



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



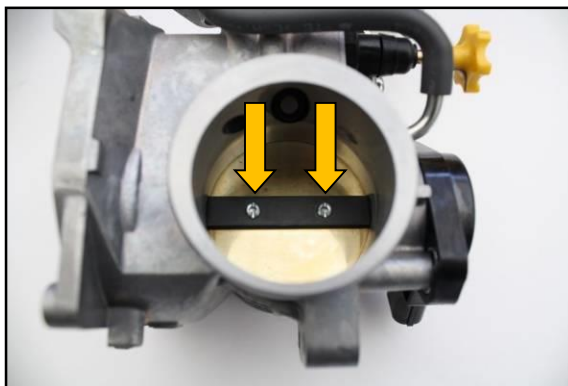
(The tubes shown in this mounting instruction may be different than your application)

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 13, 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 voltage 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)

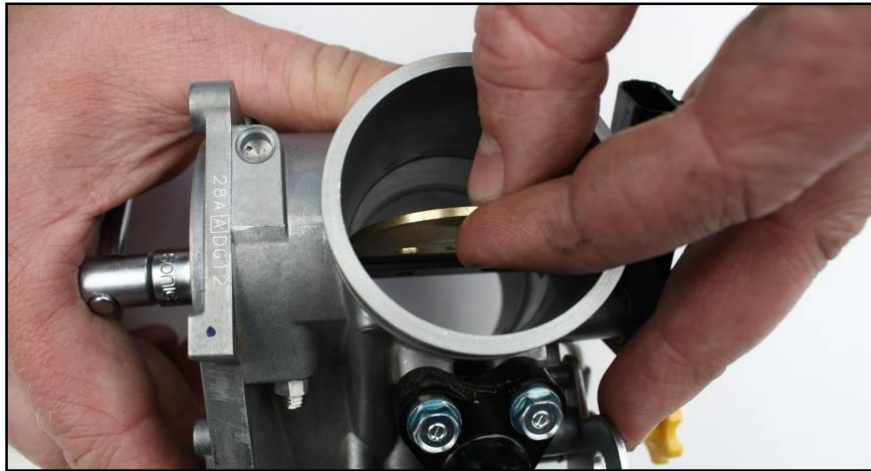


Picture 1



Picture 2

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



Picture 3

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



Picture 4

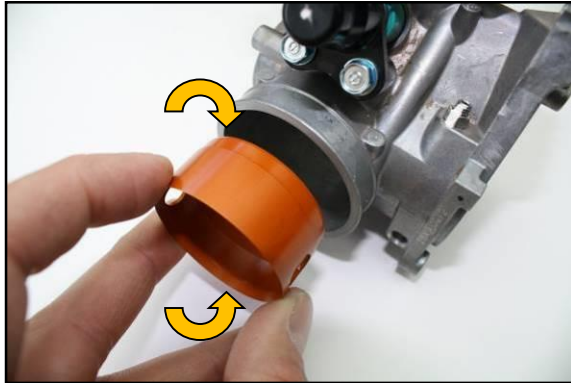
7. Remove the 11mm nut that holds the shaft. (Picture 5)



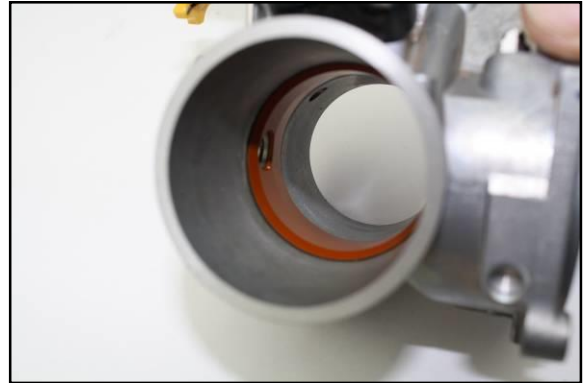
Picture 5

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

9. Insert the Twin Air throttle tube with the smaller side facing backwards. (Picture 6)
Maneuverer it around to make sure the holes match. (Picture 7)

