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ARAB65TES3 Performance Air Box

Lotus Exige S/111R Fly By Wire Fitting Instructions

Kit Contents

<u>Qty</u>		<u>Description</u>
		<u>Airbox Assembly</u>
1	X	ARAB65 Aluminium Air Box
3	X	M5 x 10 Stainless Steel Button Head Screws
		<u>Filter and Hoses etc</u>
1	X	ARAB65/65TE Maxogen Air Filter For ARAB Airbox (with MAF Adaptor)
1	X	Spare O Ring For MAF
2	X	M4 x 10mm Stainless Steel Screws
1	X	JDR-1 Dust Retention Coating
3	X	Vacuum Take-Off Blanking Plug
1	X	Black Silicon Hose
1	X	60 – 80mm Stainless Steel Hose Clips
1	X	70 – 90mm Stainless Steel Hose Clips
		<u>Bracket Assembly</u>
1	X	Plated Aluminium Air Box Mounting Bracket
1	X	Stainless Steel Solenoid Mounting Bracket
2	X	M6 x 40 Stainless Steel Screws
3	X	M6 Stainless Steel Washers
3	X	M6 Stainless Steel Ny-lock Nuts
1	X	1" Mounting Clamp
1	X	210mm Elasticated Strap



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Tools Needed:

Screwdrivers – slotted and Phillips
Allen Keys – 3mm and 5mm
10mm Spanner
Ratchet with extensions
6mm Socket (or hose clip driver)
10mm Socket
13mm Socket
17mm Socket or Wheel Brace
Jack and Axle Stands

Removal Of Standard Components

These instructions cover both the normally aspirated engines and supercharged engines and as such some sections may not apply to your vehicle.

The removal of all standard components is a relatively straight forward procedure to carry out. The first thing to do is to raise the left hand (looking from the back of the car) rear corner of the car and support it safely. Be careful when jacking the car up as there aren't any proper jacking points. The best place to jack the car is where the centre cross member meets the middle of the cars sills, it may also help to use a flat piece of wood to help spread the load and to further reduce the risk of damage.

Once you have the l/h rear wheel clear of the ground, remove the wheel and then remove the wheel arch liner. This is held in place by six 'scrivets', two at the front of the wheel arch, three at the rear of the wheel arch and one tucked up underneath the rear chassis member approximately 6" to the right of the suspension spring/damper. With the wheel arch liner removed you will now have full access to the airbox assembly.

To make life easy when fitting this kit it is advised to remove the intercooler pipe (Exige only), loosen off the hose clips marked below and unclip the hose also shown. With the clips loosened, carefully ease the intercooler pipe out of the engine bay.



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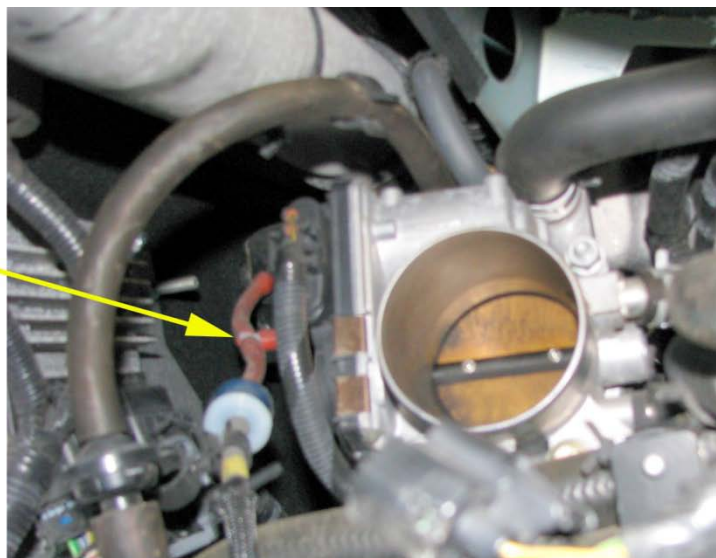


The first job to do when removing the standard airbox is to disconnect the vacuum pipes and wiring harness. With the Exige you do not need to fully disconnect the vacuum pipes from the manifold, just disconnect it from the T piece shown in the picture below. On the normally aspirated engines, remove the vacuum pipe from the side of the throttle body and blank off with the black blanking plug provided.

BE VERY CAREFUL WHEN REMOVING THESE VACUUM PIPES!!!!!!

They have a tendency to bond themselves onto the fittings so it is usually best to try and break the seal with a very small flat headed screwdriver or get your finger nail underneath. Simply pulling hard on the pipes can result in the fittings breaking.

