

# Fitting the B5 into the Lotus Elise/Exige using EBB5 brackets

Fits cars manufactured prior to 2017 – VIN serial number 1457

## Formerly EB1

The EBB5 brackets are designed to allow a seating position without compromise when fitting the B5 seats into the Lotus Elise/Exige platform cars.

The brackets are designed to be used on either side of the car, in both left and right hand drive versions. There is a difference in the available passenger space between LHD and RHD, this is because the centre console is moved around 25 mm to the right in a LHD version. This restricts the already narrow passenger side space greatly and limits the positional possibilities. Therefore, because the passenger side presents the greatest problems, this guide concentrates on fitting this seat and it helps to line up the holes in the brackets with the captive floor fittings in the Lotus floor pan.

The EBB5 has an offset tab on one end of the U channel. By flipping this U channel around and using the extra mounting point to your advantage, coupled with varying the thickness of the nylon spacers (A) that are supplied with a B5 seat, you can move the seat freely within the available space. This movement sideways also helps fit the OEM receptor for the seat belt between the seat and the centre console. It is also useful to move the rear of the seats apart to stop a big passenger from touching your shoulder when you are driving.



The EBB5 bracket allows adjustment of the leg length by having a U section channel, in which the bracket upright can be moved up to 90 mm forwards and backwards. It is important to identify this desired position before bolting the seat in. The bracket also has multiple holes for angle adjustment. (Tip: Before you start, cover the door sill with a thick blanket to prevent damage as the seat is moved in and out.) When looking at the floor without the seat in place you will see an uneven number of captive M8 threaded holes in the tub of the car. These are all suitable to be used for mounting the seat. The rear holes have a restricted depth so please use the 22 mm bolts provided (F), a longer bolt will bottom out in the rear mountings. To get a good understanding of which holes in the floor are best to pick up on, loosely place the U channels in the seating area, lining up four positions with the captive threaded holes. Then bolt the bracket uprights onto the seat, again loosely, at an average angle using the special hex bolts (E). Do not allow the front bolts to penetrate the composite by more than 15 mm. If it does use a shorter bolt. It can hit the inner skin and bottom out.

(Using the hex bolts that come in the side of the B5 seat allows you to tighten the sides of the seat as the last job.



A ratchet 10 mm spanner is advised for this task. It is important not to scratch the powder coating on the brackets by bolting up too tightly as you may decide to change the angle later. The first task is to identify which of the floor holes to use. Reaching these holes requires a decision on how many nylon spacers (A) to use at each mounting point between the seat and brackets. It is desirable to use as few spacers as possible for strength. The next step is to bolt the U channels down (Again, not tight at this stage) and then ascertain how many spacers you will require to get the uprights to the exact width of the U channels. **Make sure the front bolt does not pass into the composite by more than 15 mm, which can happen with using minimal spacers. If it does use a shorter bolt.** There are slots in the U channels to help with placing the U channel hard up against the gearbox tunnel and to allow some degree of tolerance.

Once the seat is able to rest in the U channels try to ascertain the leg length needed. Take note where each of the uprights sit in the U channel. They may not be in the same position on both sides. With the brackets possibility being slightly staggered, it is best to look at each U channel and see the gap between the back of the bracket and the bolting hole of the U channel. Once the seat is sitting in the U channels you can carefully test the seat and see if the angle is to your liking. If you are happy with the angle and have taken note of the amount of gap remaining behind each upright, everything can be removed, and the U channel bolted to the upright using the special male and female stainless fittings (B). At this point you will see that the available bolting holes changes as you slide the U channel along the upright. You have adjustment possibilities every 5 mm. Don't forget to use the support spacer (C) as you put these in. These stainless U channel fittings are deliberately a tight tolerance so any excess powder coating might need to be removed to fit these in. Occasionally the support spacer will need a very small amount filed off to make it fit inside the inner bracket. Use two 5 mm allen keys to fully tighten the U channel to the upright, using the special male/female stainless fittings (B) and central support spacer.

The seat belts should be fitted at this stage. You will need to remove the upright from the seat to do this. They have to be attached before the bracket uprights are attached to the seat. This is more difficult with an OEM three point belt and the outside attachment point will need to be fixed and the bracket attached whilst in, or very near the car.

Sitting the seat on something like 30 cm square x 150 mm thick of hard foam sheets in the cockpit space will lift it clear of the door sill and allow the belt and bracket to be fixed without damaging the surrounding car. The seat belt mounting (D) is an M10 special two part stainless fitting which needs two 6 mm allen keys to tighten. Use the provided spring (G) on the inside and the Lotus buckle on the outside. At this stage the stainless M8 hex bolts (E), should remain finger tight after fitting the completed bracket and seat belt back on the seat. Offer the whole assembly into the car and check that all the floor holes line up accurately with the holes in the U channel. Also check for the seat fouling on parts of the car. For example, the gearbox tunnel and roll bars. If they do not line up ascertain if an upright needs to be moved further along the U channel on one side, or if spacers need to be added or subtracted to move the U channel sideways.





