

Please read through this guide before you start the installation

Preparation

- Switch off the engine and ignition. Please ensure that all passengers leave the vehicle.
- Open the Bonnet/Hood, and close all of the Doors. Please do not open any Doors, Boot/Trunk until you have completed the installation.
- If the vehicle has keyless entry; remove the key from the vehicle and place it at least 10 meters / 30 feet away from the vehicle.
- Leave the vehicle for five minutes to allow the ECU to shut down.
- Remove the engine cover.

Tools & Equipment required: Vehicle Ramp, Socket Wrench, 7mm Socket, 10mm Socket, E10 Torx Socket, T40 Torx Bit.



We recommend the use premium fuel with a minimum 97 RON / 93 Octane (US)



Remove your engine cover

The engine cover on your Lotus Emira is retained by multiple push-fit retainers. **Without** standing in the rear luggage compartment. Lean forwards and lift the front of the cover upward and then slide towards you in order to safely remove the cover.

Please place the engine cover in a clean safe environment in order to prevent damage.



Harness positioning

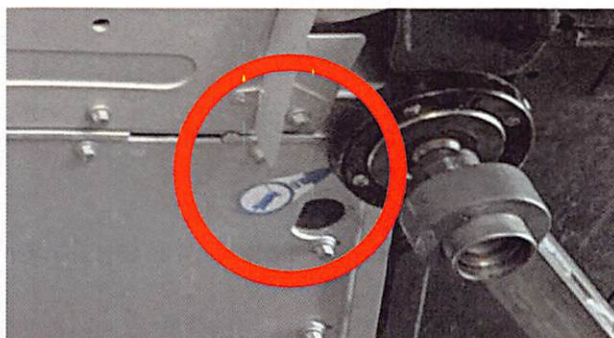
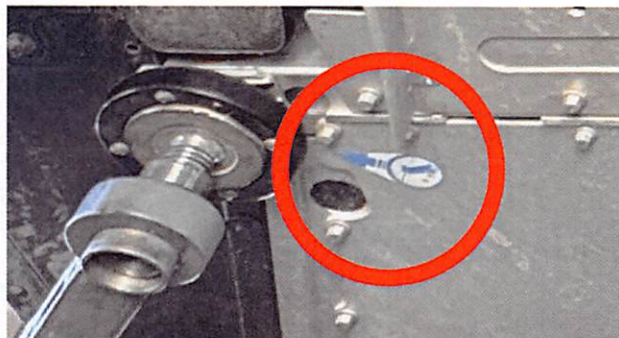
The majority of this installation will take place from underneath the vehicle. However, as the main body of your harness will be required in the engine bay, you will need to feed some parts of your harness from the top of the engine compartment down toward the back of the engine before the vehicle is lifted by a vehicle ramp. Feed your boost channel (B2) toward the bottom of the engine and leave (B1) loose toward the top.

Please ensure the engine is NOT started beyond this point as you will have loose cables in close proximity to your auxiliary drive belt.



Lift the vehicle

When placing the vehicle onto the lift. You must place the lift pads directly onto the lift points clearly identified on the chassis. These 4 points are identified by a Blue & White labels.

