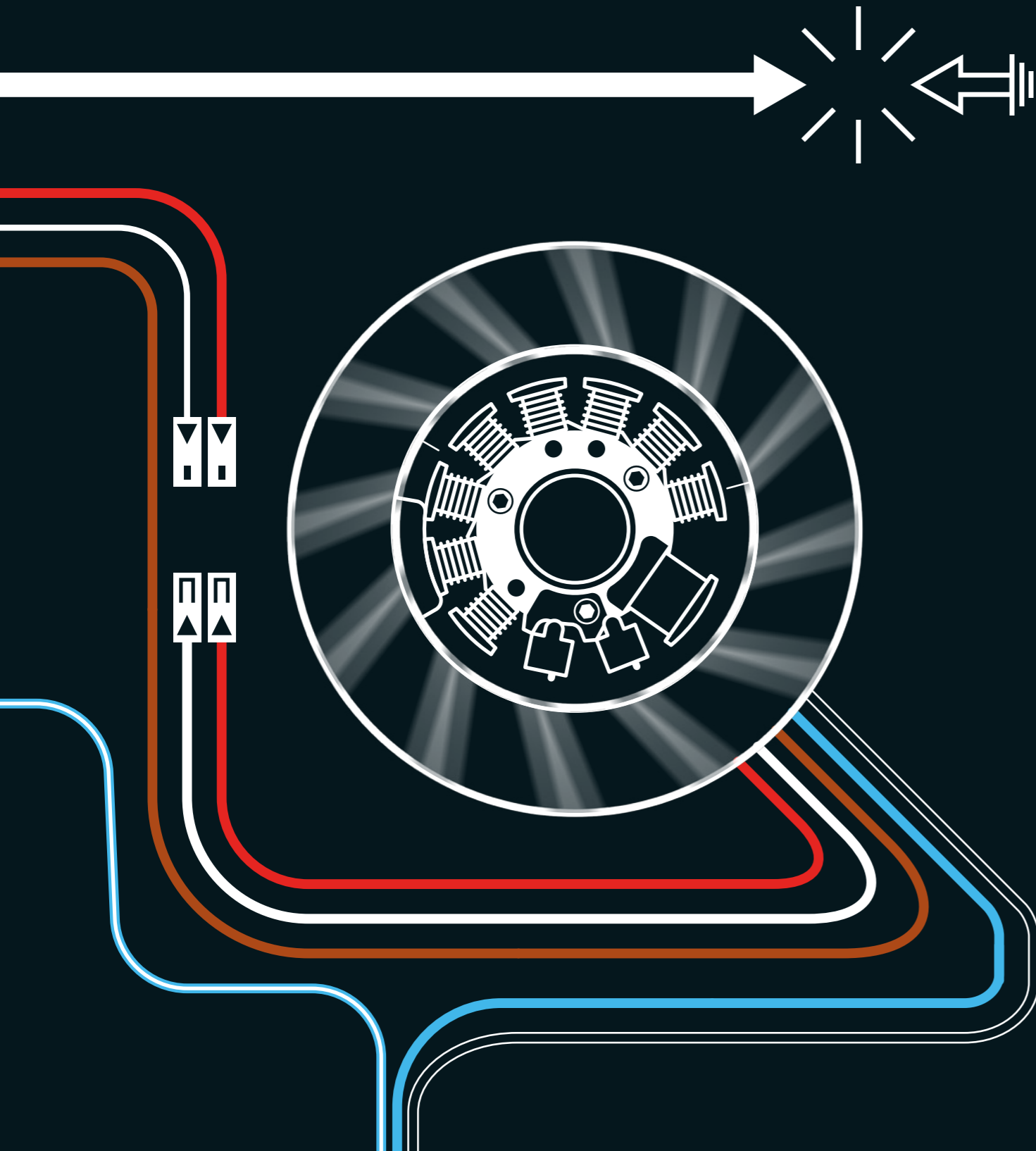




performance & style



## DEAR CUSTOMER,

thank you for choosing our SIP performance ignition and your trust in us! Please take your time, work precisely, double check and test run your scooter carefully. Re-adjust setting if necessary! In case of any doubt, please assign an authorized workshop for installation and adjustment! See attached chapter for additional components, spare / wear parts and required tooling equipment.

