



iPE Exhaust

Automotive exhaust system engineering

Mercedes-Benz

AMG GT43/53

Product installation instruction

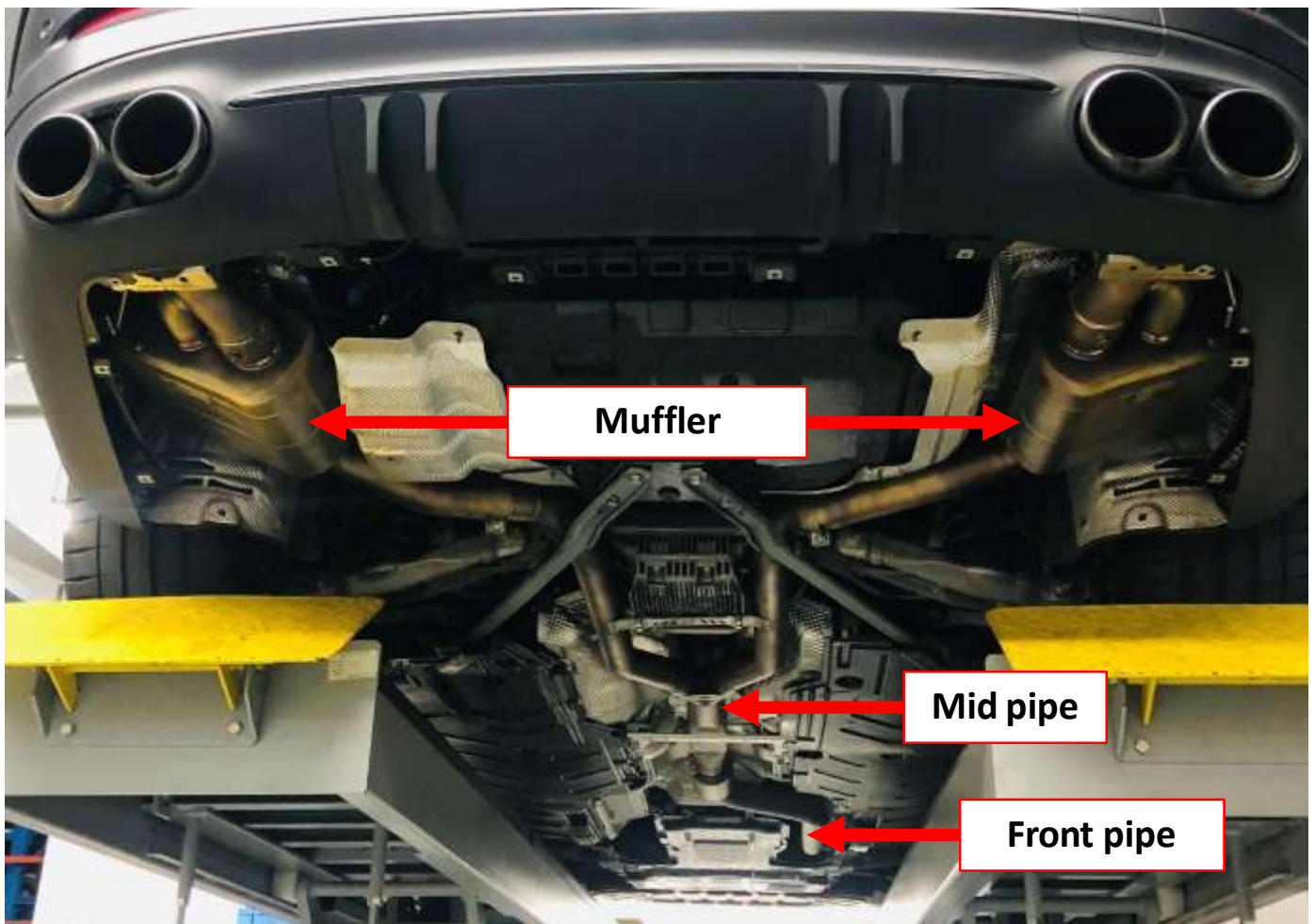
I. Important information

iPE developed exhaust systems based on the OEM exhaust to avoid issue with installation. Modern car keys and the vehicle itself have an inductive power transmission function, we suggest to keep the car key at least 5 meters away from the vehicle for safety purpose. Please wear insulated gloves to replace the exhaust pipe when hot, or replace it after cool down to avoid burns.

