



# RB7

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## Pack 4



## Stages 13-16



# RB7



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RED BULL RACING RB7 complies with CE regulations.

NOT SUITABLE FOR CHILDREN UNDER THE AGE OF 14. THIS PRODUCT IS NOT A TOY AND IS  
NOT DESIGNED OR INTENDED FOR USE IN PLAY. ITEMS MAY VARY FROM THOSE SHOWN.

# SCREWS: METRIC AND SELF-TAPPING

**IN MODELMAKING, SIMPLY TIGHTENING A SCREW WITHOUT THINKING MAY LEAD TO PROBLEMS – IT'S EASY TO OVERTIGHTEN IT IN THE SOFT PLASTIC. HERE'S HOW TO AVOID THIS PITFALL, AND WHAT YOU CAN DO TO REMEDY THE SITUATION IF YOU DO OVERTIGHTEN A SCREW.**

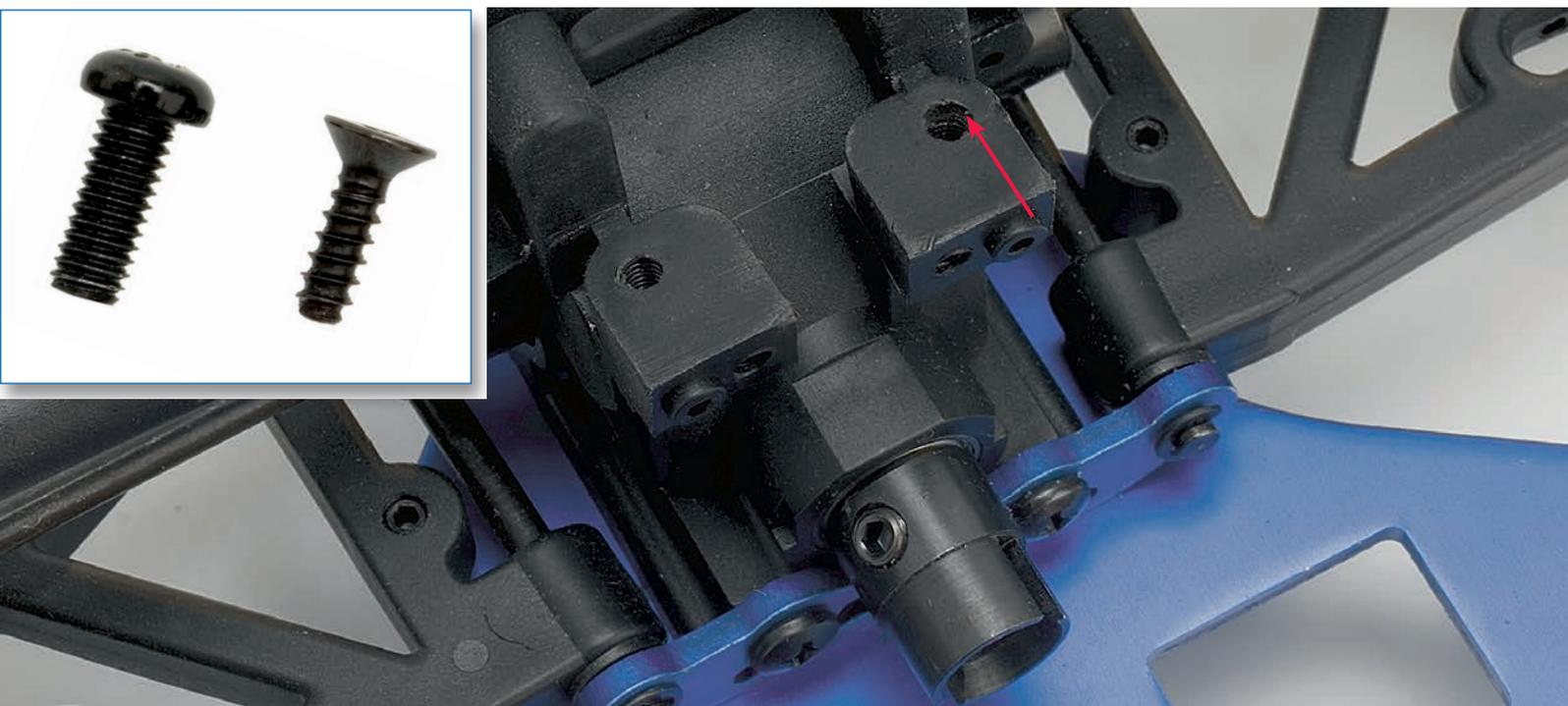
There are two main types of screws used in building your model RB7: metric thread screws and self-tapping screws. Metric screws are used to join parts that may have to be taken apart again, and may be secured either by a nut

