



# iPE Exhaust

**Automotive exhaust system engineering**

***Porsche Macan-2.0***

2019 version

**Product installation instructions**

[WWW.IPE-f1.com](http://WWW.IPE-f1.com)

# Introduction

This document is used to explain the installation process of the exhaust pipe by iPE, settings and operation methods. Include five processes, and the time required for the process shown in Table 1-1. Time required is based on an experienced technician with an assistant.

Table 1-1

No.	Content	Estimated time
1	Remove the original exhaust pipe	1.5hrs
2	Install the iPE exhaust system	1.5 hrs
3	Install the control box and wiring	2 hrs
Total		5 hrs

# Important message

iPE developed this exhaust system based on the original exhaust, so it will be the same as the original after installation. Many car keys and the car itself have an inductive power transmission function, so the car key must be at least 5 meters away from the car itself to ensure safety. The exhaust pipe of the car that has just been running still has a very high temperature, so please wear insulated gloves to replace the exhaust pipe, or replace it after the temperature is lowered to avoid burns.

When setting the valve to open automatically, please do not let the valve open prematurely to avoid the problem of resonance; it is recommended to set the valve to be set to 60% of the throttle. For detailed setting, please refer to the control box setting.

The iPE exhaust pipe is designed based on the original engine data. If the engine is upgraded to increase horsepower, there may be significant resonance with this exhaust pipe.

iPE can also provide a modified version of the exhaust pipe for this type of vehicle. Please contact us for details.

# Tools for the installation



Star sleeve  
**T30 、 T25**

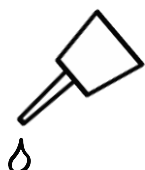


Outer hex wrench  
10mm 、 13mm



torque wrench

Torque Wrench

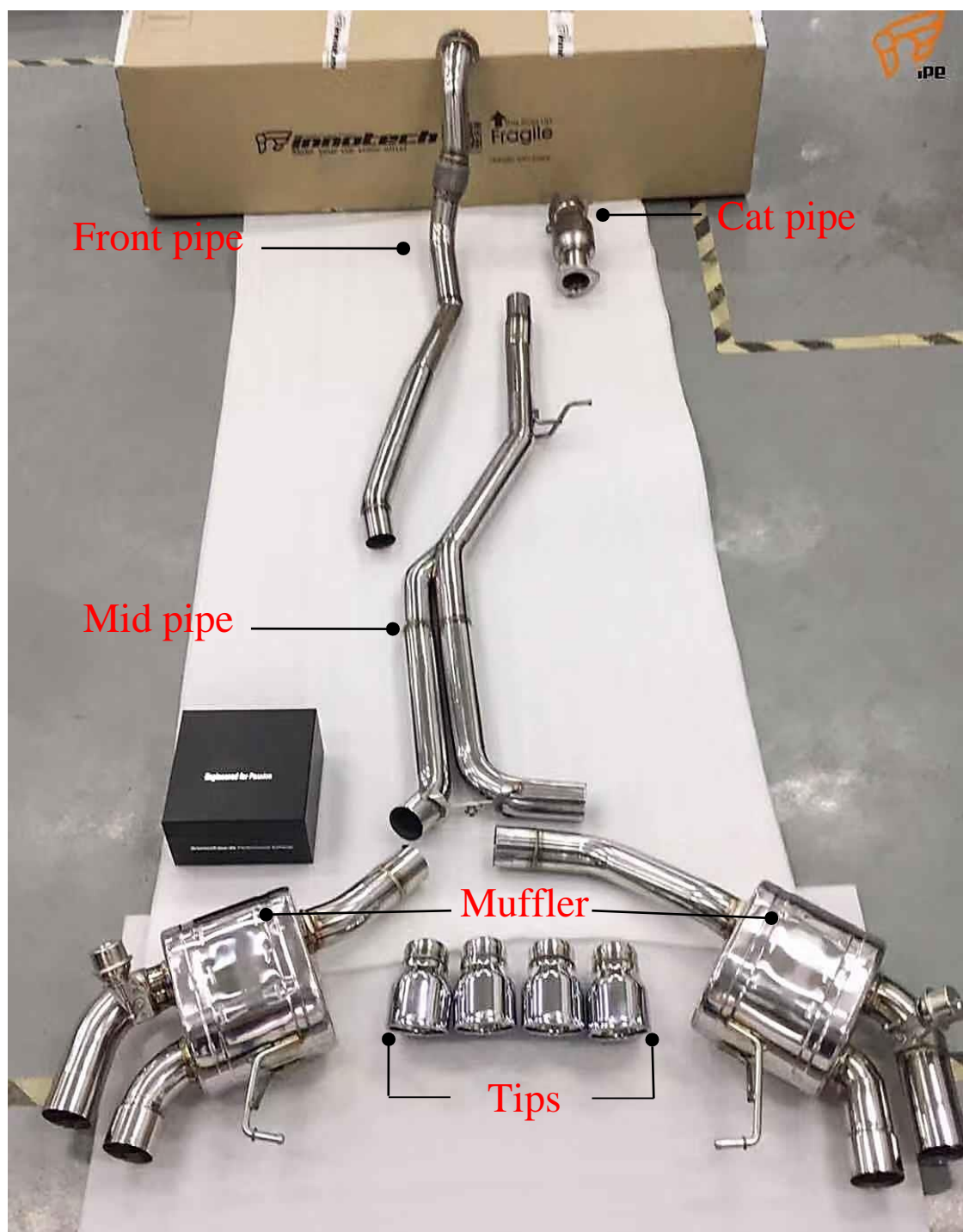


Rust Preventive spray



# Macan 2.0

## Product assembly appearance



# (1) Remove the original exhaust pipe

1. After removing the lower guard, use the 13mm wrench loosening screw (Figure 1-1) to remove bushes (Figure 1-2).

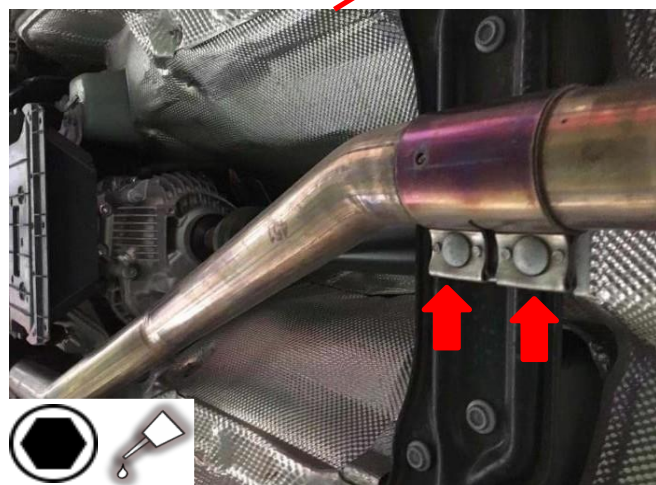


Figure 1-1



Figure 1-2



2. Remove the left rear valve motor plug (Figure 1-3)
3. Warp the valve motor plug with the waterproof tape (Figure 1-4) and secure underneath of the vehicle.