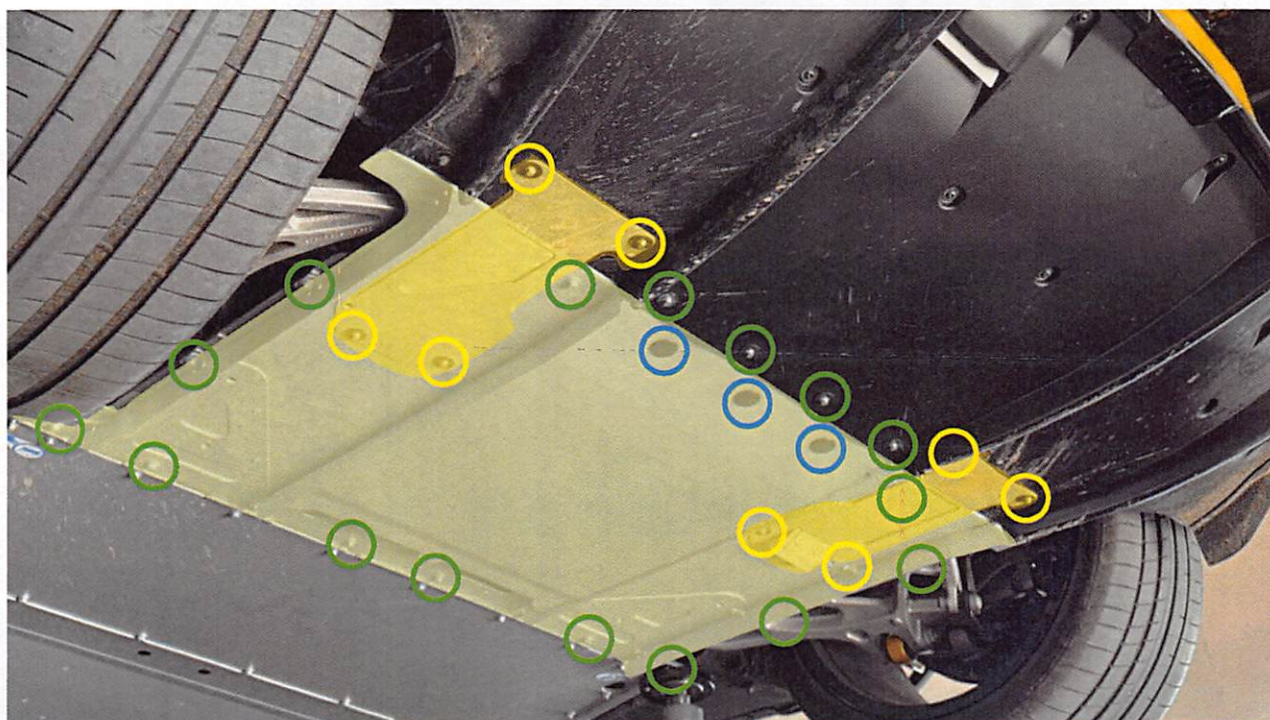


Removing the under shield

Your under shield is built in three parts. Remove the two smaller shields by removing the retaining bolts. You will require a 7mm socket and wrench. These fasteners are shown below in Yellow.

Your main under shield is removed by removing the retaining bolts. You will require a 7mm & 10mm socket. These fasteners are shown below in Green.

Before you can slide your under shield rearward and drop. You need to remove the three Black plastic caps and remove the bolts behind them. These are shown in Blue below.