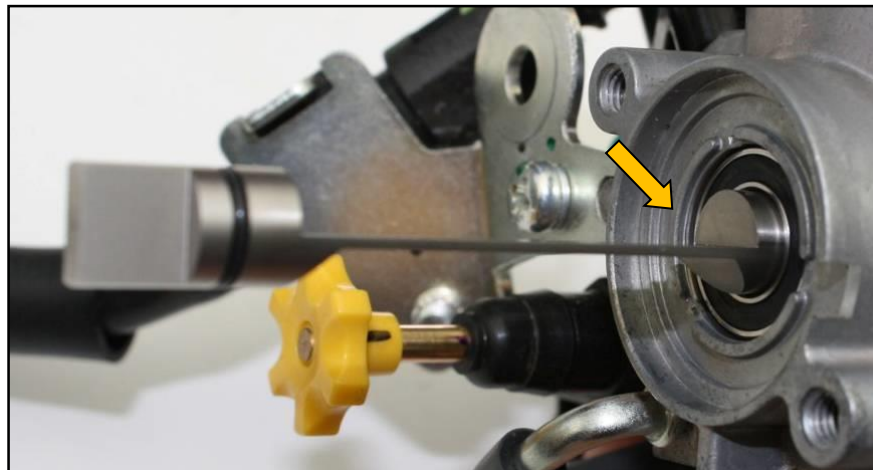


Picture 6



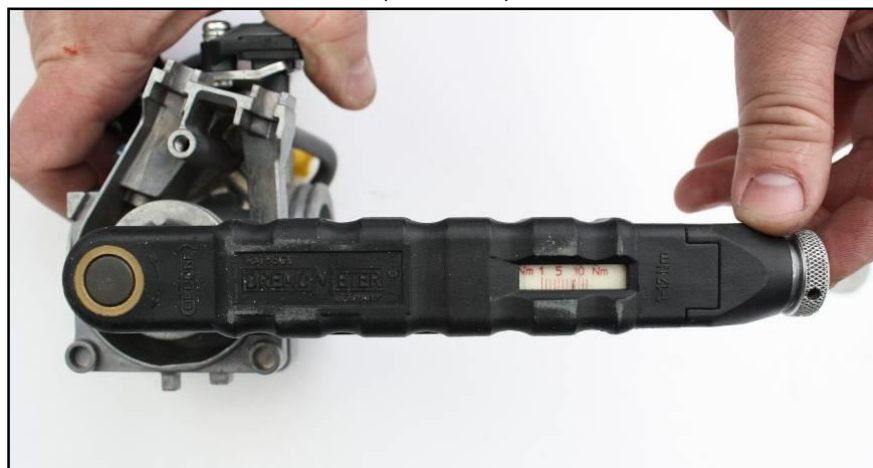
Picture 7

10. Slide in the Twin Air shaft from the TPS-sensor side as it was mounted originally.
Insert the shaft with the flat side facing upwards. (Picture 8)



Picture 8

11. Tighten the nut that holds the shaft and **do not over tighten** (Max 8Nm).
(Picture 9)



Picture 9



Mounting Instructions Powerflow Throttle Body Kit Honda

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

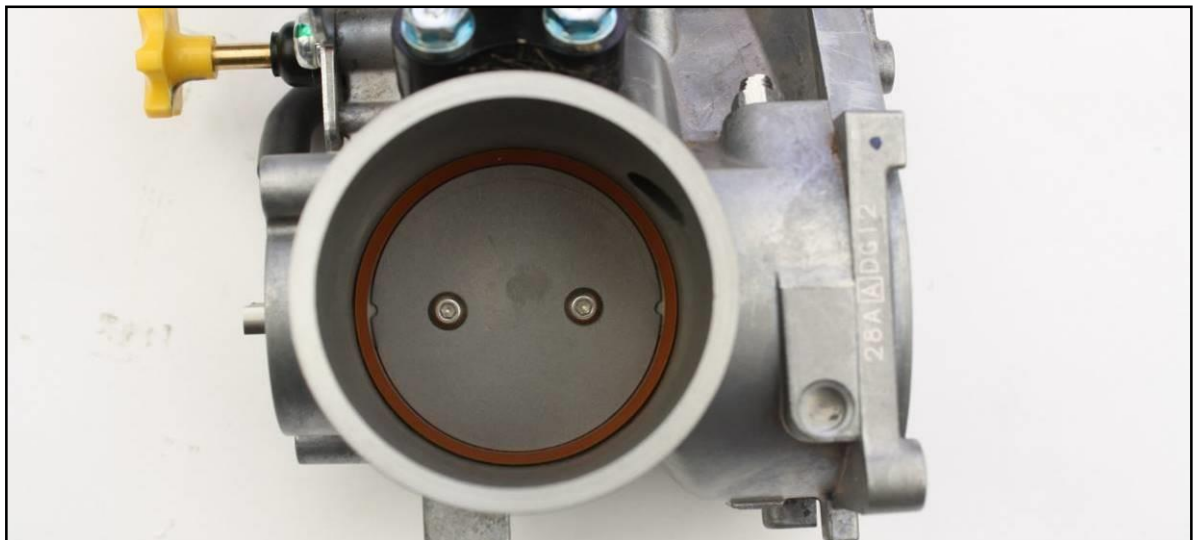
Open the throttle to 100% and slide in the valve into its place, close the throttle to 0%, apply Loctite to the supplied hex-socket screws and screw into the valve, do not fully tighten the screws before you make sure that the valve closes properly and does not have a sticky feeling when opening the 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 10, 11 and 12)