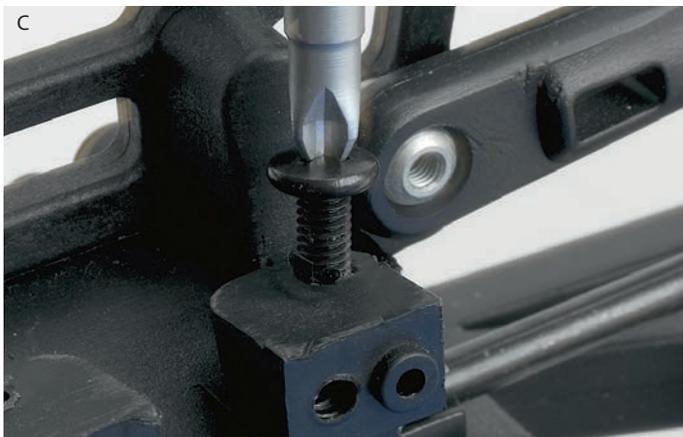
A metric screw (inset, left) has a closely-spaced thread and is usually locked with a nut or screwed into an already-threaded hole. A self-tapping screw (right) forms its own thread in the material into which it is screwed. On your RB7 racer, metric screws can be screwed directly into the plastic if so required. But be careful – if you tighten a screw too much, the thread in the hole may become stripped (see red arrow, main picture).

or by a thread that has already been tapped (cut) into the material into which the screw is to be inserted. Self-tapping screws are used for parts that do not need to be dismantled. The sharpened thread of a self-tapping screw taps a matching thread in the material as it is screwed into it.

## A TRIED AND TESTED METHOD

The risk of overtightening a screw in plastic is very high, and when that happens the thread in the hole strips and





Using a cutter, trim some shavings off a suitable piece of left-over plastic (A). Pack these shavings into the stripped hole, starting from the edge and working towards the inside until the hole is half filled (B). Insert the screw into the hole and turn it a few times (C). This will help to compress the plastic shavings against the sides of the hole. A couple of drops of glue added at this point will make the filling solidify. Wait for a little while, until the glue has set, before tightening the screw further. The thread of the screw will now have sufficient grip (D).

the screw no longer holds. To avoid having to replace the whole part, you can fill the hole with a suitable material and carefully reinsert the screw. You will have to make the filler yourself, however, but all you need is a small piece of left-over plastic, such as the sprue to which many of the plastic parts of models are attached. As a precaution, it might be a good idea to retain some of the sprue instead of discarding it after you remove the parts, in case you later need it as a filler material. You will also need a penknife or cutter.

Cut or scrape shavings off the piece of left-over plastic and then stuff them into the stripped hole, from the wall inwards. Fill the hole until it is only half the size it was before. When you insert the screw again, the filling will become compressed. If all goes well, the screw will now grip again firmly enough to fix the pieces together securely.

### A FIRMER FIX

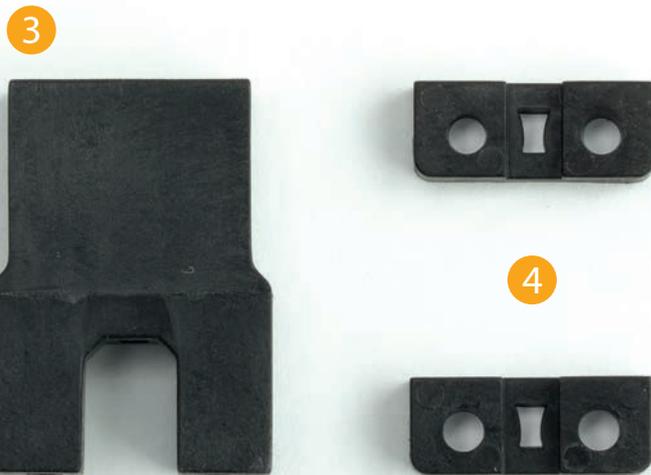
If you place a little liquid glue in the hole before inserting the screw, or before tightening it fully, your repair work will be even firmer. But only use a drop, because otherwise you risk damaging the surface round the hole. Insert the screw into the glue filling while it is still soft, and turn it a couple of times. This will ensure that the plastic shavings and glue are evenly distributed in the damaged hole.

Now leave the model to stand in a dust-free place for a few hours while the glue sets hard. Then you can tighten the screw completely – but please be careful with it this time!