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

The iPE exhaust system is an evolution designed based on OEM spec. If the vehicle has ECU tuning, there may be possible resonance from the exhaust system. If you have any questions about this installation instruction, please contact your local iPE dealer or email us at info@ipe-f1.com

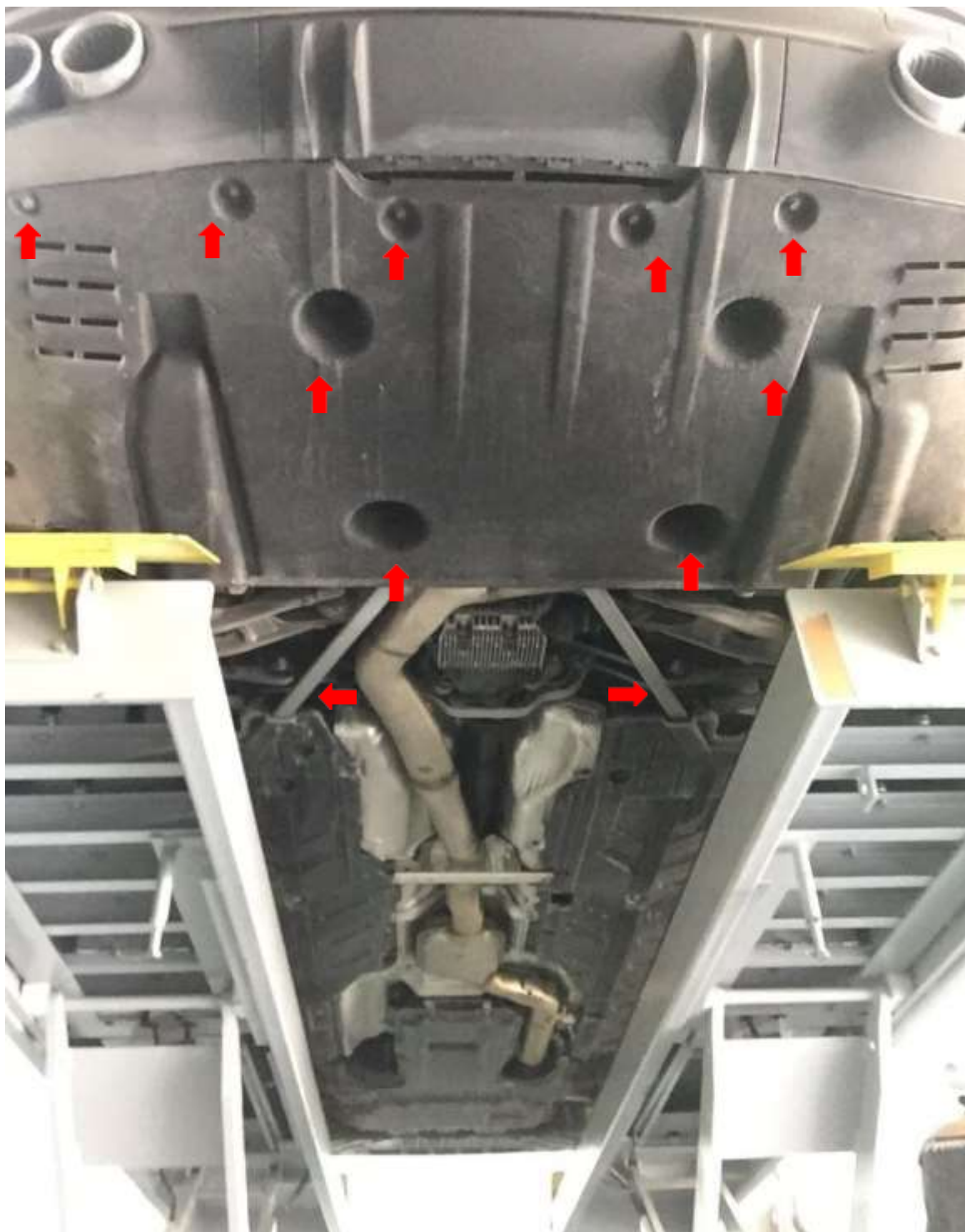
II. Mercedes-Benz AMG GT43/53 product assembly