Picture 10



Picture 11



Picture 12

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 voltage **as noted at 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.

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

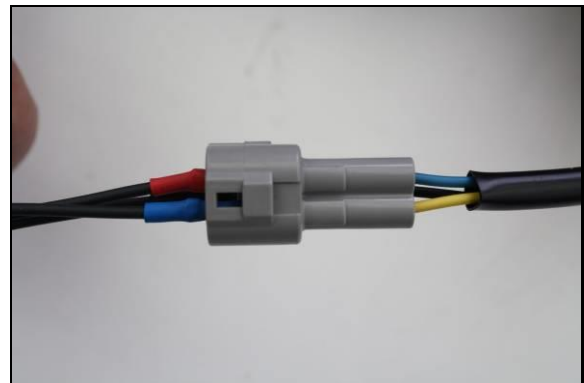
Kawasaki KXF 250 2011-2012 KTM SXF 250 2011-2012 SXF 350 2011-2012 KTM EXC 250/350/450 2012-2014	
TPS-sensor:	TPS-tool pins:
Top	Black
Bottom	Red
Middle	Blue

Kawasaki KXF 250 2013-2014 450 2009-2014 KTM SXF 250 / 350 / 450 2013-2014 Suzuki RMZ 250 2009-2014 RMZ 450 2008-2014	
TPS-sensor: (Picture 14)	TPS-tool pins:
Black	Black
Blue	Red
Yellow	Blue

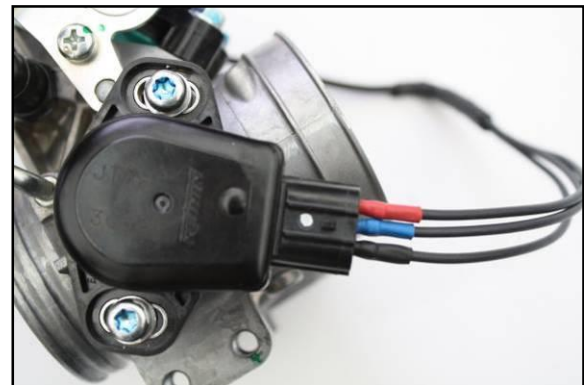
Honda CRF 250 2013-2014 CRF 450 2011-2014 Yamaha YZF 250/450 2014	
TPS-sensor: (Picture 15)	TPS-tool pins:
Bottom	Black
Top	Red
Middle	Blue



Picture 13



Picture 14



Picture 15



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

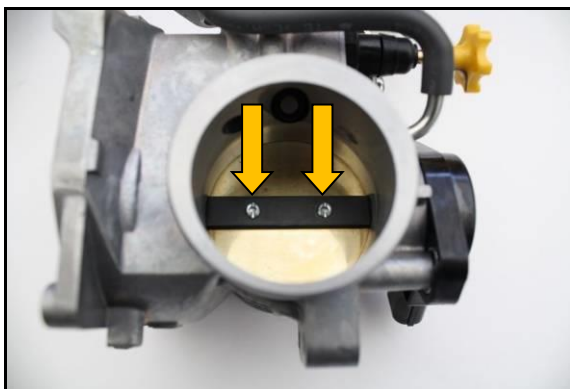


Instructions:

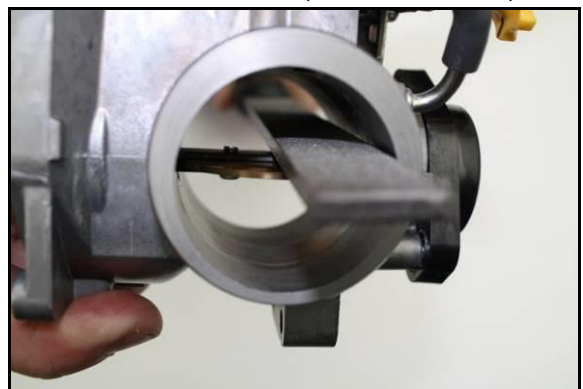
1. Remove your throttle body from your motorcycle. Check your motorcycle manual for reference.
2. Connect a TPS-tool (Throttle Positioning Sensor tool, Picture 11, also available from Twin Air) to the TPS-sensor connector, connect the cables as recommended in the TPS connection tables on page 3.
3. Write down the TPS-sensor voltage read-out on 0% throttle position before disassembling the TPS-sensor.