## Stage 13

# THE STEERING CRANK AND CHASSIS SPACERS

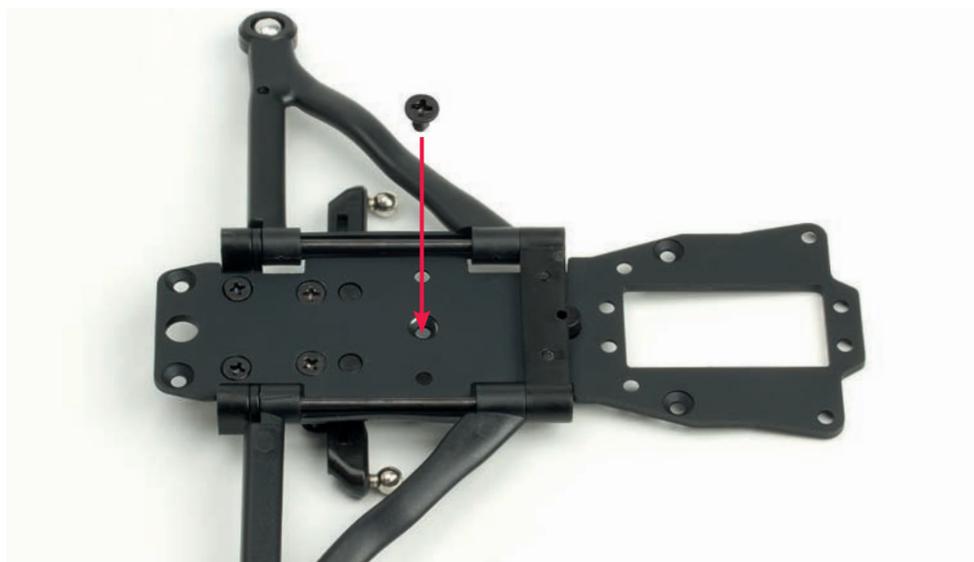
ASSEMBLE THE STEERING CRANK AND ADD FOUR SPACERS TO THE FRONT LOWER CHASSIS PLATE.



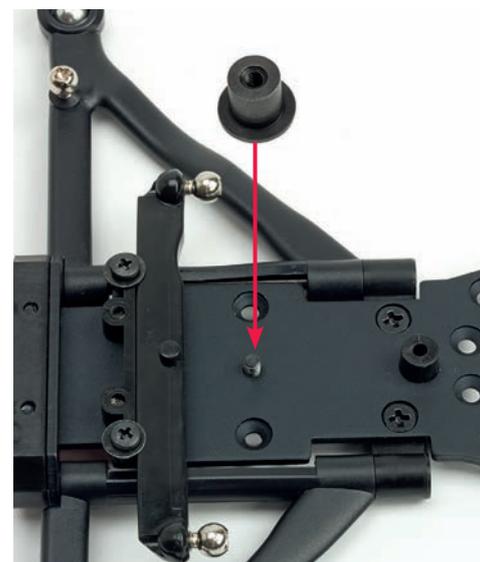
## Tools & Materials

Phillips screwdriver (size 1)  
Phillips screwdriver (size 2)  
Pliers

- 1 4 countersunk screws 3 x 6mm
- 2 4 countersunk screws 3 x 16mm
- 3 Steering servo mount
- 4 2 servo spacers



**01** Position the front chassis assembly as shown. Place the 3 x 6mm countersunk screw supplied with Stage 12 in the hole in the centre of the front lower chassis plate (see red arrow).



**02** Holding the screw in position, turn the assembly over. Then take the steering crank collar (Stage 12) and loosely screw it over the end of the countersunk screw, as indicated by the red arrow.



**03** Turn the assembly over again, and tighten the screw into the steering crank collar.



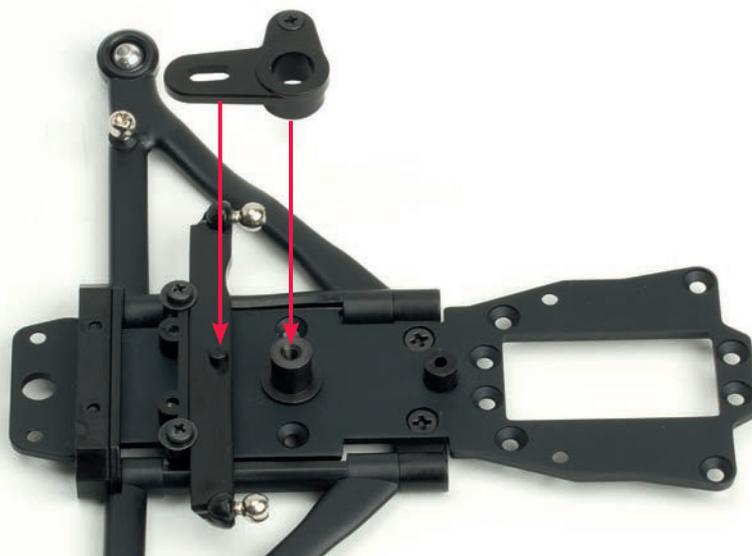
**04** Place the steering crank (Stage 12) as shown above, then place the 2.6 x 6mm countersunk screw (Stage 12) in the hole (see red arrow).



**05** Holding the screw in position, turn the crank over and fit the 4.8mm ball nut (Stage 12) onto the shaft of the screw (see red arrow).



