off.
- Carefully note the warning and safety labels on the packaging of model engine fuel.

Please keep these instructions for future reference.
If you give the model away or sell it at some point, you must be sure to pass on these safety instructions with it.
De Agostini makes no warranties for damages resulting from the operation of the model or from the actions of the owner or a third party.

THE STEERING SLIDER

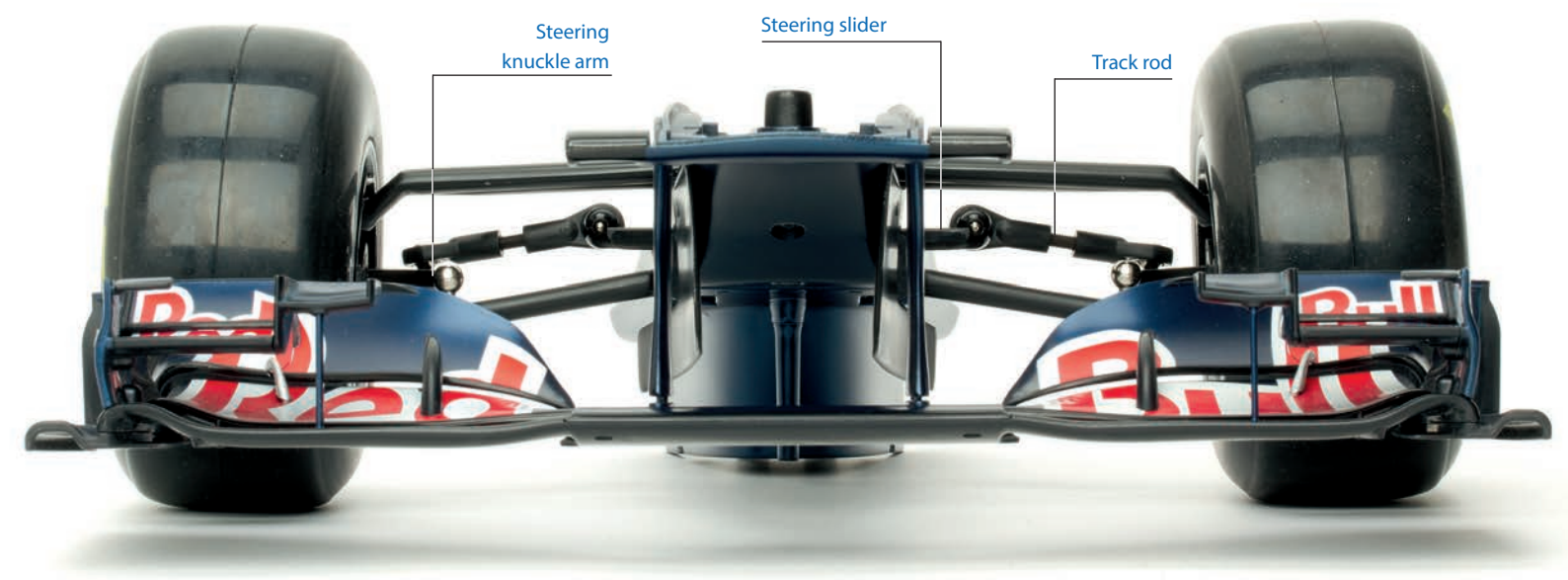
THE STEERING SLIDER, SUPPLIED WITH THIS PACK, PLAYS A MAJOR PART IN THE CONTROL OF YOUR RB7 RC RACER. IT IS THE MAIN LINKAGE BETWEEN THE STEERING SERVO MECHANISM AND THE FRONT WHEELS.

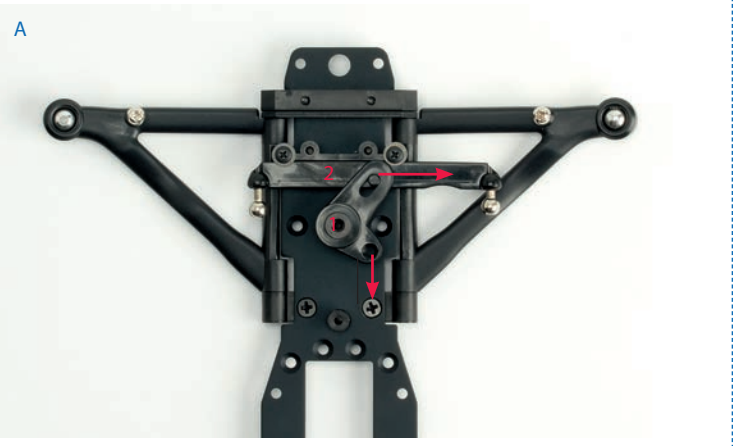
Accurate steering is vital for a competition RC model such as your RB7 racer. As you now have the first components of the steering mechanism, here is a brief explanation of how your model converts the steering commands from the remote control handset into changes of direction on the circuit.