The next stage is to wind the floor bolts (**F**) into the M8 captive threads, through the U channel section. Ideally these should be hand spun in. If this is not possible due to the restricted access, great care is needed not to cross thread the captive fittings. A flexible extension can help get the thread started. You are advised to spend more time making the holes align correctly, than forcing a bolt in the captive fittings at an angle, therefore ruining the delicate and difficult to replace thread. Carpets, if fitted, can also cause issues with cross threading if they partially block the hole.

Once all four bolts are comfortable in their threads they can be tightened to the recommended 25nm. You will need a very long extension with a 6 mm Allen socket for the rear and a regular 6 mm allen key for the front. Make sure parts of the seat belts are not trapped under the brackets as you bolt down. Lastly using the 10 mm spanner, tighten the M8 hex bolts (**E**) into the side of the seat to 35nm.

The seat should then be rigidly mounted.

#### TIP

The opposing tabs at the end of each U channel are handed and by swapping them around you can give yourself more room for the seat belt receptors or to move the passenger seat away from the driver.

### Recommended tools

- 2 x 5 mm allen keys
- 1 x 6 mm allen key
- 1 x 6 mm allen key socket
- Torque wrench
- Long 250 mm extension bar for socket wrench.
- 1 x 10 mm ratchet spanner
- If possible a flexible extension for the 6 mm allen socket



### Spacers and fittings needed for mounting a B5 seat into the Elise/Exige using the EBB5 bracket set

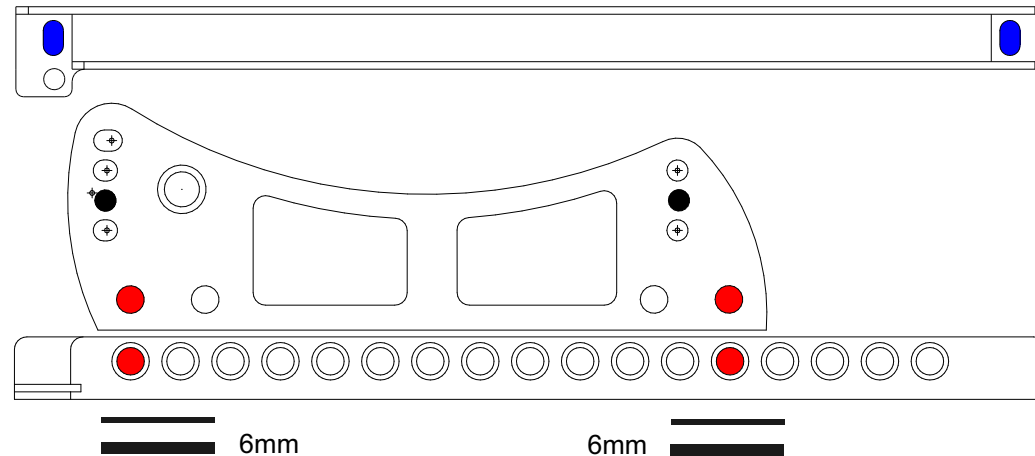
- A** 4 x Nylon 40 mm diameter x 2 mm thick spacers
- A** 4 x Nylon 40 mm diameter x 4 mm thick spacers
- A** 4 x Nylon 51 mm diameter x 5 mm thick spacers
- B** 4 x special stainless steel M8 male and female U channel fittings
- C** 4 x support spacers
- D** 2 x special stainless steel M10 male and female seat belt fittings
- E** 4 x special stainless steel hex bolts 30 mm long (supplied with B5 seat)
- F** 4 x 12.9 cap head bolts x 22 mm
- G** 1 x seat belt buckle positioning spring



# Suggested starting point for fitting the B5 into the Elise/Exige passenger side LHD using EBB5 brackets.



Due to the offset nature of the Elise floor mounting points it is sometimes necessary to offset the brackets. This page helps you line up the B5 passenger seat. This seat position relates to using the 2nd hole up on each upright for angle adjustment. Please make sure when setting the seat in its rearmost setting that the head cannot come into contact with roll bar cover bottom edge. On some Elise/Exige models it may be necessary to either tip the seat more upright, bring the seat to a further forward, or create a thicker head pad, in order to prevent the head contacting this edge. (See yellow crosses on photo)



The spacers between seat and brackets set the B5 seat correctly for the left hand drive passenger seat in the position shown. Moving the seat forward may require a different spacer setup.



Be careful with the front bolts that fix the seat and EBB5 as they must not pass into the composite by more than 15 mm, otherwise they bottom out on the inner skin.