**06** Holding the assembly as shown, tighten the screw with a size 1 Phillips screwdriver.



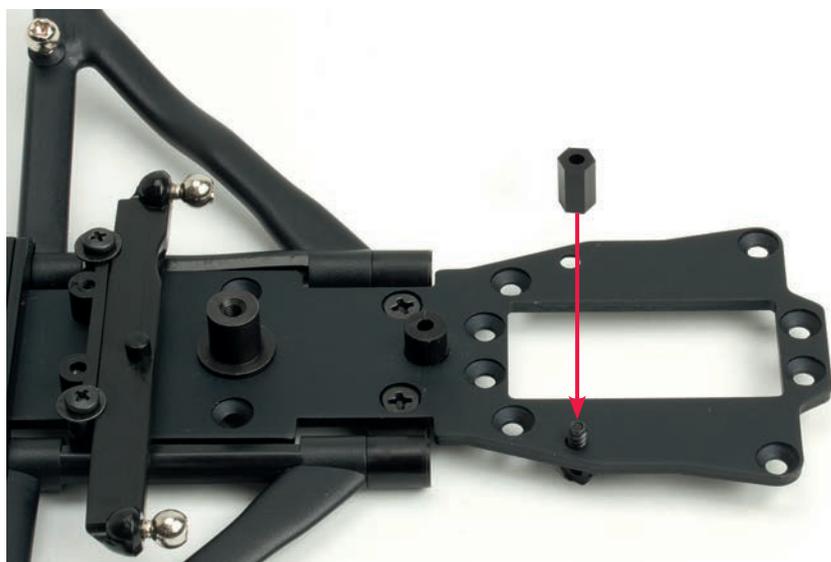
**07** Test-fit the steering crank onto the front chassis assembly with the head of the screw facing up, aligning the central holes of both parts and fitting the projection of the steering slider into the slot in the crank (see the red arrows).



**08** For the following steps, you will need the front chassis assembly, the four spacers (Stage 12) and the four 3 x 6mm screws supplied with this stage.



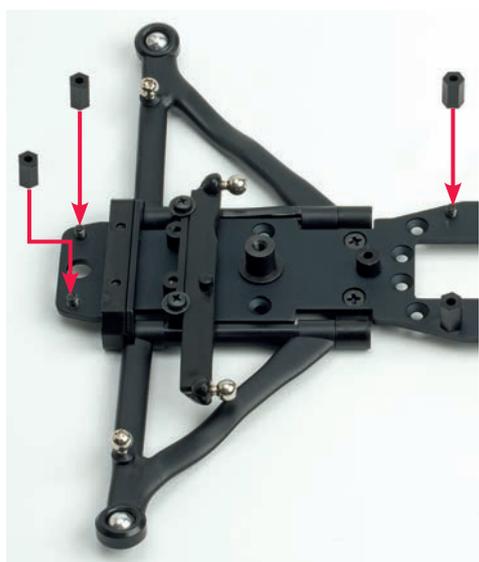
**09** First, remove the steering crank from the assembly and store in a safe place. Then turn the front chassis assembly upside down, as shown, and place one of the 3 x 6mm screws into the hole marked with a red arrow.



**10** Turn the front chassis over again, holding the screw in place. Place one of the spacers (Stage 12) onto the shank of the screw and tighten by around half a turn.



**11** Grip the spacer with pliers, as shown, and turn the screw all the way into the hole using a size 2 Phillips screwdriver.



**12** Repeat Steps 09 and 10 for the three remaining screws and spacers, identified with red arrows in the above photograph.



**13** Tighten all the screws into the spacers as in Step 11, then refit the steering crank as in Step 07.



**14** At the end of this session you have completed the steering crank and attached the four spacers to the lower front chassis. Keep any unused parts to one side as they will be used at a later stage.

## Stage 14

# FRONT UPPER CHASSIS AND PUSHROD MOUNT

IN THIS STAGE YOU WILL FIT THE FRONT UPPER CHASSIS AND FRONT PUSHROD MOUNT TO THE FRONT LOWER CHASSIS ASSEMBLY.



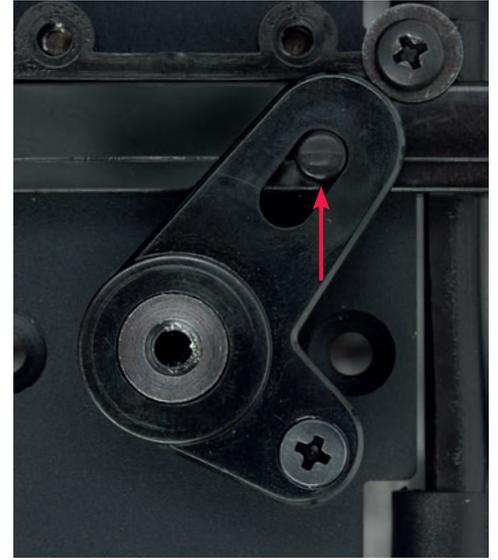
## Tools & Materials

Phillips screwdriver (size 2)