To receive the latest product presentations, unboxing of new parts and informative tutorial videos please subscribe to our SIP TV tutorial channel: [www.youtube.com/sipscootertutorial](http://www.youtube.com/sipscootertutorial)  
For the best Vespa & Lambretta lifestyle and event videos subscribe to our SIP TV event channel on YouTube: [www.youtube.com/scootershop](http://www.youtube.com/scootershop)

Have a good trip! SIP Scootershop GmbH

## IGNITION SIP PERFORMANCE INSTRUCTION MANUAL



**SIP TV TUTORIAL:**  
How to install the  
SIP performance ignition  
▶ [bit.ly/ignitiontutorial](http://bit.ly/ignitiontutorial)



**SIP TV product presentation:**  
Unboxing the  
SIP performance ignition  
▶ [bit.ly/ignitionsipperformance](http://bit.ly/ignitionsipperformance)



## FREQUENTLY ASKED QUESTIONS

**Q1: Do I need the AC or the DC version?**

In case of using a standard wiring harness without battery rather decide in favour of AC as this version doesn't imply a modification of the wiring harness. In case of using a standard model with breaker ignition a conversion wiring harness has to be installed.

**Q2: Do I need the road or the sport version?**

The road version resembles the standard Ducati ignition with a nearly static ignition point. The sport version adjusts the ignition point from 4700 U min. onwards.

**Q3: How do I install the electronic unit?**

As an optional equipment see our offer "Bracket SIP electronic unit" (SIP product codes 17910400 / 17950500 / 16484500).

**Q4: Can I keep my SIP speedometer in case of using the DC version?**

If the DC version is used in combination with a SIP rev counter, you will need to either use the KOSO rev signal filter (SIP item code KOBA0040) or connect the brown wire of the SIP rev counter to the white wire of the SIP/VAPE CDI.

**Q5: DC version: Is the regulator ground identical to the chassis ground?**

Yes, they are identical and have to be connected.

**Q6: I don't have to double check the ignition timing with a stroboscopic light, do I?**

Like all modern ignitions the SIP performance ignition has a mark on its base plate and rotor in order to verify the exact ignition point. Thanks to the degree disc and the indicator mounted on the engine casing the desired pre-ignition can be easily set. If in doubt, just double check with a stroboscopic light.

**Q7: Does the SIP performance ignition also fit in with a PX old having a battery?**

Not without modifying the wiring harness! The SIP performance ignition has namely two wires instead of four.

**Q8: How do I uninstall the flywheel?**

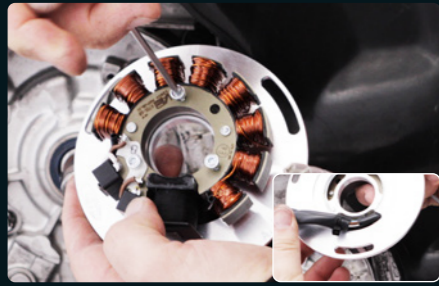
Use the standard PX / PK M28 x 1.0mm (Art.No. 93332000).

**Q9: Can I convert my AC ignition to DC ignition afterwards?**

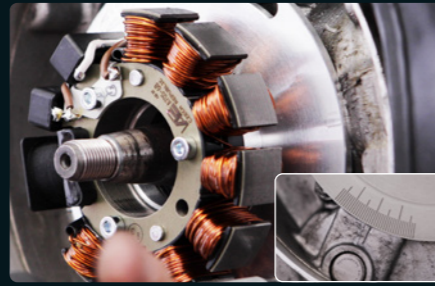
Yes. Exchange the voltage regulator for the rectifier.

**Q10: Can I convert my road ignition to sport ignition afterwards?**

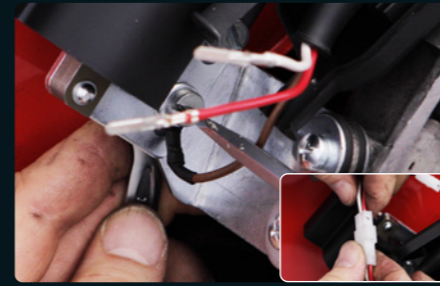
Yes. Exchange the electronic unit.



**01:** Mount ignition base plate. Apply Thread locker. Do not crush wiring harness! [SIP art.-no. see pages 18 & 19].



**02:** Guide wiring harness through crankcase. Tighten base plate. Example here: set on middle mark. [Preset around 20° before TDC]



**03:** Mount coil. Choose suitable holder. Mount and connect plugs. [SIP art.-no. see pages 18 & 19].



**11:** Mount fan wheel and align with rotor. Insert enclosed screws with Loctite. Torque: 12-14 Nm. [SIP art.-no. see pages 18 & 19].



