



## CR200 – Gear sensor replacement and air conveyor kit installation

Panigale V4 S/STD MY 2020 (all versions)

Panigale V4 R MY 2019-2020 (all versions)

Technical Service Bulletin SRV-TSB-20-012

Date: November 5, 2020

To: Dealer Principal, General Manager, Service Manager, North American Dealer Network

From: Richard Kenton, Technical Director

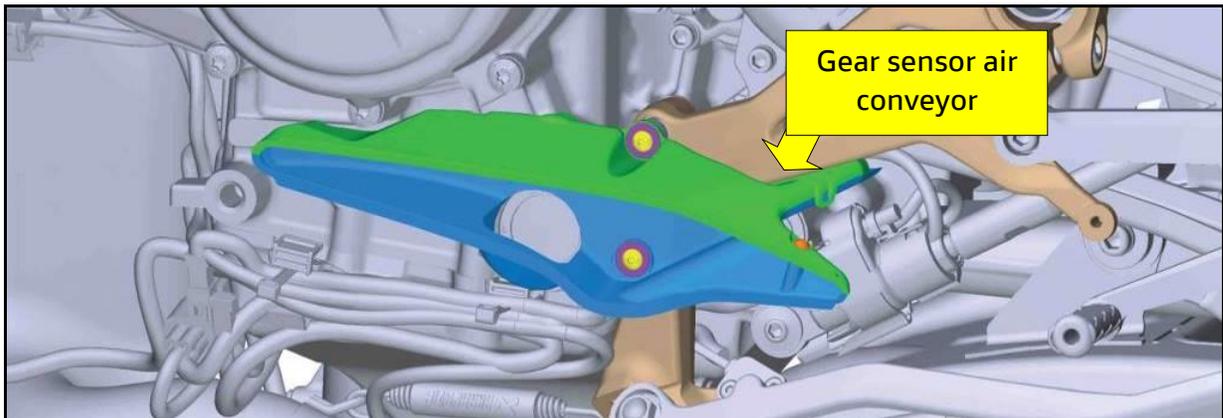
Eric Bradley, Technical Training and Publications Manager

Dear Dealers,

Ongoing product quality testing and field reports have identified a potential for a failure to display the gear engaged on the instrument panel, and the validation in the control unit of the error "P0916 - Gear Sensor [Short-circuit to ground or Open Circuit]". This phenomenon is most likely due to overheating of the gear sensor. A new duct has been implemented to assist in airflow to the sensor to prevent this occurrence.

For this reason, on the motorcycles involved in this upgrade it is necessary to proceed with:

- 1) **The preventive replacement of the Hirschmann type gear sensor** with a new unit, Part no.55243941A
- 2) **The installation of the air conveyor kit** Part no.69929211A to ensure a greater air flow close to the gear sensor, thus avoiding overheating and the phenomenon described above.



### WARNING

This Workshop Campaign involves only the vehicles equipped with the Hirschmann gear sensor; do NOT assemble the Hirschmann gear sensor Part no.55243941A on a vehicle equipped with the Novotechnik gear sensor. For further information, please refer to Tips&Tricks SRV-TTB-20-001.



## CR200 – Gear sensor replacement and air conveyor kit installation

Panigale V4 S/STD MY 2020 (all versions)

Panigale V4 R MY 2019-2020 (all versions)

Technical Service Bulletin SRV-TSB-20-012

### Application

You can find the precise list of VIN numbers involved in CR200 on the DCS, in sections:

<b>VIN HISTORY</b>		It is possible to search by individual frame number.
<b>CAMPAIGNS</b>		It is possible to search for all the frame numbers that you received from Ducati Motor Holding.

PANIGALE V4 R RED 2019 CAL DMH			
VIN #	_____XXX	ENGINE #	AGSK0 XXX
END CUSTOMER	Corsa Moto Transport, Inc. 	MANUFACT DATE	04/18/2019
WARRANTY TYPE		STANDARD WTY START DATE	05/22/2019
		INVOICE	05/22/2019
		LAST MILEAGE	1 MI

**ATTENTION: YOU HAVE 1 PENDING RECALL CAMPAIGNS**

N	TYPE	ID NUMBER	REPAIR DATE	DEFECT	CAUSAL PART	DEALER	MILEAGE
1	CAMPAIGN 	<u>CR 200</u>		SRV-TSB-20-012 Gear sensor replacement and air conveyor kit installation	Air Conveyor and Gear Position Sensor	<input type="button" value="VIEW"/> <input type="button" value="APPLY"/>	

### Customer Impact

All motorcycles in your inventory (to be registered or already registered) and to be delivered to final Customers must be updated during pre-delivery operations and always before delivery to the final Customer. All motorcycles already delivered to final Customers must undergo this inspection as soon as they come to your workshop. Note: this is NOT a safety recall.

### Parts Distribution

If required, the following components required to carry out the upgrade under this Workshop Campaign must be ordered for each affected frame number.

- Hirschmann gear sensor Part no.55243941A (only for Hirshmann sensor equipped models)
- Air conveyor kit for gear sensor Part no.69929211A
- Hellermann clamps Part no.75840951A

The required self-locking ties are easy to find consumables and should be sourced locally.



## CR200 – Gear sensor replacement and air conveyor kit installation

Panigale V4 S/STD MY 2020 (all versions)

Panigale V4 R MY 2019-2020 (all versions)

Technical Service Bulletin SRV-TSB-20-012

### Warranty Reimbursement Rules

Reimbursement for work associated with this Service Campaign will be made through the regular warranty claim procedure using the “**VIN History**” section of the DCS. The warranty claim is pre-filled and is identified as CR200.