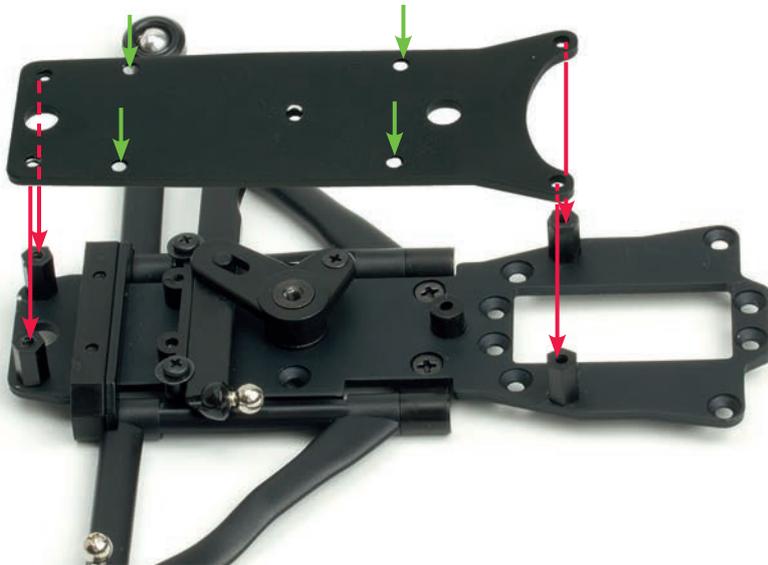
- 1 Front upper chassis
- 2 2 self tapping countersunk screws 3 x 10mm
- 3 Countersunk screw 3 x 14mm
- 4 Front pushrod mount



**01** In this stage of assembly, you fit the front upper chassis and pushrod mount to the front lower chassis. Place the lower chassis assembly, as shown here, with the four spacers facing up.



**02** Check that the steering crank is positioned as shown in the picture, with the projection of the steering slider in the groove of the crank (see the red arrow).



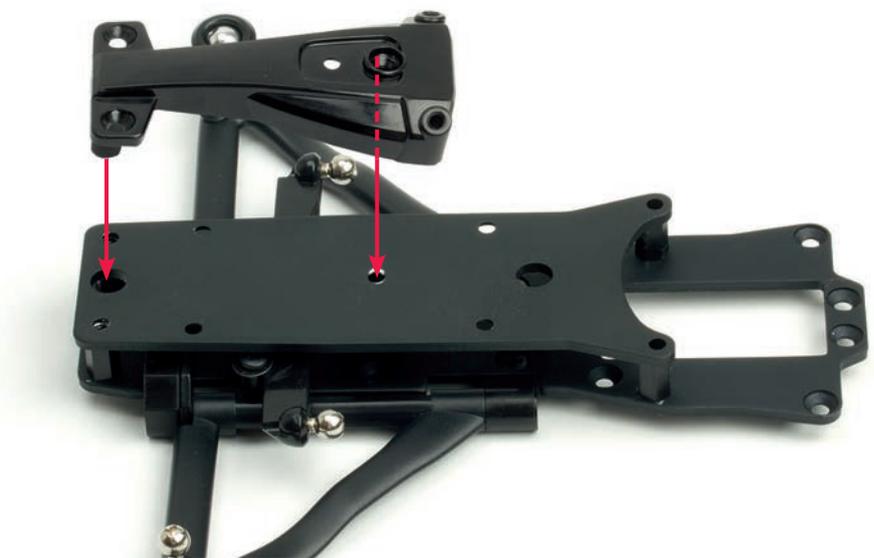
**03** Hold the front upper chassis as it is positioned in the photo. The countersunk sides of the four holes indicated by the green arrows must face downwards. Place the front upper chassis onto the assembly, aligning the four holes in the corners over the holes in the spacers, indicated by the red arrows.



**04** The front upper chassis should look like this when it is resting on the lower chassis assembly.



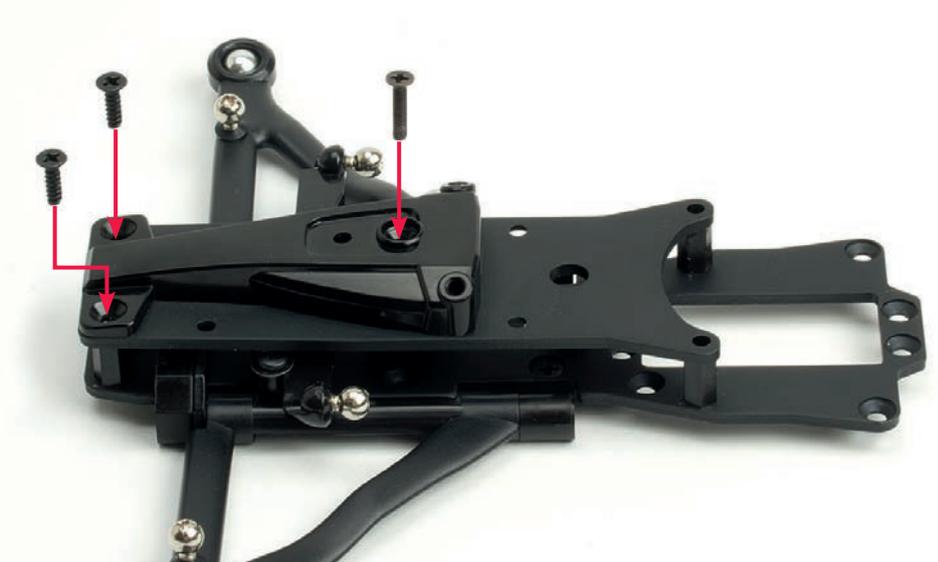
**05** The front holes of the pushrod mount (shown at the top of the photo), as well as the hole in the centre (indicated by the red arrow), are used to fix the mount to the chassis.