You will need this value at step 12.

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

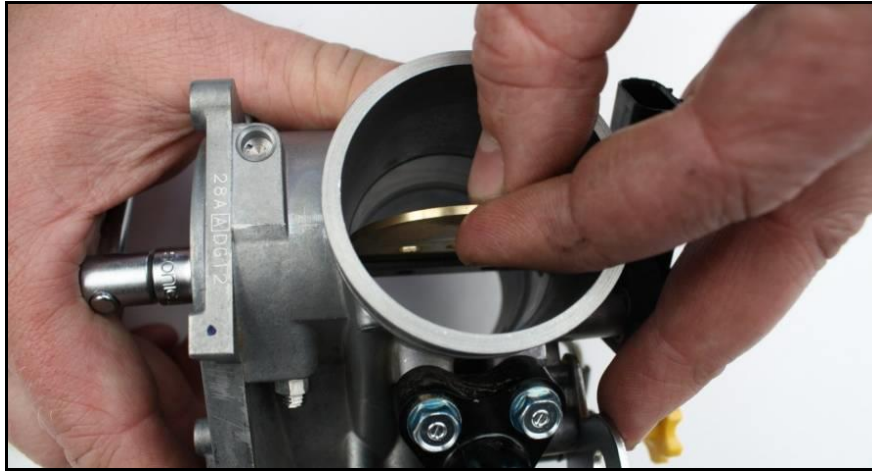


Picture 1



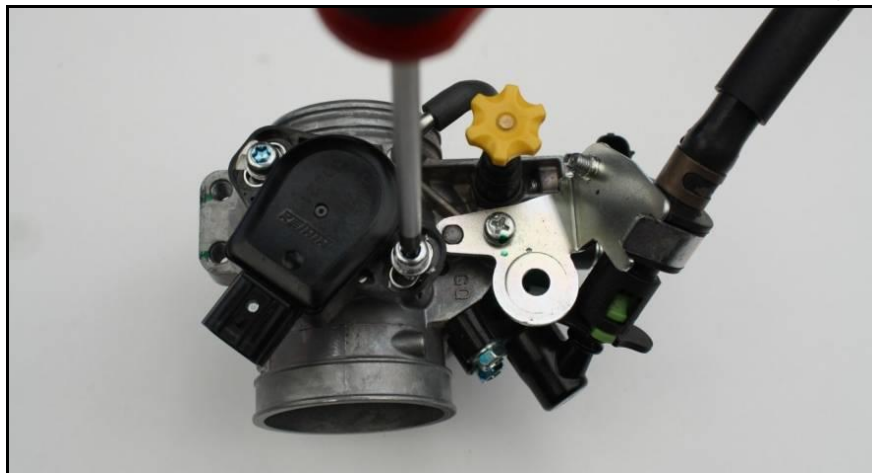
Picture 2

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)



