

Fitting Tillett Seats in the Lotus Elise/Exige using the ERAIL

A combination of the ERAIL aluminum billet rails, and steel EBR, EBR 17+, (or for the B5 the REBB5 and EBB5R 17+) steel brackets allow Tillett seats to be solidly fitted into the Elise, Exige platform of cars. They fit both LHD and RHD cars, offer a wide range of positions and allow fine adjustments in both angle and leg length. The bracket system also adapts to fit the shorter 345 mm floor hole spacings of cars newer than 2017. The four types of upper steel bracket that fit on the ERAIL are for specific Tillett seat models. The EBR and EBR 17+ brackets are for B6-40, or B6-44 side mount, B6-40 or B6-44 Screamer, B6-43 XL Screamer, B7-40, B7-44, B8-43, B9-43, B10-44, B10XL-45, C1-41, C1-44 and C1-43 XL. For any XL seat sat on the ERAILS which must be set low, we recommend the EBR 17+ as this has a profile which is made to drop the bigger seats to the floor.

The shorter 23 cm holes in the side of a B5 seat require the REBB5 and EBB5R 17+ brackets.

All of these brackets can also be used on top of the original Lotus runners. 17+ brackets are the ones for the cars supplied after 2017.

Fitting seats to the drivers side of the Elise/Exige aluminium tub is less complicated than the passenger side. The passenger side is narrower because the centre console is moved away from the driver, restricting the space. When the seat rails are set in the passenger side, the outside front hole is not square with the other three that must be used. To cope with this ERAIL's have a mirrored offset tabs on one end. By using one of these tabs you can fit the seat to the LHD or RHD passenger side. The larger width seats such as the B6-43 XL, B8-43, B9-43, B10XL-45 and C1-43 XL will have a restricted position if used in the passenger side and must be set towards the rear.

(Tip: Before you start moving seats in and out, cover the door sill with a thick blanket to prevent damage.)

On the B5, B8 or B9 front mounting points, it is important not to use bolts that extend into the seat more than 18 mm. This is because it can impact and damage the inner skin if they are too long and bottom out.

Recommended tools

- 6 mm allen key "ball end" socket and/or, 6 mm allen key socket on extension that can cope with angles
- Thin 250 mm extension bar with socket wrench
- Flexible extension bar
- Thin telescopic magnet
- 10 mm socket
- 10 and 13 mm ratchet spanner
- Torque wrench



EBR + ERAIL



Alignment of the ERAIL

The ERAIL adjusts for leg length by having multiple threads along its upper surface. These allow the seat to be moved forward and back in 10 mm increments. 4 x M8 bolts (F) are used each side to secure a steel bracket to the lower aluminium rail. Lining up the ERAIL to the captive floor threads requires an initial fit where leg length and angle are not considered. The focus being on bolting the rails in parallel.

Firstly lightly bolt the steel brackets onto the seat at an average angle, using the hex bolts (B).

The offset tabs will normally be set at the front with the tabs pointing inwards. Depending on the age of the car either of the two rear slots would be used. The forward position for post 2017 cars with a 345 mm hole spacing in the floor and the rear slot which give the 383 mm option used in the older pre 2017 cars. When looking at the aluminium floor without the seat in place you will see an uneven number of captive M8 threaded holes in the tub of the car. The outside front hole has only one mounting option, whereas the others all have two. When the seat is in the passenger side it is pushed to the outside and the joggle is used to reach back under the front of the seat to line up with the narrower front outside hole. In the pre 2017 Elise/Exige car, the floor hole spacing is 383mm front to back and 405mm from side to side. When in the passenger side the front dimension reduces to 390mm. In cars newer than 2017, the drivers side will again be 405mm side to side but only 345mm front to back. For the newer cars the passenger side front hole dimension is narrowed further to 380mm. This is why there are two choices provided on the ERAIL.

You will need around 14 mm of Nylon spacers with narrow shells such as the B6, B7, B10 or C1 shapes, but on a wider based B5, B8, B9, B6-43 XL, B10XL-45 and C1-43 XL, between 0 and 2 mm of spacers would be used. To aid alignment and to avoid cross threading, leave all the upper fittings loose until the floor bolts have been spun in by fingers.