This includes reimbursement for the part listed for the operation; Hirschmann gear sensor Part no.55243941A, air conveyor kit for gear sensor Part no.69929211A, Hellermann clamps Part no.75840951A, self-locking ties and the applied LOCTITE; and labor for [REDACTED] that includes the time necessary for:

- Vehicle reception
- Gear sensor replacement
- Installing the air conveyor kit for gear sensor
- Gear position reset procedure through DDS 2.0 diagnosis instrument and subsequent teach-in procedure
- Soft cleaning of the vehicle

### Table of Contents

	Page
Introduction	1
Application	2
Customer Impact	2
Parts Distribution	2
Warranty Reimbursement Rules	3
Spare Parts	4
Service Solution	6
Part 1: Replacement of the Hirschmann Gear Position Sensor	7
Part 2: Installation of the Air Conveyor	13
Part 3: Gear Position Sensor Calibration	17



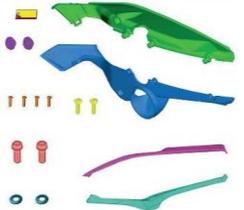
## CR200 – Gear sensor replacement and air conveyor kit installation

Panigale V4 S/STD MY 2020 (all versions)

Panigale V4 R MY 2019-2020 (all versions)

Technical Service Bulletin SRV-TSB-20-012

### Spare Parts

Part no.	Description	Photo	Quantity to order
55243941A	Gear sensor Hirschmann		1 pc
69929211A	Air conveyor kit for gear sensor		1 pc
75840951A	Hellermann tie		2 pc



### NOTE

The minimum quantity of Hellermann clamps to be ordered is 2, but only one is needed to carry out the intervention; for self-locking ties, on the other hand, it is not necessary to fill out spare part orders since they are consumables and therefore easily available.



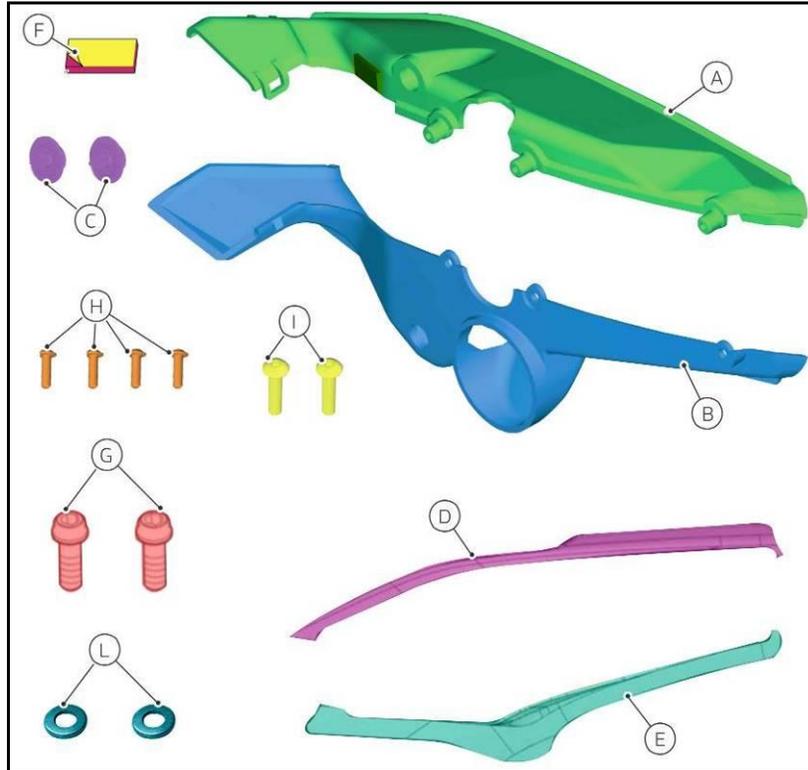
## CR200 – Gear sensor replacement and air conveyor kit installation

Panigale V4 S/STD MY 2020 (all versions)

Panigale V4 R MY 2019-2020 (all versions)

Technical Service Bulletin SRV-TSB-20-012

The air conveyor kit for gear sensor Part no.69929211A consists of the following components:



Position	Description	Qty
A	Upper conveyor	1
B	Lower conveyor	1
C	Spacer with collar	2
D	Upper seal	1
E	Lower seal	1
F	Adhesive pad	1
G	Special screw M8x35	2
H	Self-tapping screw	4
I	Screw M4x16	2
L	Washers, 1 mm thick	2



## CR200 – Gear sensor replacement and air conveyor kit installation

Panigale V4 S/STD MY 2020 (all versions)

Panigale V4 R MY 2019-2020 (all versions)

Technical Service Bulletin SRV-TSB-20-012

### Service Solution



#### WARNING

To ensure the correct execution of the operation within the provided labor time to carry out the updates, it is necessary to follow the sequence indicated in the following instructions



#### WARNING

This Workshop Campaign involves only the vehicles equipped with the Hirschmann gear sensor; do NOT assemble the Hirschmann gear sensor Part no.55243941A on a vehicle equipped with the Novotechnik gear sensor. For further information, please refer to Tips&Tricks SRV-TTB-20-001.

