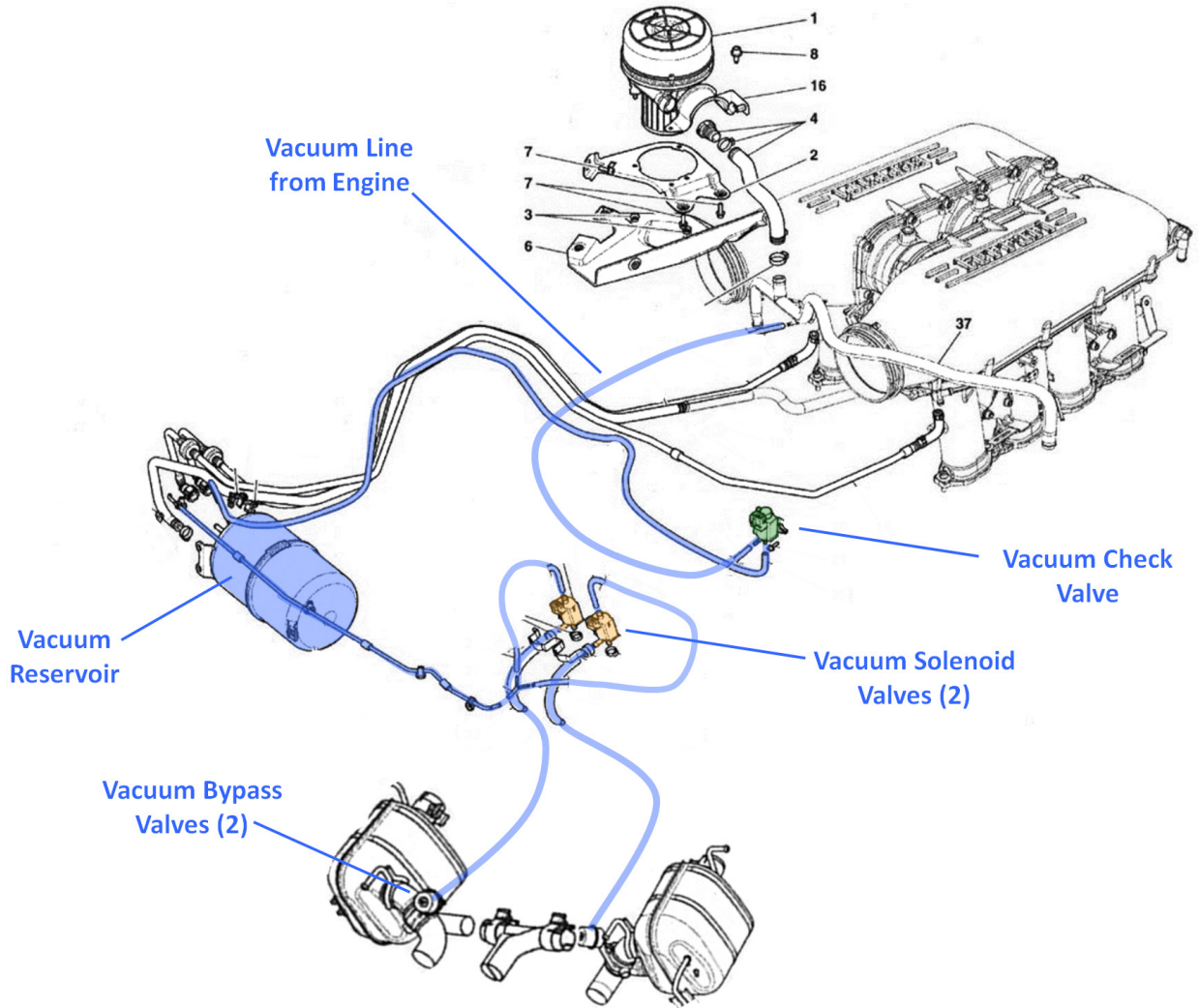


Forza Exhaust Bypass Valve Controller Installation Tips - Ferrari 458 Italia

Installation of the Forza Bypass Valve Controller on the Ferrari 458 is a DIY task, but it does require some patience and careful manipulation of some components in the engine bay to gain access to the vacuum solenoid valves.