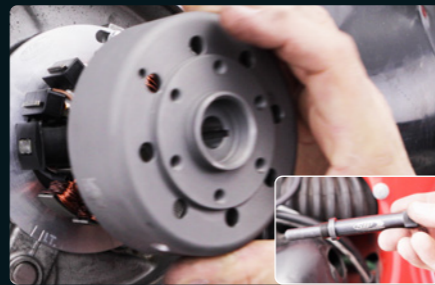
**12:** Mount holding tool. Mount the rotor with nut and star washer on the crankshaft. Tighten fly wheel to 45-60 Nm. [SIP art.-no. see pages 18 & 19].



**13:** Screw in new spark plug. Renew spark plug connector if necessary. [SIP art.-no. see pages 18 & 19].



**04:** Check connectors. Replace if necessary [enclosed]. Pay attention to matching colours! [SIP art.-no. see pages 18 & 19].



**05:** Mount rotor. Replace woodruff key if necessary. Screw in piston stopper. [SIP art.-no. see pages 18 & 19].



**06:** Place degree disc and indicator [SIP art.-No. 83002300]. Rotate rotor clockwise against piston stop tool.



**14:** Mount regulator. Connect with enclosed plugs. Replace all lamps to 12V. Countercheck timing with a strobe gun!

YOUR ENGINE IS NOW EQUIPPED WITH A SIP PERFORMANCE IGNITION!

Space for your notes:



**07:** Align degree disc in this position with indicator to zero position. Do not turn the rotor!



**08:** Rotate rotor counterclockwise together with locked degree disc against piston stop tool. [Example: 86°]



**09:** To calculate top dead centre [TDC] divide in half your measured value. Remove piston stopper. Turn the rotor exactly to the determined value. [Example: 43°]

Note your measurement result here:

Note your measurement result here:

Our example: 86°

Our example:  $86^\circ : 2 = 43^\circ \text{OT}$

Note your measurement result here:

Our example:  
43° TDC - 23° TIMING MARK = 20° IGNITION ADVANCE

This goes along with the dotted blue timing line shown in the comparison diagram on page 14. [Road version: at 3.000 U/min - sport version: at 2.300 U/min]. The desired value of ignition advance may be adjusted by rotating the ignition base plate: clockwise means less ignition advance / counterclockwise means more ignition advance



**10:** Rotate rotor counterclockwise together with locked degree disc and align disc / indicator with your calculated value. Keep rotating counterclockwise until T-mark on ignition base plate aligns with laser mark on rotor. Read out angle degree. [Example: 23°]



### SMALLFRAME ADDITIONAL MOUNTING INSTRUCTION IGNITION BASE PLATE

SIP art.-no. 51009110 for Vespa 50-125 / PV / ET3 / PK50-125 / S / XL / XL2



The base plate of an ignition is subject to high mechanical loads. Both the rotor's magnetic field and the vibrations of the running engine put high mechanical stress to the plate.

#### 1. Planarity

The base plate must seat totally planar on the crankcase's retainers.

**No wobble / tilt ! No bending when tightening the screws!**

#### 2. Wire ducting

The wires must not be clamped between plate and crankcase.

**Wires could break, the ignition base plate might bend!**

#### 3. Fixation

Use only the included mounting kit art.-no. 12493000 containing sunk screws and washers. Never use weaker, smaller or no washers at all!

Correctly mounted plate with screws and washers kit SIP art.-no. 12493000.

