



Innotech Performance

Exhaust

Vehicle exhaust system  
technology

# Product Installation Manual

Applicable model:  
Porsche Macan-Turbo

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

Version 1

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## Preface

This document explains installation procedures that relates setting and operation methods for the exhaust sold by IPE. There are 5 processes and the working content and time of each process as below chart 1-1. The estimated time is based on team work by an experienced technician and an assistant.

	<b>Working Content</b>	<b>Estimated time</b>
1	Demount Stock Exhaust System	1.5hrs
2	Install iPE Exhaust System	1.5hrs
3	Install Control Box and Wire	2hrs
	total	5hrs

table1-1

## Preface

This document explains installation procedures that relates setting and operation methods for the exhaust sold by IPE.

## Important Notice

IPE developed this exhaust according to the improvement of stock .

Therefore, there will be no effect of the car from the original manufacturer after installation. There is an inductive power supply function between the car key and the car for many vehicle models. Therefore, the car key should be kept away from the car with a distance of at least five meters to maintain safe conditions.

The exhaust of a car right after driven is still in a high temperature. Thus, please wear heat insulating gloves to replace the exhaust, or perform the replacement after the temperature lowered to avoid burns.

For avoiding the generation of resonance, please don't let the valve open too early when setting the valve to open automatically. The opening of the valve is recommended to be set to 60% of gas pedaling. Please refer to page 21 for the explanation of detail setting.

IPE exhaust is designed according to the stock engine data. In case the engine computer upgraded for increasing horse power, obvious resonance in conjunction with this exhaust could occur. IPE also provide revised exhausts for such vehicles, please contact us for further details.

## Tools required for Operating Procedures



**Star groove wrench, star  
driver**

**T30 · T25**



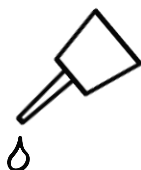
**Outer hexagonal  
wrench**

**10mm · 13mm**



**Torque wrench**

Torque Wrench

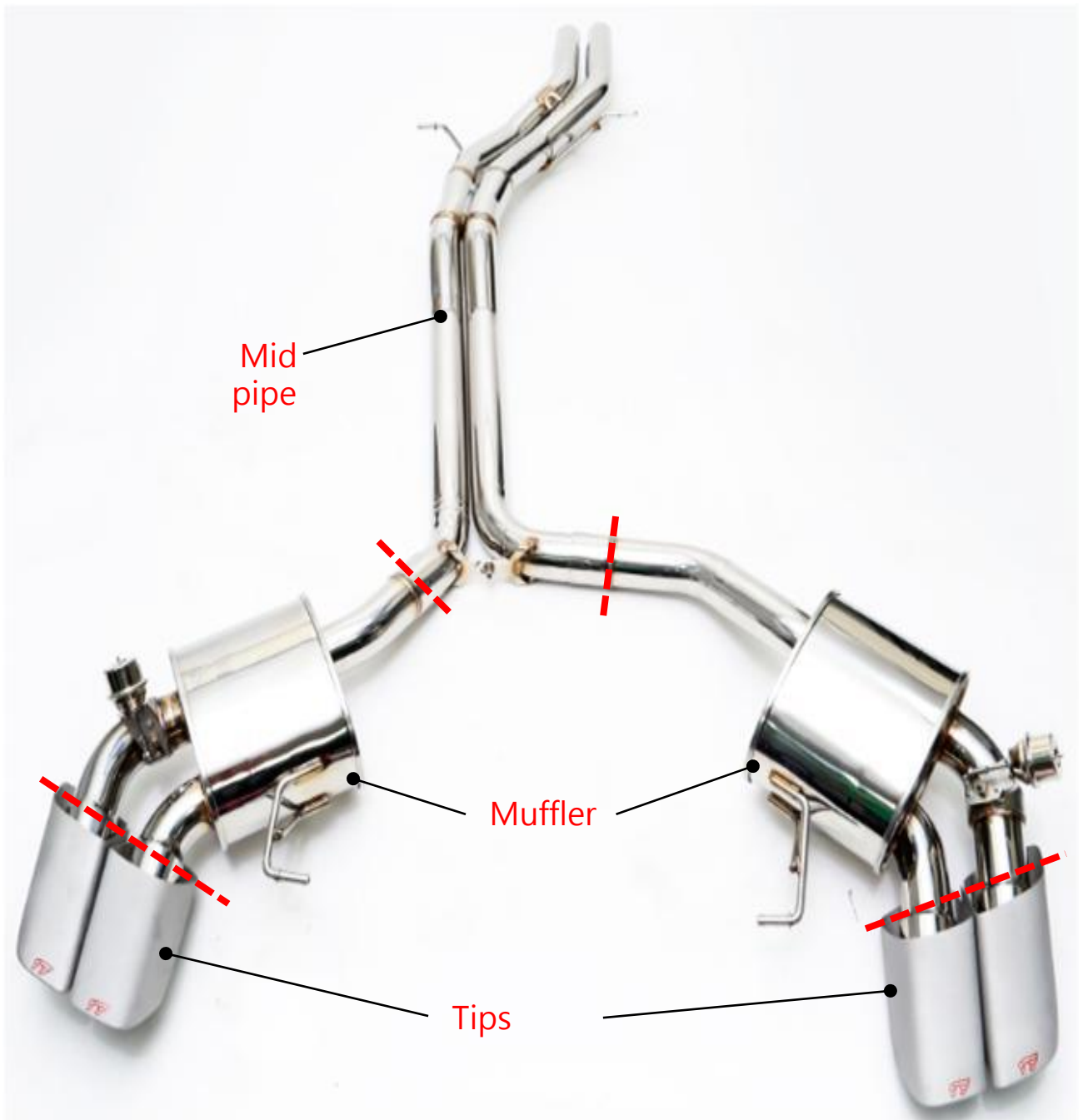


**Rust Preventive spray**



## iPE Macan Turbo Assembly of product appearance

(The product excluding inlet manifold & cat pipe)