Fixing down the ERAIL

When bolting the rails into a post 2017 car the captive floor fittings are set to align with the OEM runners. These runners are tipped up at the front. Therefore there is a slight angle on these threads. This can mean the accurate ERAIL makes it difficult to get the bolts into the threads and the addition of a 10 mm spacer under the front of the ERAIL will help with this alignment. It is possible to manipulate the rails in without this spacer if you want to drop the front of the seat further. It might require a round file to just ease the slots and help the bolt in the threads.

The slots provided in the rails allow them to be set hard up against the centre console and they allow some degree of tolerance. With the seat out of the car, lightly fix it to the steel brackets using the stainless hex bolts and in the car fit the M8 x 30 mm bolts into the captive floor threads through the ERAILS into the car. **It is important to bolt down the ERAILS parallel**, otherwise you will have difficulty getting the spacer configuration to make the top holes line up.

Do not worry about calculating leg length at this stage. The wider seats will often only fit in a rearward position in the tighter passenger side and this is generally preferable for the driver. Check the hole centre dimensions in the brackets on the seat will match the respective hole setup in the ERAILS bolted in the floor of the car. If there is a discrepancy, you should use the nylon spacers and the available slots to attain the correct width dimensions. With all the seat side bolts finger tight, carefully lower the seat and brackets into the car. Assistance from another person can be really helpful here. With the measurements pre set, the hole alignment should be close. If the spacings are correct you will see that you could fit all eight M8 bolts into the rail.

Once the ERAIL width is set and the four bolts are comfortably in their threads they can be tightened up to 22nm. *Making sure the bolts at the rear do not pass into the blind floor threads by more than 15 mm.* With the Erails fixed down you can move the seat back and forward to ascertain your favoured leg length.

Setting the drivers seat to its absolute lowest position at the front to tip the seat maximum upright, can require turning both joggles to the rear pointing outwards and the one near the centre console cut off, if it impacts the console in such a way that it cannot be made to line up.

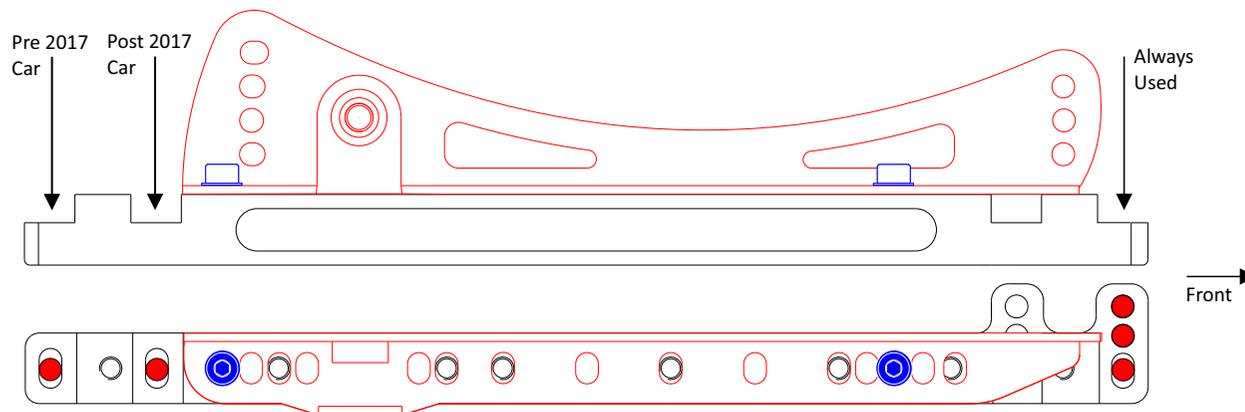
Seat Belts

With the angle set to your liking, fit the seat belts. The receptor should be bolted on the inner bracket whilst out of the car. The outer belt needs to be attached with the seat next to the car by extending the belt out. Take care that the chrome belt buckle is the correct way around. The seat belt mounting consists of an M10 countersunk bolt (E), which clamps up on a 14.5 mm spacer (D), which has an internal chamfer one end. This chamfer points outwards and the countersink of the M10 bolt will tighten onto this chamfer. Use the spring (C) on the inside and the Lotus seat belt buckle on the outside.