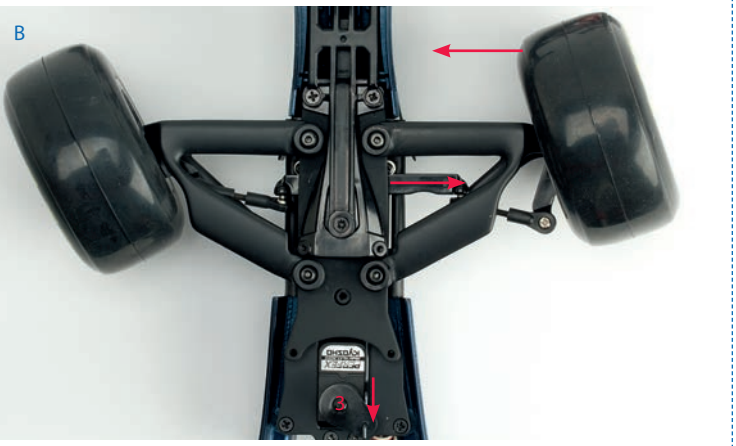
As shown in the photograph below, the steering mechanism sits between the upper and lower suspension arms of the front axle. Because there are definite advantages in reducing the weight of the steering mechanism and the space it takes up in the model, designing the layout of its various components required a certain amount of ingenuity. In particular, a way had to be found of reducing to a minimum the number and size of the components in the chain of command from the steering servo to the front wheels.

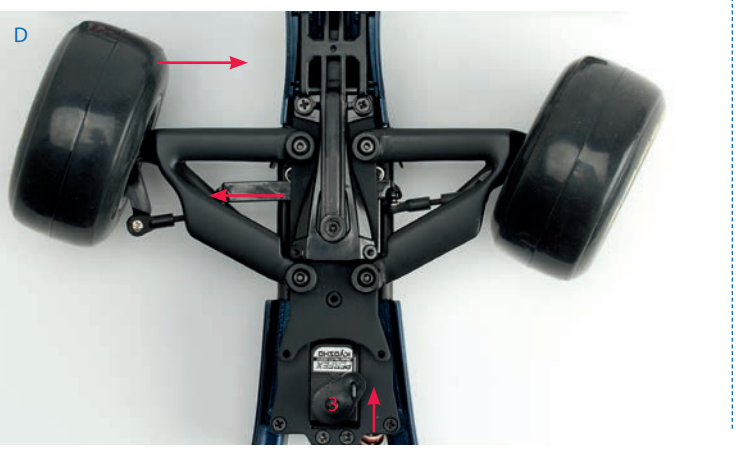
For your model RB7, the way to create the flattest, lightest steering mechanism was for the steering slider to move on a base that is screwed directly to the lower front chassis plate. The steering slider is activated by the steering crank, which has also been made as flat as

This photo shows the central position of the steering slider and track rods between the upper and lower suspension arms of the front wheels of your RB7 racer.









A: The front axle and the assembly as far back as the lower front chassis plate, showing the interaction between the steering crank (1) and the steering slider (2). When the shorter arm of the crank moves back, its longer arm pushes the steering slider to the right.

B: The result of this movement on the positions of the wheels is clearly visible in this view of the fully assembled suspension. The steering servo (3) pulls on the steering crank, the steering slider moves to the right and the wheels turn to the left.

possible and is located immediately behind it. These two central components of the steering mechanism project just 9mm above the level of the lower front chassis plate.

CLEVER POSITIONING

This flat design has been made possible by the clever positioning of a component called the servo saver. In other RC models of this scale, this is integrated into the steering crank and takes up space there, but in your RB7 it has been moved further back, onto the horn of the servo arm. Without the servo saver, the steering crank has just two arms of different lengths that pivot on a collar. The longer arm points forwards and operates the slider while the shorter arm points to the right and is connected to the rods of the servo.