The vacuum solenoid valves are beneath the engine air filter box. This illustration shows you the approximate positions of the vacuum solenoid valves relative to other components on the car ...



The following instructions will aid you in removing / loosening the engine air filter box so you can gain the access required getting to the electrical connectors on the vacuum solenoid valves.

NOTE: *Some people have found that removing the air diffuser on the underside of the car at the rear to also be an excellent way to gain access to the vacuum solenoid valves.*

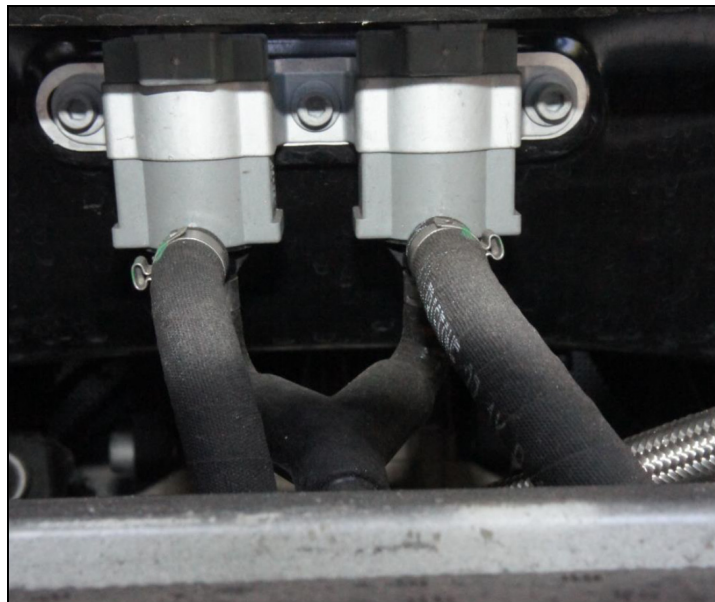
These instructions will not allow you to completely remove the engine air filter box. To do that you will need to remove the rear bumper. This is because the hose from the vacuum solenoid valves is connected to the air filter box from below and this does not allow you to move the box very much ... but enough to gain access to the connectors.

Once you loosen the air filter box enough to access the plugs, you must take care when reaching the connectors. Each connector has a metal clip that secures it. You can attempt to squeeze the clip to disconnect it, but some have found it easier to remove the clip with a pair of sharp nose pliers. Take care when you do this that you do not drop the clip into the engine bay.

To give you a frame of reference, this photo of a 458 with the bumper removed shows you where the vacuum solenoid valves are located. These next series of photos from an online source, FerrariChat .