Novotechnik gear sensor: DO NOT REPLACE	Hirschmann gear sensor: REPLACE
	



## CR200 – Gear sensor replacement and air conveyor kit installation

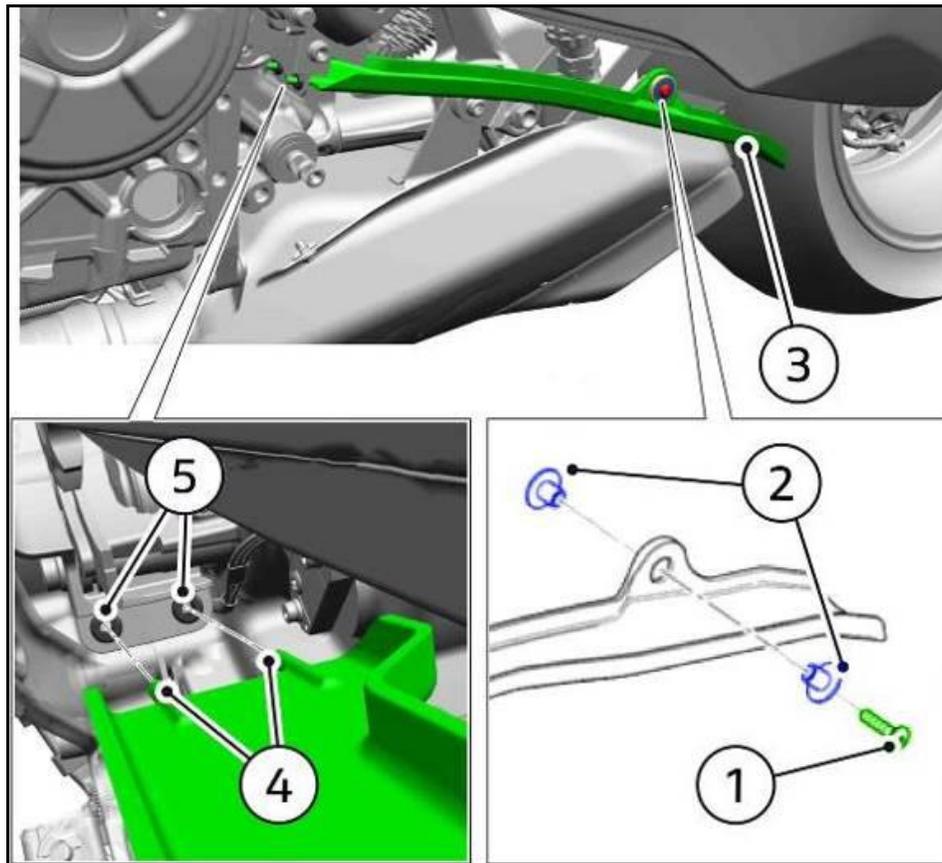
Panigale V4 S/STD MY 2020 (all versions)

Panigale V4 R MY 2019-2020 (all versions)

Technical Service Bulletin SRV-TSB-20-012

### Part 1: Replacement of the Hirschmann Gear Position Sensor

1. Remove the LH lower half-fairing (see Sec. 5: "Fairing installation - Fairing" of the Workshop Manual)
2. Remove the **M5x20 screw (1)** and the **2 spacers (2)** retaining the **splash guard (3)**
3. Slide the **splash guard (3)** out towards the rear side of the bike in order to release the **2 pins (4)** from the relevant **rubber blocks (5)** on the sprocket cover





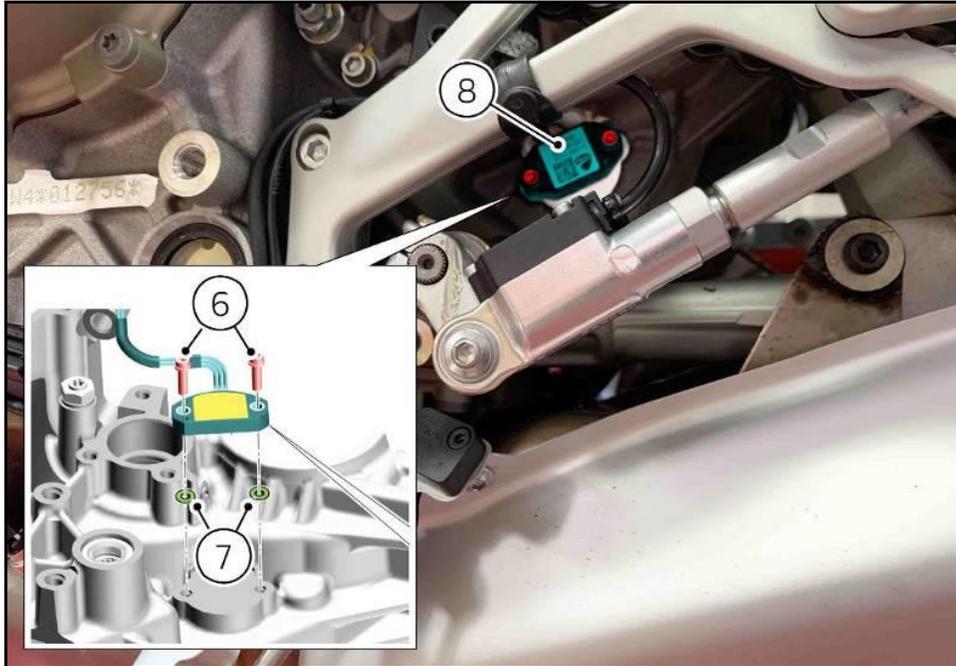
## CR200 – Gear sensor replacement and air conveyor kit installation

Panigale V4 S/STD MY 2020 (all versions)

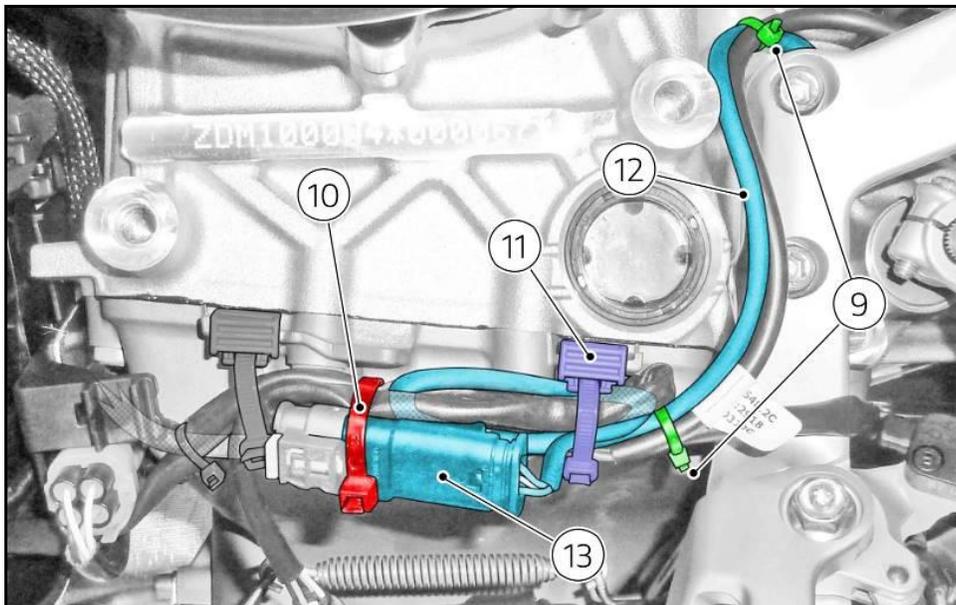
Panigale V4 R MY 2019-2020 (all versions)