Figure 1-3



Figure 1-4

4. Remove the left and right bushes (Fig. 1-5), and then remove the original middle and rear exhaust pipes.

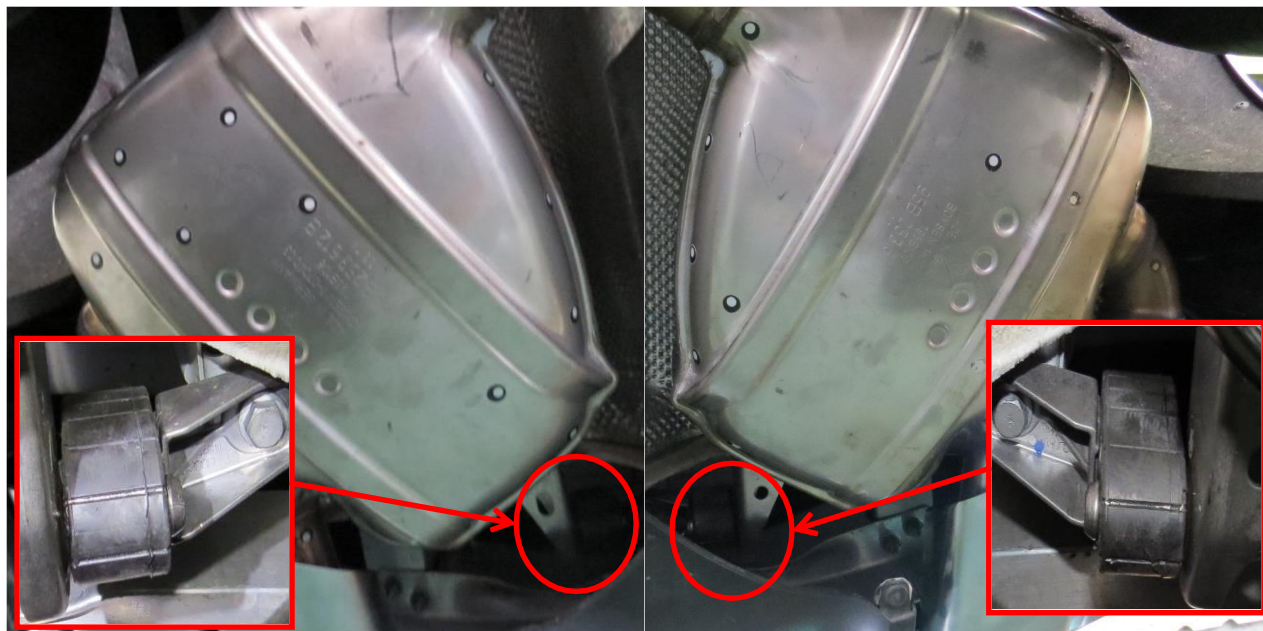


圖1-5

5. After removing the lower guard, remove the original front pipe with a 13mm hex wrench (Figure 1-6)

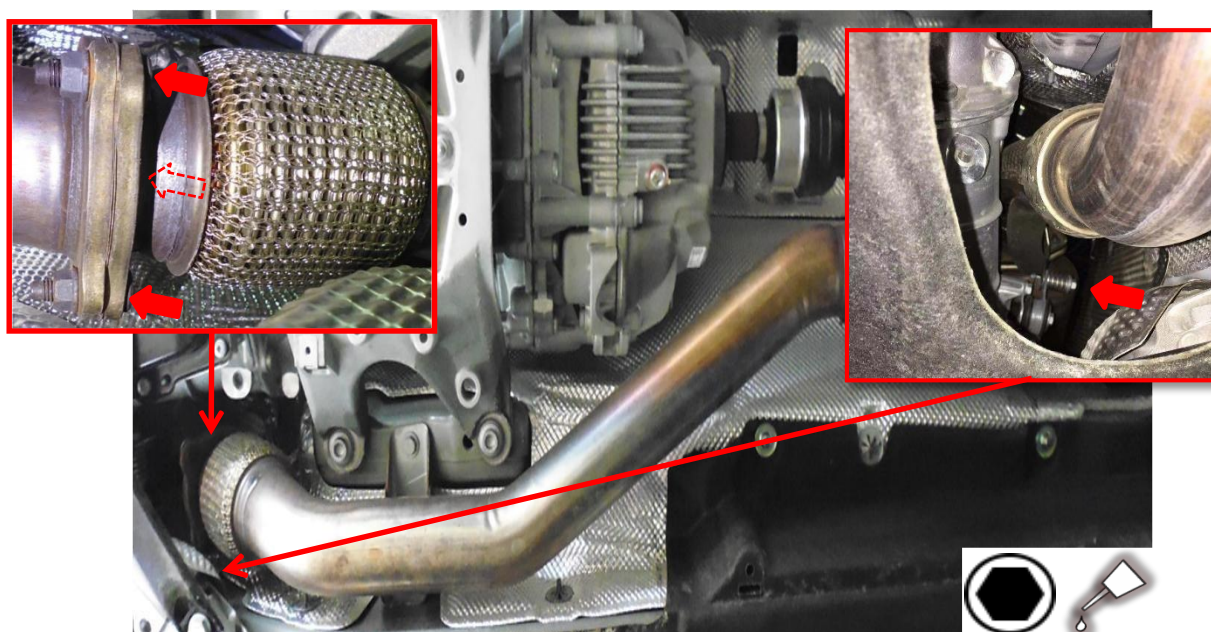


Figure 1-6



6. After removing the engine cover, remove the oxygen sensor from the catalyst (Figure 1-8) and remove the original catalyst section using a 13mm hex wrench (Figure 1-8).