Right

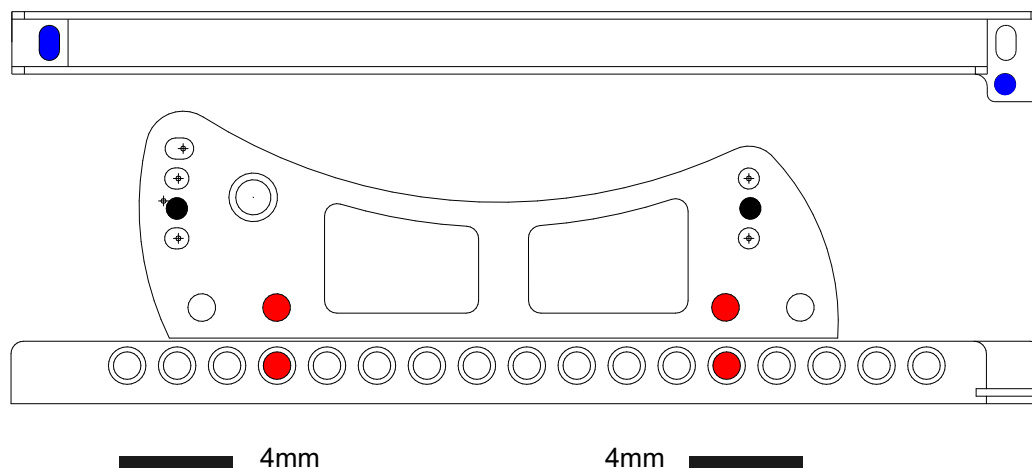
Suggested upright fixing positions are shown by red dots. Please take note of which holes are used in the floor U channels by using the blue dots as a guide.

## Suggested starting point for fitting the B5 into the Elise/Exige passenger side RHD using EBB5 brackets.

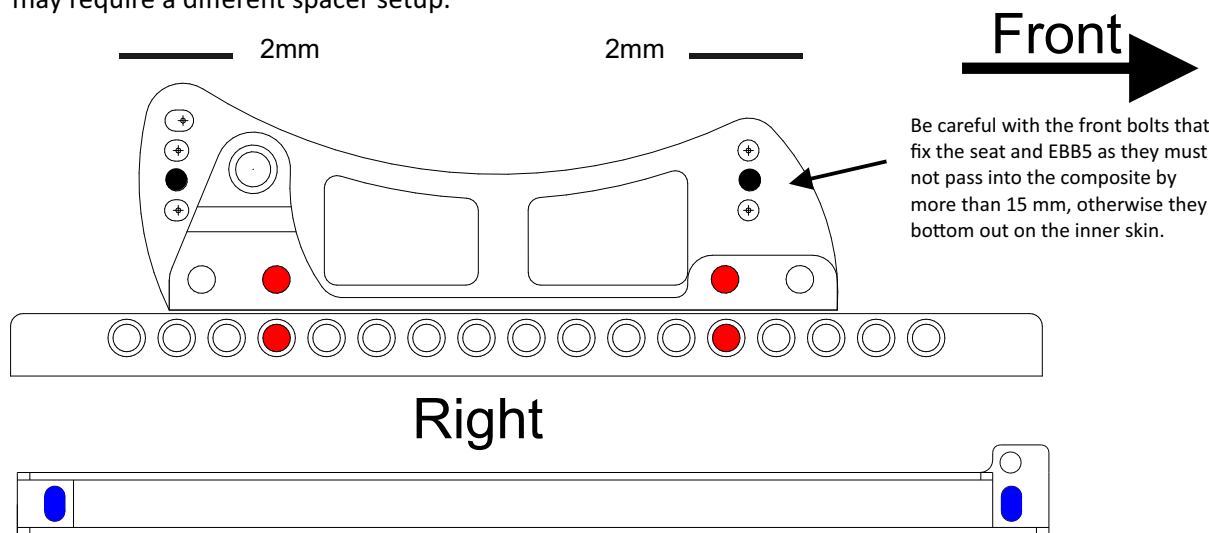
Due to the offset nature of the Elise floor mounting points it is sometimes necessary to offset the brackets. This page helps you line up the B5 passenger seat. This seat position relates to using the 2nd hole up on each upright for angle adjustment.

Please make sure when setting the seat in its rearmost setting that the head cannot come into contact with roll bar cover bottom edge. On some Elise/Exige models it may be necessary to either tip the seat more upright, bring the seat to a further forward, or create a thicker head pad, in order to prevent the head contacting this edge.

(See yellow crosses on photo)



The spacers between seat and brackets set the B5 seat correctly for the right hand drive passenger seat in the position shown. Moving the seat forward may require a different spacer setup.



Suggested upright fixing positions are shown by red dots. Please take note of which holes are used in the floor U channels by using the blue dots as a guide.