



Twin Air Powerflow Throttle Body Kit

Configuration # 1:

Can significantly increase horsepower and throttle response in low to mid-range. This configuration uses the following parts supplied in the packaging: orange intake tube, shaft, butterfly valve (small diameter) and two bolts.

Configuration # 1



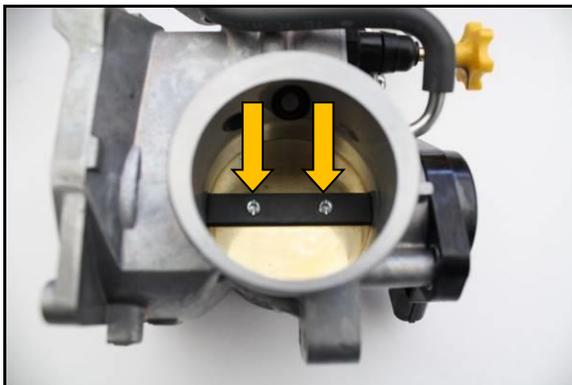
(The tubes shown in this mounting instruction may be different than your application)

Instructions:

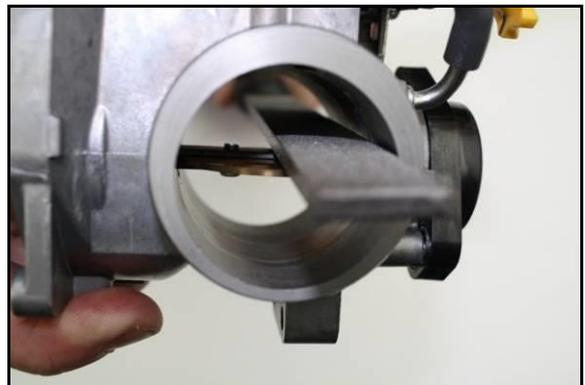
1. Remove your throttle body from your motorcycle. Check your motorcycle manual for reference.
2. Connect a TPS-tool (Throttle Positioning Sensor tool, Picture 14, also available from Twin Air) to the TPS-sensor connector; connect the cables as recommended in the TPS connection tables on page 3.
3. Write down the TPS-sensor position read-out on 0% throttle position before disassembling the TPS-sensor.

You will need this value at step 13.