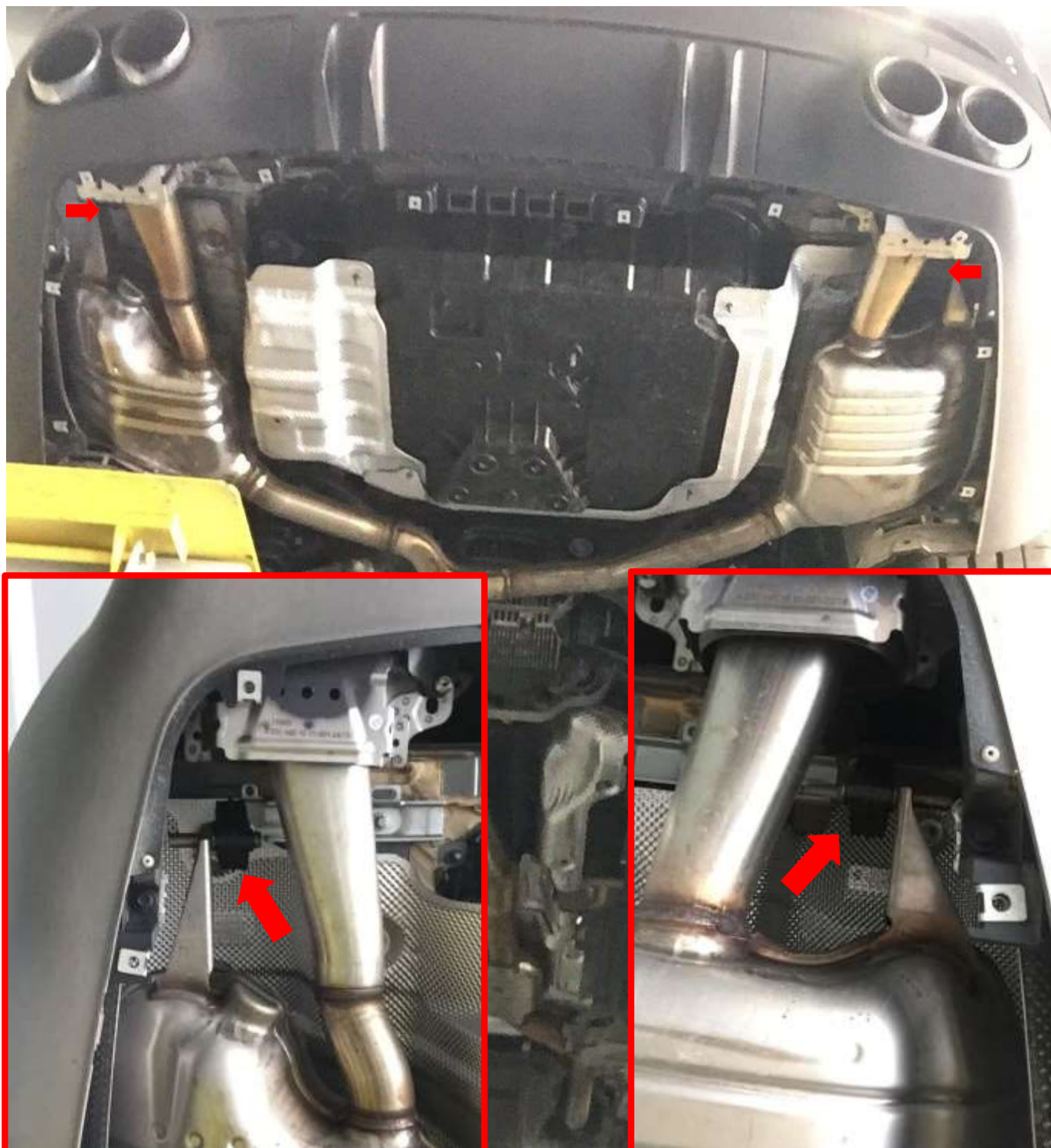
III. Remove the original exhaust

1. Remove the original rear guard and chassis support.

Warning: After the screws are removed, placed neatly to avoid confusion during reinstall.