The side-to-side movement of the steering slider is transmitted by two track rods to the steering knuckle arms. These carry the front axles and are able to pivot. When the steering slider moves to the left, the part of the wheel that is behind the axle is also pushed to the left. Consequently, the wheel itself turns in the opposite direction, in this case to the right.

C: When the short arm of the steering crank (1) is pushed forward, the steering slider (2) moves to the left, guided by its slider base (see red arrow).

D: The same process with the completed front axle. The steering servo (3) pushes the steering linkage forward, the steering slider moves to the left and the wheels turn right.

Stage 9

MOUNTING THE WISHBONES

THE COMPONENTS SUPPLIED FOR THIS STAGE WILL CONNECT THE FRONT LOWER WISHBONES TO THE FRONT LOWER CHASSIS OF YOUR RED BULL RACING RB7.

Tools & Materials

Phillips screwdriver (size 2)
Steel ruler
Knife

1. Front lower wishbone mount
2. 2 mounting shafts 3 x 68mm
3. 2 countersunk screws 3 x 6mm

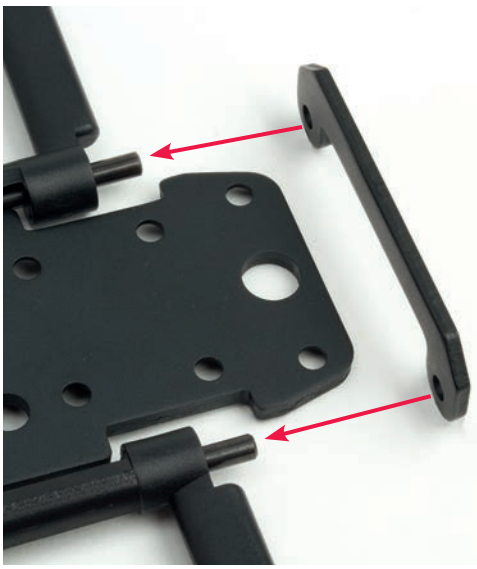
01 Position the front lower wishbone mount with the cylindrical projection facing upwards. Slide both mounting shafts into the two holes at the ends of the mount.

02 Slide the front lower wishbones onto the mounting shafts, with the screws facing upwards.

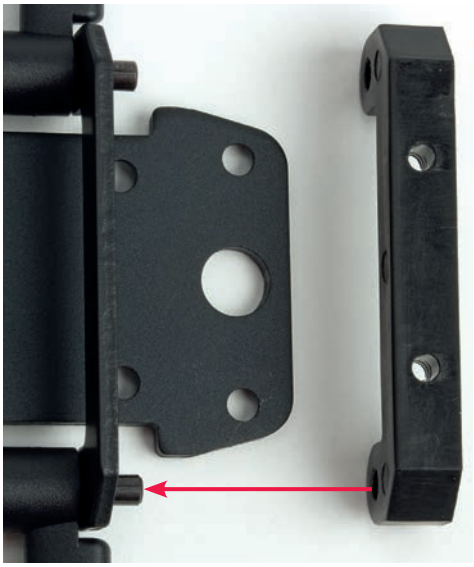
03 Before proceeding, check that your assembly looks like the one in the photo above.

04 Hold the lower front chassis supplied with Pack 2 as shown, with the wider parts of the countersunk holes facing upwards.

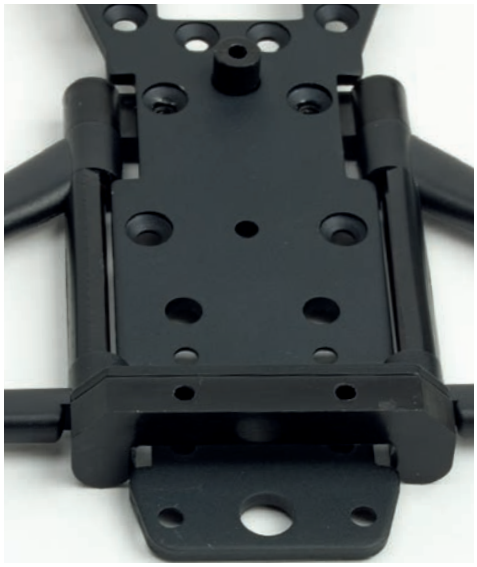
05 Place the lower front chassis onto the assembly from Steps 01 to 03, as shown, with the cylindrical projection of the mount (arrowed) protruding through the chassis.