Figure 1-7

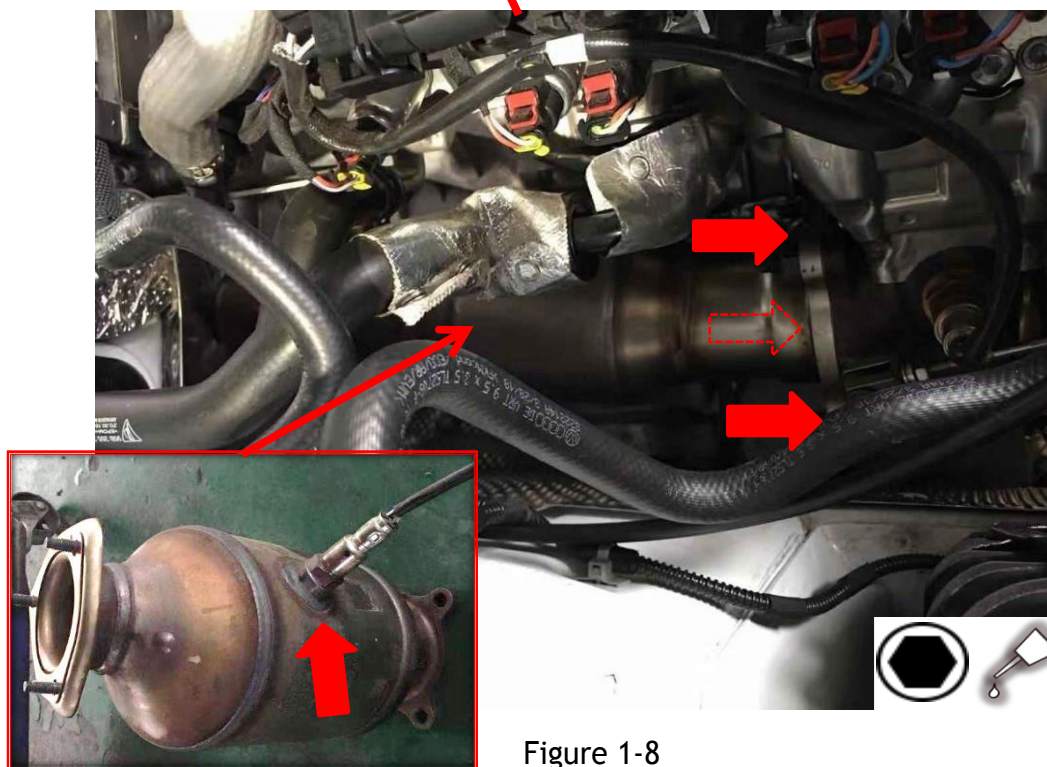


Figure 1-8

## (2) Install the iPE exhaust system

1. Install the IPE catalyst with screw (Fig. 2-2) and reinstall the oxygen sensor on the catalyst.



Figure 2-1

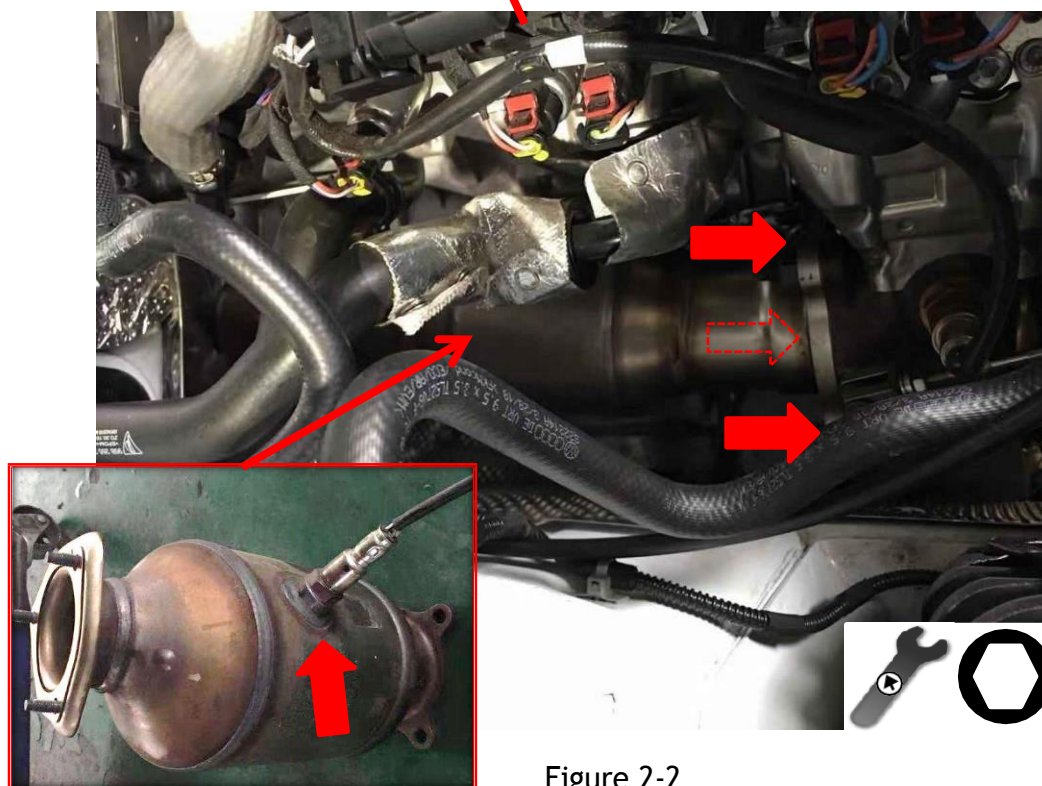
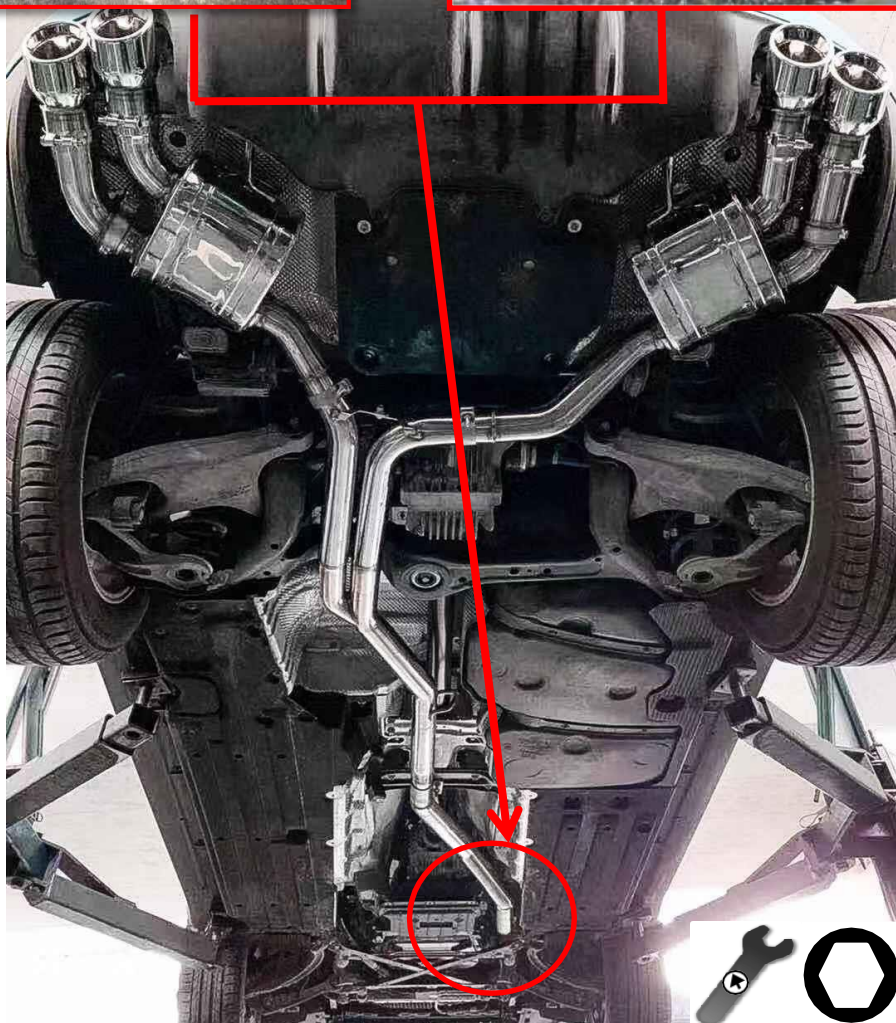
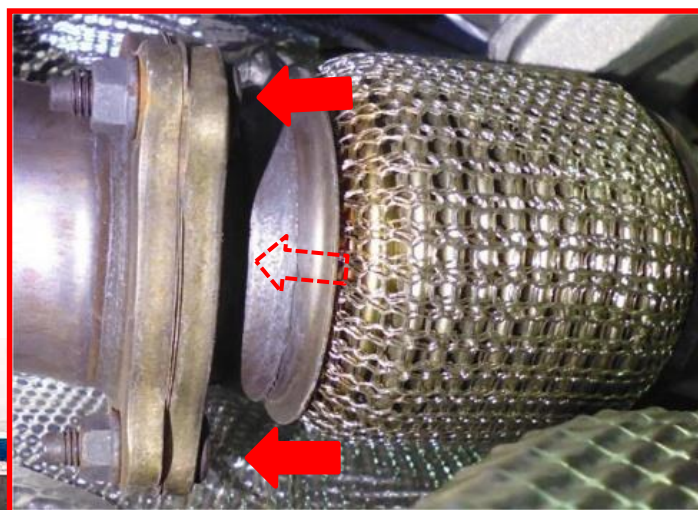