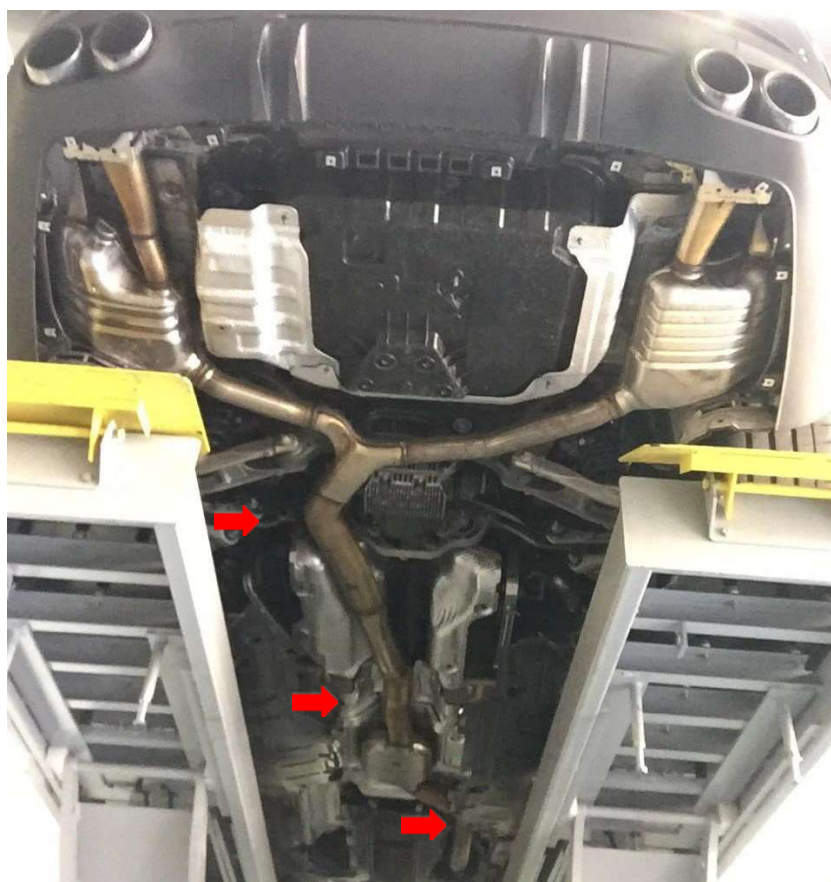
2. Remove the muffler bushes then remove the original muffler.



3. Remove the upper guard of engine cover.
4. Remove the heat shield of the cat pipe.
5. Loosen the cat pipe from the front pipe clamps.