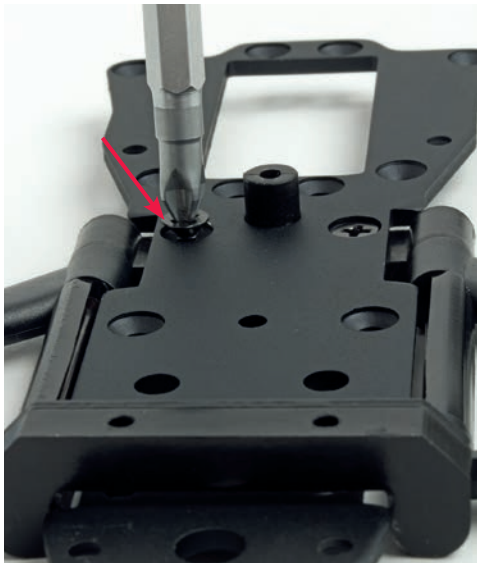
06 Place the front lower wishbone plate (Pack 2) on the free ends of the mounting shafts.



07 Place the front lower wishbone holder (Pack 2) on the ends of the mounting shafts.



08 Check that your assembly looks like the one in the photo above before continuing.



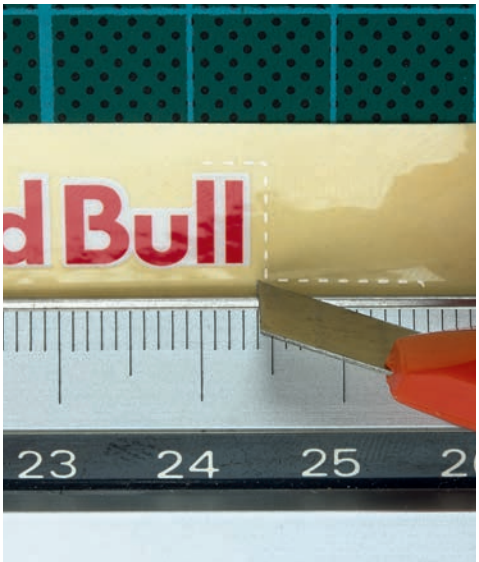
09 Place a 6mm countersunk screw into each of the holes either side of the cylindrical projection of the mount.

10 Turn the assembly over so that the underside is accessible. Place the two 3 x 8mm screws supplied with Pack 2 into the holes of the chassis, as shown, to secure the front lower wishbones in place.

11 Position the assembly as shown. Check that it looks like the one in the photo above, then check that the two wishbones can move freely around the mounting shafts.

12 For the next steps, you will need the Red Bull MOBILE sticker supplied with Pack 1 and the rear wing assembly.

13 Place the sticker sheet on a suitable cutting surface, and separate the two halves using a steel ruler and a knife.



14 Cut along the dotted lines and remove the stickers without separating them from their backing paper. Make the cuts just inside the lines.

15 The stickers fit in place on the inner surfaces of the rear wing endplates. Wipe these areas clean with a moist cloth to remove any dust or grease.