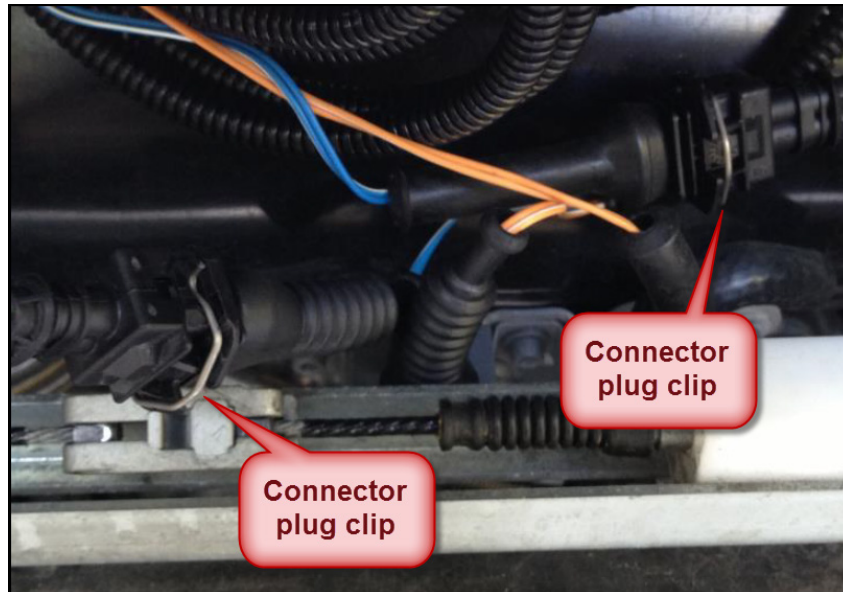


Here is a close up view of the vacuum solenoid valves ...



The clips on the connectors may need to be removed to disconnect the plug. Do not drop the clip ... note: this next photo shows additional wires which may not be present in your case. This is only to illustrate what the clips look like.

Note: Once you remove the clips and disconnect the plugs, re-install the clip on the female connector. When you are ready to reconnect the plugs, push them together until they click.



The next series of pages are taken from a Ferrari Technical Document that included instructions on how to change the air filter and how to remove the engine air filter box. You do not need to completely remove the air filter box as that requires removing the rear bumper. Follow these instructions to get to the point where it is loose and you are able to reach below the box to access the vacuum solenoid valve connectors.

Removal of Engine Compartment Cosmetic Shields

Although it may not be necessary to do so, removal of the engine compartment cosmetic shields may assist you with the subsequent loosening of the engine air filter box ...



Lateral cosmetic shields


- Undo the screws indicated.
- Remove the lateral cosmetic shields (A), disconnecting the water drainage pipes.
- **FROM Ass.ly No. 93871**, the water drainage pipes are no longer included.



Centre cosmetic shield


- Remove both lateral cosmetic engine compartment shields.
- Undo the screws indicated.
- Remove the centre cosmetic shield (C).

Refitting Engine Compartment Cosmetic Shields


			
Tightening torque		Nm	Class
Fastening engine compartment cosmetic shields	Screw	4.5 Nm	B



Lateral cosmetic shields

- Fit the lateral cosmetic shields (A), connecting the water drainage pipes.
-  **FROM Ass.ly No. 93871**, the water drainage pipes are no longer included.


- Hand tighten the screws indicated.

			
Tightening torque		Nm	Class
Screw		4.5 Nm	B



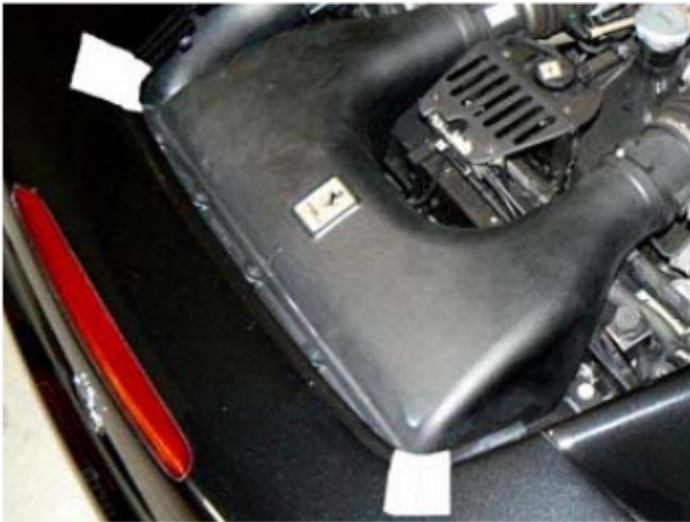
Centre cosmetic shield

- Fit the centre cosmetic shield (C).
- Hand tighten the screws indicated.

			
Tightening torque		Nm	Class
Screw		4.5 Nm	B

- Refit both lateral cosmetic engine compartment shields.