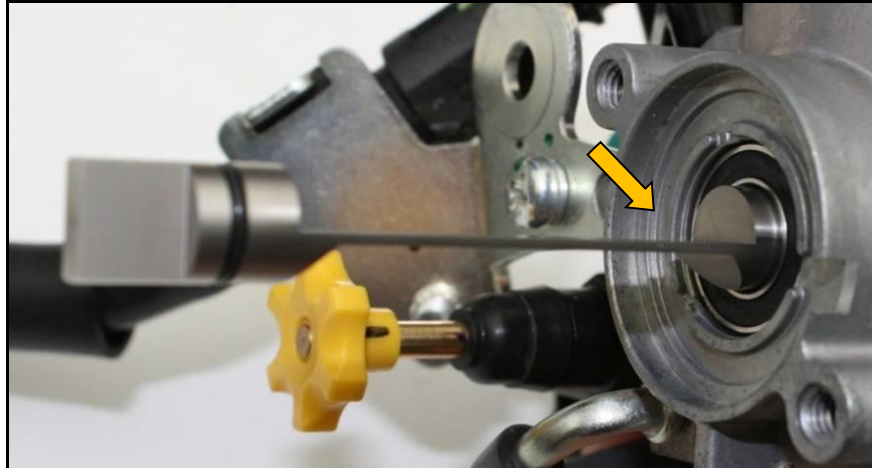
Picture 4

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



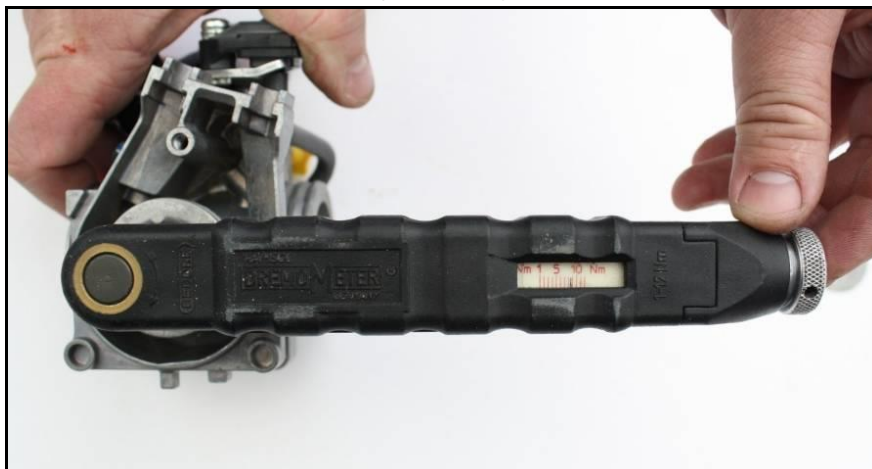
Picture 5

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. Insert the shaft with the flat side facing upwards. (Picture 6)



Picture 6

10. Tighten the 11mm nut that holds the shaft and **do not overtighten** (Max 8Nm). (Picture 7)



Picture 7



Mounting Instructions Powerflow Throttle Body Kit Honda

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 8, 9 and 10)



Picture 8



Picture 9



Picture 10

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 voltage **as noted at 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.

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TPS-sensor:	TPS-tool pins:
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Yellow	Blue

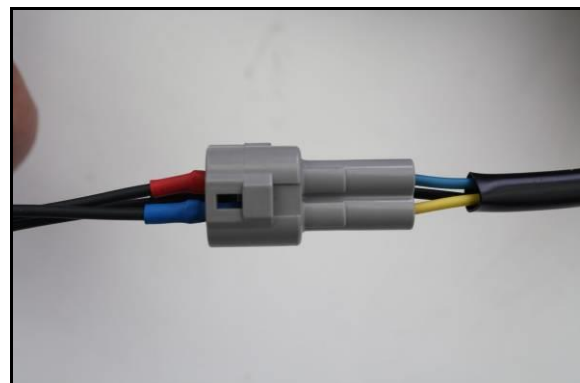
Kawasaki KXF 250 2011-2012 KTM SXF 250 2011-2012 SXF 350 2011-2012 KTM EXC 250/350/450 2012-2014	
TPS-sensor:	TPS-tool pins:
Top	Black
Bottom	Red
Middle	Blue

Kawasaki KXF 250 2013-2014 450 2009-2014 KTM SXF 250 / 350 / 450 2013-2014 Suzuki RMZ 250 2009-2014 RMZ 450 2008-2014	
TPS-sensor: (Picture 12)	TPS-tool pins:
Black	Black
Blue	Red
Yellow	Blue

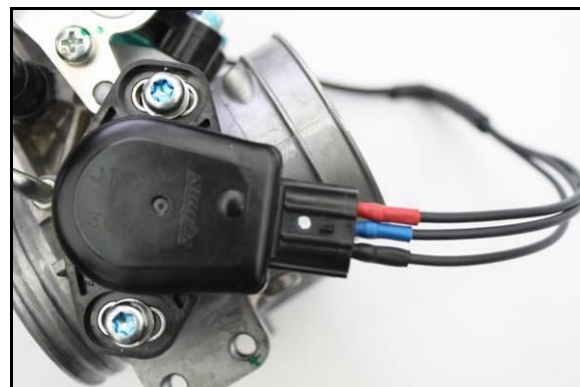
Honda CRF 250 2013-2014 CRF 450 2011-2014 Yamaha YZF 250/450 2014	
TPS-sensor: (Picture 13)	TPS-tool pins:
Bottom	Black
Top	Red
Middle	Blue



Picture 11



Picture 12



Picture 13