# Procedures and related points for Demounting

## Stock Exhaust

1. Demounting bottom shield screws by using T30 star groove wrench.

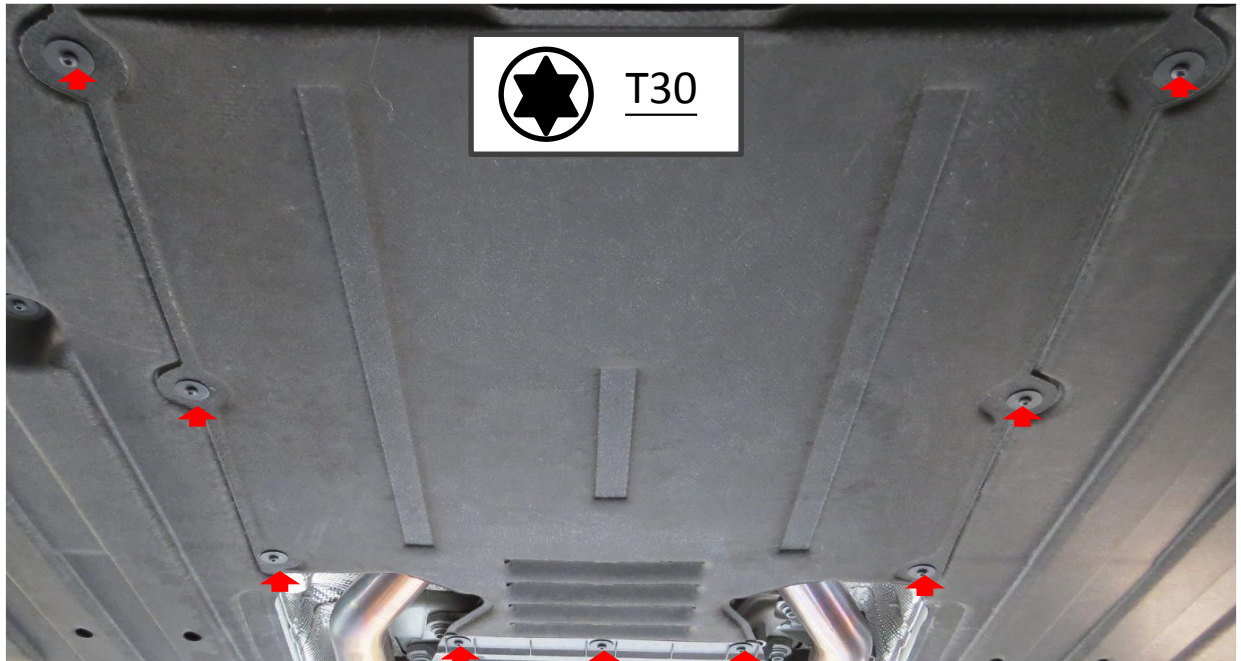


Photo 1-1

2. Loosen band clamps by using 13mm wrench(photo 1-2), and demount both sides hanger(photo 1-3).

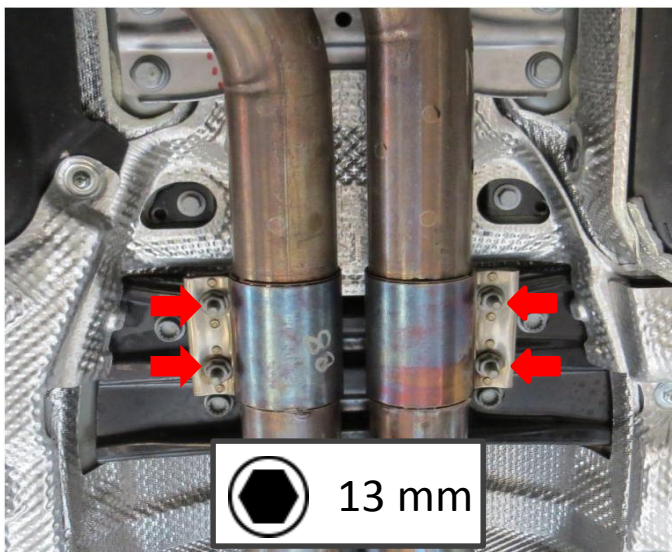


Photo 1-2

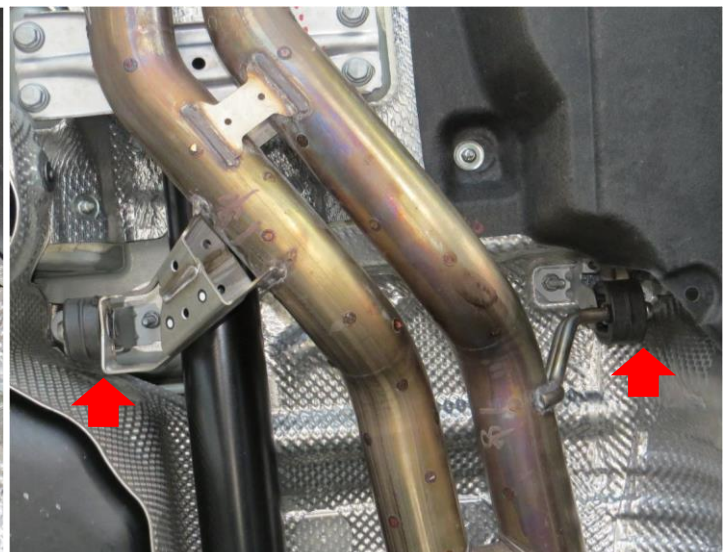


Photo 1-3



3. Unplug the upper auto valve of right muffler(photo 1-4)