#### Notes:

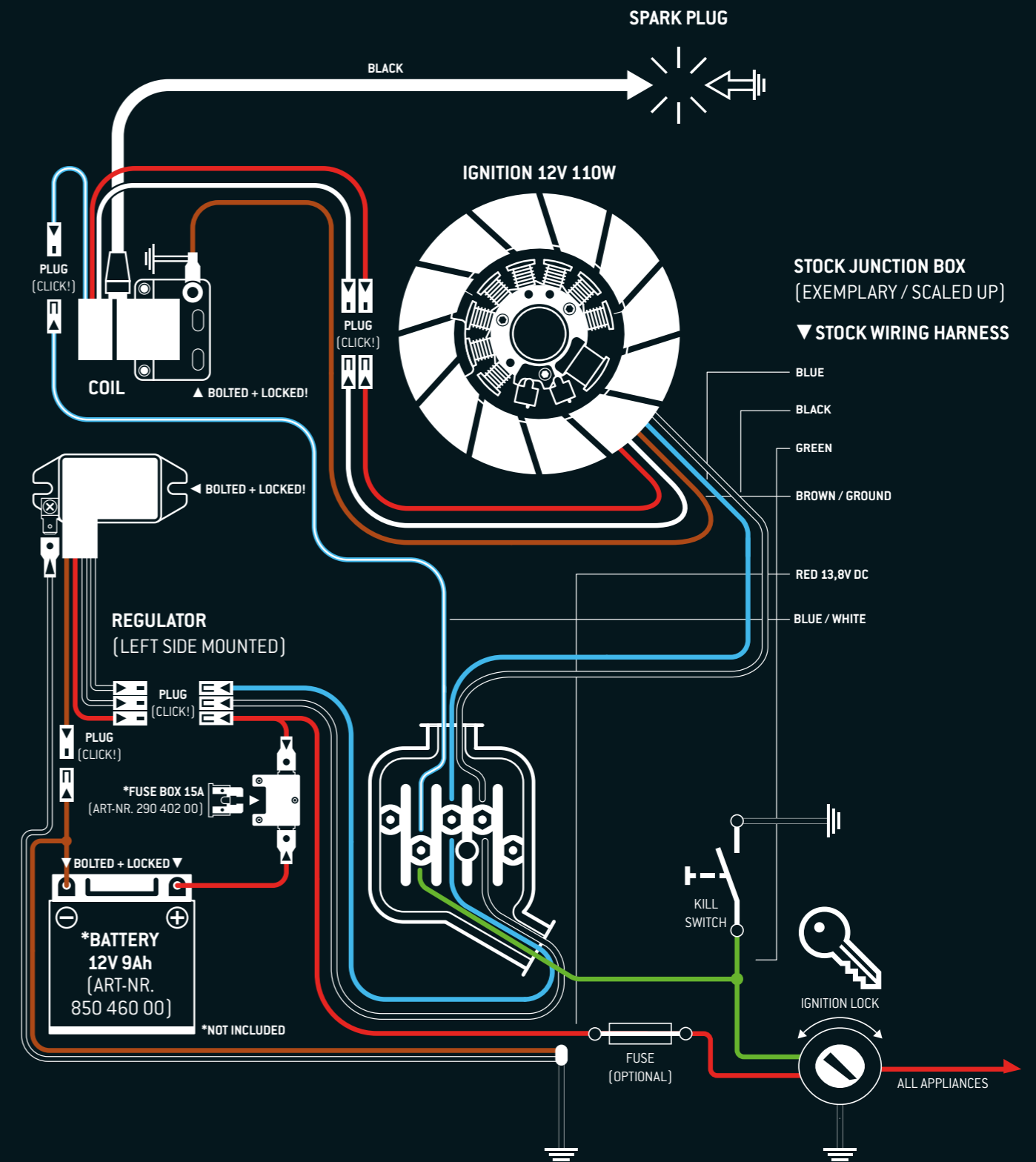
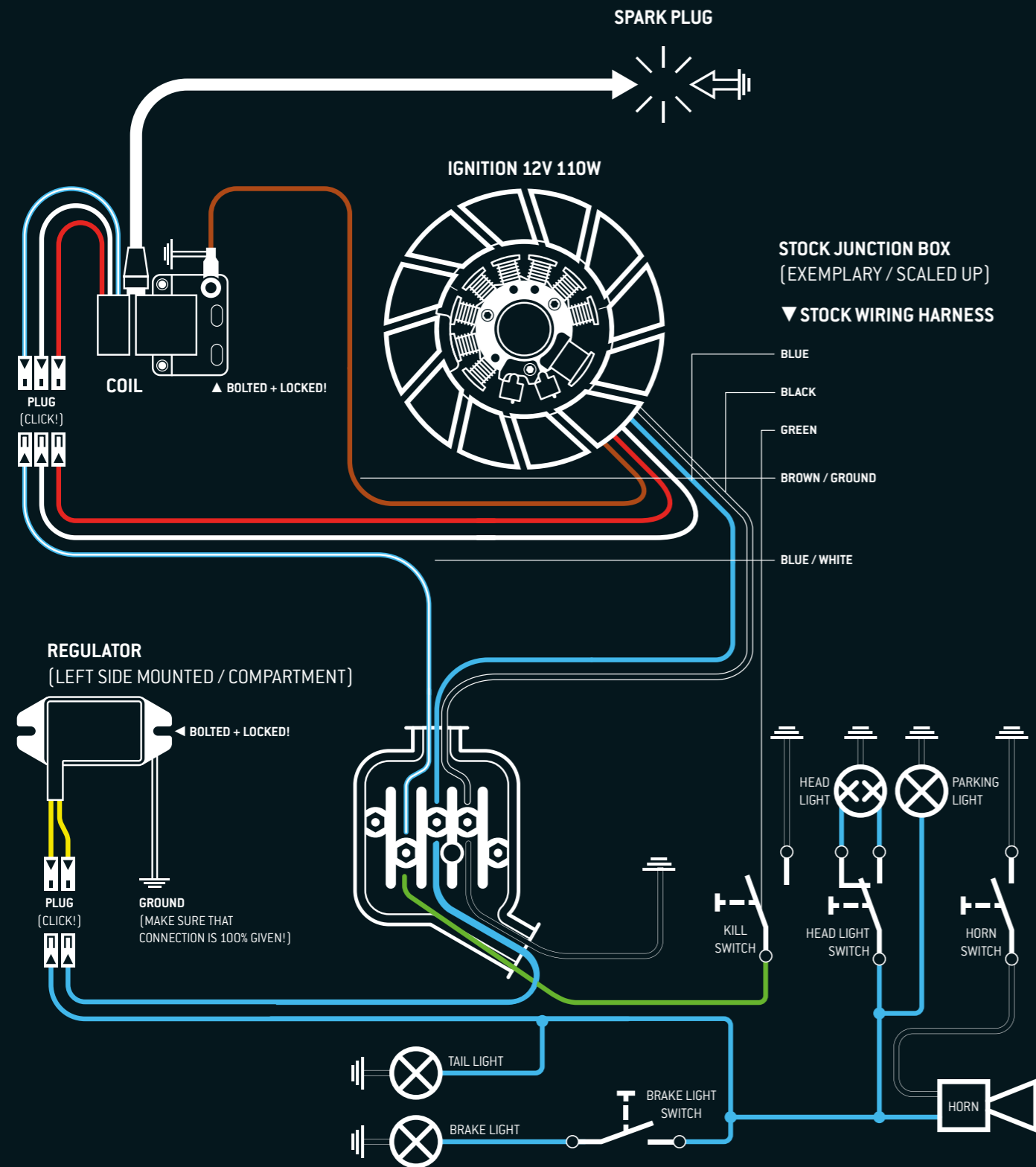
Any machining of the baseplate, e. g. to create space for the transfer ducts of a cylinder, is NOT covered by the manufacturer's warranty.