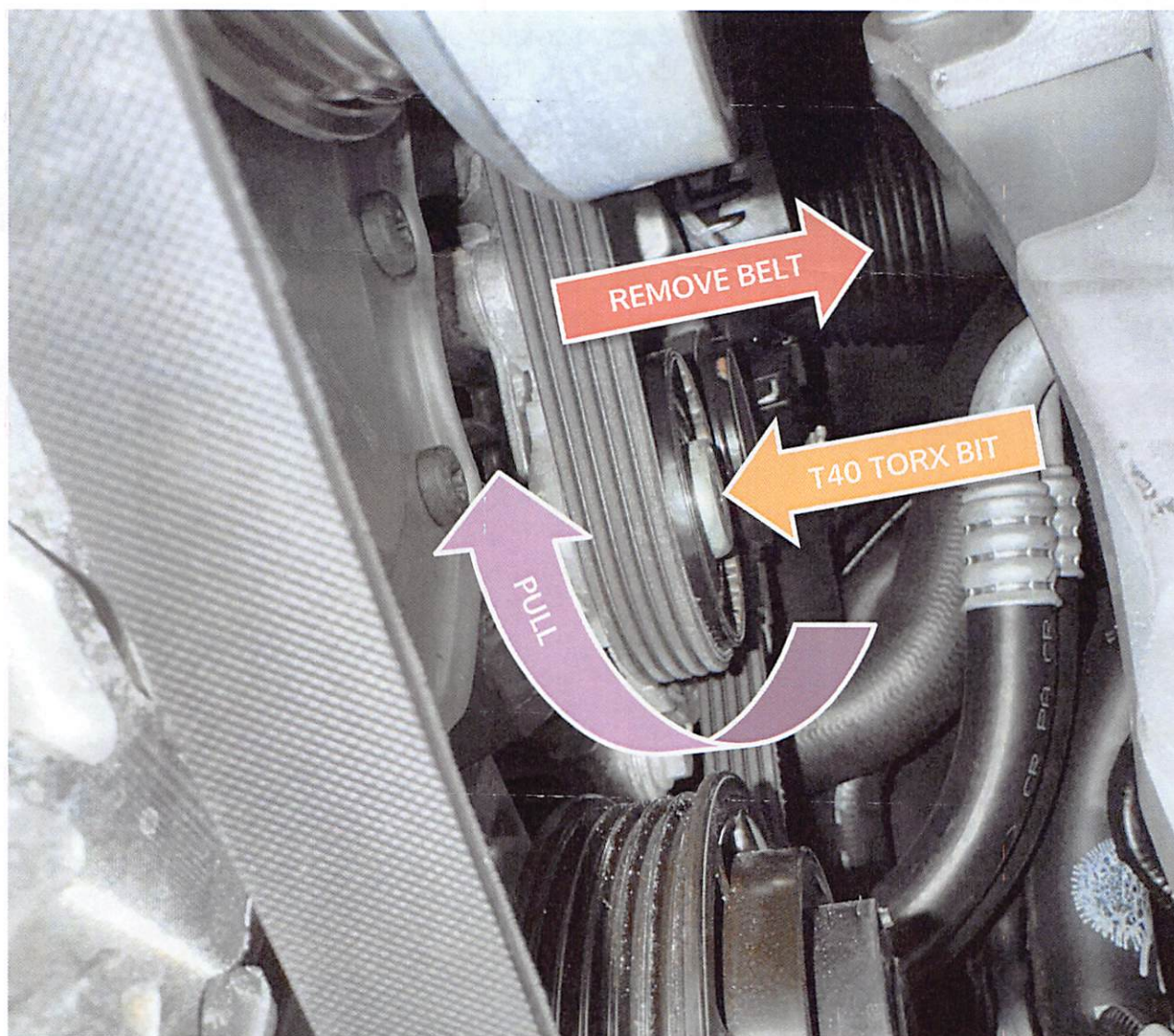


Removing the auxiliary drive belt.

In order to gain access to both of your boost pressure sensors, you must move your air conditioning compressor to one side. In order to do this you will need to remove your auxiliary drive belt. This is very simple process as show below.