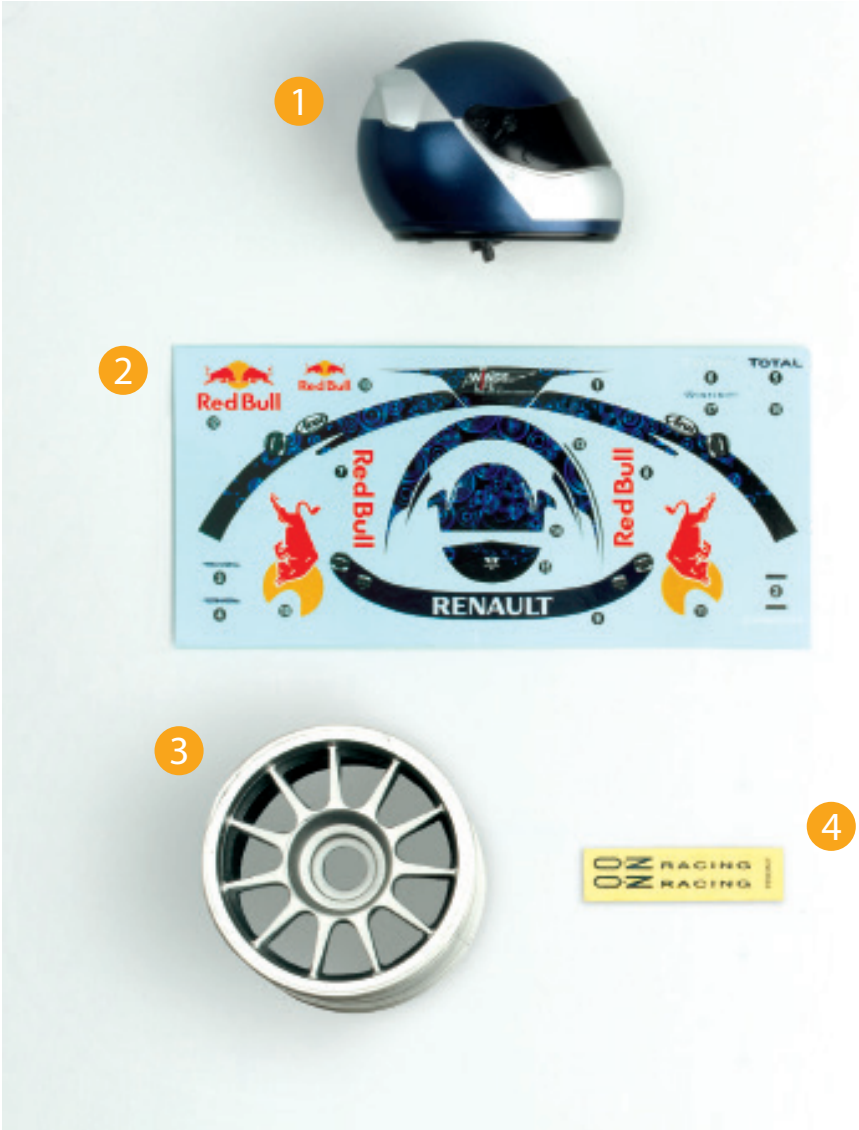
16 Remove the backing paper from one of the stickers, and carefully place the sticker on the inner surface of the endplate, parallel to the upper edge at around the height of the round indent, about 1.5cm from the rear edge.

17 Repeat Steps 15 and 16 to fix the second Red Bull MOBILE sticker to the inner surface of the other endplate. Then store the wing safely for later use.

Stage 10

SEBASTIAN VETTEL'S HELMET

IN THIS SESSION YOU APPLY THE DECALS TO THE 1:7-SCALE DISPLAY HELMET FOR YOUR RED BULL RACING RB7 MODEL. THE DECALS REPLICATE THE LIVERY OF SEBASTIAN VETTEL'S 2011 SEASON HELMET.



Tools & Materials

- Steel ruler
- Tweezers
- Knife
- Cutting mat
- Cloth or microfibre cloth
- Paper towels
- Bowl

1. Helmet
2. Decal sheet
3. Front right wheel
4. OZ RACING sticker

01 Before applying the first decal to the helmet, it is best to remove any dust or grease from the surface with either a damp cloth or microfibre cloth.

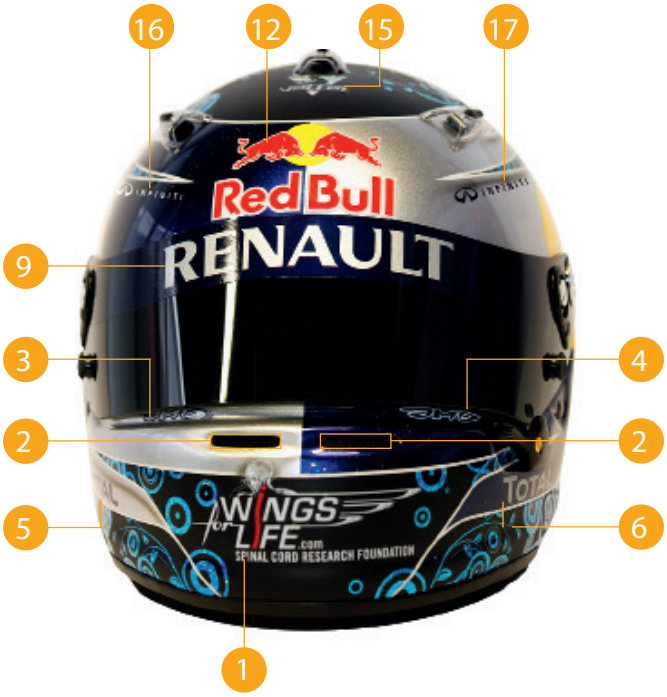
02 Place the decal sheet on a cutting mat and locate decal 12. Place a ruler on the sheet, blocking decal 12 off from the rest of it. Using a sharp knife, carefully cut along the edge of the ruler to remove the decal from the sheet.