Technical Service Bulletin SRV-TSB-20-012

4. Remove the 2 M4x14 screws (6) and the relevant washers (7) 0.2mm thick securing gear sensor (8) to crankcase



5. Remove the 2 small self-locking ties (9), the big self-locking tie (10) and the Hellermann clamp (11) to release the gear sensor cable (12)
6. Disconnect the gear sensor connector (13) and slide the gear sensor cable (12) out of the vehicle





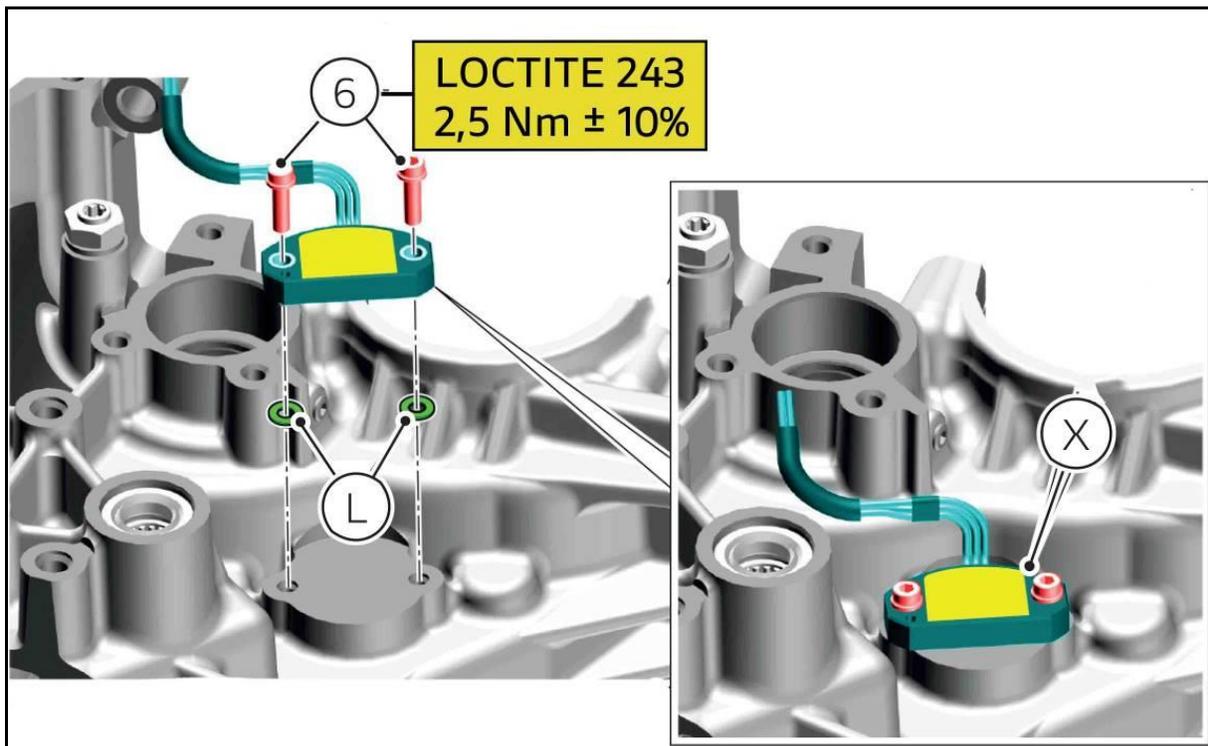
## CR200 – Gear sensor replacement and air conveyor kit installation

Panigale V4 S/STD MY 2020 (all versions)

Panigale V4 R MY 2019-2020 (all versions)

Technical Service Bulletin SRV-TSB-20-012

7. Clean the 2 screws M4x14 to remove all previous threadlocker and take the new Hirschmann gear sensor (X) Part no.55243941A and the 2 washers (L) 1 mm thick from kit Part no.69929211A
8. Insert the 2 screws M4x14 (6) on gear sensor (X) and insert the 2 washers (L) on the screw thread, ON THE OTHER SIDE between engine case and sensor.
9. Apply LOCTITE 243 (or equivalent) on the thread of the 2 screws M4x14 (6)
10. Position Hirschmann gear sensor on the crankcase, start the 2 screws M4x14 (6) making sure that the label is visible, as shown in the figure. Tighten the screws to a torque of 2.5 Nm ± 10%
11. After tightening, remove any excess of threadlocker





## CR200 – Gear sensor replacement and air conveyor kit installation

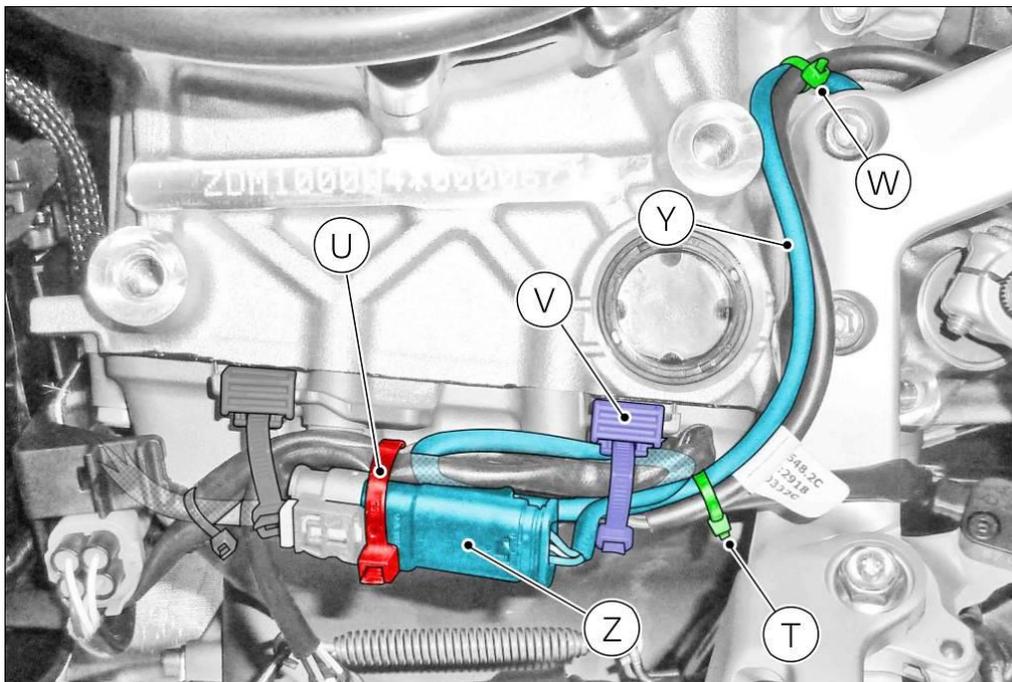
Panigale V4 S/STD MY 2020 (all versions)

