Twin Air Powerflow Throttle Body Kit

Configuration # 2:

Can significantly increase horsepower in the top-end range. This configuration does NOT use the orange intake tube supplied in the packaging. This configuration uses the following parts supplied in the packaging: shaft, butterfly valve (bigger diameter) and two bolts.

Configuration # 2

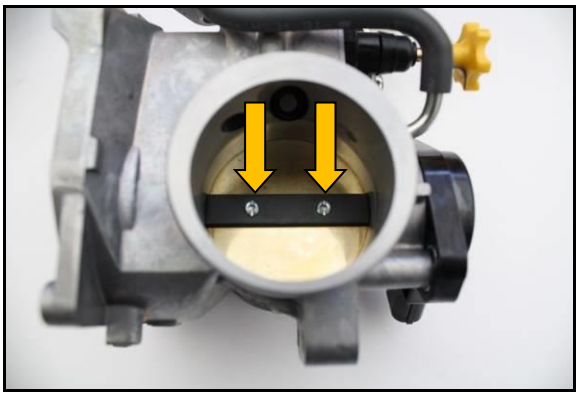
Instructions:

1. Remove your throttle body from your motorcycle. Check your motorcycle manual for reference.

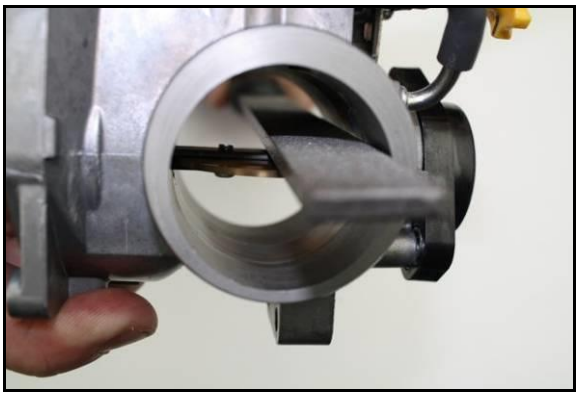
2. Connect a TPS-tool (Throttle Positioning Sensor tool, Picture 12, also available from Twin Air) to the TPS-sensor connector, connect the cables as recommended in the TPS connection tables on page 3.

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 12.