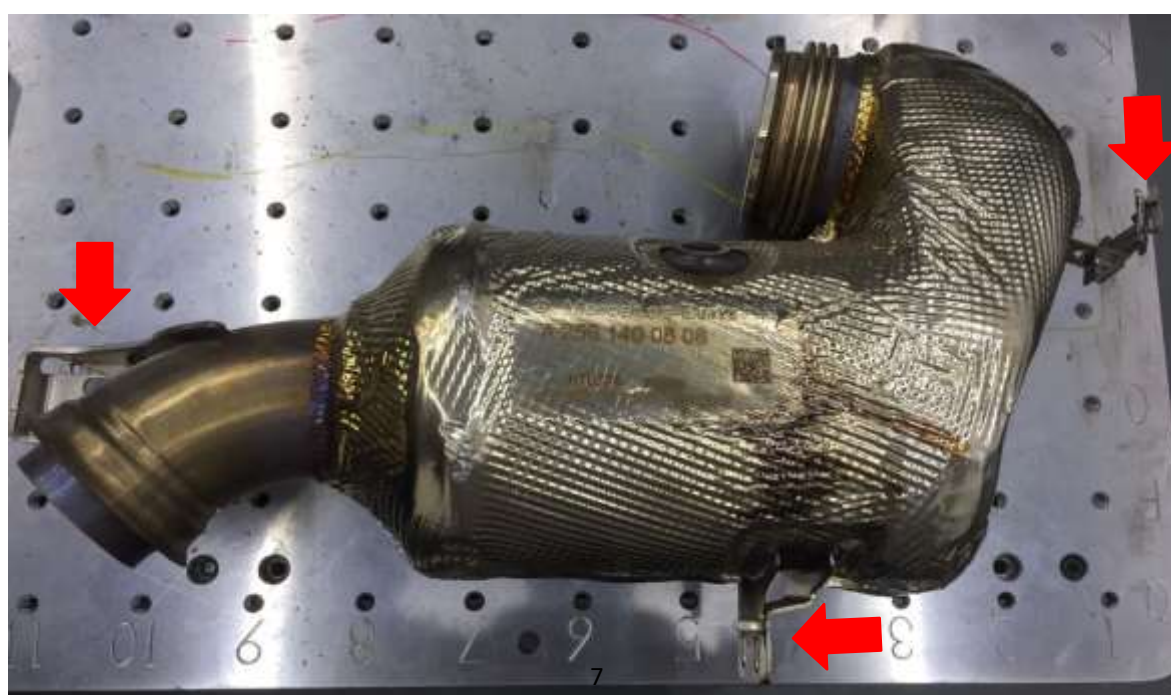
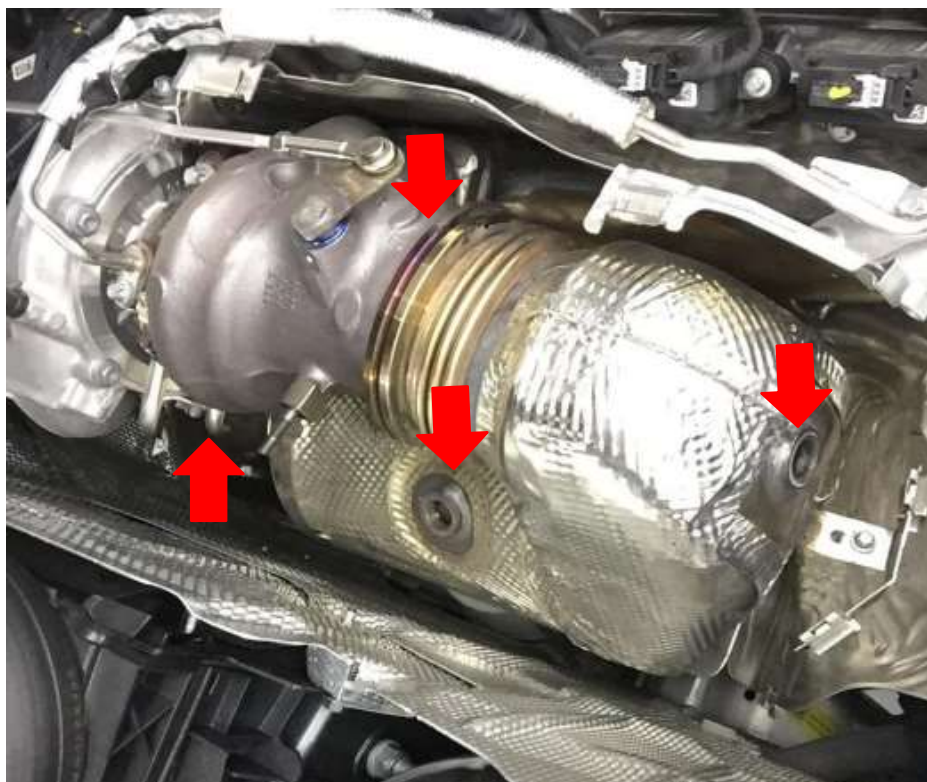
6. Remove the chassis support braces.
7. Remove the front pipe / /middle section bushes screws.
8. Then you can remove the original exhaust.