Panigale V4 R MY 2019-2020 (all versions)

Technical Service Bulletin SRV-TSB-20-012

12. Position **gear sensor cable (Y)** and secure it in place using the self-locking ties, as shown in the figure. In particular

- Fit the new small self-locking **tie (W)** to fasten together **gear sensor cable (Y)** and Ducati Quick Shift cable
- Fit the new small self-locking **tie (T)** to fasten together **gear sensor cable (Y)**, Ducati Quick Shift cable and side stand cable
- Fit the new **Hellermann clamp (V)** to fasten together Ducati Quick Shift cable, front lambda sensor cable excess length, **gear sensor cable (Y)** with relevant excess length and side stand cable
- Connect gear sensor **connector (Z)** and use the new big self-locking **tie (U)** to fasten it to Ducati Quick Shift wiring branch, front lambda sensor cable exceeding length and side stand cable





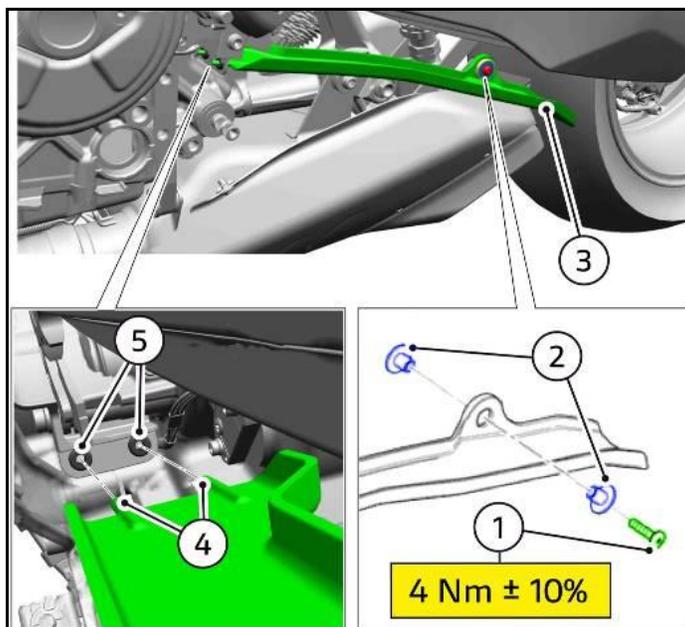
## CR200 – Gear sensor replacement and air conveyor kit installation

Panigale V4 S/STD MY 2020 (all versions)

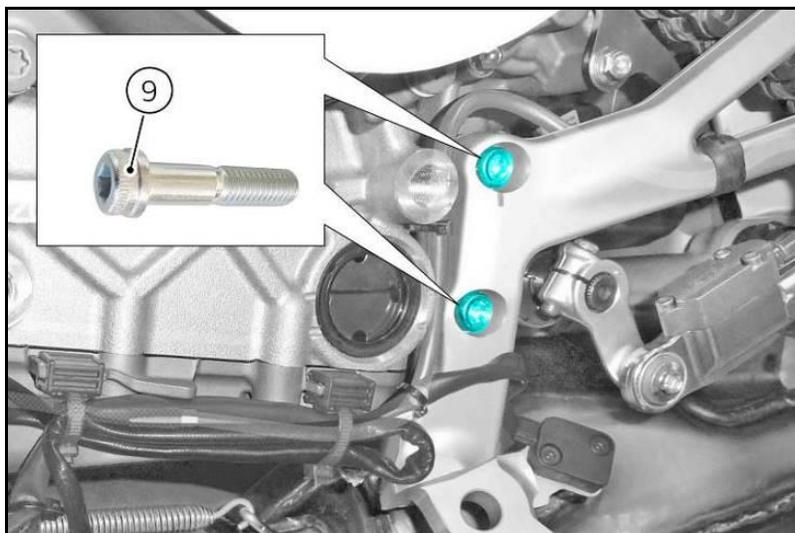
Panigale V4 R MY 2019-2020 (all versions)

Technical Service Bulletin SRV-TSB-20-012

13. Install the splash guard (3) as shown in the figure by inserting the 2 pins (4) in the relevant seals (5) on the sprocket cover
14. Fit the 2 spacers (2) on the vibration damper on the splash guard (3)
15. Tighten the screw M5x20 (1) that retains the splash guard to the left silencer cover to 4 Nm ± 10%