For engines with exceptionally strong vibrations, occasionally repair the vibration source: Change twisted crankshaft, check the wheels radial run out, change the balance factor of the crankshaft, etc.

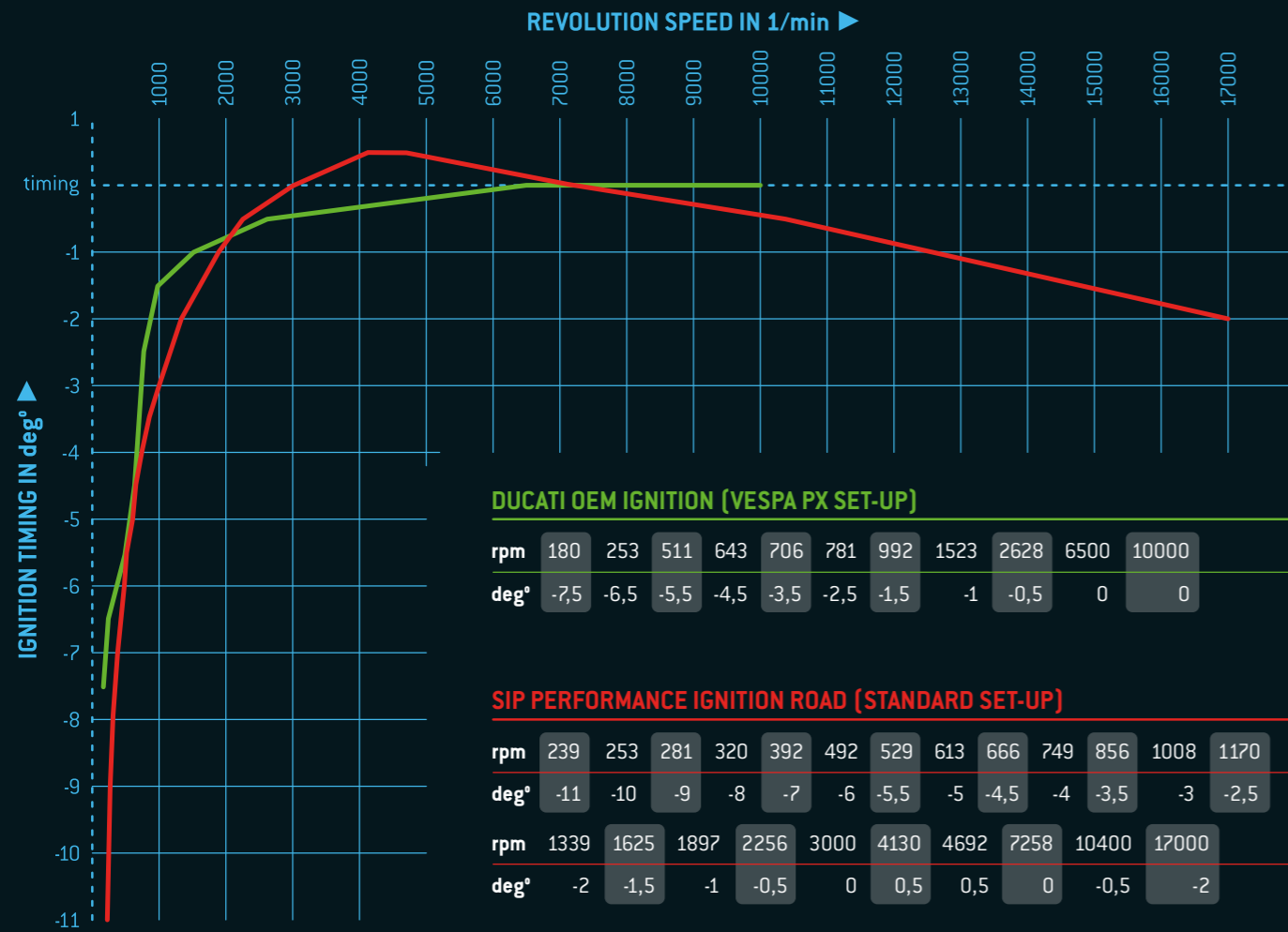
### WIRING DIAGRAM AC (WITHOUT BATTERY)