Figure 2-2



2. Install the iPE front pipe and reinstall the front pipe with bushes.



3. Reattach the original factory mid pipe and secure with support bar (Figure 2-3). The center of the support bar must be vertical.

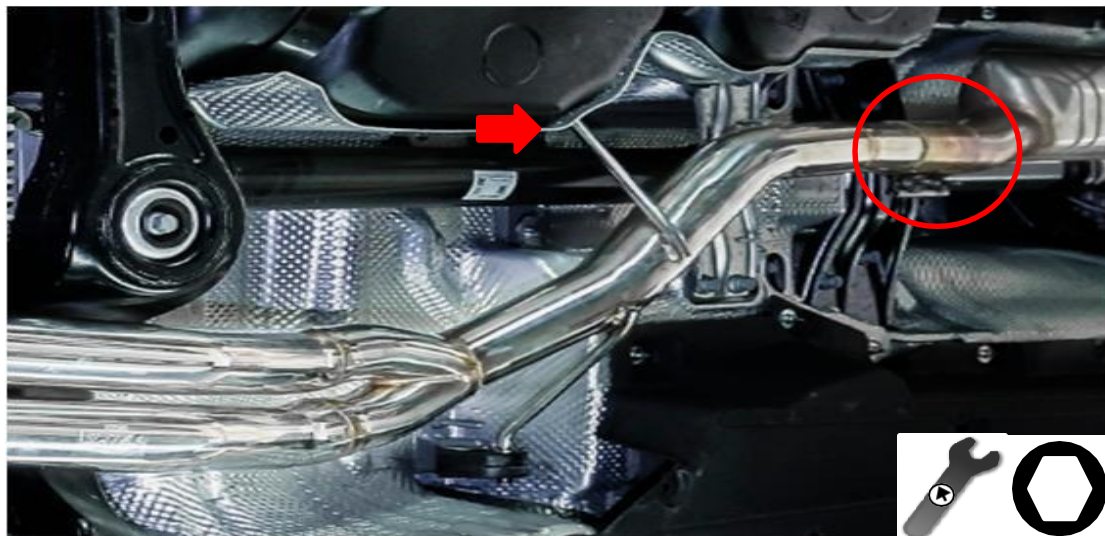


Figure 2-3

4. Attach the left and right muffler with clamps to the loops and screw tight bushes (Figure 2-4).