16. Remove the 2 screws M8x35 (9) securing the LH footpeg holder plate





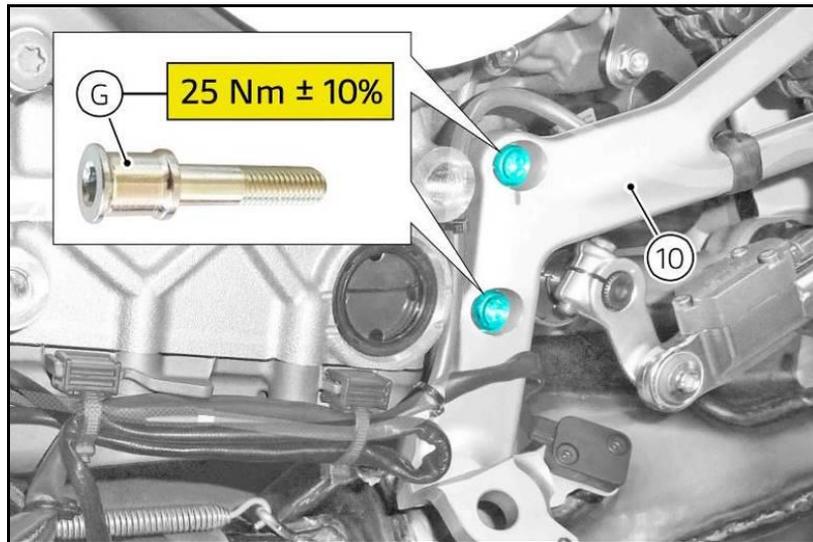
## CR200 – Gear sensor replacement and air conveyor kit installation

Panigale V4 S/STD MY 2020 (all versions)

Panigale V4 R MY 2019-2020 (all versions)

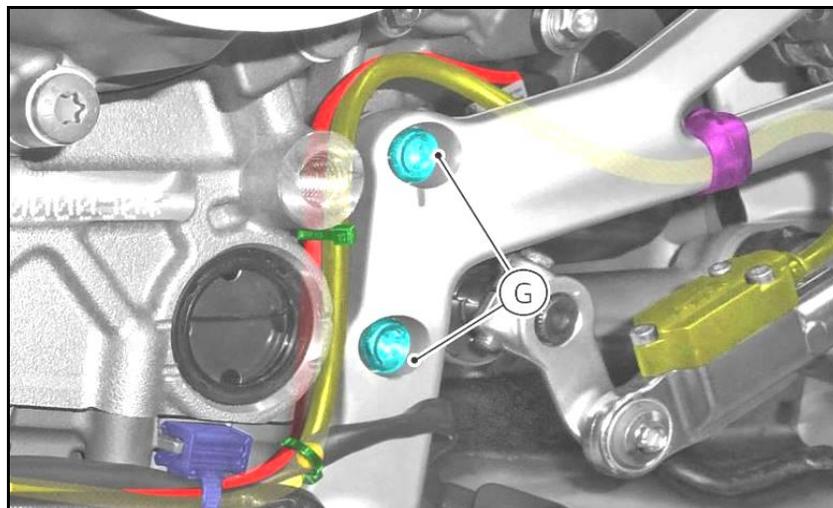
Technical Service Bulletin SRV-TSB-20-012

17. Take from the kit part no.69929211A the 2 special screws M8x35 (G), apply Shell Gadus S2 V220 AD 2 grease (or equivalent) and start them onto the LH footpeg holder plate (10)
18. Tighten the 2 special screws M8x35 (G) to 25 Nm  $\pm$ 5%



### NOTE

Make sure that the DQS sensor cable and the gear sensor cable do not overlap the 2 special screws M8x35 (G), and are not pinched between the foot holder plate and the engine case.





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Panigale V4 S/STD MY 2020 (all versions)

Panigale V4 R MY 2019-2020 (all versions)

Technical Service Bulletin SRV-TSB-20-012

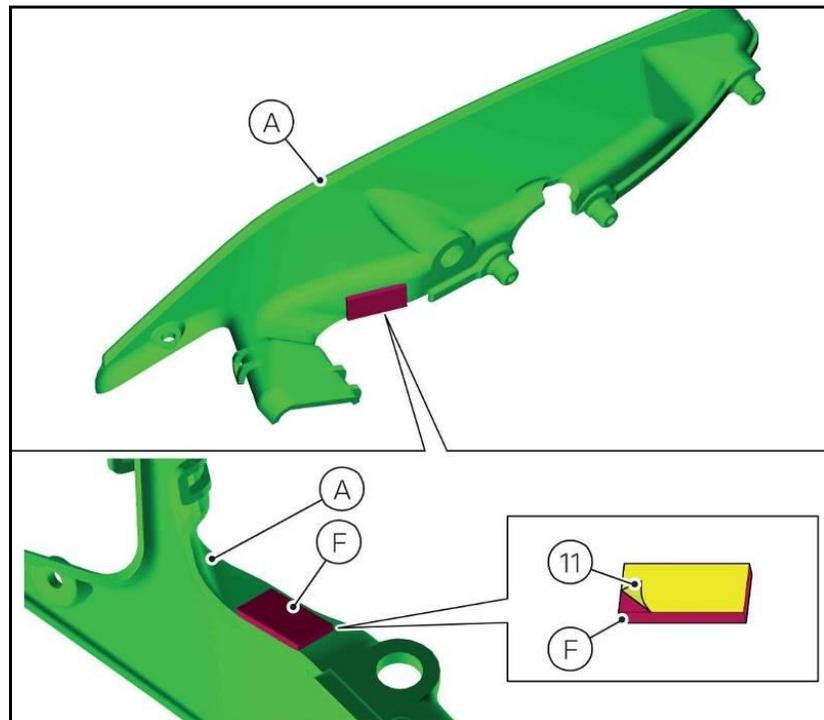
### Part 2: Installation of the Air Conveyor

1. Take the following parts from the part no.69929211A
  - upper conveyor (A)
  - lower conveyor (B)
  - adhesive pad (F)
  - 4 self-tapping screws (H)
2. Remove **protective film (11)** on the back of the adhesive **pad (F)**
3. Apply adhesive **pad (F)** in the indicated area of **upper air conveyor (A)** positioning it as shown in the figure.



#### NOTE

Before applying the adhesive pad, thoroughly clean the upper conveyor surface where pad will be stuck. During the application, take special care not to touch the adhesive surface with your fingers.