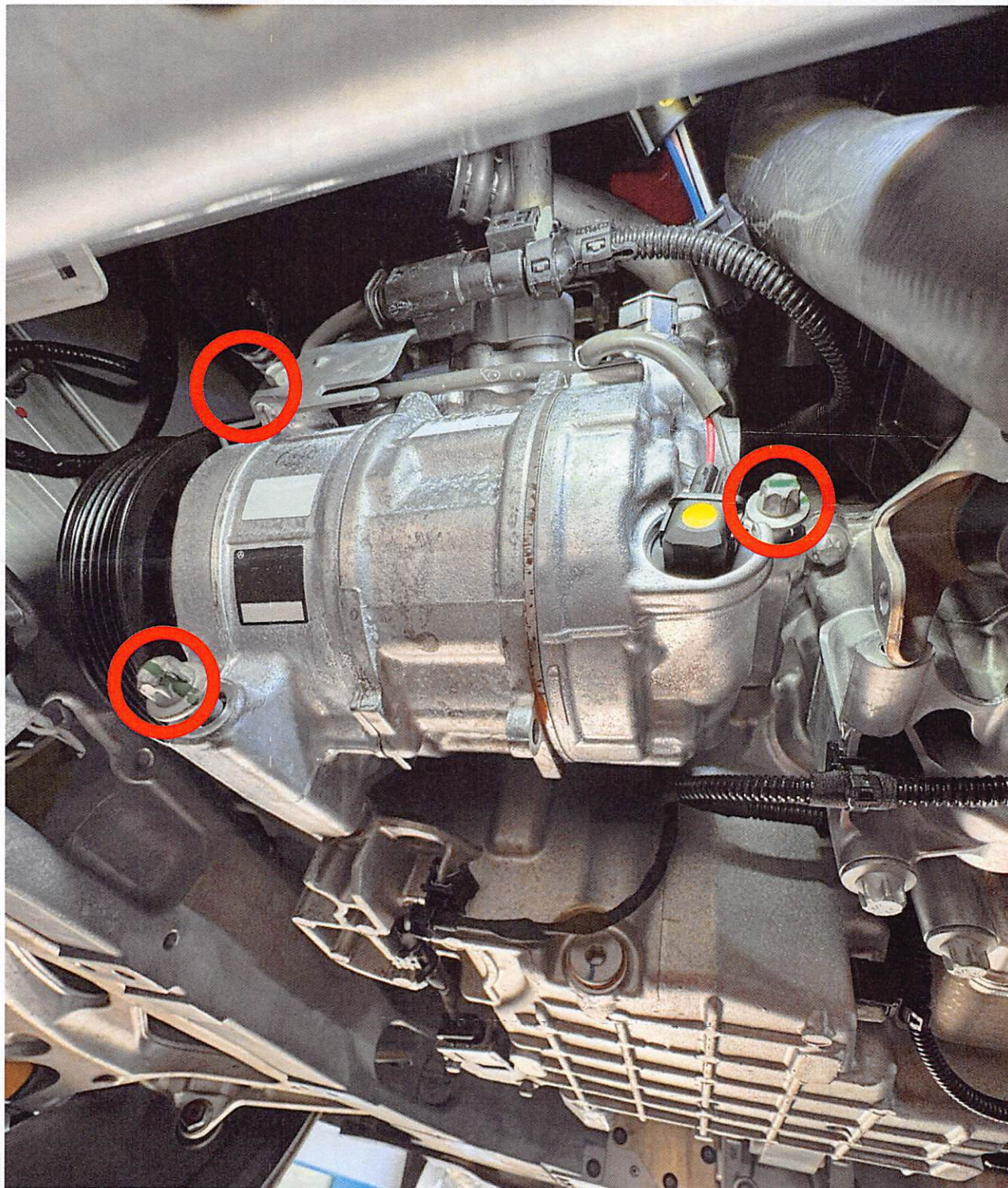
1. Attach your T40 Torx Bit onto your Wrench. Insert into the centre of the Bolt located in the middle of your Pulley.
2. Pull the Wrench toward you and simultaneously slide the auxiliary drive belt to the right.
3. Gently release the wrench and allow the tensioner to return to it's rest position.

Please be careful not to touch the surfaces of the belt with dirty hands. Contaminating the surface of the belt may cause the belt to slip or squeal.