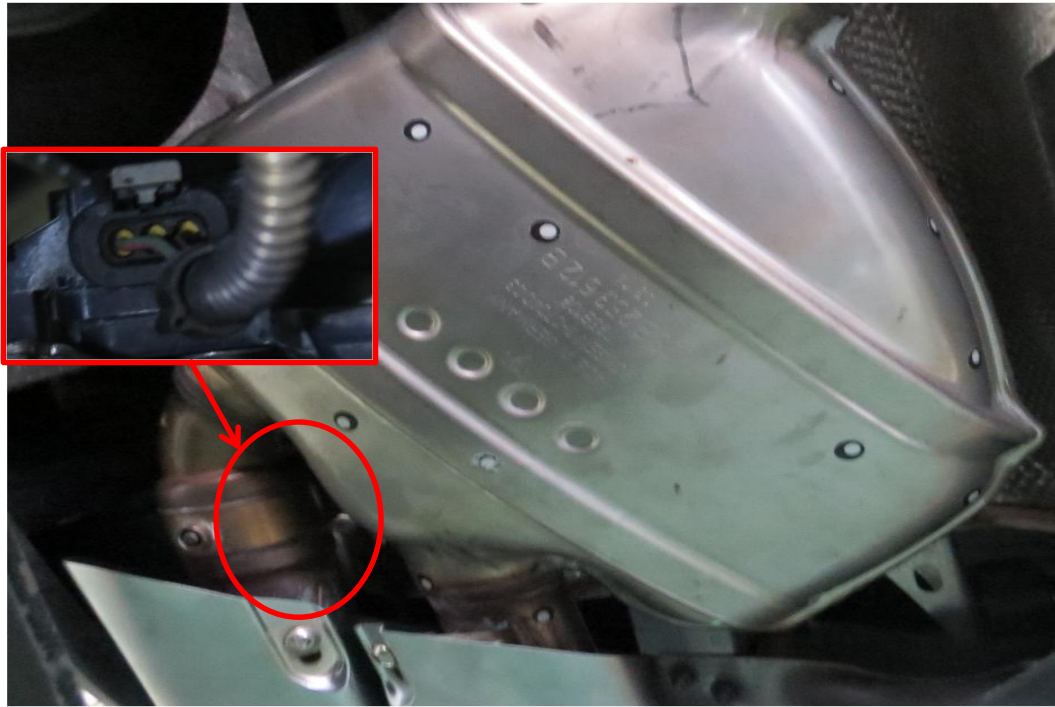


Photo 1-4

4. Demount hanger of left and right mufflers(photo 1-5), and the stock muffler can be taken off.

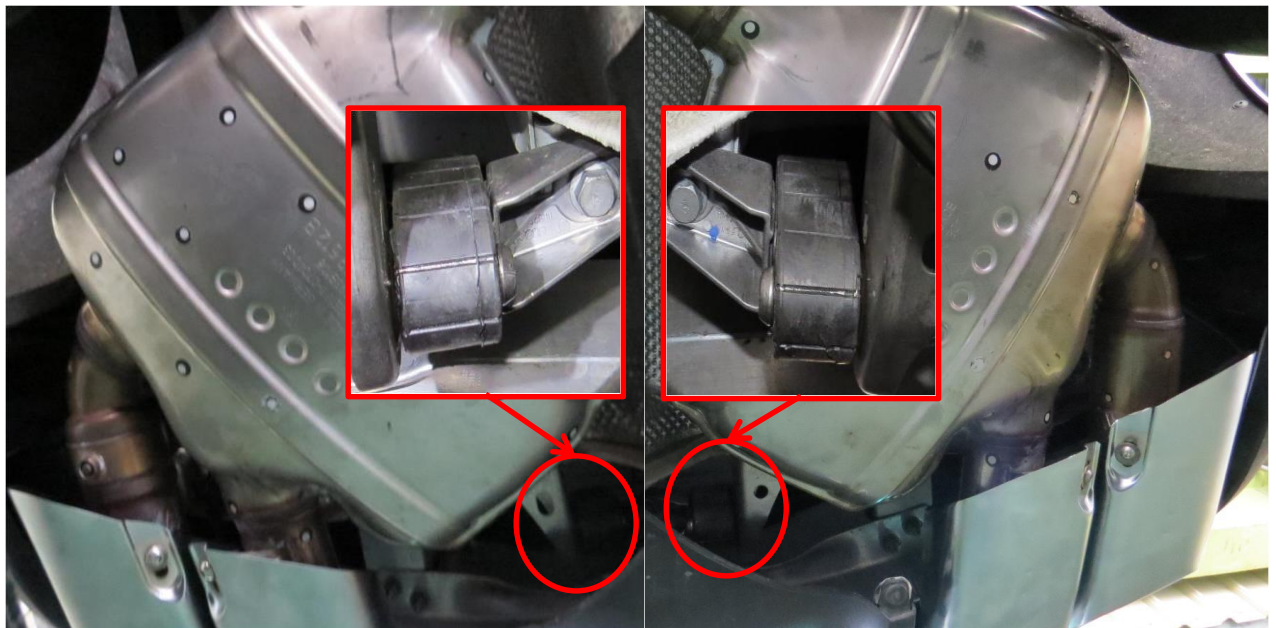


Photo 1-5

## Procedures and related points of iPE Exhaust installation

2-1 Install stock band clamps onto mid pipe(photo 2-1 red circle), and than mount left & right hangers, hanger must be vertical(photo 2-1 arrows), and fasten clamps with 13mm wrench.