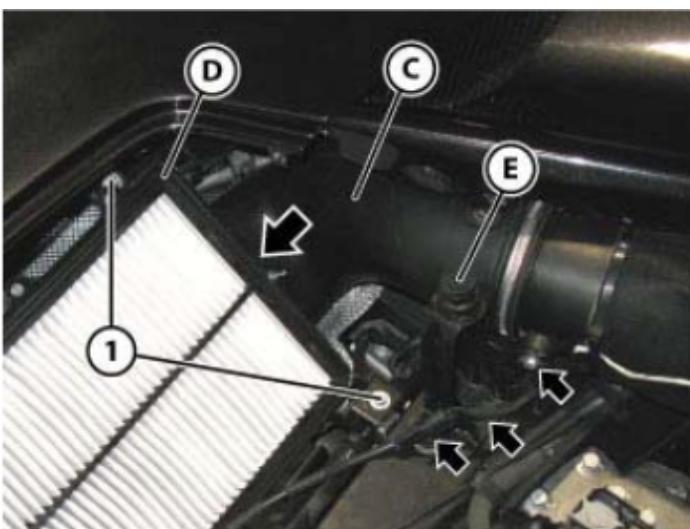
Loosening the Engine Air Filter Box



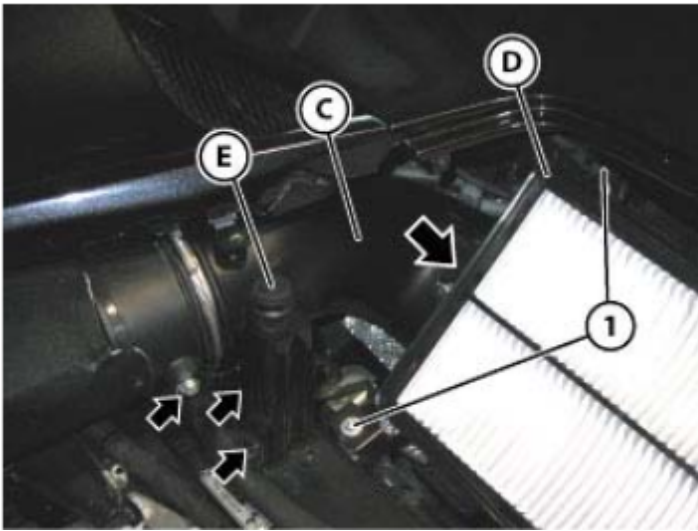
- Place a few strips of adhesive tape to protect the bodywork on the areas shown in the photo aside.



- Undo the indicated nuts fastening the air flow meters (A) to the air filter box cover (B).
- Undo the screws indicated fastening the air filter box cover (B).
- Remove the air filter box cover (B) from the relative seat, disconnecting from the air flow meters (A) and retrieving the O-rings.



- Loosen the indicated screw collar fastening the left hand lateral hose union (C) to the air filter box (D).
- Disconnect the left hand lateral hose union (C) from the air filter box (D).
- Undo the nuts (1) fastening the air filter box (D).
- Undo the indicated screws fastening the left hand bracket (E) to the engine compartment lid mounting.
- Remove the left hand bracket (E) from the relevant seat.



- Loosen the indicated screw collar fastening the right hand lateral hose union (C) to the air filter box (D).
- Disconnect the right hand lateral hose union (C) from the air filter box (D).
- Undo the nuts (1) fastening the air filter box (D).
- Undo the indicated screws fastening the right hand bracket (E) to the engine compartment lid mounting.
- Remove the right hand bracket (E) from the relevant seat.



- Undo the indicated screws fastening the bracket (F) to the back of the air filter box (D).
- Remove the bracket (F) from the relevant seat.

- Working with due caution, remove the air filter box from the relevant seat.


At the above point, the original manual assumed you had removed the rear bumper. You will not be able to remove the air filter box, but you will now be able to shift it aside to gain access to the vacuum solenoid valves and the electrical connectors.