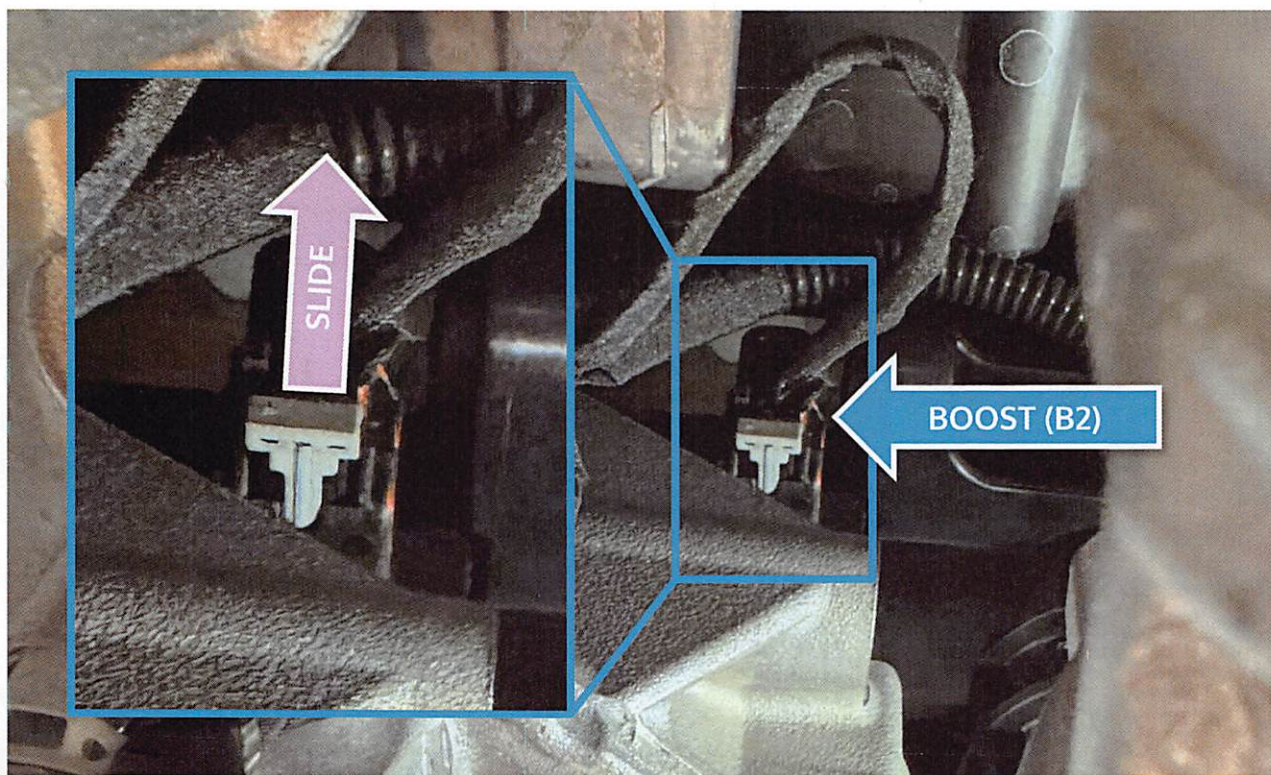
Move your air conditioning compressor for better access.

In order to gain access to both of your boost pressure sensors, you must move your air conditioning compressor to one side. In order to do this you will need to remove the three retaining bolts. This is very simple process. The E10 Torx fasteners are identified below.

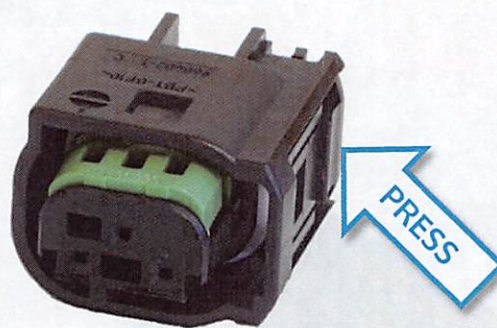


Boost pressure sensor (B2)

The boost pressure sensor is located on the side of your chargecooler as show below.



1. Locate the female connector attached to your boost pressure sensor identified by the **Blue** arrow above.
2. Slide the Grey release lock in the direction of the **Pink** arrow until it hits the stop.
3. Press the release lock inward and pull the connector so that it detaches from the sensor. It may help to use a torch to assist with lighting.
Please do not pull the cables.
4. Your harness will have a **Blue** Label shown as **(B2)** on the Boost Channel. Locate the connector on the new harness and attach it to the sensor which you removed in the previous step.
5. Attach the other connector on your new harness to your vehicle connector that you removed originally.
6. Use the zip ties provided to restrain your new and existing harness into position. Take care not to tie it to anything hot, or too close to your auxiliary belt. Try to follow the vehicles original wiring harness where possible.



You have now completed the installation of your Boost Channel (B2).