9. Remove the oxygen-containing plug first, and then remove the oxygen-containing sensor.

10. Remove the retainer clamps and bushes screws.

11. Then remove the original cat pipe.



IV. Install the iPE exhaust

1. Put the original front pipe clamps on the iPE cat pipe and install it on the car.
2. Tighten the OEM front retainer clamps and screw the bushes are locked to the position.
3. Install the oxygen sensor on the cat pipe.
4. Insert the oxygen sensor plug back and fix the wire set on the brace to complete the installation of the cat pipe.
5. Lock the heat shield of the cat pipe and put the engine cover to the position.



6. Lock the clamps at the connection between the cat pipe and the front pipe.
7. Lock the screw of the front pipe bushes back.
8. Adjust the iPE front pipe to position.



1. Install the mid pipe and the mufflers to the positioning.
2. Tighten the bushes and the screws of the muffler clamps.
3. Lock the chassis support back and check the spacing is 15mm.
4. Complete the installation of the full exhaust system of iPE.



VI. Install the control box and wiring

※ The parts of the control element and the connection methods are shown in Figure3-1, and the description of names and number are shown in Table 3-1.

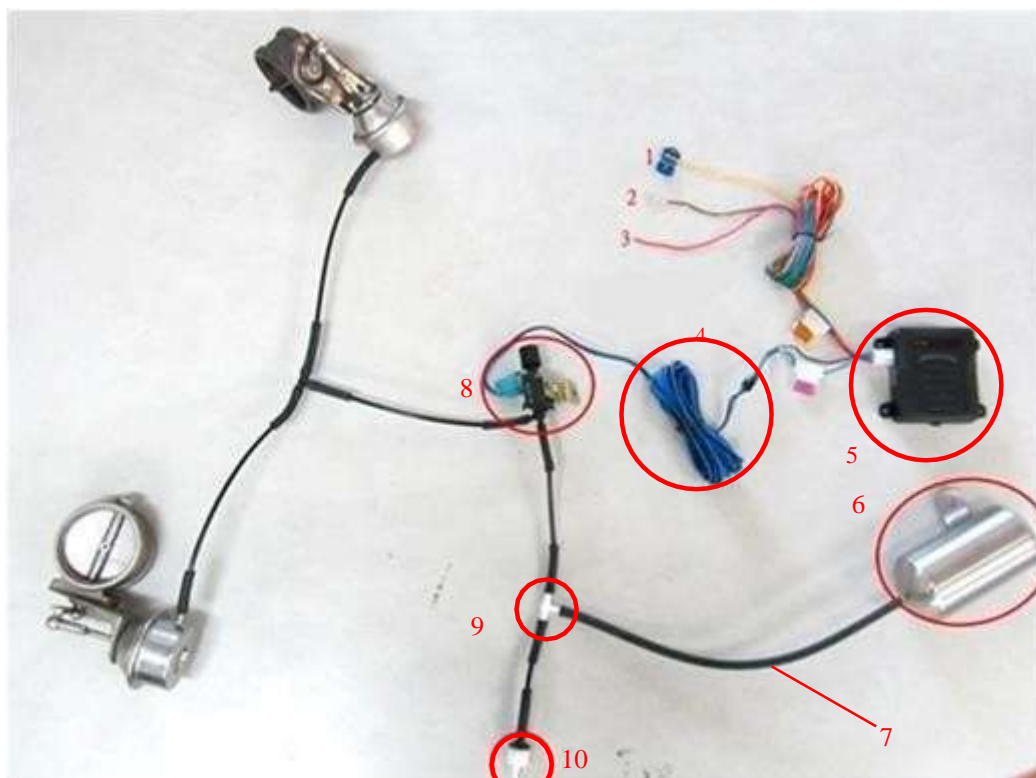


Figure 3-1

Table 3-1

No	Product	No	Product
1	Yellow Cable / Throttle signal cable	6	Vacuum pressure reservoir
2	Brown Cable / Ground cable	7	Pressure line
3	Red Cable / Power line	8	Vacuum solenoid valve
4	Black & Blue Cable / Solenoid valve connection cable	9	Three-way connector
5	Control host	10	One way valve