03 Holding the decal with tweezers, immerse it in a shallow bowl of lukewarm water. Keep it under water until it starts to move away from the transfer paper.

04 Remove the decal from the water and place it in roughly the correct place over the front of the helmet. Hold one side against the helmet and slide the transfer paper away from underneath it.

05 Once the decal is in its correct position, take a cloth or some paper towel and carefully dab it until dry.

06 You have now placed the first decal on the helmet. The following steps will now show you different views of the helmet, showing you where the rest of the decals fit. Follow the process in Steps 02-05 to apply the remaining decals. Note: look at all five helmet views before you begin applying them.



Front view

It is recommended that decals 1 and 9 be place centrally first, before carefully spreading across the curve of the helmet. This way it will be easier to apply the decals accurately and without creases.

Rear view

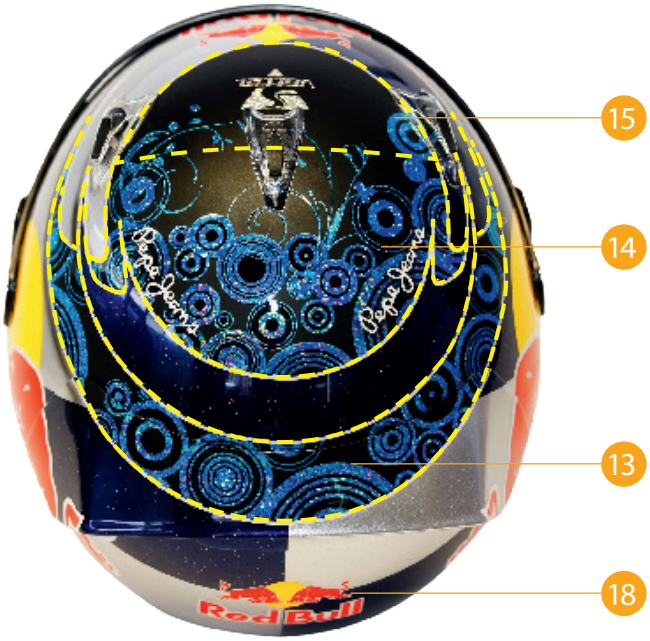
Make sure decal 18 is positioned exactly in the centre of the rear of the helmet. The yellow circle should sit in the middle of the two lines, with the lettering parallel to the horizontal line.

Right side view

Wrap decals 1 and 13 with extra caution, as their long and thin shapes will make applying them more difficult.

Left side view

The left side looks similar to the right. Note the inverted colours of the TOTAL and INFINITI logos (decals 6 and 17).



Top view

Decal 15 is placed on the top of the helmet. Follow the photo for guidance. The outlines of decals 13, 14 and 15 are highlighted here with a yellow dotted line to help you place them correctly.

Stage 11

FITTING THE RIGHT FRONT TYRE

THE COMPONENT SUPPLIED FOR THIS STAGE IS THE RIGHT FRONT TYRE, WHICH IS COMPLETE WITH ITS FOAM INSERT SO THAT IT IS READY TO BE FITTED.

Tools & Materials

Fine-grade sandpaper
Brush
Superglue

1. Right front tyre with Pirelli logo
2. Foam insert (pre-installed)

01 Using some rolled-up fine-grade sandpaper, roughen the inner surface of the fluting around the outer groove of the wheel (supplied with Stage 10) to optimise the adhesion in this area. When you have sanded the fluting, brush away any residue. Repeat this for the inner groove of the wheel.

02 Take the right front tyre with its pre-installed foam insert and push the wheel gently through the central hole from the back.

03 Turn the wheel around and, holding the assembly as shown, pull the tyre lip into the groove on the inside rim so that it rests fully within the groove.

04 Now repeat Step 03 on the other side of the wheel rim and the tyre. The tyre lip should again rest fully within the groove.