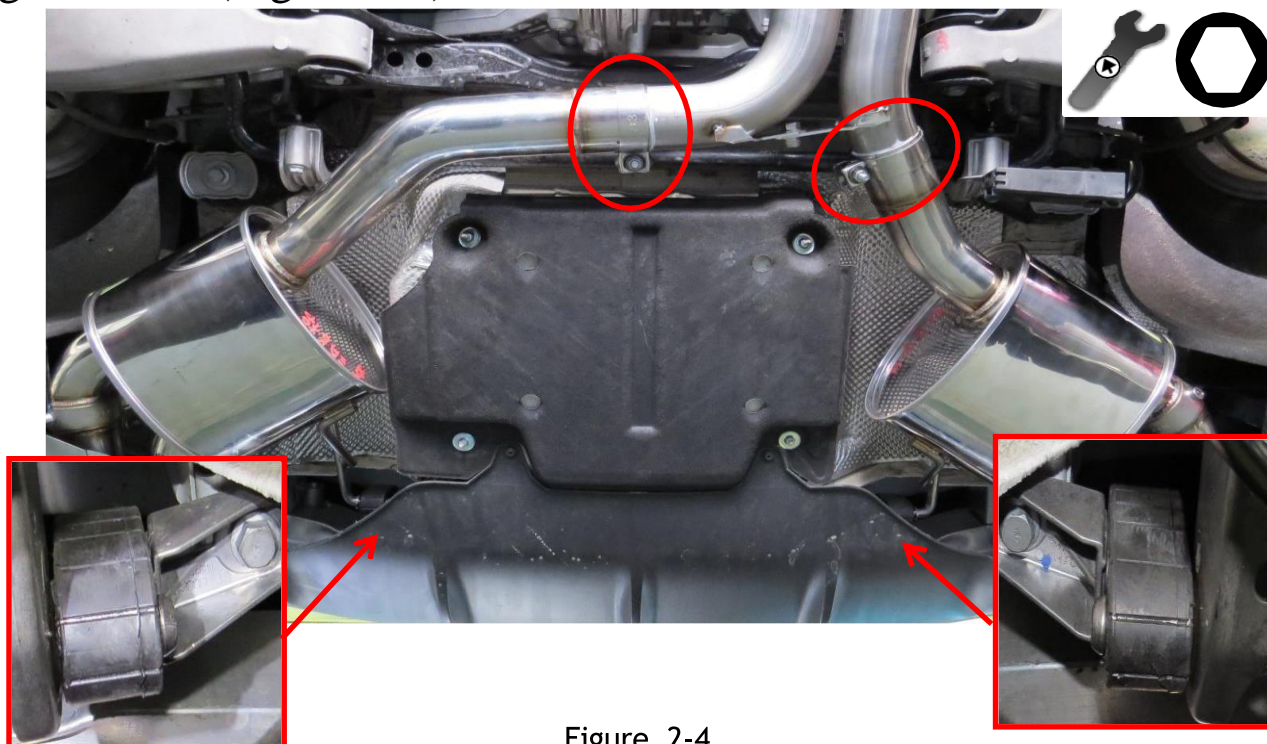
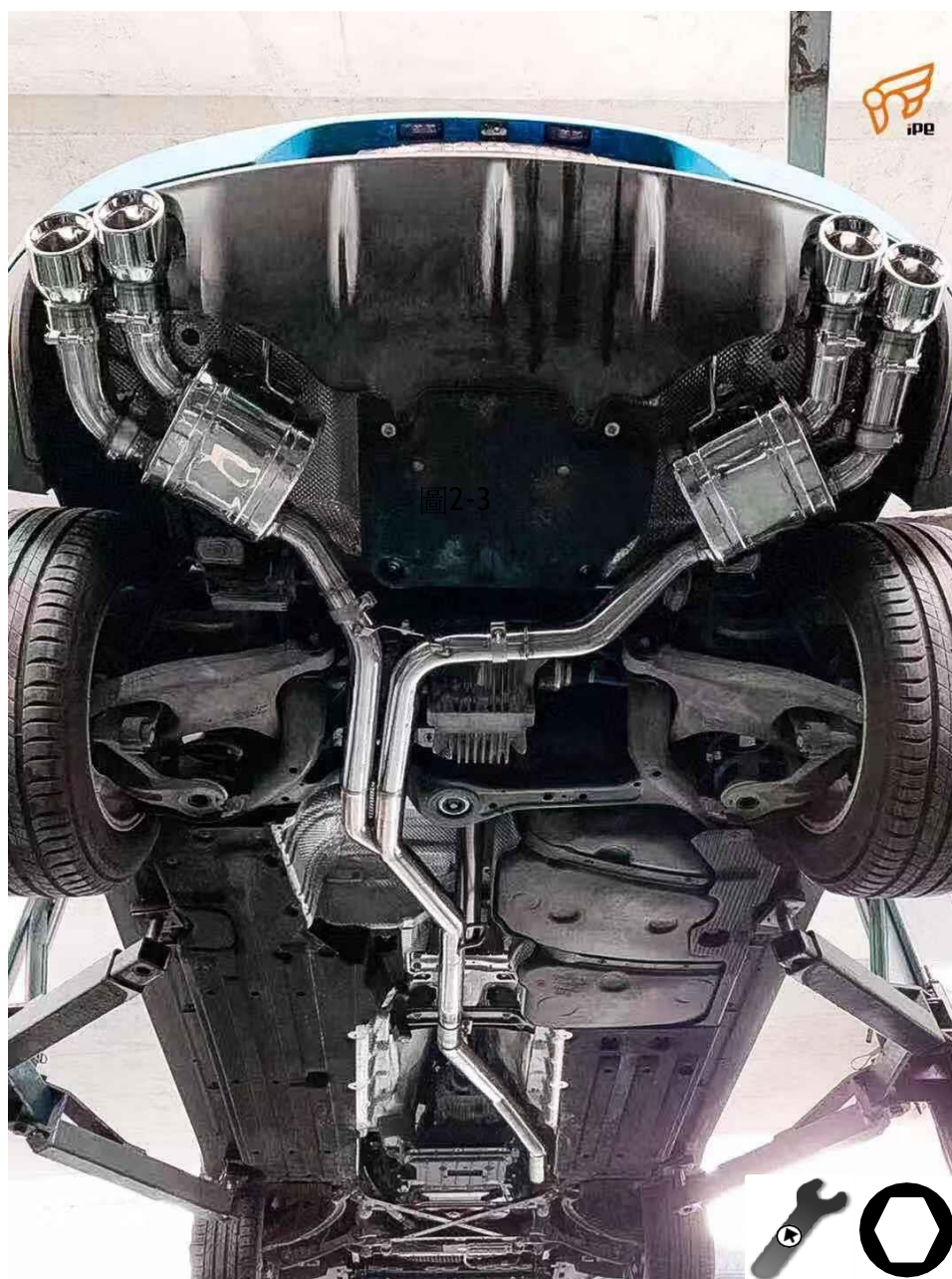


Figure 2-4



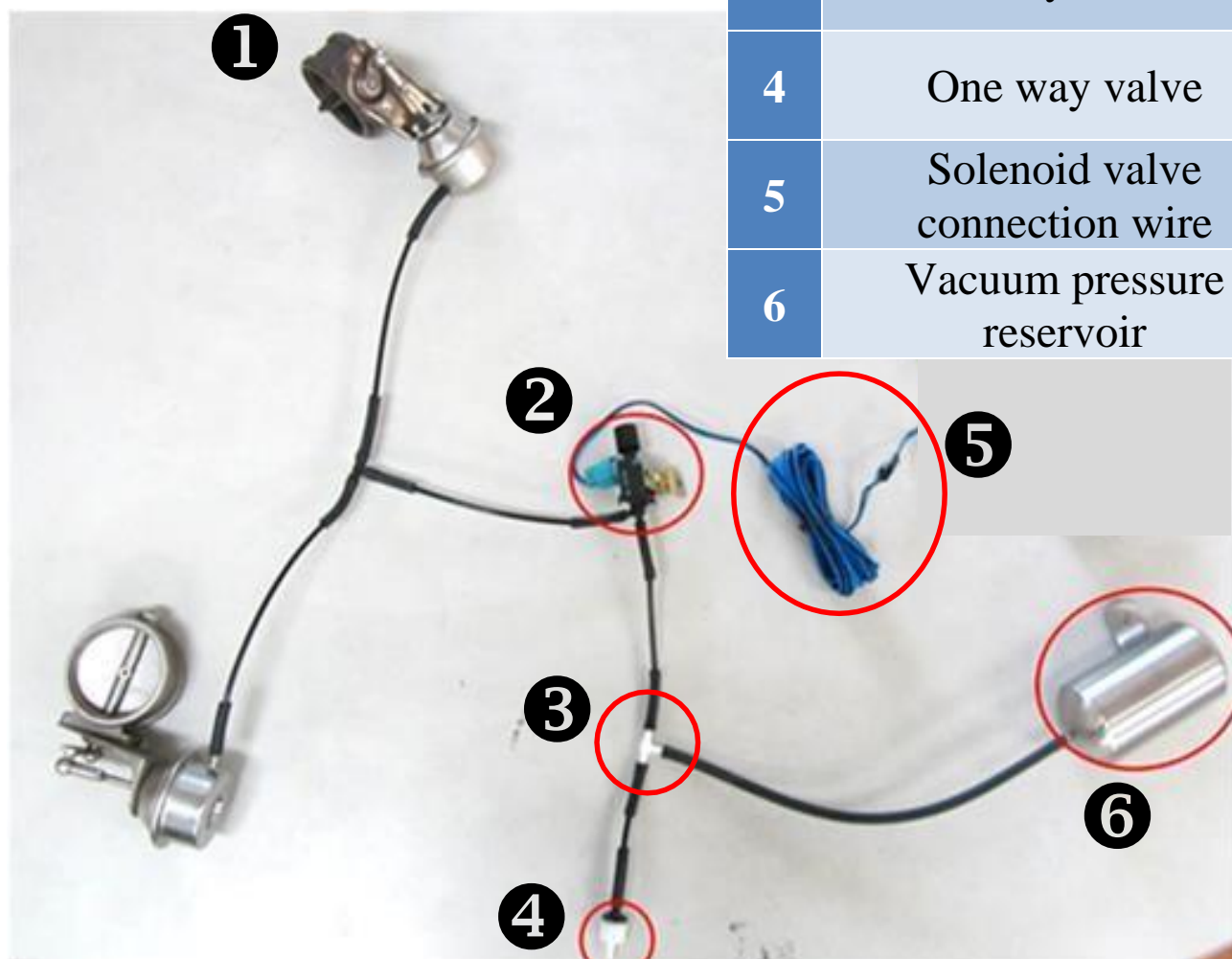
5. After installing the tips, make sure to adjust the gap between the exhaust pipe and chassis at least 15mm. Adjust the exhaust pipe backward from the catalyst section to position and lock the sliding sleeve, the lug screw, and the clamps.