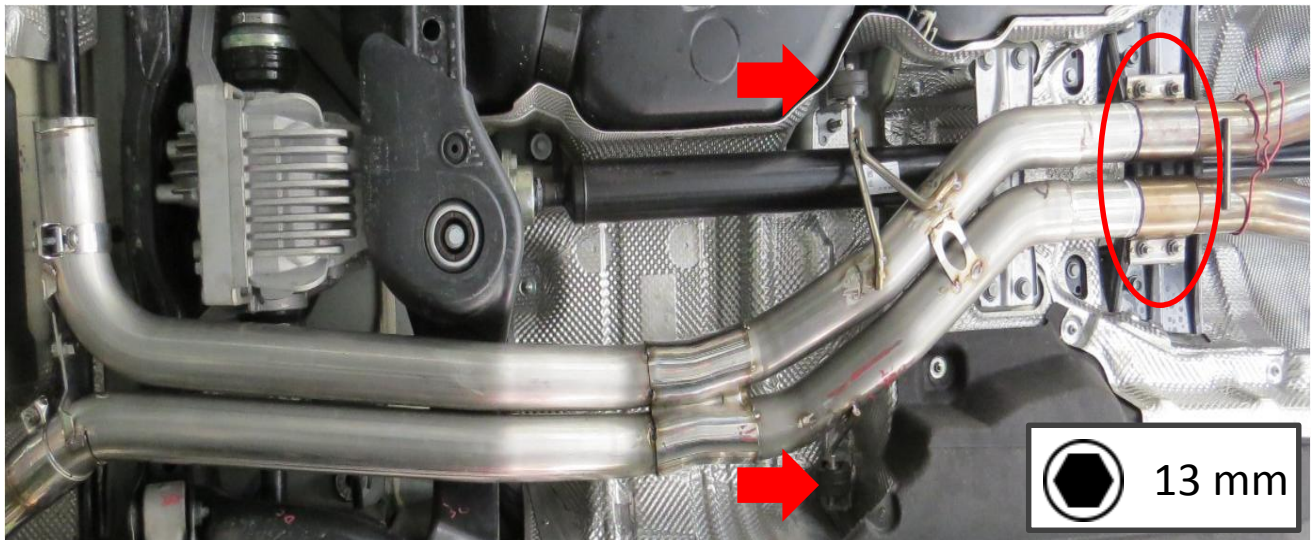


Photo 2-1

2-2 Connect C section to mufflers with 69.3 clamps fasten by 13mm wrench(photo 2-2 red circles), mount hanger and hanger move forward 10mm.(photo 2-2 arrows).

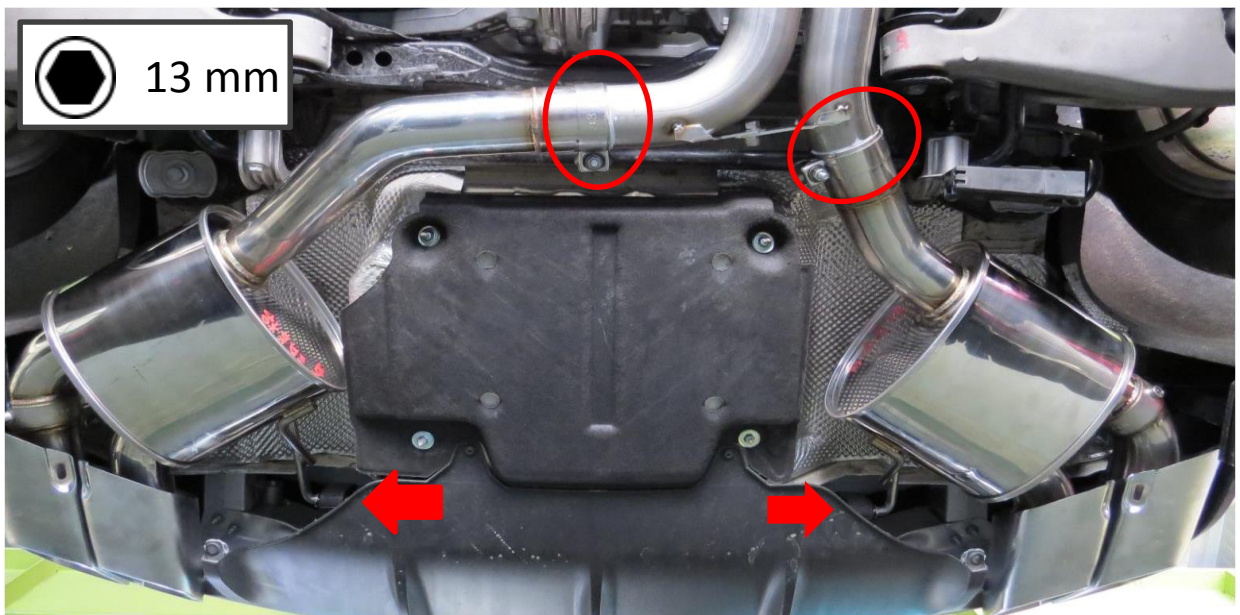


Photo 2-2



2-3 Insert tips into muffler outlet by using star wrench T25 and fasten tips(photo 2-3 arrows).