Boost pressure sensor (B2)

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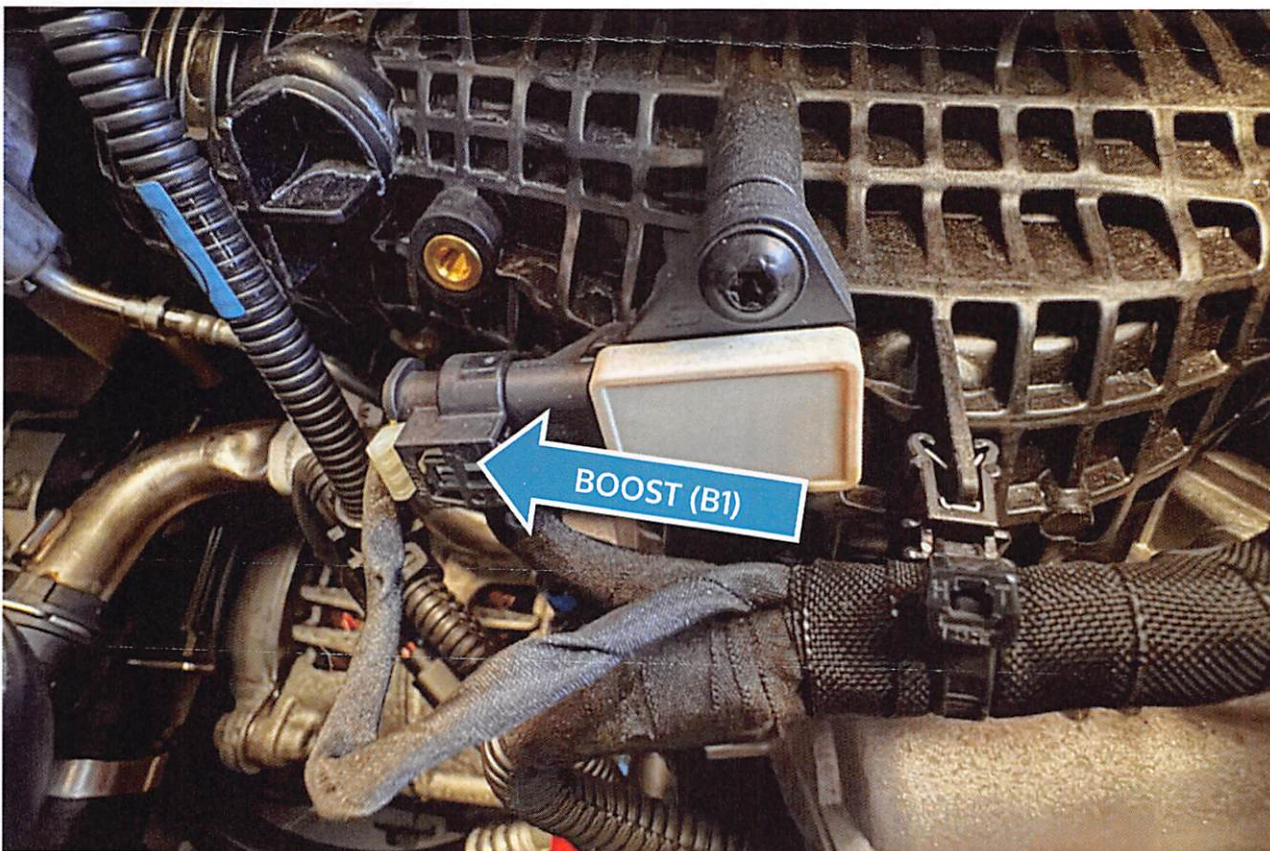
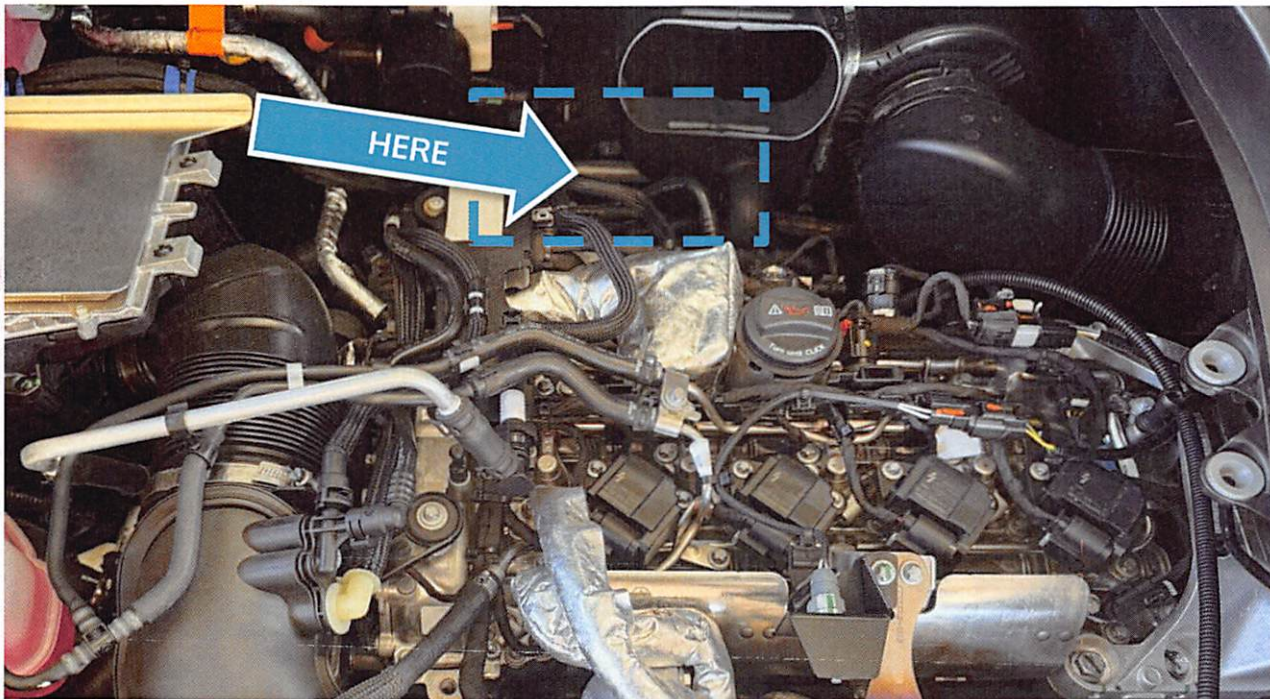
The harness installation process under the vehicle is now complete. Please follow your initial strip-down process in reverse order.