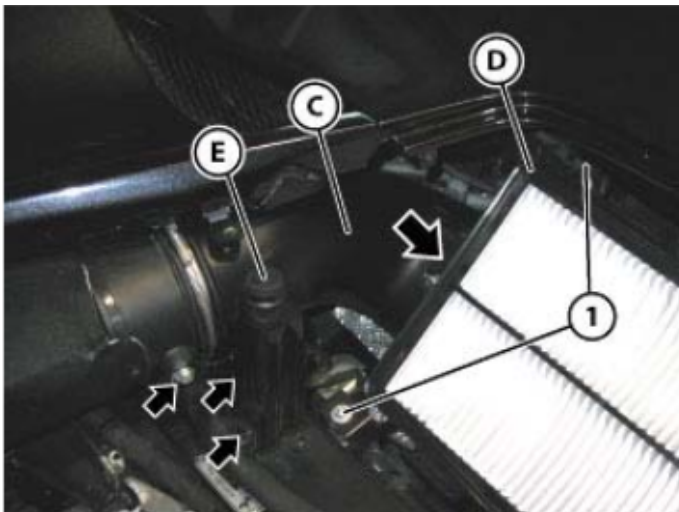
Refitting the engine air filter box

- Working with due caution, fit the air filter box in the relative seat.




- Fit the bracket (**F**) in the relative seat.
- Tighten the indicated screws fastening the bracket (**F**) to the back of the air filter box (**D**).

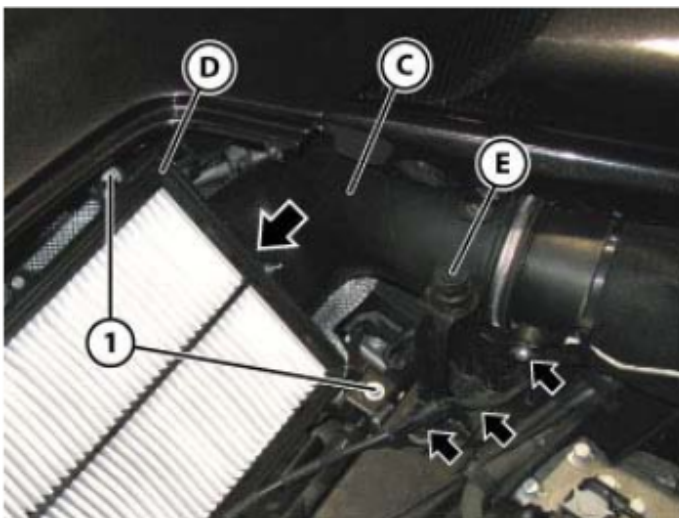
		
Tightening torque	Nm	Class
Screw	4 Nm	B




- Fit the right hand bracket (**E**) in the relative seat.
- Tighten the indicated screws fastening the right hand bracket (**E**) to the engine compartment lid mounting.
- Tighten the nuts (**1**) fastening the air filter box (**D**).

		
Tightening torque	Nm	Class
Nut	9 Nm	B

- Connect the right hand lateral hose union (**C**) to the air filter box (**D**).
- Tighten the indicated screw collar fastening the right hand lateral hose union (**C**) to the air filter box (**D**).



- Fit the left hand bracket (**E**) in the relative seat.
- Tighten the indicated screws fastening the left hand bracket (**E**) to the engine compartment lid mounting.
- Tighten the nuts (**1**) fastening the air filter box (**D**).

		
Tightening torque	Nm	Class
Nut	9 Nm	B

- Connect the left hand lateral hose union (**C**) to the air filter box (**D**).
- Tighten the indicated screw collar fastening the left hand lateral hose union (**C**) to the air filter box (**D**).



- Fit the air filter box cover **(B)** in the relative seat, refitting the O-rings and connecting the cover to the air flow meters **(A)**.
- Tighten the screws indicated fastening the air filter box cover **(B)**.
- Tighten the indicated nuts fastening the air flow meters **(A)** to the air filter box cover **(B)**.