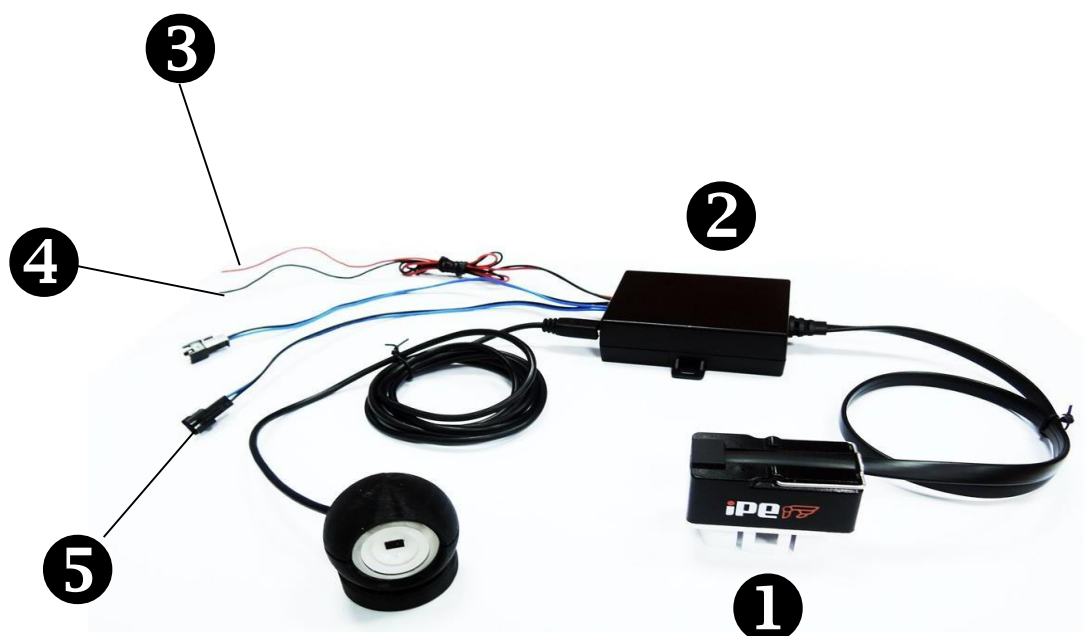


## (3) Install the control box and wiring

※ The number of exhaust valves must be based on the actual exhaust pipe design.

No.	Product
1	Exhaust valve
2	Vacuum solenoid valve
3	Three-way connector
4	One way valve
5	Solenoid valve connection wire
6	Vacuum pressure reservoir





No	Product	No	Product
1	OBDII connector	4	Black (negative)
2	Solenoid valve controller	5	Blue black (solenoid valve)
3	Red (ACC positive)		