A quick recap....

1. Reinstall the air conditioning compressor back in place remembering not to touch the pulley with dirty or contaminated hands.
2. De-tension the auxiliary drive belt tensioner and re-install the drive belt remembering not to touch the pulley with dirty or contaminated hands.
3. Perform a quick overview in order to ensure everything is back in place.
4. Reinstall under trays and access panels as the rest of installation is completed from above the engine.
5. Lower the vehicle back onto the ground.
6. Do not open the doors or activate the ignition.

Boost pressure sensor (B1)

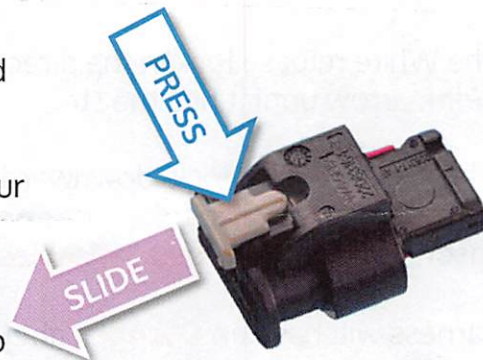
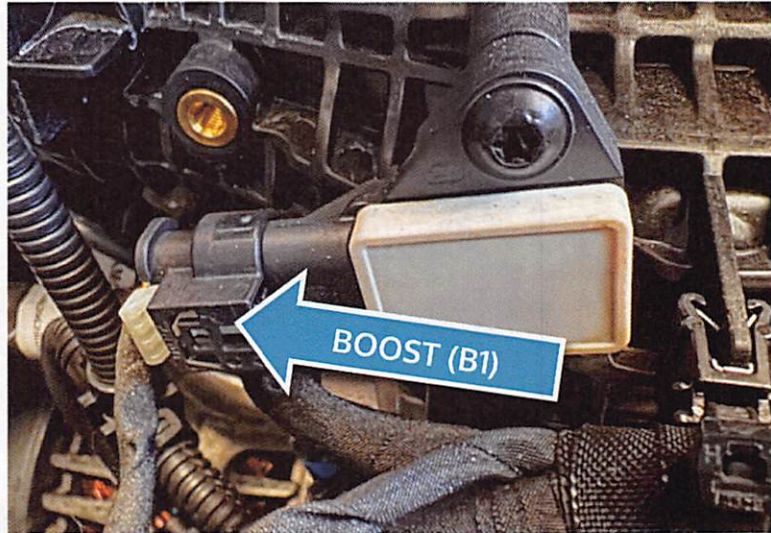
The boost pressure sensor is located on the front of the inlet manifold. The manifold is located at the top on the rear of the engine as show below.