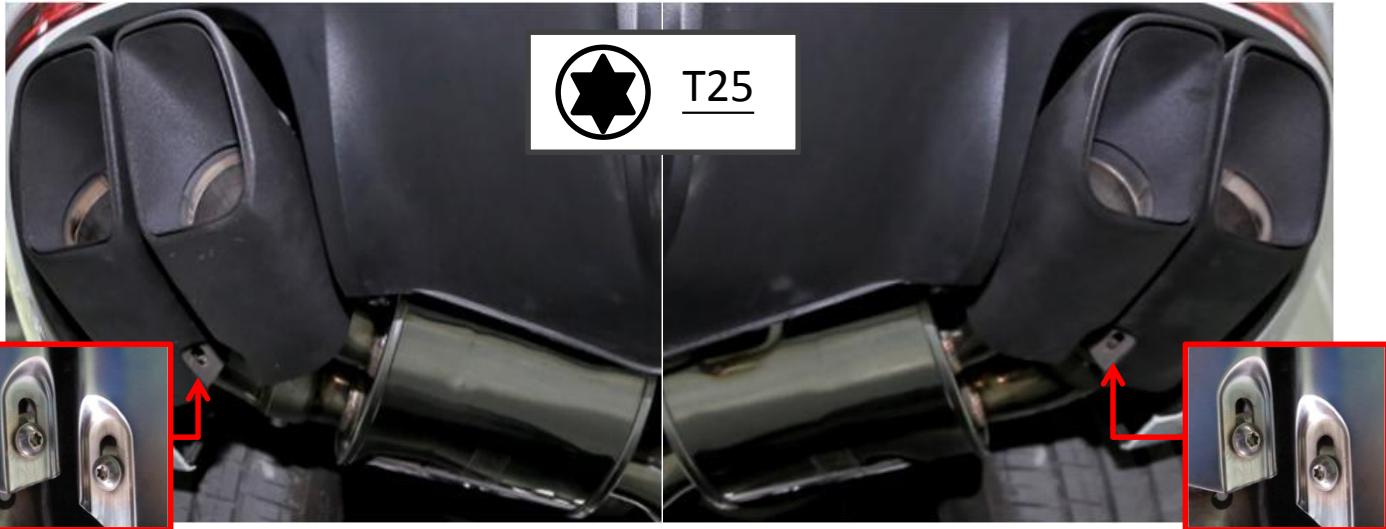


Photo 2-3

**Attention:**

To adjust tips space after muffler installation, loosen the clamps between muffler and mid pipe, move tips to mid-rear and fastening.

## Wiring-harness and Setting

Listed are all parts of control-component and inter-connection, description as indicated.

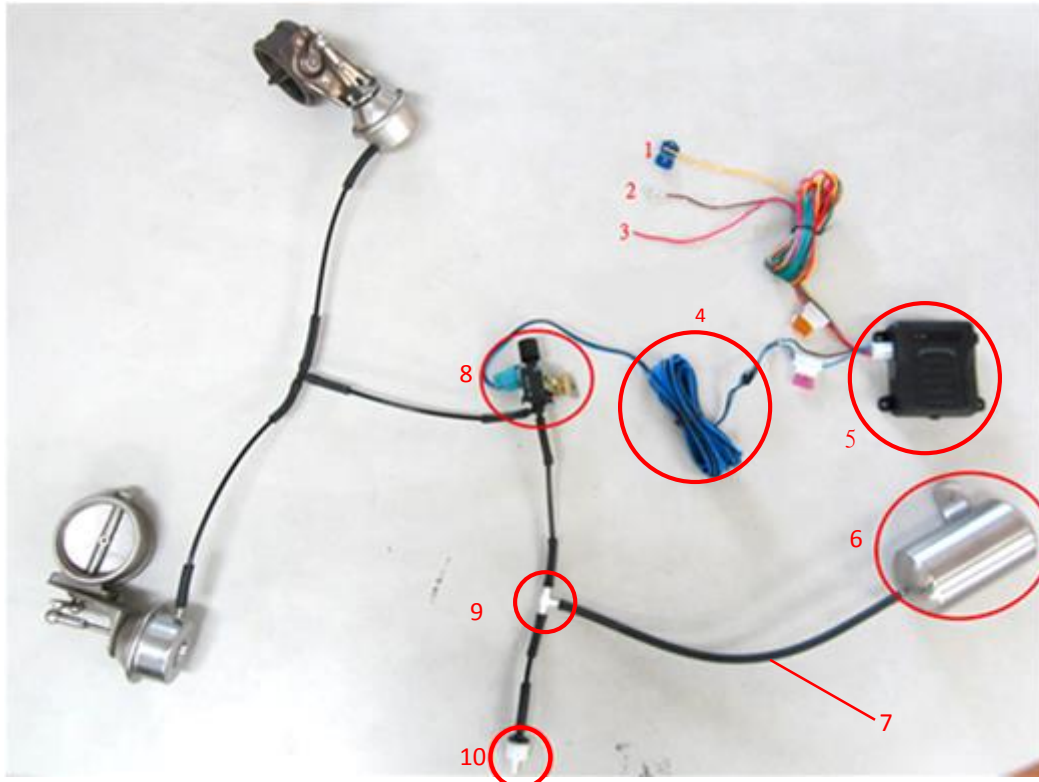
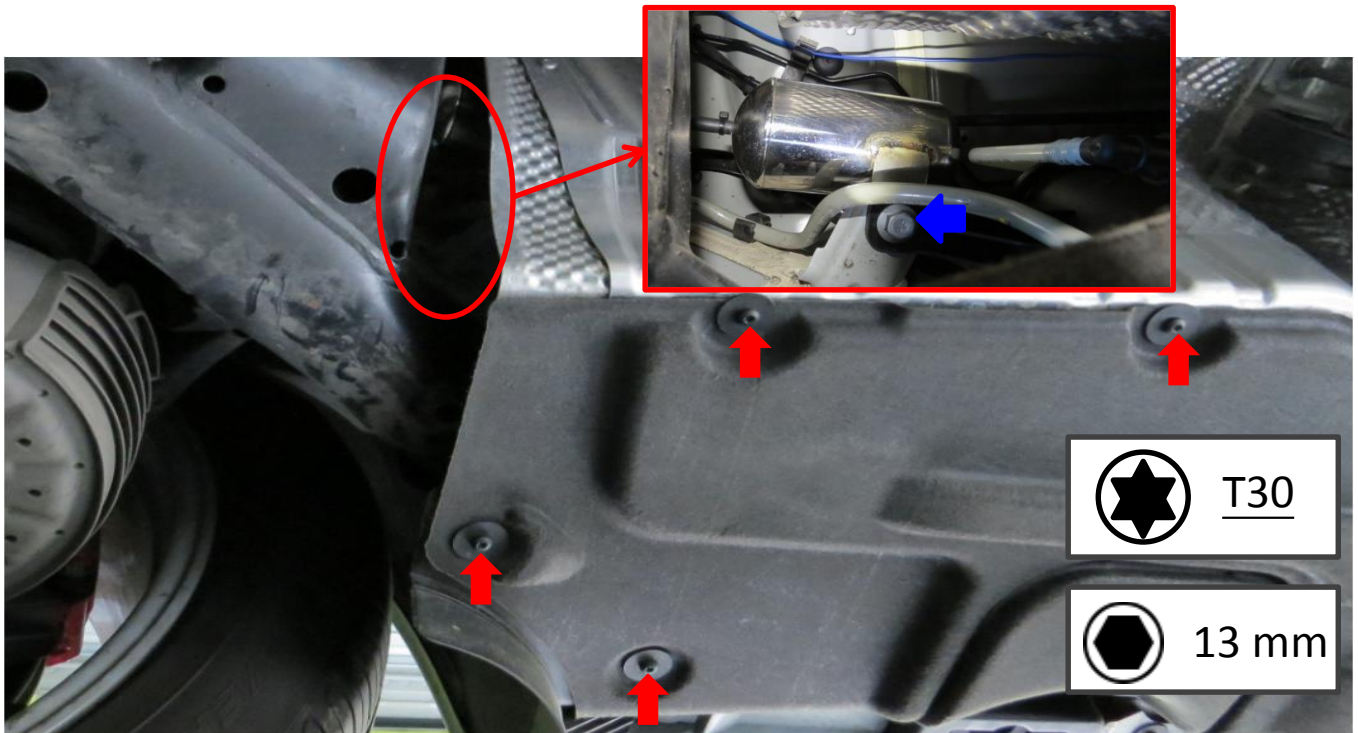