1. Remove the left guard screw (Figure 3-1) and install the pressure storage reservoir and solenoid valve (Figure 3-2).

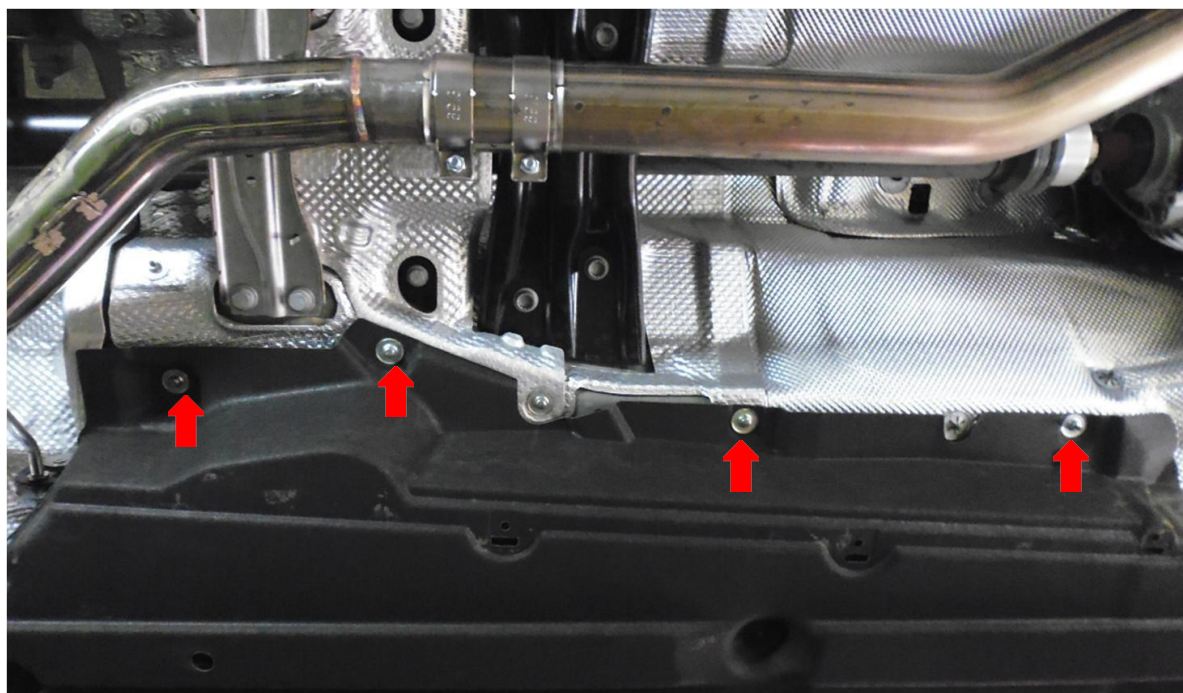


Figure 3-1

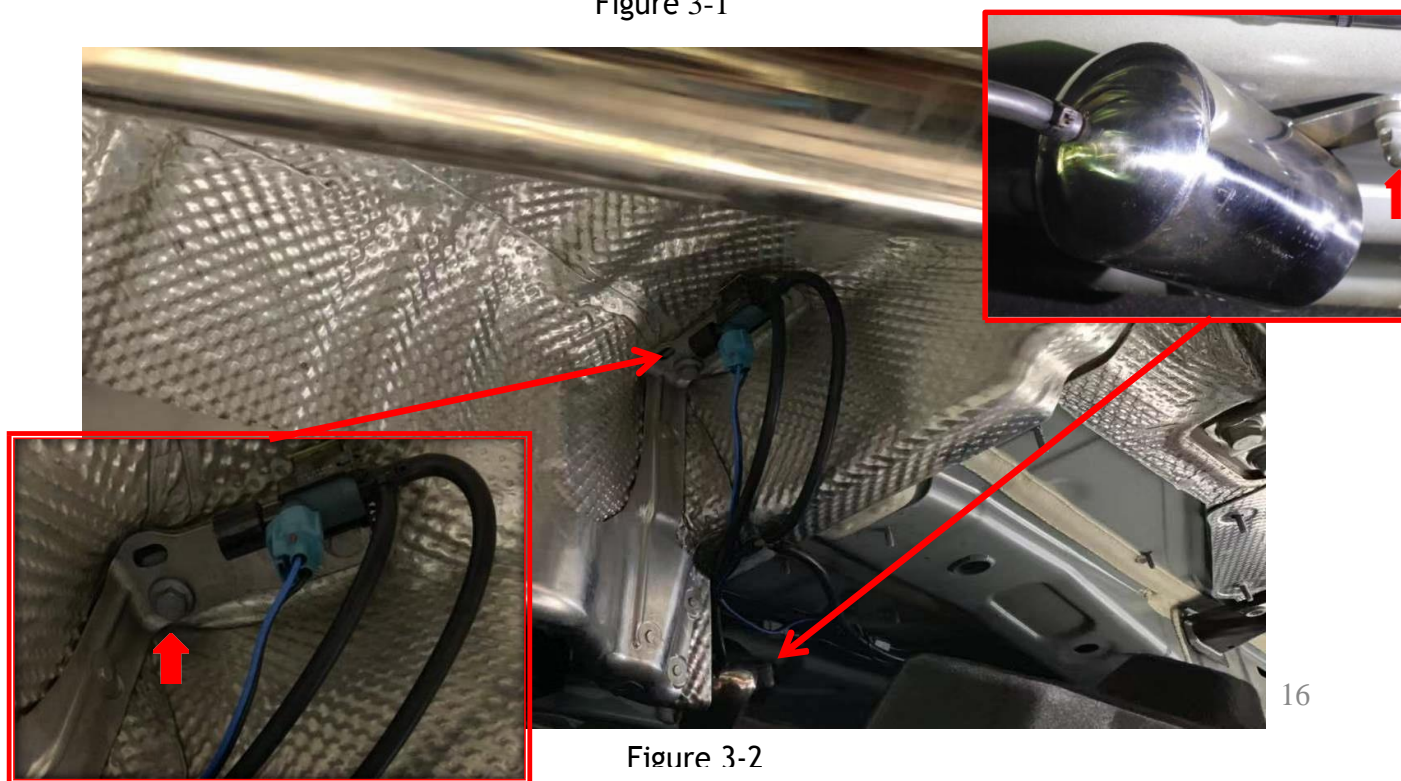


Figure 3-2



2. Remove the vacuum line (Figure 3-3) and use the three-way connector to the vacuum source also attach with the one way valve (Figure 3-4)