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

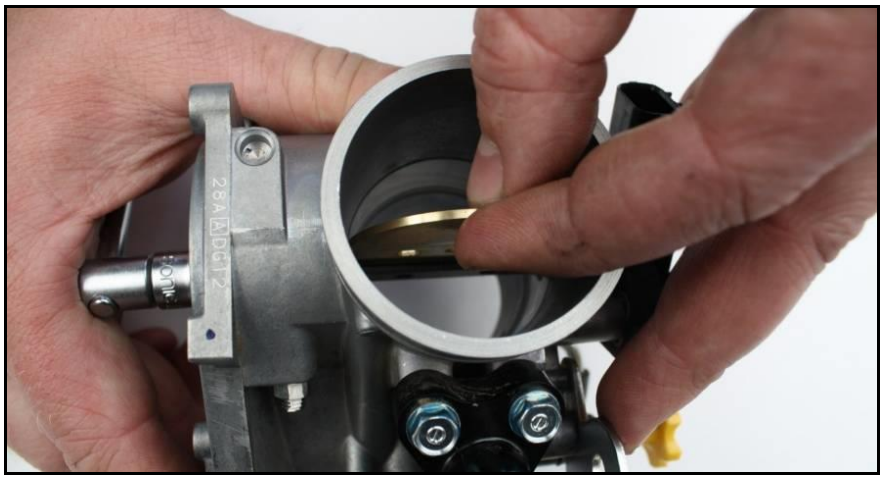


Picture 1



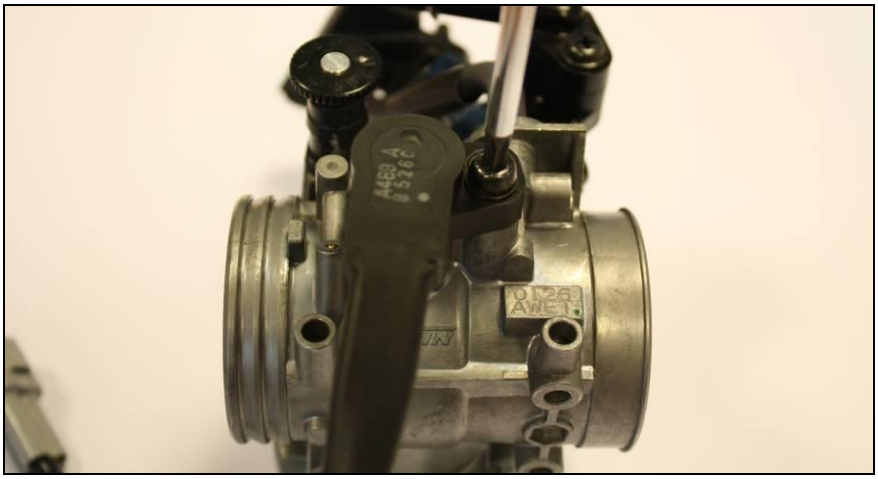
Picture 2

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



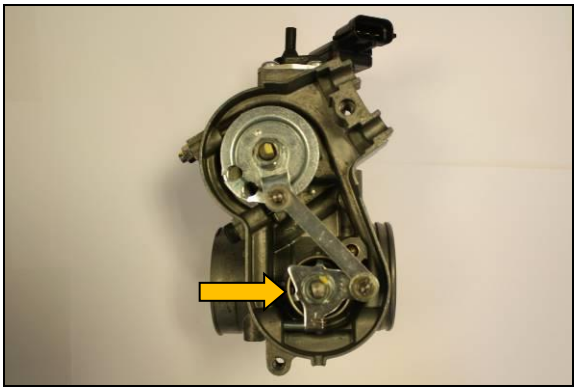
Picture 3

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)

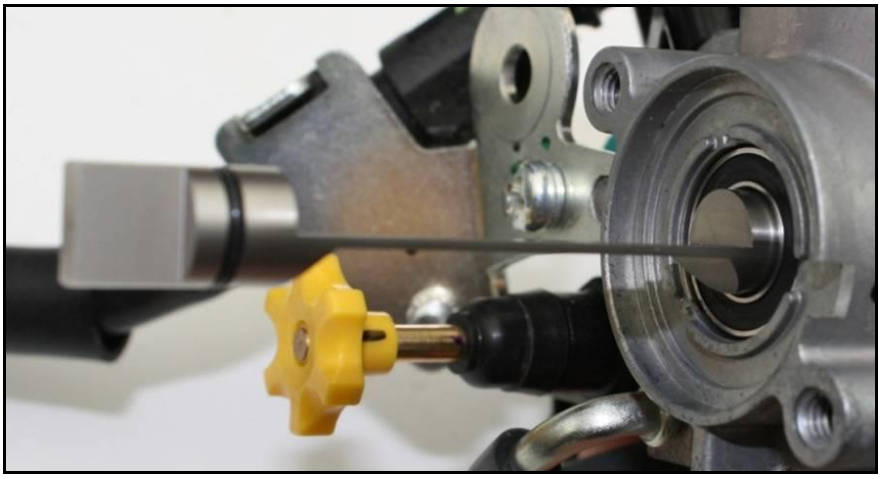


Picture 5

Picture 6

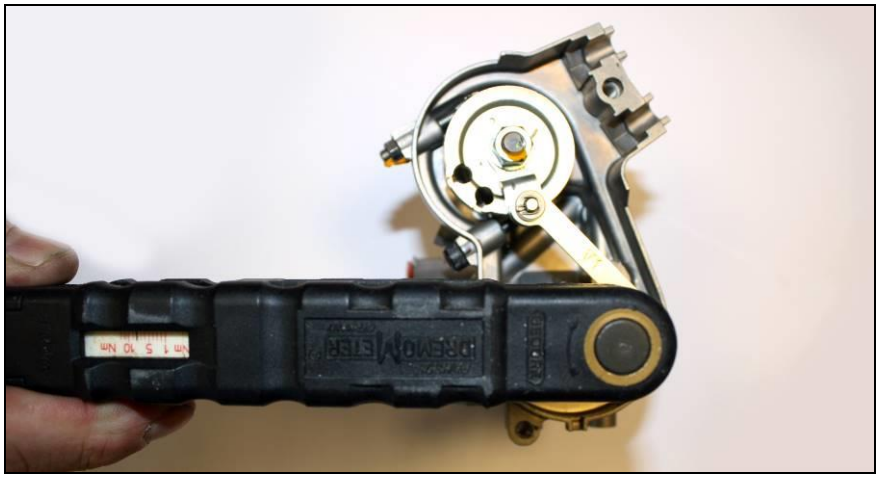
8. Remove the original shaft by pulling it out on the TPS-sensor side.