Photo 3-1

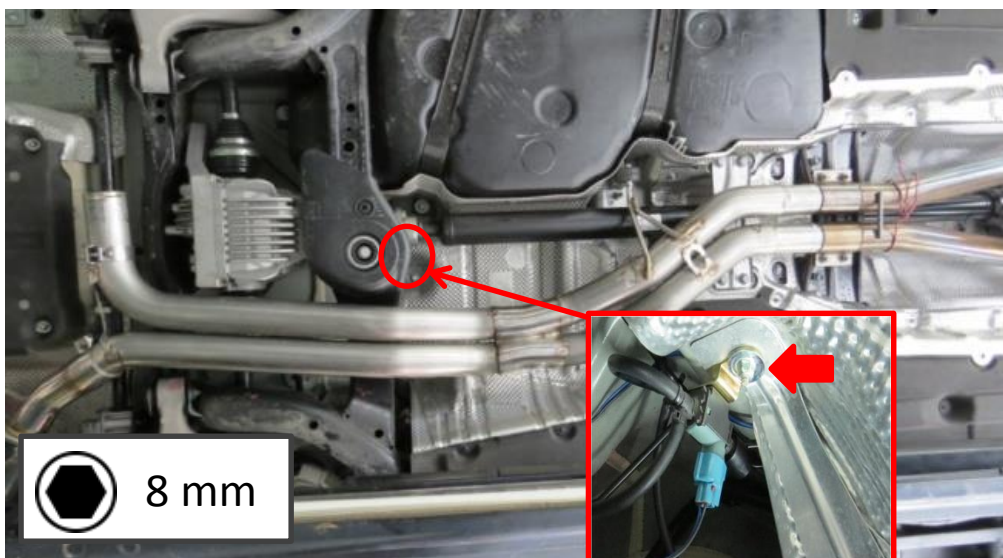
No.	Description	No.	Description
1	Yellow wire / Gas paddle pressing signal wire	6	Vacuum tank
2	Brown wire / Ground wire	7	Vacuum hose
3	Red wire / B+ wire	8	Valvetronic solenoid valve
4	Black blue wire / solenoid valve wire	9	Three-way branch
5	Valvetronic control box	10	One-way valve

Table 3-1

3-1 Demount the screws of front shield of rear left wheel(photo 3-1 red arrow), demount 13mm screws inside shield and mount vacuum tank(table 3-1, no. 6) here(photo 3-1 blue arrow).



3-2 Demount 8mm screw in front of rear differential, and mount solenoid valve(table 3-1, no.8) here(photo 3-2 arrow).





3-3 Demount vacuum pipe(photo 3-3), connect one-way valve(table 3-1, no.10) with three-way branch(photo 3-4 red circle). 3-3.