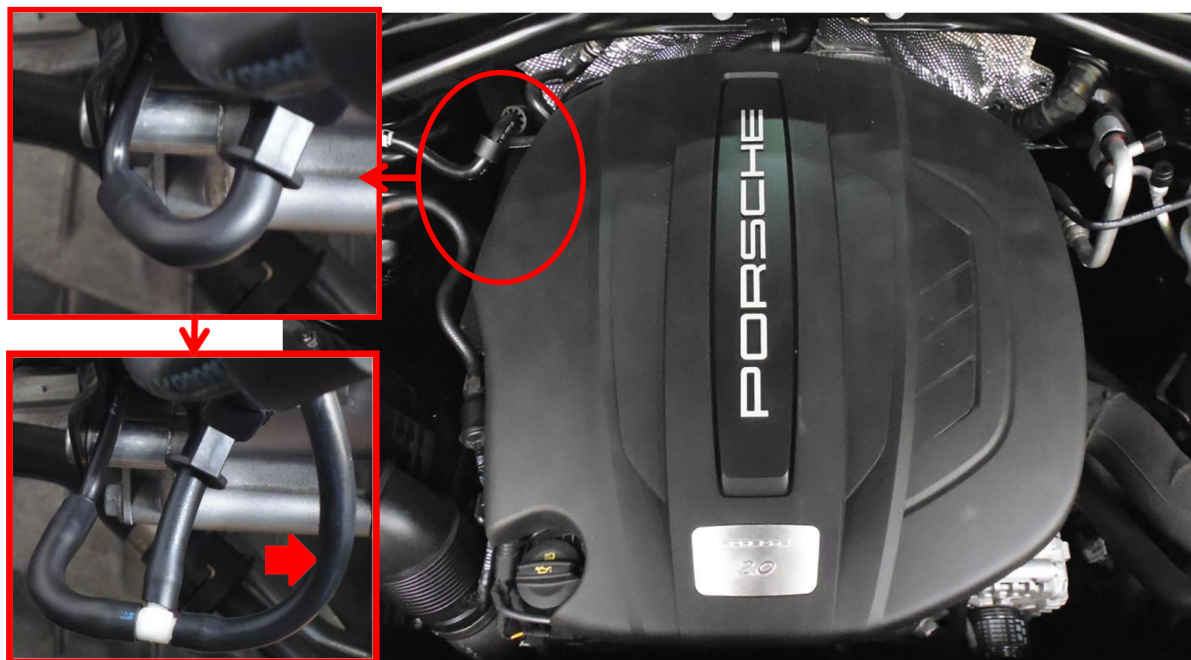


Figure 3-3

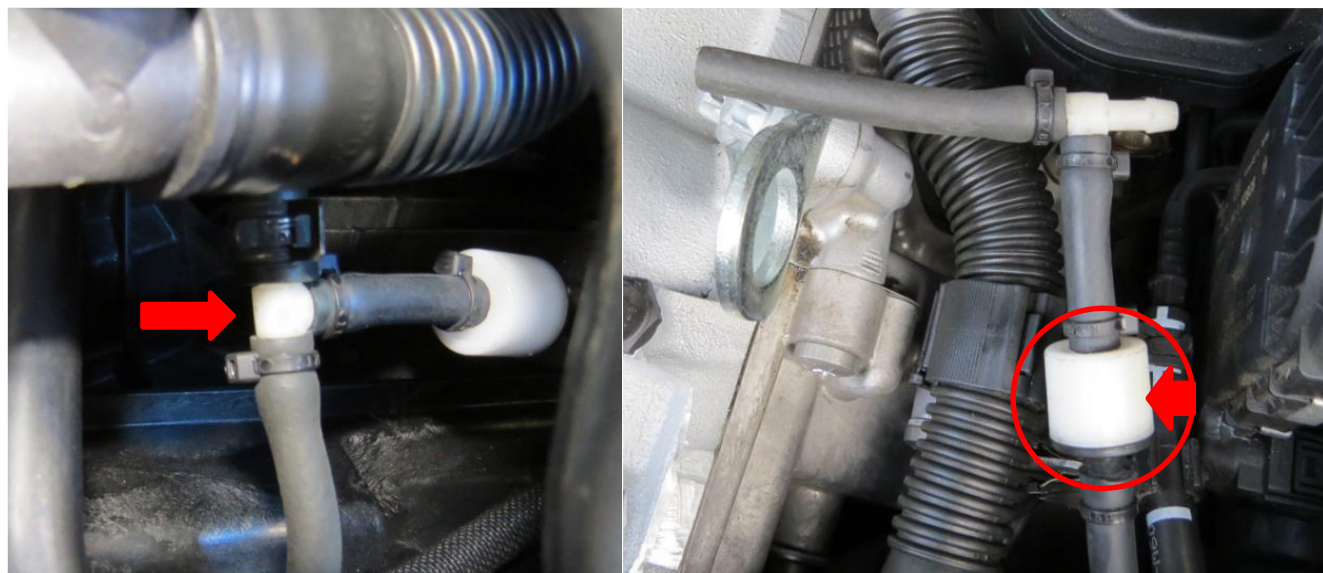


Figure 3-4

3. Connect the engine vacuum source to the pressure tank and connect the three-way connector with valve inlet.(Figure 3-5), the solenoid valve outlet is connected to the left and right muffler valves by using a tee connector (Figure 3-6).

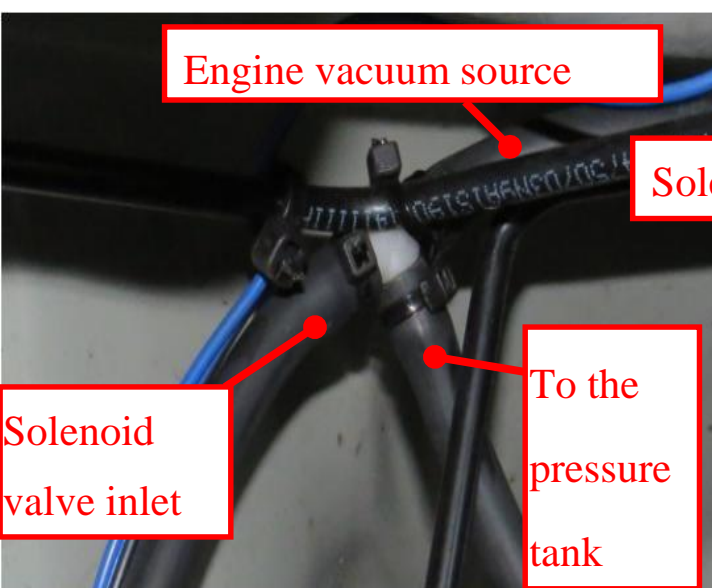


Figure 3-5

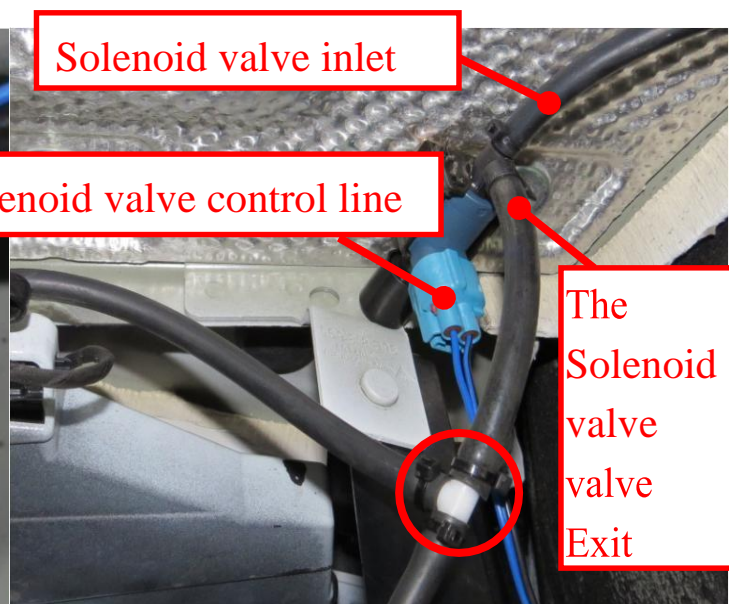


Figure 3-6

4. Connect (Fig. 3-6) solenoid valve control line (blue, black) from the bottom of the vehicle through the steering firewall (Fig. 3-7) to the driver's seat and control box (Figure 3-8)



Figure 3-7

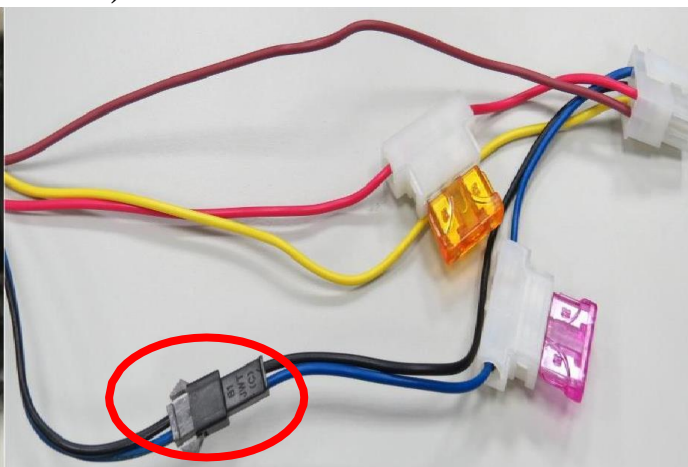


Figure 3-8

Notice: Pay attention to whether the steering wheel is rotated to prevent damage to the wires.

5. On the side of the driver's seat fuse box, measure the ACC positive power connection control box red power line (positive), control box black power line (negative) screw with the car to create ground.



6. After installation, confirm that the valve is working without problems, and reinstall the lower guard plate, engine cover trim, etc.