05 Pull the tyre lip back from the wheel as shown, and drip a small amount of superglue into the groove.

06 Push the tyre lip back into the groove and hold it there for a few seconds. Repeat Steps 05 and 06 at intervals of 2cm around the entire circumference of the wheel groove (as indicated by the red arrows).

Stage 12

THE FIRST PARTS OF THE STEERING

IN THIS SESSION YOU COMPLETE THE RIGHT FRONT WHEEL AND BEGIN TO ASSEMBLE THE FIRST PARTS OF YOUR MODEL'S STEERING MECHANISM.

Tools & Materials

- Phillips screwdriver (size 1)
- Phillips screwdriver (size 2)
- Angled, needle-nose pliers (smooth)
- Small screwdriver
- Steel ruler
- Knife
- Superglue

1. 2 ball-headed screws 5.8mm
2. Countersunk screw 3 x 6mm
3. Countersunk screw 2.6 x 6mm
4. 2 countersunk screws 3 x 6mm (self-tapping)
5. 2 dome-headed screws 2.6 x 4mm (self-tapping)
6. Ball nut 4.8mm
7. Steering slider
8. 4 chassis spacers
9. 2 washers 2.6 x 6mm
10. Steering crank collar
11. Steering slider base
12. Steering crank

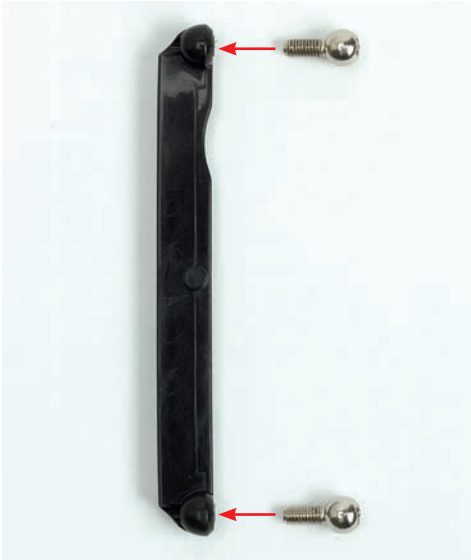
01 Retrieve the wheel assembly and OZ RACING stickers from Stage 10.

02 Using a steel ruler and knife, separate the two OZ RACING stickers from each other.

03 Holding the assembly as shown, use a moist cloth to wipe away any dirt, grease or residue from the inside of the wheel. Ensure the wheel is dry before proceeding.

04 Remove one of the two stickers from the backing paper and stick it on the inside of the rim, as shown.

05 Remove the backing paper from the second OZ RACING sticker, and fix to the inside of the rim, opposite the sticker from Step 04 (indicated by the red arrow). Store this wheel for use later on.

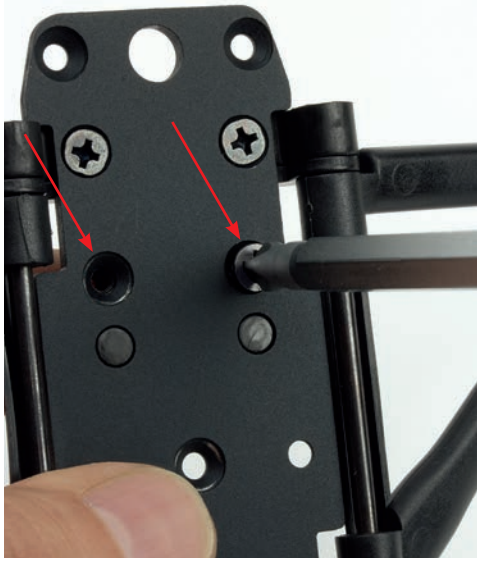


06 Position the steering slider and the two ball-headed screws, as shown. Insert the threaded part of each of the screws into the holes of the slider (indicated by the red arrows) and turn about half a full rotation.

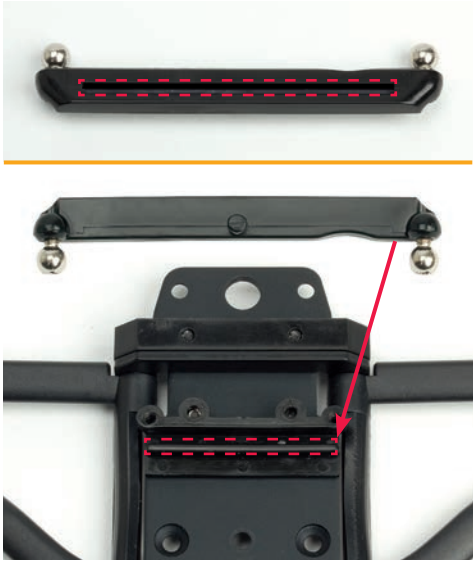
07 With a size 2 Phillips screwdriver, screw the ball-headed screw into the hole until the end of the threaded part is flush with the domed end of the hole, as indicated by the red arrow.