**06** Place the pushrod mount on top of the front upper chassis. The long projection at the front end of the mount fits into the hole at the front of the upper chassis (indicated by the left-hand arrow). The hole in the centre should align with the hole in the centre of the upper chassis (right-hand arrow).



**07** The projection on the front of the mount fits through the central hole in the front upper chassis and into the central hole in the front lower chassis, indicated by the red arrows.



**08** To fix the pushrod mount and the upper front chassis to the lower front chassis, you will need the two 3 x 10mm self-tapping countersunk screws, as well as the 3 x 14mm countersunk screw. The two shorter screws fix the front end of the upper chassis and the mount to the chassis assembly, as shown by the left-hand arrows. The longer screw (right-hand arrow) secures the rear end of the mount to the centre of the front upper chassis and the steering crank (not visible).



**09** Take the first 3 x 10mm self-tapping countersunk screw and gently screw it all the way into the hole on the front right-hand end of the assembly.



**10** Then fit the second 3 x 10mm self-tapping countersunk screw gently into the other hole to secure the front end of the assembly.



**11** Fix the 3 x 14mm countersunk screw into the central hole at the rear of the mount.



**12** When secured, the front upper chassis should sit flush with the spacers (see photo above). If there is a gap between the two (see top photo), the screw in the central hole is probably not screwed into the crank properly. Check and adjust if this is the case.



**13** At the end of this session, you have fitted the front upper chassis and the front pushrod mount to the front lower chassis assembly. Store the unused parts carefully, as they will be needed at a later stage.

## Stage 15

# FRONT LEFT UPPER WISHBONE

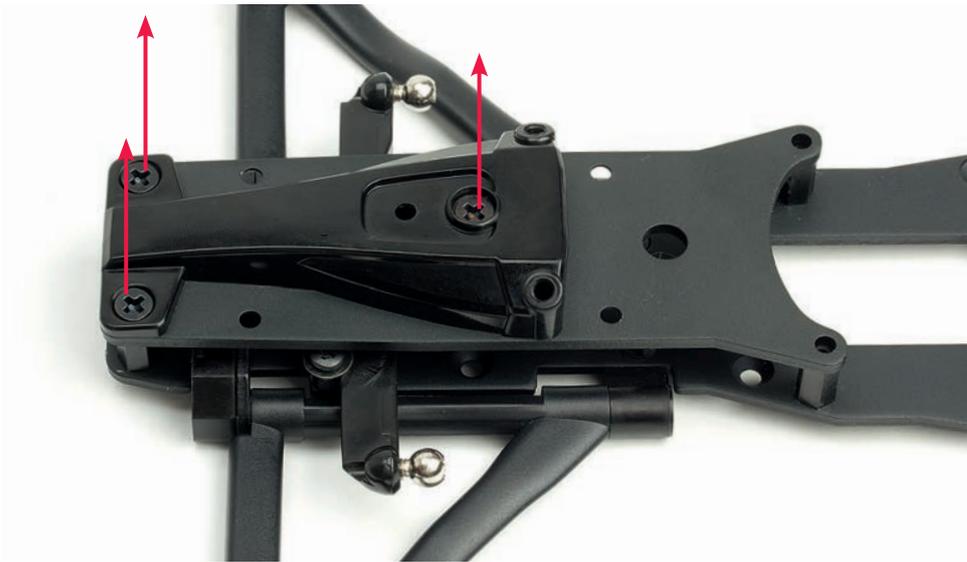
CONTINUE ASSEMBLING YOUR MODEL'S FRONT SUSPENSION BY FITTING THE FRONT LEFT UPPER WISHBONE TO THE FRONT CHASSIS.



## Tools & Materials

Phillips screwdriver (size 2)  
Angled needle-nose pliers (smooth)  
Knife

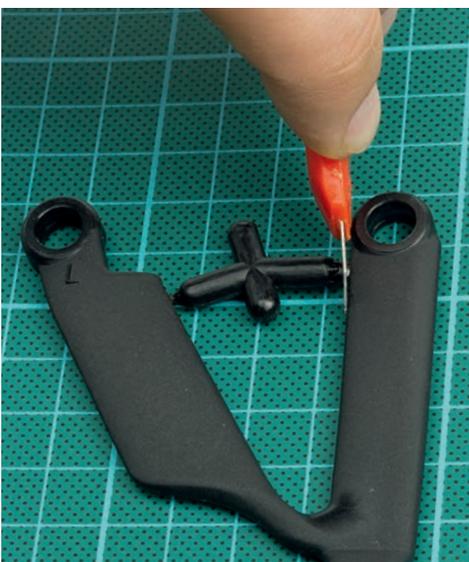
- 1 2 ball flanges 7.8mm
- 2 Pillow ball 7.8mm
- 3 2 countersunk screws 3 x 8mm
- 4 Front left upper wishbone