9. Slide in the Twin Air shaft from the TPS-sensor side as it was mounted originally. (Picture 7)



Picture 7

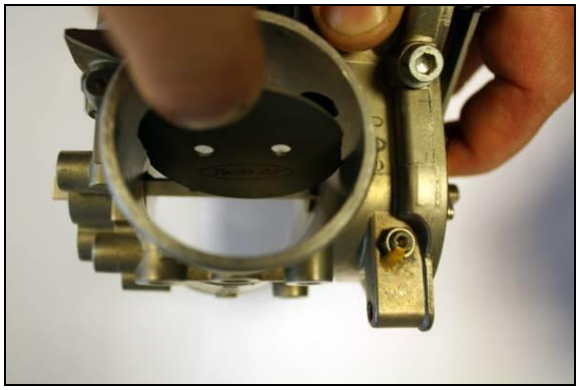
10. Tighten the 11mm nut that holds the shaft and ***do not over tighten*** (Max 8Nm). (Picture 8)



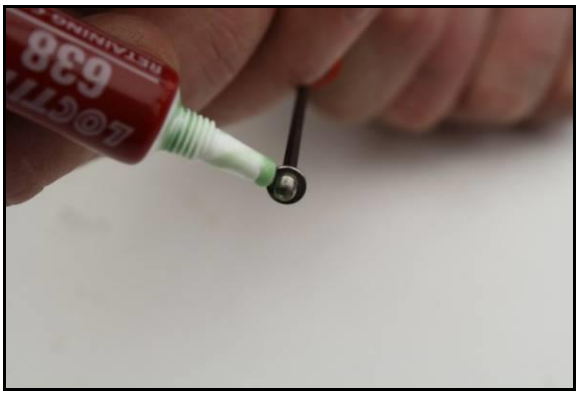
Picture 8

11. Insert the Twin Air butterfly valve. Use the bigger valve for this configuration (configuration #2).

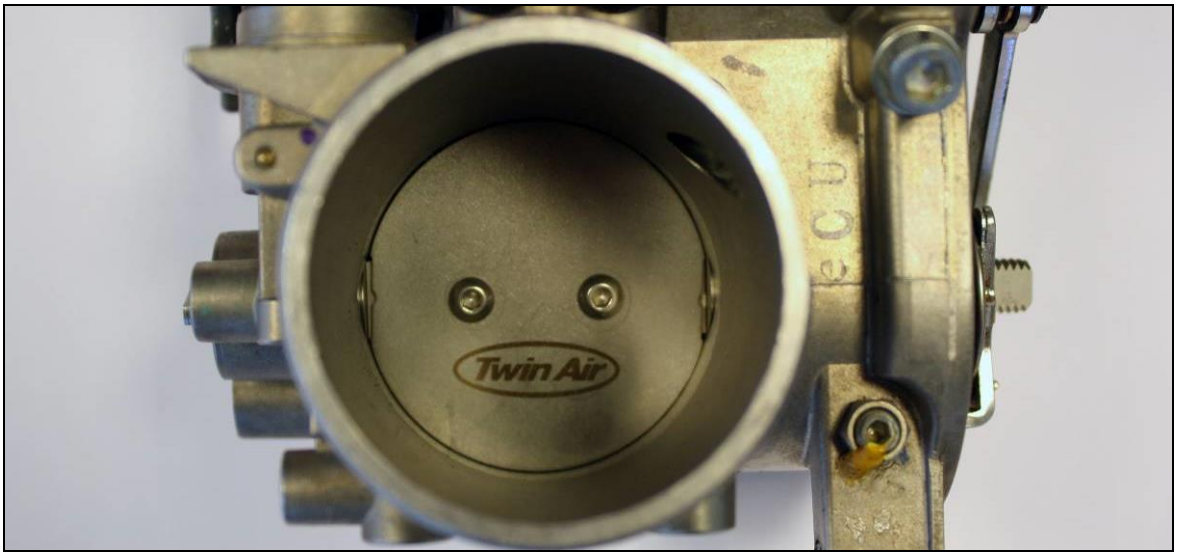
Open the throttle to 100% and slide in the valve into its place, close the throttle to 0%, apply Loctite to the supplied hex-socket screws and screw into the valve, do not fully tighten the screws before you make sure that the valve closes properly and does not have a sticky feeling when opening the 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 9, 10 and 11)



Picture 9



Picture 10



Picture 11

12. 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)

13. 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.

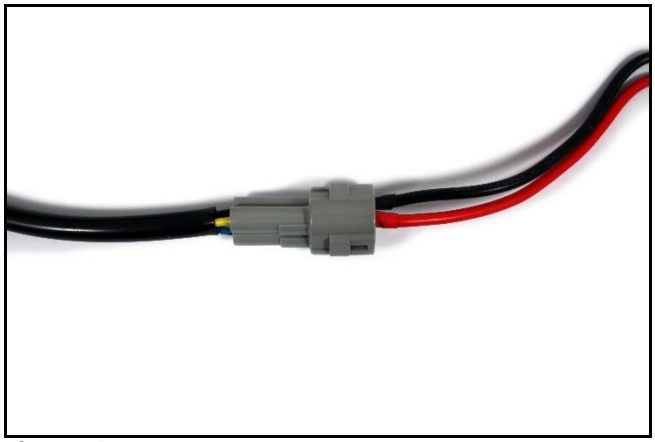
Yamaha YZF 450 2010-2013	
TPS-sensor:	**TPS-tool pins:**
Black	Black
Yellow	Red

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 12



Picture 13