4. Grind off the ends off the screws with a file. Remove the screws. (Picture 1 and 2)

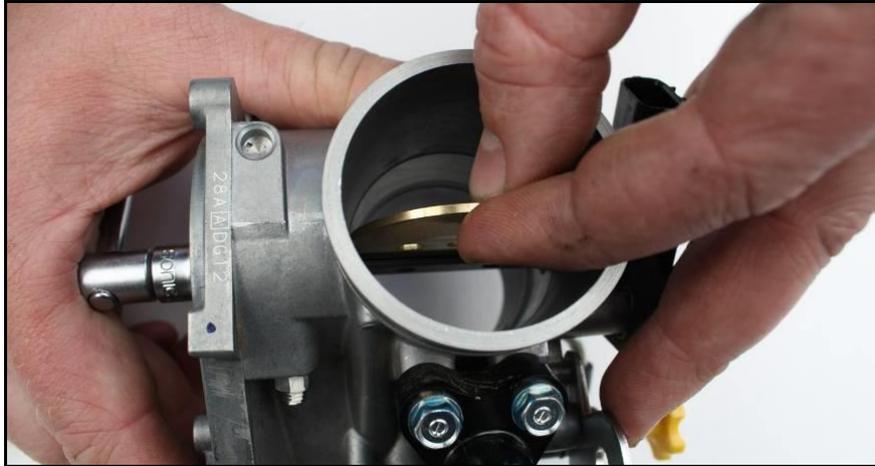


Picture 1



Picture 2

5. Remove the butterfly valve, by holding the throttle body at full throttle. (Picture 3)



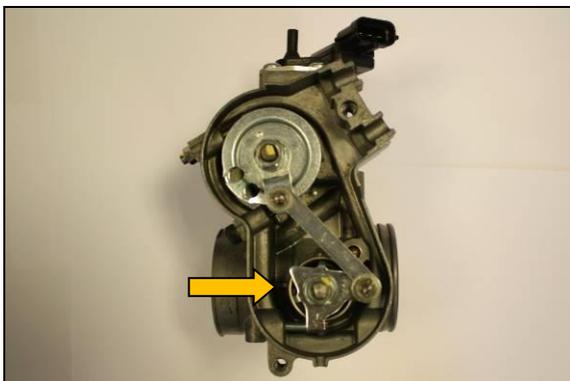
Picture 3

6. Remove the screws that holds the TPS-sensor. Remove TPS-sensor. (Picture 4)



Picture 4

7. Remove the 11mm nut that holds the shaft. (Picture 5 and 6)



Picture 5



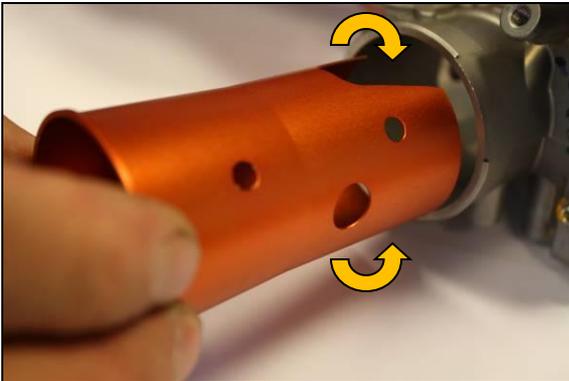
Picture 6

8. Remove the original shaft by pulling it out on the TPS-sensor side.



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9. Insert the Twin Air throttle tube. Maneuver it around to make sure the holes match. (Picture 7 and 8)