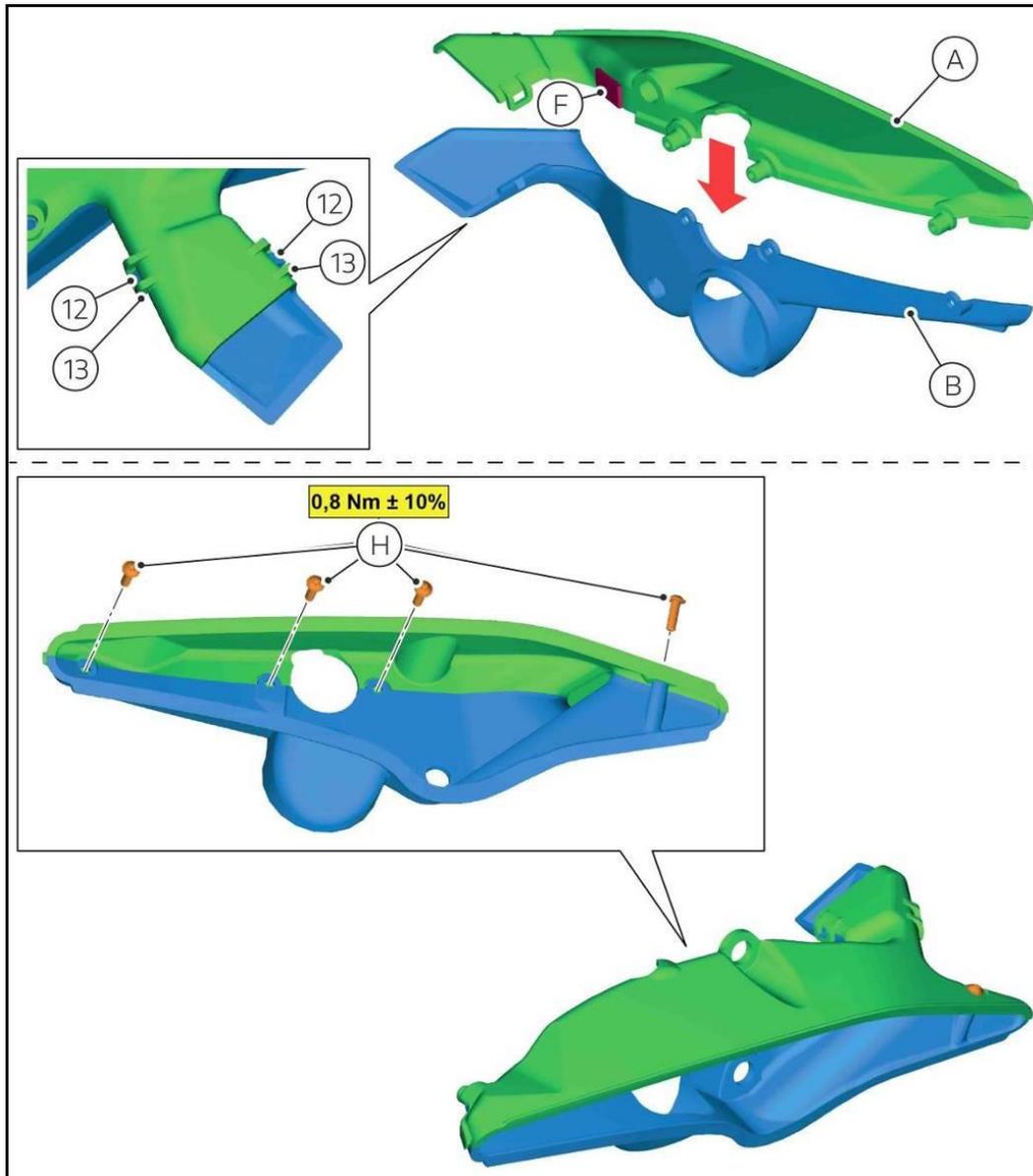
## CR200 – Gear sensor replacement and air conveyor kit installation

Panigale V4 S/STD MY 2020 (all versions)

Panigale V4 R MY 2019-2020 (all versions)

Technical Service Bulletin SRV-TSB-20-012

4. Fit **upper conveyor (A)** on **lower conveyor (B)**, making sure that the **2 teeth (12)** are correctly inserted inside the **2 ends (13)** and start **4 self-tapping screws (H)**
5. Tighten the **4 self-tapping screws (H)** to **0.8 Nm ± 10%**





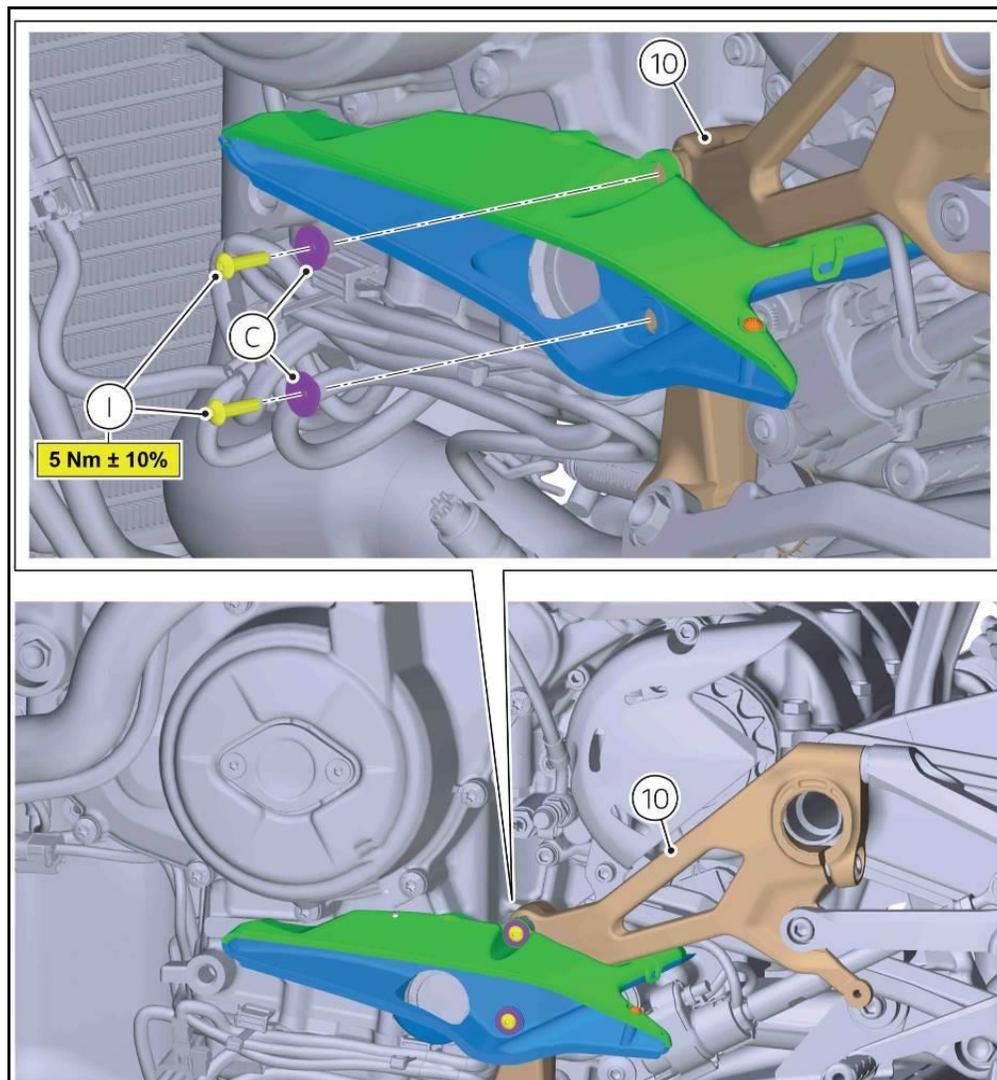
## CR200 – Gear sensor replacement and air conveyor kit installation