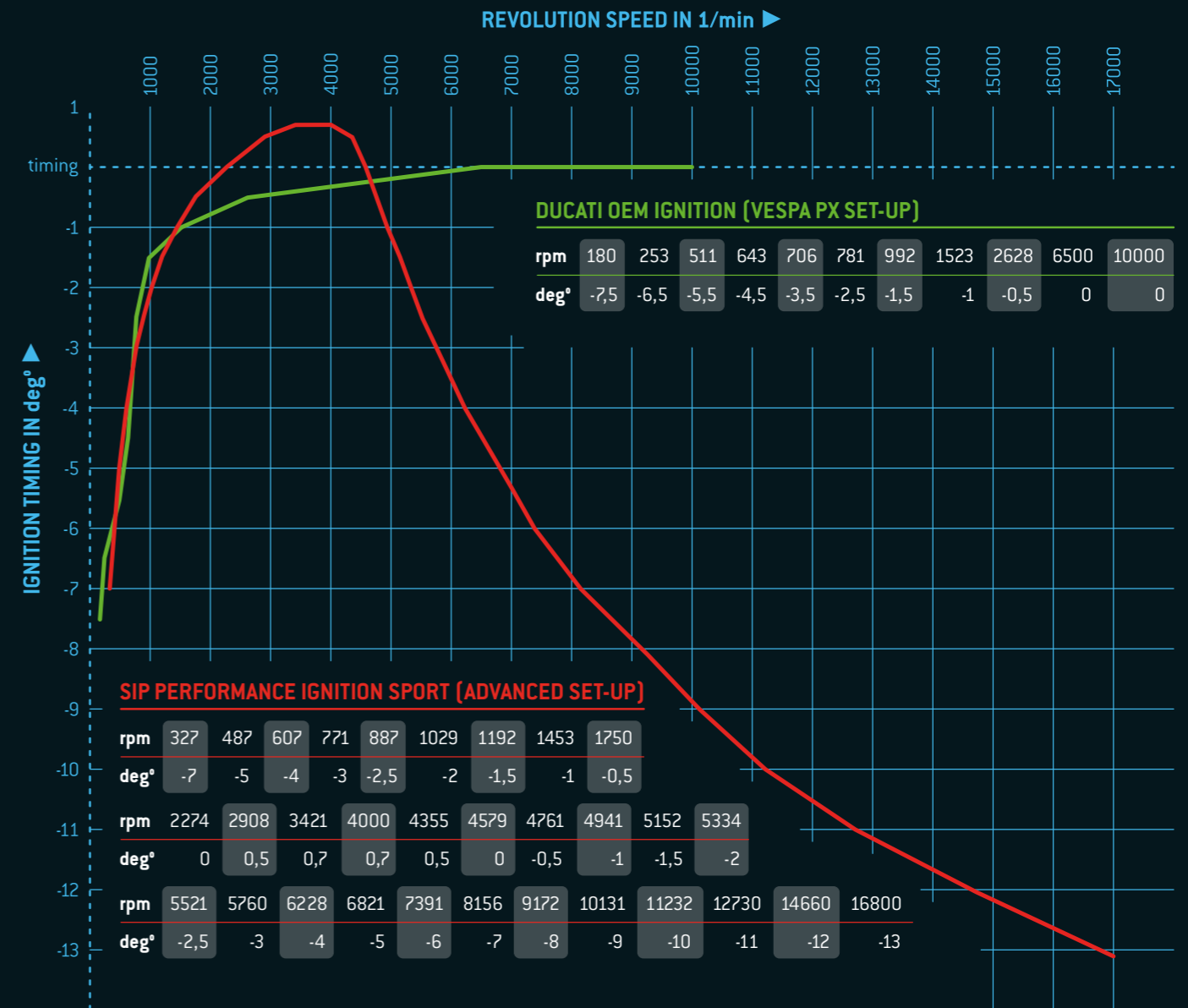
### WIRING DIAGRAM DC (WITH BATTERY)



### COMPARISON DIAGRAM (OEM / SIP ROAD)



### COMPARISON DIAGRAM (OEM / SIP SPORT)





**BRACKET SIP ELECTRONIC UNIT** Art.-Nr. 17910400

for Vespa 50-125/PV/ET3/PK50-125/S/XL2 - steel, zinc plated



**BRACKET SIP ELECTRONIC UNIT** Art.-Nr. 16484500

for Vespa 125 GTR 2\*/TS 2\*/150/Sprint V 2\*/Super 2\*/200/Rally 2\*/PX80-200/PE/Lusso Cosa - steel, zinc plated, w/o E-start



**BRACKET SIP ELECTRONIC UNIT** Art.-Nr. 17950500

for Vespa 125 GTR 2\*/TS 2\*/150/Sprint V 2\*/Super 2\*/200/Rally 2\*/PX80-200/PE/Lusso/Cosa with PX Lusso/MY/11 E-start motor/-casing - steel, zinc plated



**ELECTRONIC UNIT BY VAPE** Art.-Nr. 51008300

for SIP Performance ignition for Vespa 50-125/PV/ET3/PK50-125/S/125 GTR 2\*/TS 2\*/150 Sprint V 2\*/Super 2\*/200 Rally 2\*/PX80-200/PE/Lusso/Cosa, static ignition point



**ELECTRONIC UNIT BY VAPE** Art.-Nr. 51008400

for SIP Performance ignition for Vespa 50-125/PV/ET3/PK50-125/S/125 GTR 2\*/TS 2\*/150 Sprint V 2\*/Super 2\*/200 Rally 2\*/PX80-200/PE/Lusso/Cosa, variable ignition timing



**MOUNTING KIT UNIT VAPE** Art.-Nr. 17910410

To perfectly mount our SIP PERFORMANCE Electronic Ignition Units we have had these brackets produced, suitable for various scooter models. These enable a mounting position identical to that of the original.