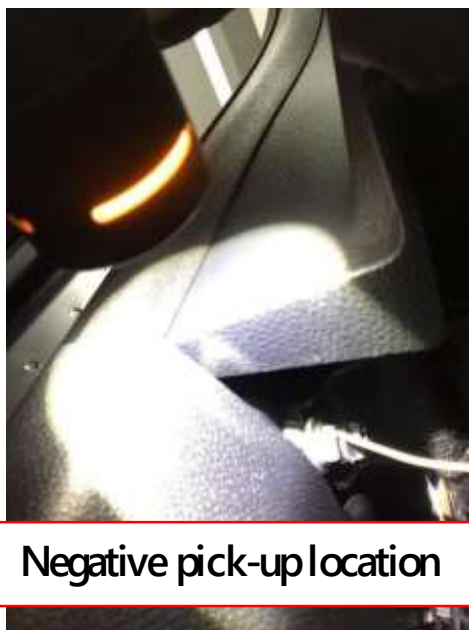
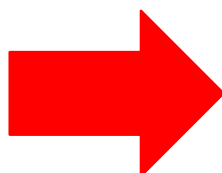
1. Install the gas cylinder and solenoid valve in the recessed area of the chassis as shown in the figure.
2. Connect the solenoid valve to the vacuum tube and pull it forward to the engine room.
3. Connect the solenoid valve to the vacuum tube and use the three-way to tap it back to the gas cylinder and the vacuum ball of the left and right mufflers.
4. Remove the trim panel under the steering wheel and install the remote control box on the inside of the trim panel.
5. Connect the one-two extension cable to the solenoid valve, pull it into the engine room through the lower guard, pass through the waterproof plug in the engine room, and then pull it to the inside of the driver's seat to connect to the control box.
6. Connect the throttle signal cable to the blue cable position (as shown by the arrow in the figure).



7. Remove the original vacuum tube, use iPE attached the 'middle 3-way' and rubber tube to connect the one way valve and the vacuum tube.



8. Remove the hood fuse cover.
9. Measure the positive power of ACC and connect the red power cable (positive) of the control box.
10. Connect the negative pole to the ground.
11. Check whether the valve control system of the remote control is operating normally, and adjust the appropriate valve opening timing. For the adjustment method, please refer to the instructions on the next page. If it is normal, all installations will be completed.



Negative pick-up location



VII. Remote control & control box light analysis

Remote control



Control box light

The red light is the power indicator

The green light is the valve switch indicator

The yellow light is the AUTO mode switch indicator



ON mode
Valves open



OFF mode
Valves closed



AUTO mode
Valves closed



AUTO mode
Valves open

Note: AUTO mode is to control the valve switch according to the throttle position signal
(Detailed settings on the third page)

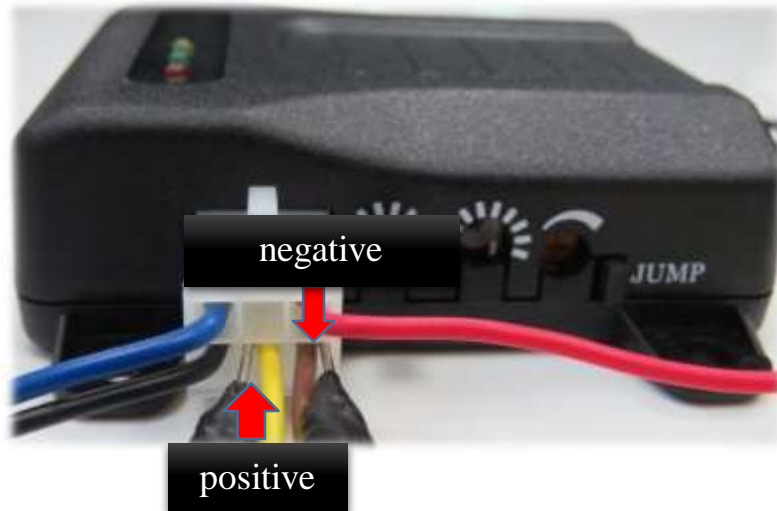
VIII. Control setting process

1. After installation, turn the key to the ON position.

Whenever the key restarts (OFF → ON) the control box is initially set to AUTO mode.