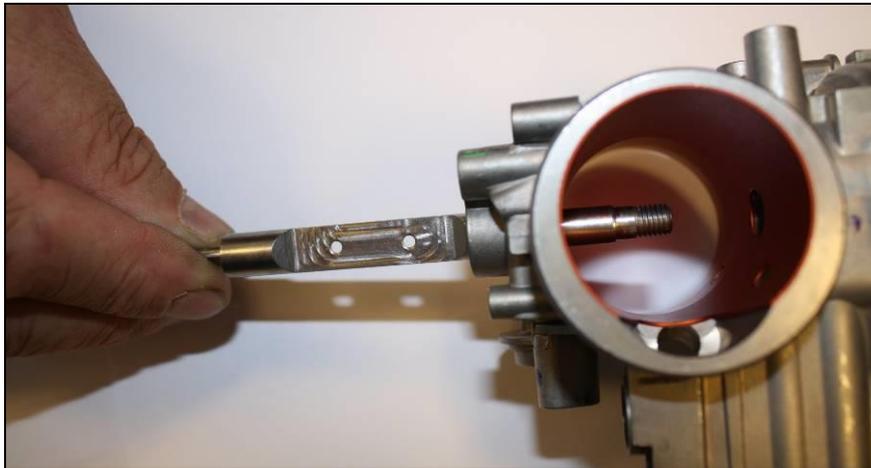


Picture 7



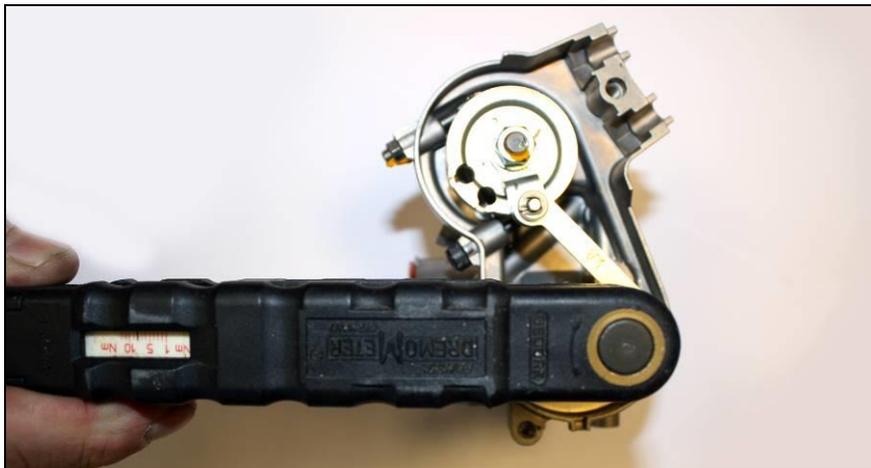
Picture 8

10. Slide in the Twin Air shaft from the TPS-sensor side as it was mounted originally. (Picture 9)



Picture 9

11. Tighten the nut that holds the shaft and **do not over tighten** (Max 8Nm). (Picture 10)



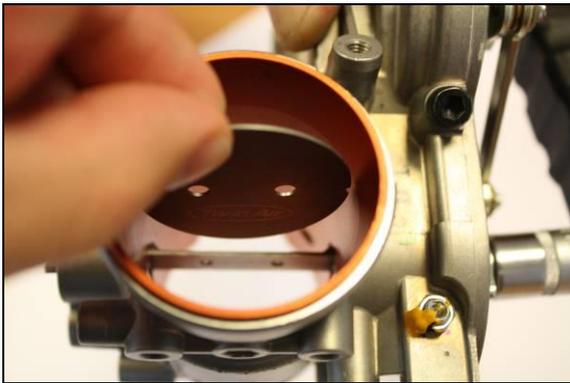
Picture 10



Mounting Instructions Powerflow Throttle Body Kit

12. Insert the Twin Air butterfly valve. Use the smaller valve for this configuration (configuration #1).

Open the throttle to 100% and slide in the valve into its place, close the throttle to 0%, apply Loctite to the supplied hex-socket screws and screw into the valve, do not fully tighten the screws before you make sure that the valve closes properly and does not have a sticky feeling when opening the throttle. (when the valve does have a sticky feeling to it or it does not close properly you will have to adjust it at the bolts) Do not over tighten the hex-socket screws (Max 1Nm). (Picture 11, 12 and 13)



Picture 11



Picture 12



Picture 13

13. Put the TPS-sensor back on the throttle body and tighten it down with the screw until the TPS-tool reads out the original position **as noted at step 3**.
(If using application Part No. 160741 or 160742 reset the TPS after setting the idle to the value measured in step 3)
14. Remount your throttle body to the bike (check your motorcycle manual for reference), set up your idle rpm speed.
 - In some cases, mapping changes may be needed after installation of the Powerflow Throttle Body Kit to optimize performance.

TPS connection tables:

Connect the TPS-tool pins to the TPS-sensor pins as shown in below tables.

Extra information:

- When turning on the TPS-tool unconnected, 1 . will appear on the display.
- Measurement range 0-20k ohm.

Yamaha YZF 450 2010-2013	
TPS-sensor:	TPS-tool pins:
Black	Black
Yellow	Red

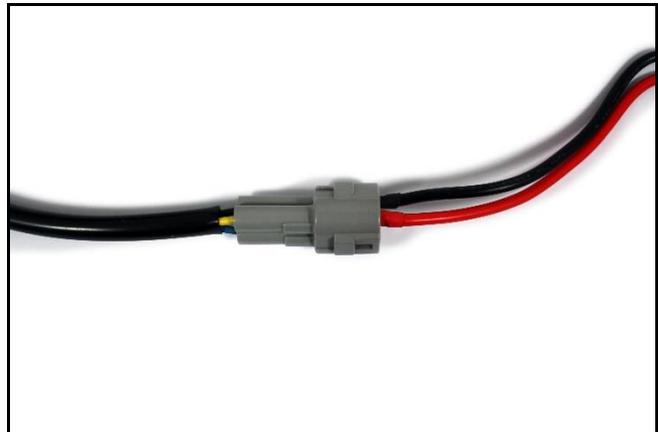
Kawasaki KXF 250 2011-2012 KTM SXF 250 2011-2012 SXF 350 2011-2012 KTM EXC 250/350/450/500 2012-2015	
TPS-sensor:	TPS-tool pins:
Top	Black
Middle	Red

Kawasaki KXF 250 2013-2015 450 2009-2015 KTM SXF 250 / 350 / 450 2013-2015 Suzuki RMZ 250 2009-2015 RMZ 450 2008-2015	
TPS-sensor:	TPS-tool pins:
Black	Black
Yellow	Red

Honda CRF 250 2013-2015 CRF 450 2011-2015 Yamaha YZF 250/450 2014/2015	
TPS-sensor:	TPS-tool pins:
Bottom	Black
Middle	Red



Picture 14



Picture 15