Disconnect Vacuum
Pipe At This
'T' Piece





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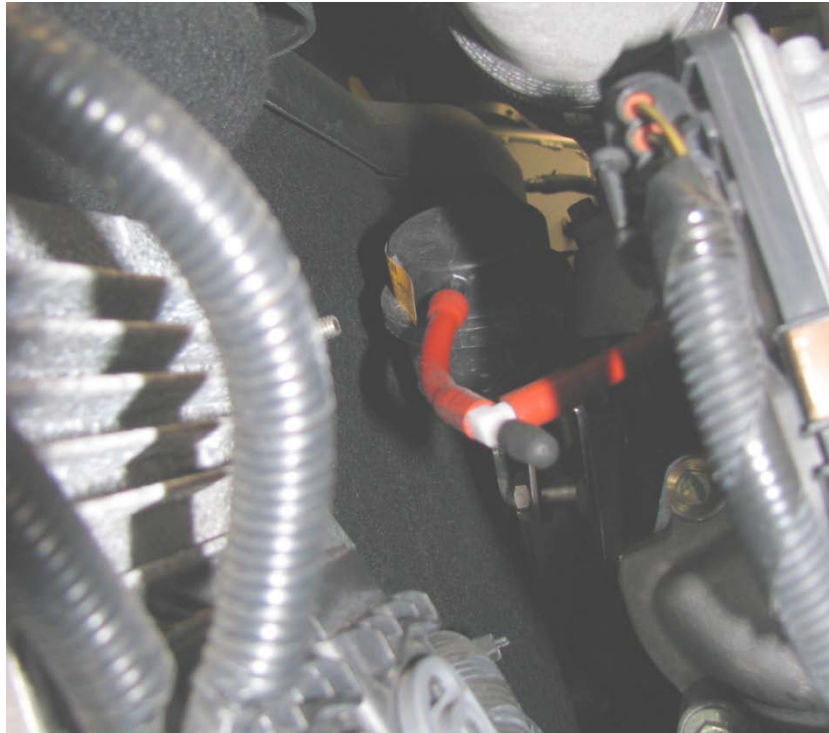
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After you've disconnected the vacuum pipe it's a good idea to fit the black vacuum blanking plug as shown below.



Now disconnect the vacuum hose that connects the base of the airbox to the vacuum solenoid and lastly, disconnect both the MAF sensor and the vacuum solenoid from the main wiring harness. You should now be ready to remove the airbox lid. To do this, unclip the two retaining clips at the wheelarch end of the lid, pull the lid away from the base and remove the air filter.

Now unhook the lid from the other end of the base and remove through the wheelarch. You will now be able to access the three M8 retaining bolts that hold the airbox base in place. Using a 13mm socket with ratchet (you may require a couple of different length extensions to make this easier), remove the three bolts and remove the airbox base. Be careful when you are doing this as the intake end of the snorkel is usually held in place with an adhesive tape and may require a small amount of force to free it.

With the whole assembly removed from the car, remove the vacuum solenoid valve from the lid of the airbox. This is mounted onto a bracket which is held in place by two Phillips headed screws.

All that is left now is to remove the MAF sensor from the airbox lid. This is held in place by a pair of Phillips headed screws. Remove the two screws and GENTLY pull the sensor out. These are relatively fragile so be careful!!

The car should now be ready to start fitting the new components.



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ARAB65TES3 Fitting Instructions

Fitting Your Maxogen Induction Kit

Pre-assembling components

Before you start actually fitting the airbox to the car it is a good idea to pre-assemble the airbox, filter and MAF sensor.

The first part of this process is to oil the filter (instructions can be found in the cleaning and maintenance section of these instructions). Once you have the filter oiled you can fit it into the airbox. Using a 3mm allen key, fasten it into place with the three M5 x 10 screws. With the filter in place carefully fit the MAF sensor into the filter neck (it will only drop into place one way). Be careful when you are doing this as the O-ring on the MAF sensor is easily damaged. A spare is included just in case. With the MAF sensor pushed down, fully tighten it into place with the two M4 x 10 screws using a 3mm allen key.

The last part of the sub-assembly is the silicon hose. Simply slide the smaller diameter end of the hose onto the filter neck ensuring that the itg logo is inline with the MAF. Slide the hose onto the neck until there is a gap of approximately 10mm (just under ½") between the end of the hose and the MAF mounting, then tighten using the 60-80mm hose clip.

With the airbox and filter assembly put together, you can now start fitting parts to the car.