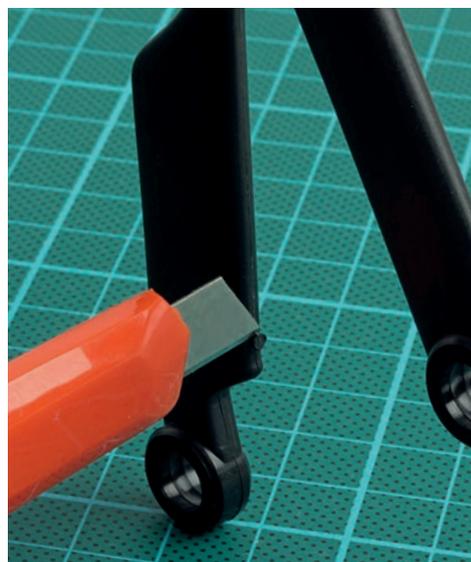
**01** To fit the front left upper wishbone, first you remove all the screws identified with red arrows in the photograph above. Then remove the pushrod mount and the upper front chassis.



**02** Place the wishbone as shown in the photo, and score along the joints between the casting flash and the wishbone.



**03** Continue to score the joints until you cut through both sides of the flash.



**04** Holding the wishbone as shown in the photo, use your knife to remove any burrs from the two arms of the component.



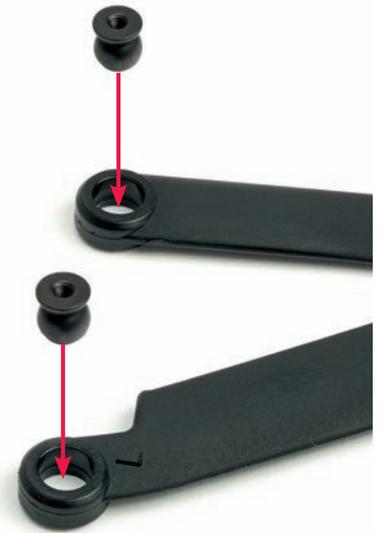
**05** Place the wishbone as shown. Position the 7.8mm pillow ball in the large socket at the top of the wishbone.



**06** Holding the wishbone as shown above, press the ball into the socket with pliers.



**07** Check that the ball is seated in the centre of the socket, as shown above.



**08** Turn the wishbone over and place one ball flange into each of the two ball sockets at the ends of the arms, as shown by the red arrows.



**09** When pressing each ball flange into its socket, ensure that it goes in straight. Use pliers to press it into the socket.



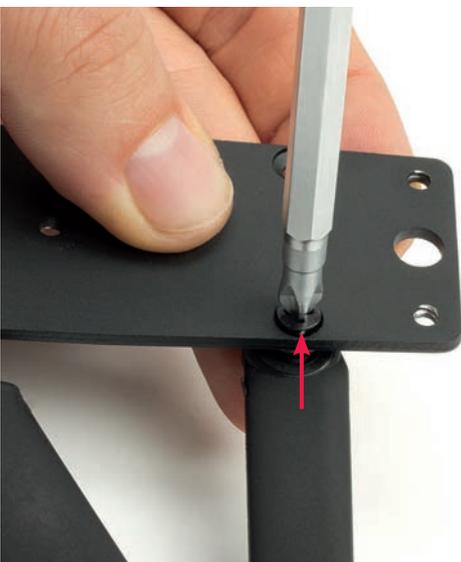
**10** Compare your assembly to the photo above. All balls must be able to move freely. If they can't, they may not be pushed far enough into their sockets. If this is the case, repeat steps 06 or 09.



**11** Place the left upper wishbone as shown. Then position the front upper chassis with the countersunk sides of the holes near the edges of the plate facing up. Place the rear countersunk hole directly over the ball of the wishbone, as indicated by the red arrow.



**12** Now, holding the two parts together, place one of the two 3 x 8mm screws into the hole. Using the Phillips screwdriver, turn the screw until it is just tight.



**13** Repeat Steps 11 and 12 to fix the wishbone to the second of the two countersunk holes (see red arrow).



**14** At the end of this session, you have fitted the front left upper wishbone to the front upper chassis of your Red Bull Racing RB7. In the next stage, you will assemble the front right upper wishbone. Store the assembled parts carefully until they are needed.

## Stage 16

# FRONT RIGHT UPPER WISHBONE

THIS TIME YOU WILL FINISH ASSEMBLING THE FRONT RIGHT UPPER WISHBONE. YOU ARE NOW NEARING COMPLETION OF THE FRONT UPPER CHASSIS OF YOUR RED BULL RACING RB7.



## Tool & Materials

Phillips screwdriver (size 2)  
Angled needle-nose pliers (smooth)  
Knife

- 1 2 ball flanges 7.8mm
- 2 Pillow ball 7.8mm
- 3 2 countersunk screws 3 x 8mm
- 4 Front right upper wishbone



**01** The front right upper wishbone fits on the front upper chassis, opposite the front left upper wishbone.



**02** Place the wishbone as shown in the photo, and score along the joints between the casting flash and the wishbone.



**03** Continue to score the joints until you cut through both sides of the flash.



**04** Holding the wishbone as shown in the photo, use your knife to remove any burrs from the two arms of the component.