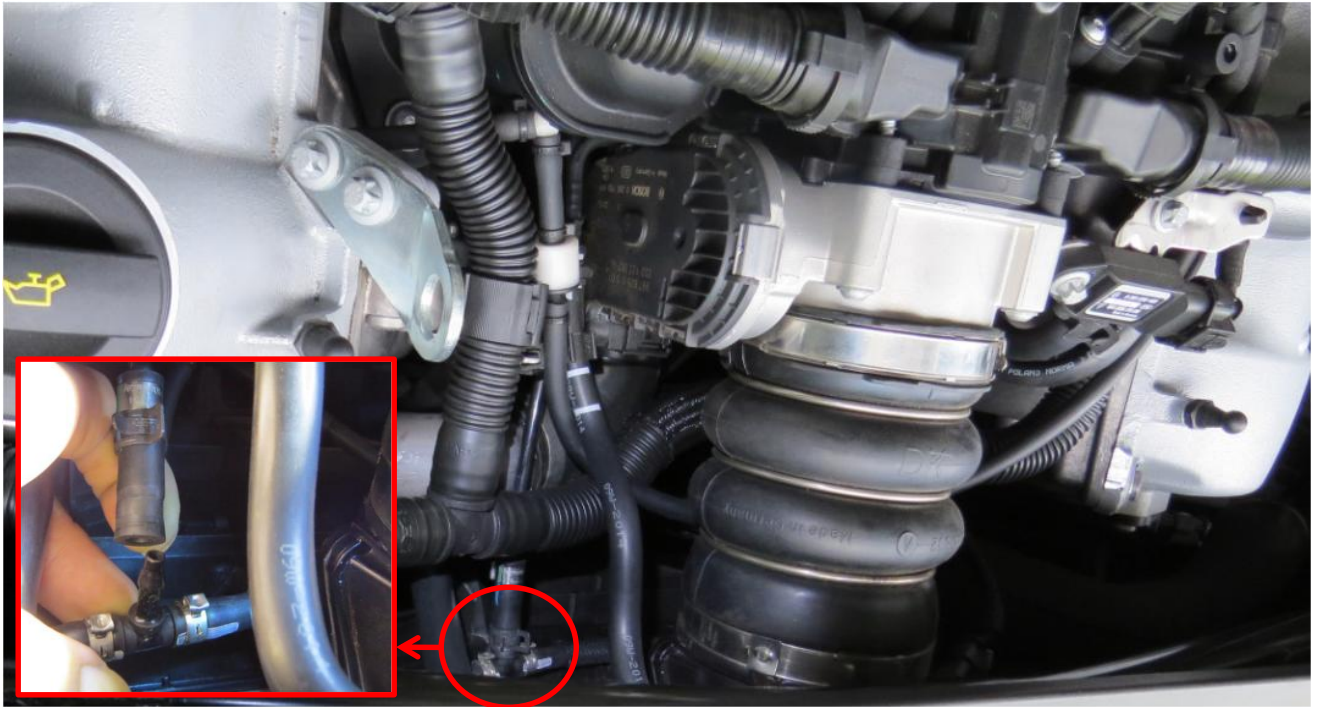


Photo 3-3

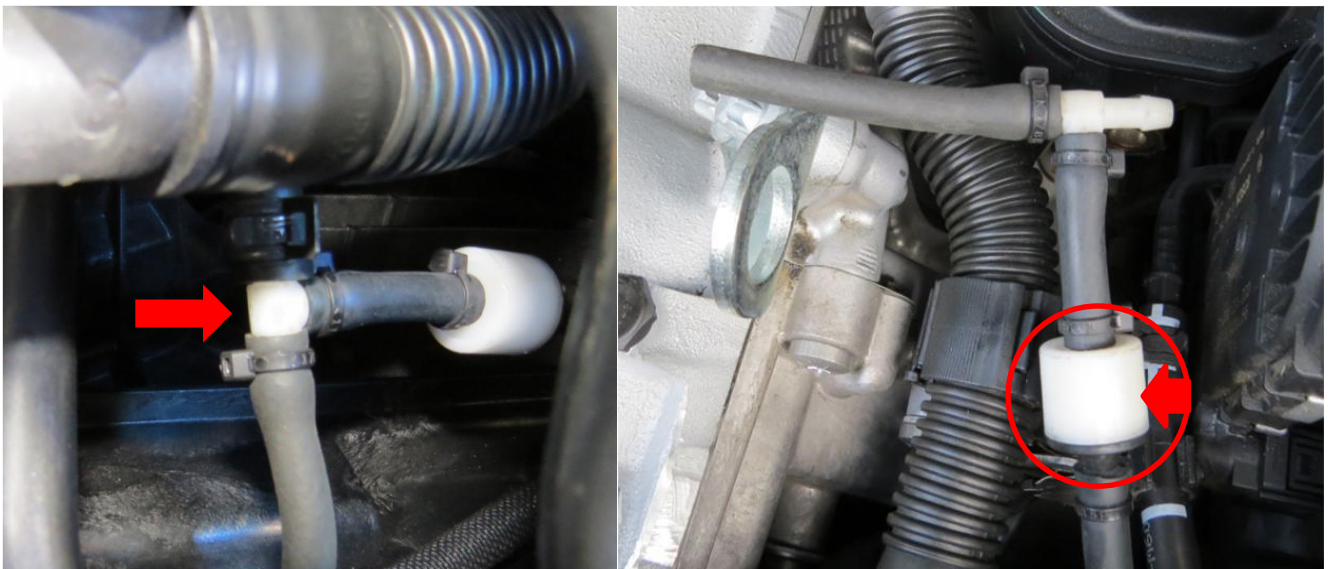


Photo 3-4



3-4 Connect engine vacuum source to vacuum tank, and connect solenoid valve entry with three-way branch(photo 3-5). Connect solenoid valve exit with three-way branch to left & right muffler valve(photo 3-6 red circle).

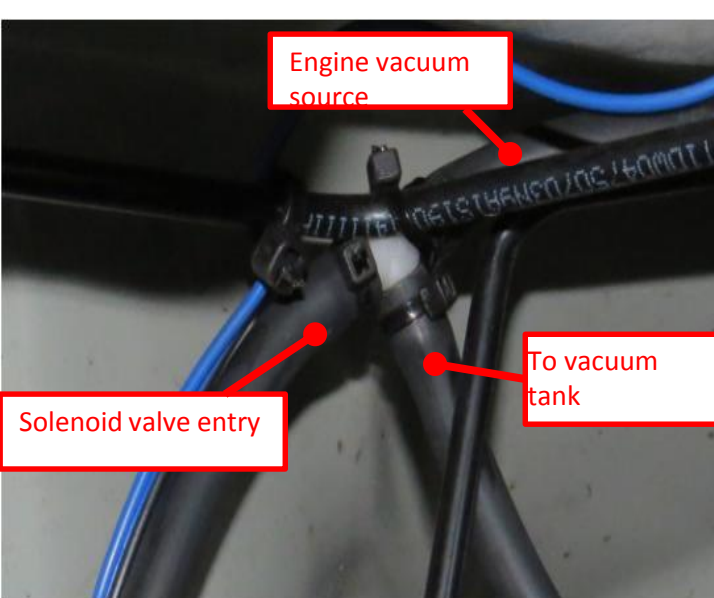


Photo 3-5

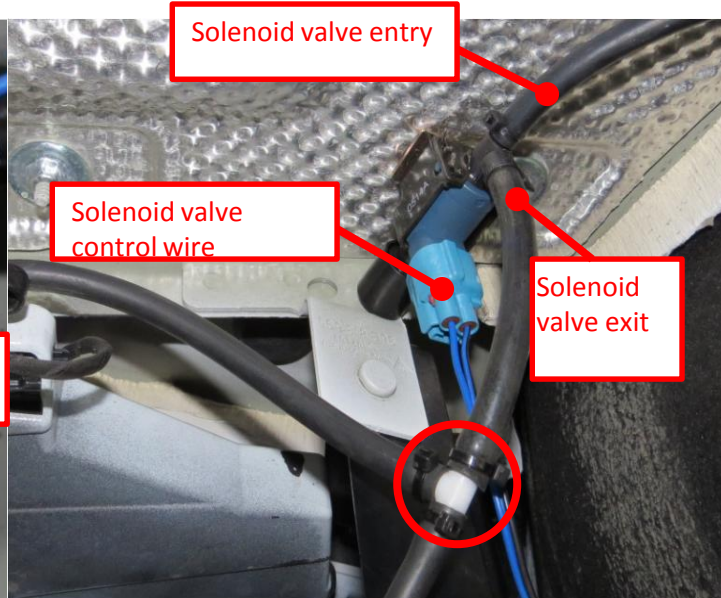


Photo 3-6

3-5 Connect solenoid valve control wire through steering seal from car bottom to control box in driver seat.