**SCREW/BOLT KIT** Art.-Nr. 12493000

M5x16 mm, inner hexagonal, counter sunk screw, stainless steel, stator plate, for Vespa 50-125/PV/ET3/PK/XL/XL2 incl. rosette Ø 16mm, height 3,2mm



**SCREW/BOLT KIT** Art.-Nr. 12492000

M5x16 mm, inner hexagonal, stainless steel V2A, SERIE PRO by M.R. stator plate, for Vespa 50-125/PV/ET3/125/VNA-TS/150 VBA-T4/160 GS/180 SS/Rally/PX80-200/PE/Lusso/98/MY/TS, incl. rosette Ø 14mm, height 3,4mm



**THREAD LOCKER LOCTITE „243“** Art.-Nr. 14100000

medium strength, blue, 5ml



**PULLER COMBINATION SIP** Art.-Nr. 93332400

flywheel/clutch/clutch mounting tool for Vespa 50-125/PV/ET3/PK50-125/S/XL/XL2/125 GT-TS/150 GL-Super/200 Rally/PX80-200/PE/Lusso 98/MY/11/T5/Cosa steel S45C, 26x1 outside/26x1 inside



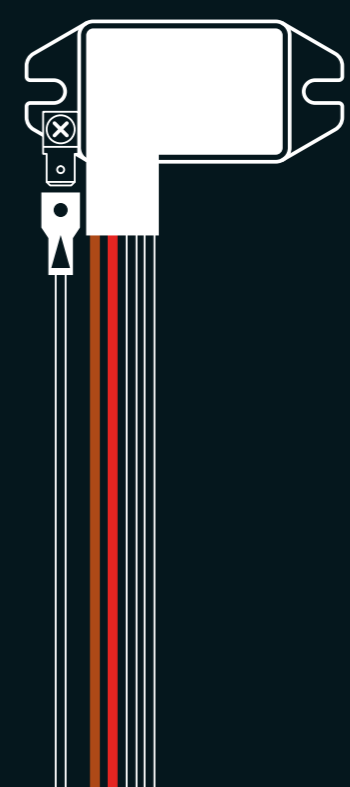
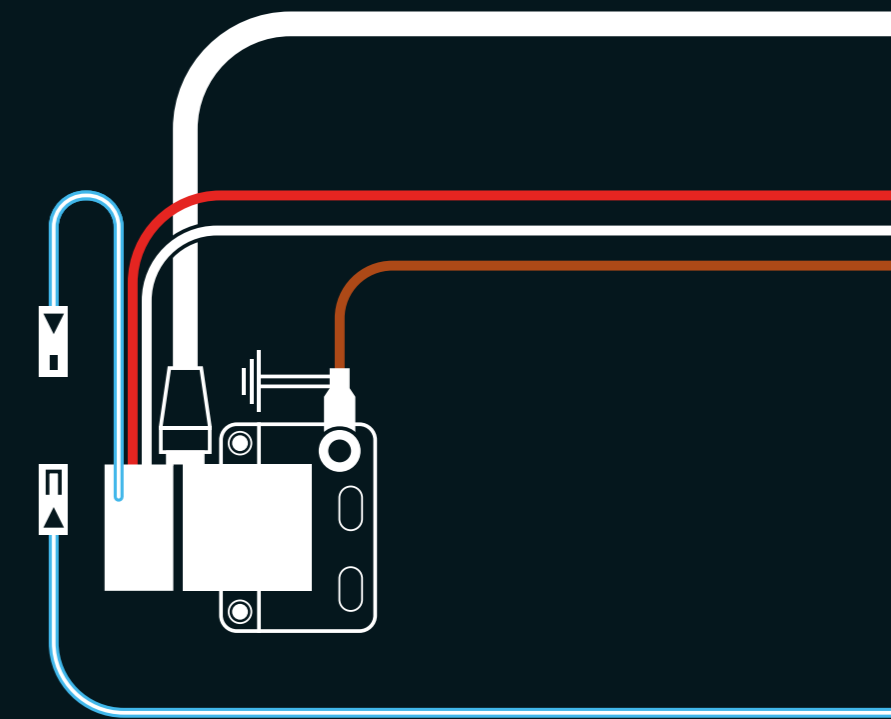
**PISTON STOPPER SIP LONG** Art.-Nr. 49316000

M14x1,25 mm, l top 72mm l bottom 40,5mm, Ø collar 19 mm, steel



**HOLDING TOOL FAN WHEEL** Art.-Nr. 20095100

for Vespa all models for flywheels with metal fan



Scan QR Code with your Smartphone e.g. with the App „ScanLife“ for more infos

SIP-2023-05-08

[www.sip-scootershop.com](http://www.sip-scootershop.com)



**performance & style**

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