Fixing the bracket down to the ERAIL

Without the eight M8 bolts in place, the seat can be moved back and forwards and the correct bolt hole array for the desired leg length can be noted. To fit the 8 x M8 bolts (F) and washers (G) use a long thin ball end allen key along with a telescopic magnet to lower the bolt and washer into each hole. take care to make sure no force is used getting the thread started. Choose the bolts which are the most access restricted first. Select one hole behind the seat belt mounting point, one in front and one as far forward as possible. The fourth is positioned in the middle of the others. Due to the overhanging seat the eight bolts are best tightened with a ball end hex allen key. On larger seats in the passenger side a flexible extension may be necessary to get the thread started. To avoid scratching the paint do not tighten these bolts right down until you are happy with the position. Once all eight bolts with washers are in the threads, tighten the hex bolts into the side of the seat using a spanner and then fully tighten down the bracket to ERAIL bolts.

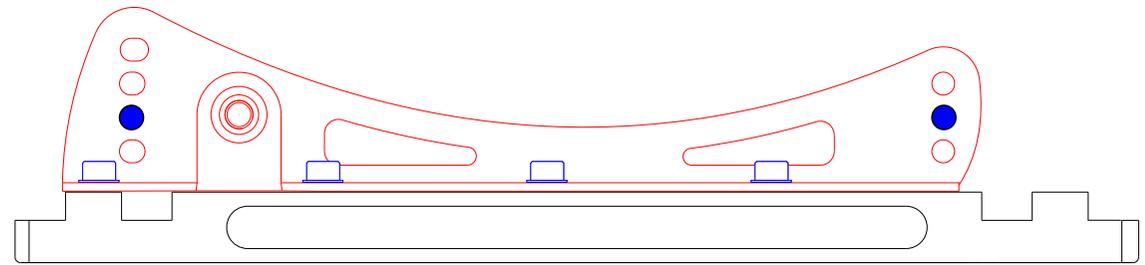
With everything tight your seat should be ready for you to experience a different level of driver support, feedback and comfort.



The bracket position above can be used to line up the floor rails. It leaves open the holes and slots shown by the coloured red dots that will be needed whether you are fitting it to the new 345 mm hole centres, or the old 383 mm spacing. Only two bolts need to be initially used to set the position of the aluminium rails into the floor. If the slightly longer 17 + brackets are used, a longer bolt is needed as you need to go through one end of the bracket too in order to square the Erails up, then remove the seat and put the correct bolt in that end to tighten them down.

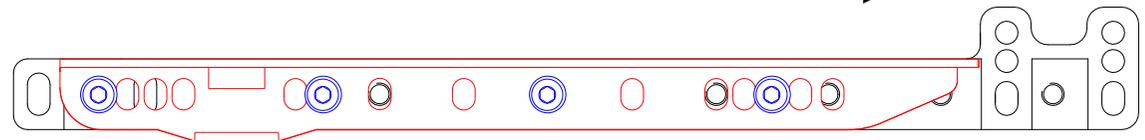
The examples shown on this page show an average position using the 2nd hole up on each upright for angle adjustment. Depending on the car age and the seat type used, the lowest holes together could result in the dome touching the aluminium dropped floor. The lower holes are usually only used for the most extreme upright or reclined positions and are rarely used together. When using the brackets on original OEM Lotus runners, these lower holes are not used and the upper front hole should be used to allow the handle to operate. Some angle combinations do allow the second hole down to be used. It is advised to make sure the seat does not touch the floor, or harness bar if used. This is to avoid vibration and damage to the car and seat.

Please make sure when setting the seat in its rearmost setting, that the head cannot come into contact with the bottom edge of the roll bar cover. On some cars, drivers with a very long torso may need to order a thicker head pad to prevent the head contacting the edge, shown by the yellow crosses on the photo below.