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Fitting Your Maxogen Induction Kit

Fitting the airbox

Believe it or not, fitting the kit is actually easier than removing the standard components. There are a few stages that can be a little tricky but all in all fitting is fairly simple and straight forward.

The first step is to relocate the vacuum solenoid. The best place to relocate it is on the water header tank mounting, as shown below, using the L shaped bracket provided. Also, dont forget to fit the rubber blanking caps as shown to keep out any dirt.



Next, loosely attach the airbox mounting bracket to the 25mm (1") chassis tube that lies beneath the rear bodywork. Attach the bracket and clamp onto the chassis, ensuring that the mounting plate is on the wheelarch side of the tube, then tighten the nuts and screws using a 10mm spanner and 5mm allen key. Only tighten the nuts enough to gently pinch the tube and hold the mounting in place but still loose enough to move the bracket if necessary. Due to the handmade nature of the Exige/Elise, there can be quite a few differences in tolerances between cars. To overcome this, we have put two sets of mounting holes into the brackets. The bracket comes pre-assembled with the mounts in the top holes. This will point the intake end of the airbox downwards and is intended to ensure that any water that gets into the airbox will drain automatically and effectively. If you find that the airbox sits against the wiring harness on its underside, it may be necessary to use the lower mounting holes.



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When fitted, the mounting bracket should be positioned roughly as shown below in fig.1. Now, to ease fitting of the airbox, swing the mounting bracket upwards to make enough space to thread the airbox assembly into place as shown in fig.2.



Fig.1



Fig.2

Ensuring that the 70-90mm hose clip is on the end of the silicon hose (leave the hose clip as loose as possible), move the airbox into position and then slide the silicon hose onto the throttle body. Push the hose onto the throttle body until it reaches the step on the inside of the hose. Make sure that the itg logo on the hose is facing up and that the MAF is situated on top of the filter neck. With everything aligned, tighten up the hose clip.

With the airbox roughly in place, swing the mounting bracket downwards until it is dead vertical. This is the point where you may need to make a few small adjustments to the alignment of the airbox. There is quite a bit of adjustment available, not only the two sets of holes in the bracket itself, but the mounting bracket can also be slid up or down the chassis tube a small amount to help get better clearance.



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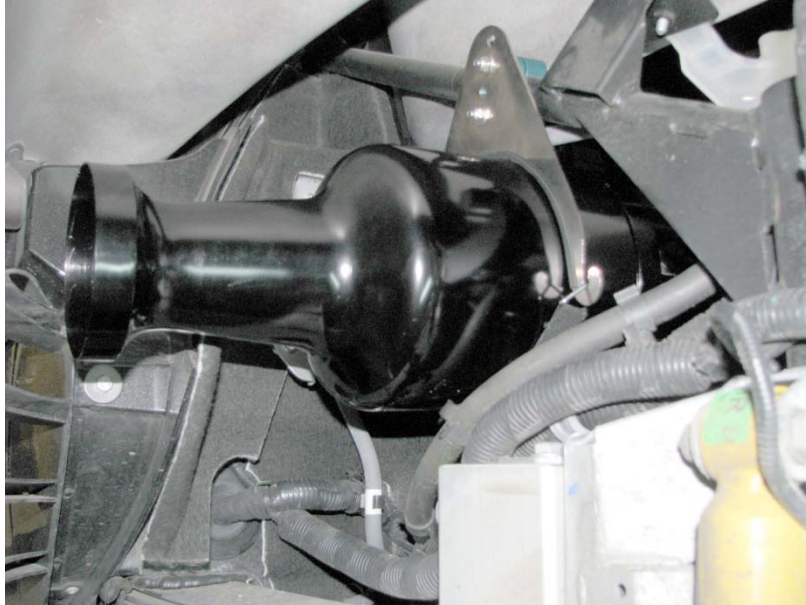
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When the airbox is installed it should sit as shown below. Note the clearance on the bottom where the airbox sits above the wiring loom. When you are certain nothing fouls, fully tighten the mounting clamp.



The airbox should sit quite firmly against the bracket even without the retaining strap fitted. If it doesn't, then you will need to slacken off the hose clip on the filter neck and adjust the hose until the box is sat firmly in the bracket. Re-tighten the hose clip and then fit the elastic retaining strap.

With the airbox fully fitted in place you can now refit the wheelarch liner, rear wheel and lower the car back down onto the ground.

All that is left now is to re-connect the MAF sensor and vacuum solenoid to the wiring harness. On the Exige you will also need to re-fit the intercooler pipe. With these jobs done, you are finished!!

Before you go out for a test drive double check everything.....TWICE!!!!!!