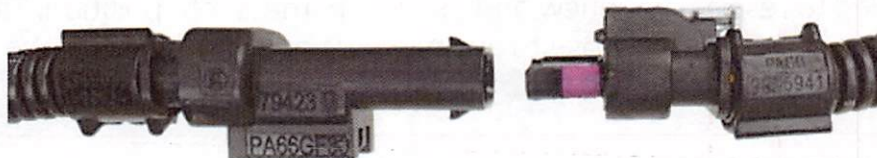
Boost pressure sensor (B1)

Continued....

1. Locate the female connector attached to your boost pressure sensor identified by the **Blue** arrow opposite.
2. Slide the White release lock in the direction of the **Pink** arrow until it hits the stop.
3. Press the White release lock downward and pull the connector so that it detaches from the sensor. **Please do not pull the cables.**
4. Your harness will have a **Blue** Label shown as **(B1)** on the boost channel. Locate the connector on the new harness and attach it to the sensor which you removed in the previous step.
5. Attach the other connector on your new harness to your vehicle connector that you removed originally.
6. Use the zip ties provided to restrain your new and existing harness into position. Take care not to tie it to anything hot, or too close to any moving parts. Try to follow the vehicles original wiring harness where possible.



Please note the correct orientation of the Boost connector:



You have now completed the installation of your Boost Channel **(B1)**.

Cam Position Sensor

The cam position sensor is located on the top right side of your engine as shown below



1. Locate the female connector attached to your cam position sensor identified by the **Orange** arrow opposite.
2. Slide the White release lock in the direction of the **Pink** arrow until it hits the stop.
3. Press the White release lock downward and pull the connector so that it detaches from the sensor. **Please do not pull the cables.**



4. Your harness will have an **Orange** Label shown as **(RPM)** on the cam channel. Locate the connector on the new harness and attach it to the sensor which you removed in the previous step
5. Attach the other connector on your new harness to your vehicle connector that you removed originally.
6. Use the zip ties provided to restrain your new and existing harness into position. Take care not to tie it to anything hot, or too close to any moving parts. Try to follow the vehicles original wiring harness where possible.

Please note the correct orientation of the Cam position connector:



You have now completed the installation of your Cam channel **(RPM)**.

Finishing Up

Connect the tuning box to the end of the harness, and secure it in the engine bay away from any extreme source, such as the exhaust or turbo.

Tidy up the wiring harness with the cable ties supplied - Take care not to tie it to anything too hot, or too close any belts or fans. Try to follow the engine's own wiring loom.

You're ready to go!

Replace any parts you removed, and turn on the ignition. Check that the LED on the tuning box has illuminated on Program 4. Start the engine and enjoy your freshly tuned vehicle!

Please make sure to leave the system in Program 4 for at least 20 miles (30 Kilometres) before making any adjustments.

Need some help?

Please feel free to contact us on 01245 806 446 (+44 1245 806 446) or email our technical department at technical@tdi-tuning.com

For more general information and FAQs, please see the CRTD4 Owner's Handbook, or visit our website.