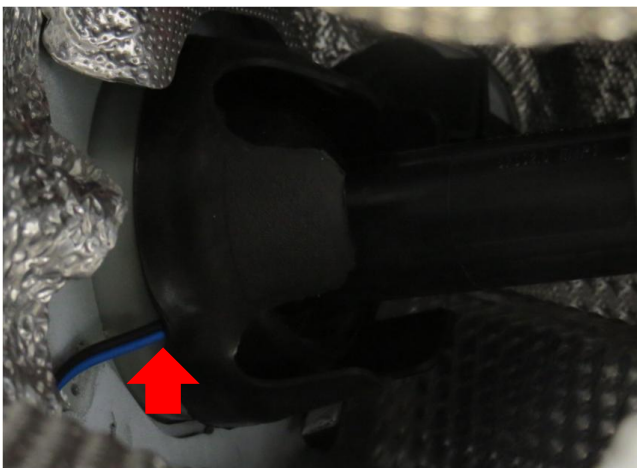


Photo 3-7

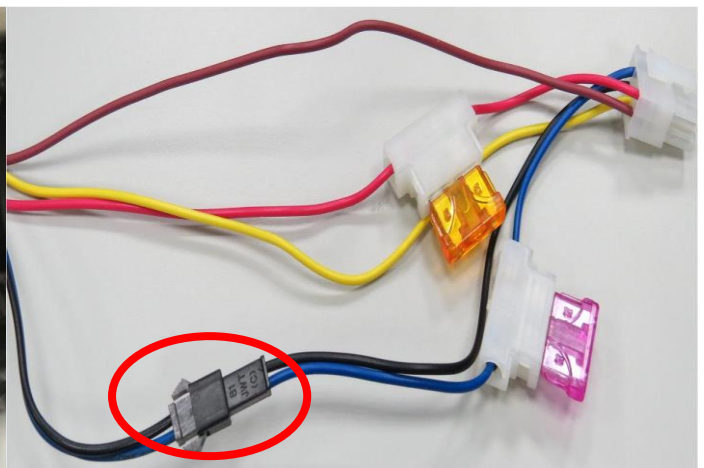


Photo 3-8

Attn:

To prevent wire damaged, be careful solenoid valve control wire chafe on steering turning when through steering seal.

3-6 Demount screws of steering wheel bottom & left shield by using T25 star wrench(Photo 3-9 arrow).



Photo 3-9

6. Pull out gas paddle wire head, and clip on signal wire(photo 3-10 arrow, yellow gray no. 4 stitch) with bridging terminal, and plug control box gas paddle signal wire(table 3-1, no.1) connect to photo 3-11. Confirm no shortage and bad connection, and cover with tape(photo 3-11), plug gas paddle wire head back in.

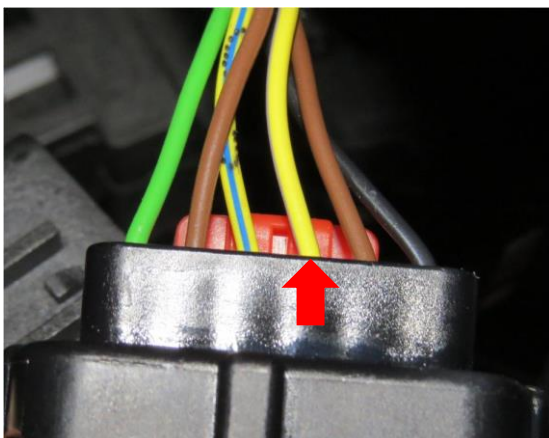


Photo 3-10



Photo 3-11



7. Unplug fuse inside fuse cover in left side of steering wheel, and connect control box wire (photo 3-13) to fuse bridging terminal.



Photo 3-12

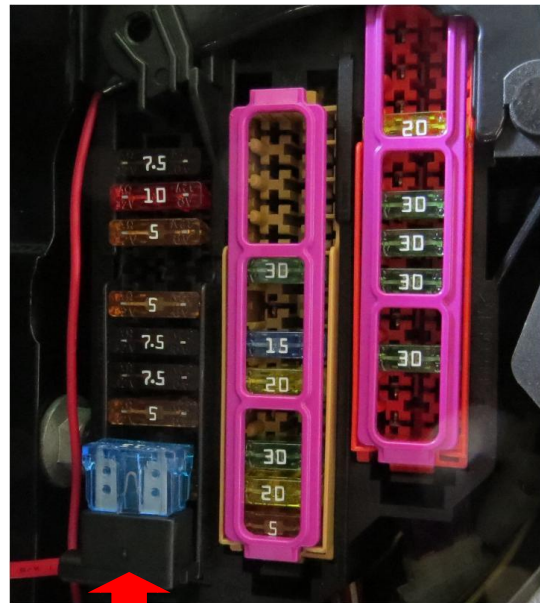


Photo 3-13

8. Mount control box ground wire to ground connection in left side of steering wheel by using 10mm wrench(photo 3-14).



Photo 3-14

Above control box and wiring installation complete, setting refers to control box setting, and hide box inside the steering wheel bottom cover.