2. Connect the positive pole of the multimeter to the yellow cable and the negative pole to the brown cable.

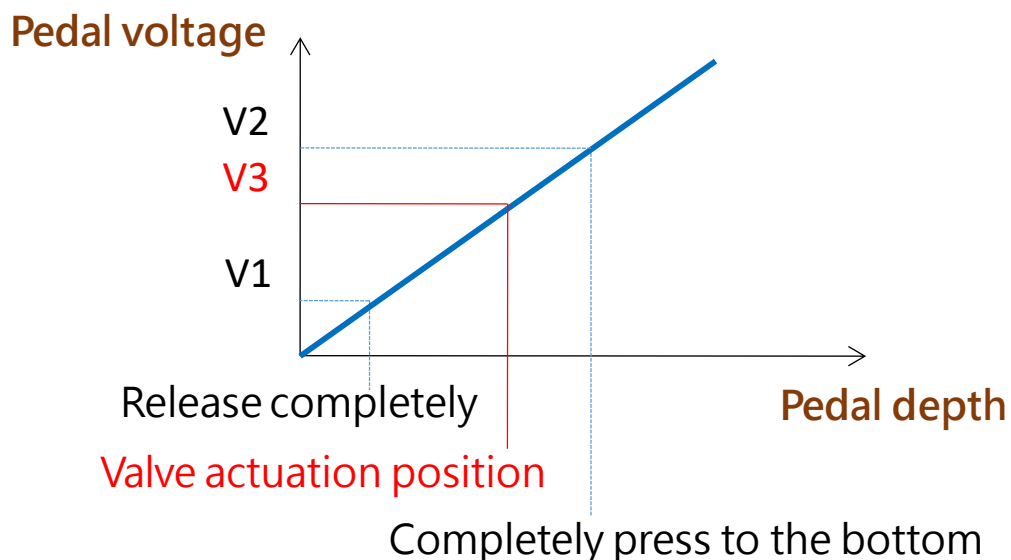
Note: Be careful not to touch the two ends to cause a short circuit



3. Press the accelerator pedal to the bottom, at this time the maximum voltage is V2. Then release the pedal completely, at this time the minimum voltage is V1. The voltage of the valve opening timing is V3.

Calculation formula: $V3 = (V2 - V1) \times 0.6 + V1$

Note: 0.6 is the recommended percentage, this value can be adjusted according to the user's ideal opening timing.



4. Slowly depress the accelerator pedal to the voltage value of V3, and then adjust the knob
(A) Turn right until the green light is on and the setting is complete.



AUTO mode
Valves closed



AUTO mode
Valves open



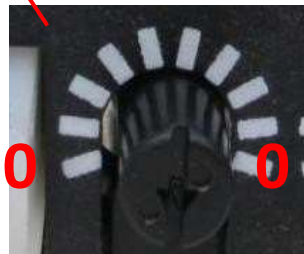
If there are two knobs,
 turn clockwise from right to bottom.

Accelerator pedal depth --- deep

Voltage --- High

Valve opening time --- later

10 **0**



Accelerator pedal depth --- shallow

Voltage --- Low

Valve opening time --- early

5. After the setting is completed, turn on the control box to AUTO mode and try to step on the accelerator pedal until the voltage when the green light is on is consistent with the set value. **If the setting is not ideal, repeat the fourth step.**

Note: When the green light in AUTO mode is on, the throttle is released after a delay of 5 seconds! This is to improve the design of the vacuum shortage caused by the user continuously stepping on the throttle.

~ The above completes the setting of the control box. ~