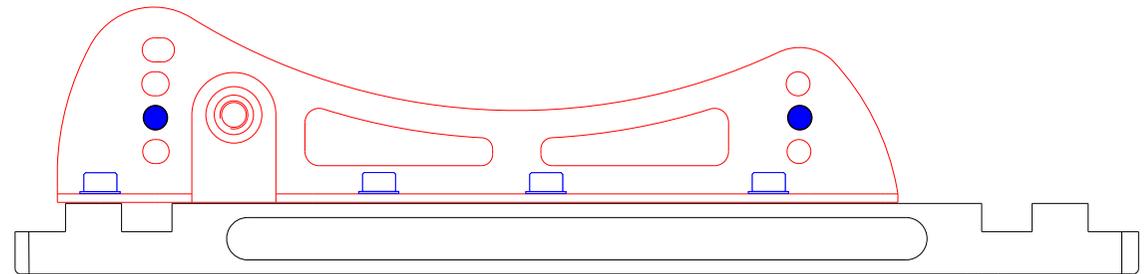


EBR+ ERail

Front →

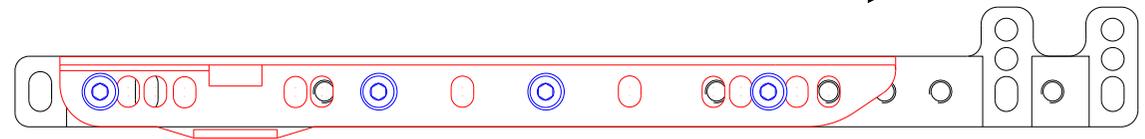


The setting above is for an EBR bracket to fit a B6, B7, B8 and B9 seat positioned for a tall driver, or for a passenger seat that is required to be set towards the rear.



REBB5 + ERail

Front →



The setting above is for an REBB5 to fit a B5 seat positioned for a tall driver, or for a passenger seat that is required to be set towards the rear.

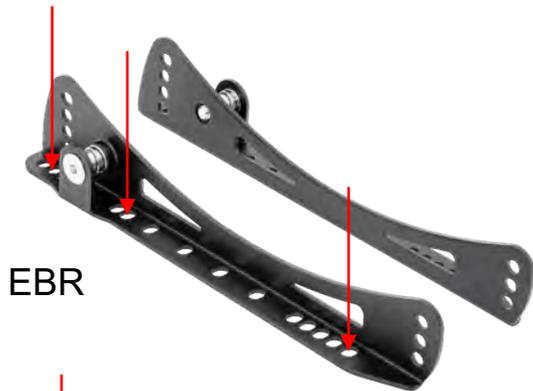


EBR + ERail
showing adjustment range

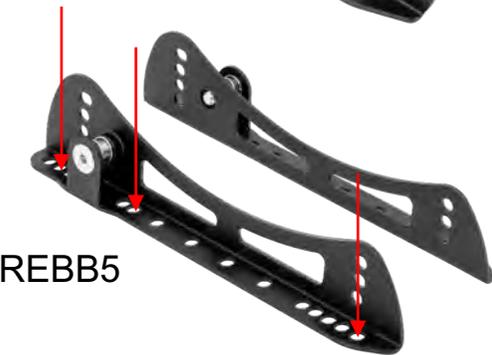
The EBR and REBB5 steel brackets are usable on both the ERAIL and the OEM Lotus runners, prior to VIN number 1457. For fitment onto the OEM adjustment runners of the cars later than 2017, use the EBR 17+ and EBB5R 17+ brackets. When fitting the EBR and REBB5 brackets on the stock Lotus adjustment runners, the existing bolts should be used. They will only fit in three specific slots each side, positioned to match the Lotus runners. **Shown by the red arrows in the pictures below.** The steel brackets are supplied with the fitting kit shown, which can be used for either the ERAIL or OEM runners. The ERAIL set comes with additional bolts, to fit the rails to the floor and the brackets to the rails.



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EBR



REBB5



ERAIL
 Alloy rails

EBR, EBR 17+, REBB5 and EBB5R 17+ fittings

Kit supplied with brackets

- A** 4 x 40 mm dia. 10 mm thick Nylon spacers
- B** 4 x 40 mm dia. 4 mm thick Nylon spacers
- C** 4 x 40 mm dia. 2 mm thick Nylon spacers
- D** 4 x M8 stainless hex bolts
- E** 2 x seat belt buckle positioning spring
- F** 2 x seat belt spacer stainless steel.
- G** 2 x M10 countersunk bolts x 25 mm long



ERAIL fittings

Kit supplied with ERAIL

- H** 8 x M8 black cap head bolts x 15 mm long
- I** 12 x M8 Bright zinc washers
- J** 4 x M8 zinc cap head bolts x 30 mm long
- K** 2 x 40 mm dia. 10 mm thick Nylon spacers