**05** Place the wishbone as shown. Position the 7.8mm pillow ball in the large socket at the top of the wishbone.



**06** Holding the wishbone as shown above, press the ball into the socket with pliers.



**07** Check that the ball is seated in the centre of the socket, as shown above.



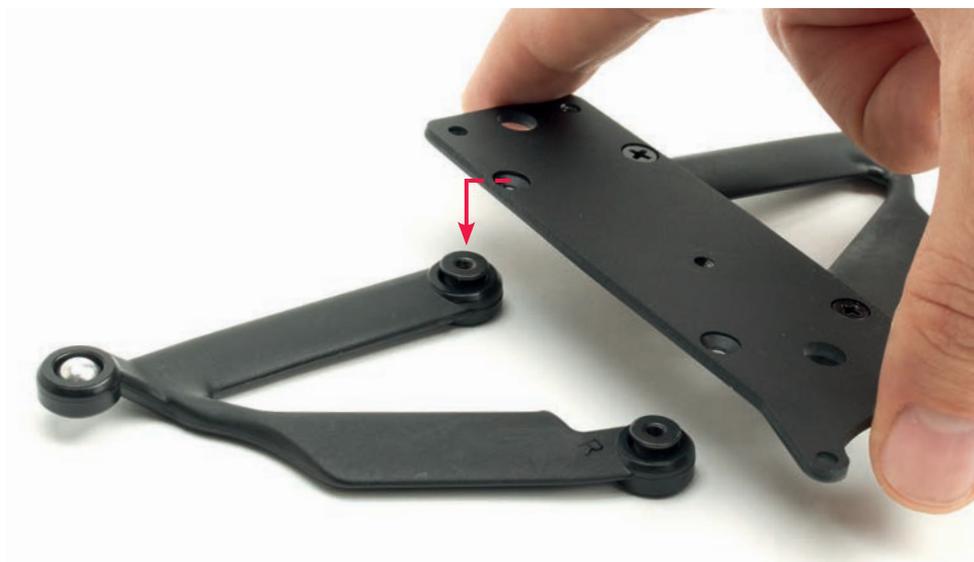
**08** Turn the wishbone over and place one ball flange into each of the two ball sockets at the ends of the arms, as shown by the red arrows.



**09** When pressing each ball flange into its socket, ensure that it goes in straight. Use pliers to press it into the socket.



**10** Compare your assembly to the photo above. All balls must be able to move freely. If they can't, they may not be pushed far enough into their sockets. If this is the case, repeat steps 06 or 09.



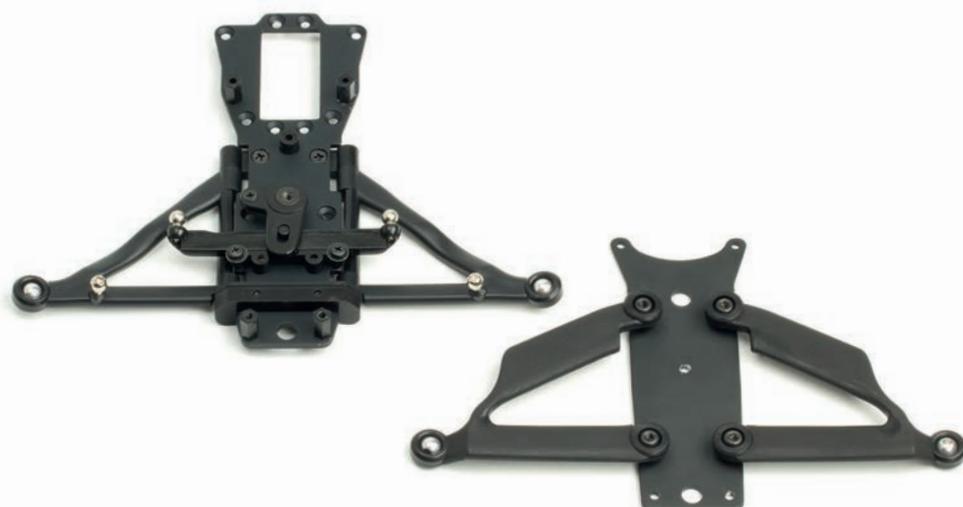
**11** Place the right upper wishbone as shown. Then position the front upper chassis with the countersunk sides of the holes near the edges of the plate facing up. Place the rear countersunk hole directly over the ball of the wishbone, as indicated by the red arrow.



**12** Now, holding the two parts together, place one of the two 3 x 8mm countersunk screws into the hole. Using the Phillips screwdriver, turn the screw until it is just tight.



**13** Repeat Steps 11 and 12 to fix the wishbone to the second of the two countersunk holes.



**14** At the end of this stage, the two front upper wishbones have been fitted to the front upper chassis. The front upper chassis is ready to be mounted on the front lower chassis, but for now, keep the assemblies separate and store them carefully until they are needed.