08 Repeat Step 07 on the opposite side of the slider.

09 Place the front chassis assembly as shown in the photo. Holding the steering slider base above the assembly, place the projections into the two holes marked with red arrows. Hold the slider base in place and turn the assembly over (see Step 10).

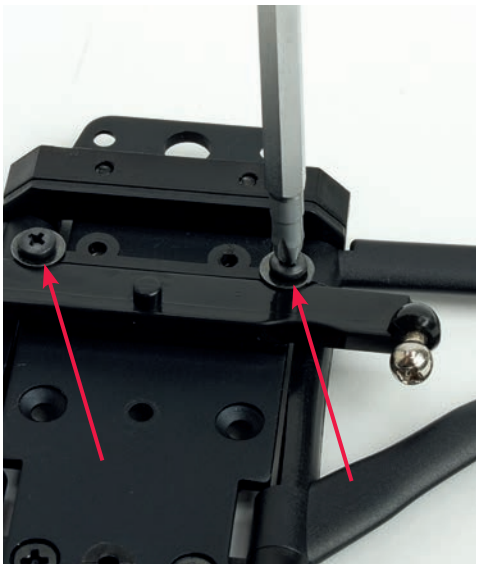


10 Take the two self-tapping 3 x 6mm countersunk screws and place in the two holes marked with red arrows. Screw them into place to secure the slider base in position.

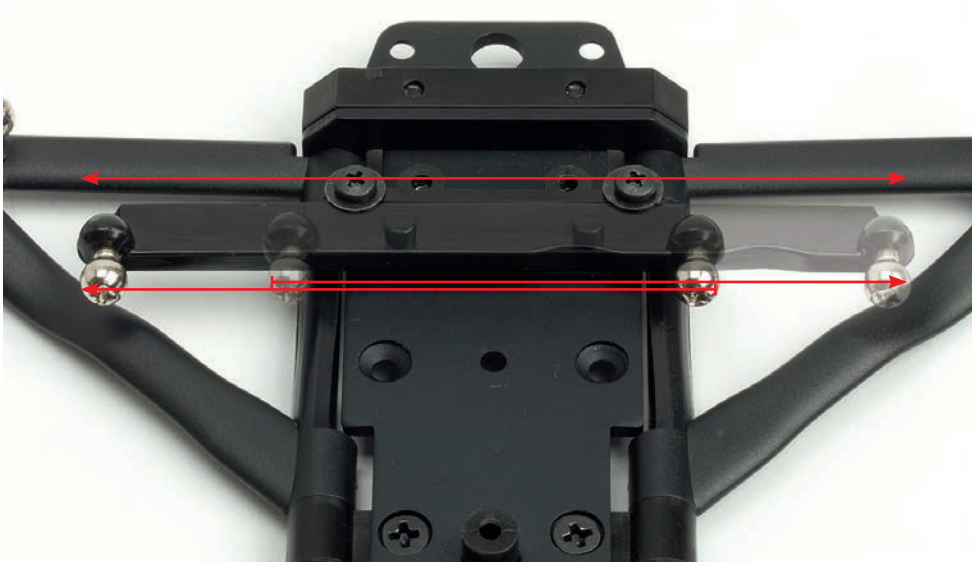


11 Now fit the steering slider onto the base, as shown above, by placing the groove on the underside of the slider onto the ridge of the base.

12 Place the two washers over the holes on the steering base (shown by the red arrows in Step 13).



13 Place a 2.6 x 4mm screw in each of the two holes and then, using a size 1 Phillips screwdriver, fully tighten both screws.



14 To check that the steering slider can move freely, loosen the two screws by half a rotation each. Move the slider all the way in each direction (see red arrows). If the slider doesn't move freely in each direction, undo the screws a little more.

15 At the end of this stage, you have fitted the first part of the steering to the front chassis assembly. Store the unused parts carefully, because they will be needed at a later stage.