Panigale V4 S/STD MY 2020 (all versions)

Panigale V4 R MY 2019-2020 (all versions)

Technical Service Bulletin SRV-TSB-20-012

6. Take the 2 screws M4x16 (I) and the 2 spacers with collar (C) from the kit part no. 69929211A
7. Fit no. 2 spacers with collar (C) on the thread of no. 2 screws M4x16 (I)
8. Position the air conveyor assembly on LH footpeg holder plate (10), aiming it as shown in the figure and start no. 2 screws M4x16 (I)
9. Tighten the 2 M4x16 screws (I) to  $5 \text{ Nm} \pm 10\%$





## CR200 – Gear sensor replacement and air conveyor kit installation

Panigale V4 S/STD MY 2020 (all versions)

Panigale V4 R MY 2019-2020 (all versions)

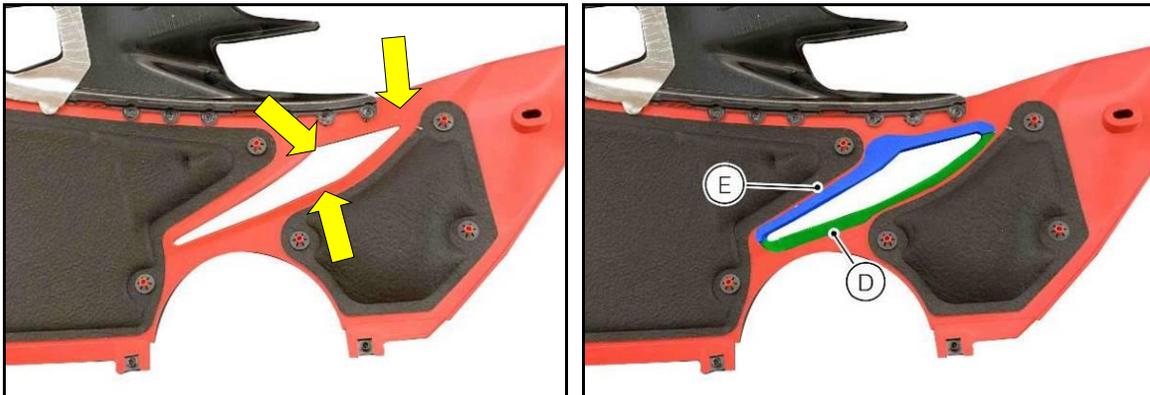
Technical Service Bulletin SRV-TSB-20-012

10. Thoroughly clean with a damp cloth the LH lower half fairing from the inside, at the air inlet shown in the figure
11. Take the **upper seal (D)** and **lower seal (E)** from the kit part no. 69929211A
12. Remove the protective films on the back of the two adhesive seals
13. Install the **upper seal (D)** and **lower seal (E)** inside the LH lower half fairing, at the air inlet, as shown in the figure.



### NOTE

Before applying the adhesive seals, carefully clean the inner surface of the half fairing. During the application, take special care not to touch the adhesive surface with your fingers.





## CR200 – Gear sensor replacement and air conveyor kit installation

Panigale V4 S/STD MY 2020 (all versions)

Panigale V4 R MY 2019-2020 (all versions)

Technical Service Bulletin SRV-TSB-20-012

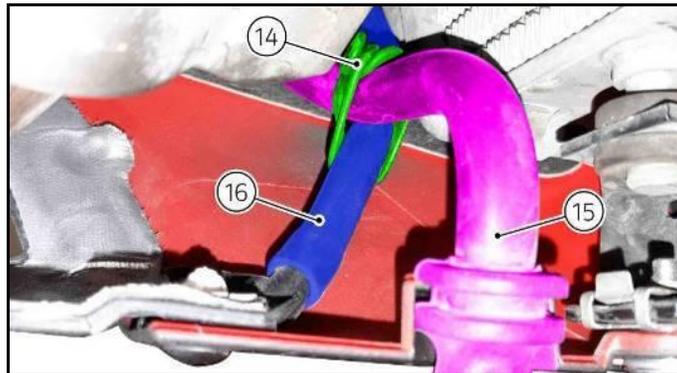
14. Install the LH lower half-fairing (see Sec. 5: "Fairing installation - Fairing" of the Workshop Manual).



### NOTE

Make sure that the L=39mm **button tie (14)** is in place, to fasten the Airbox drain **hose (15)** to the fuel-coolant tank breather **hose (16)**, as shown in the figure.

For further details, please refer to bulletin SRV-SRB-20-024 "Introduction of button tie on breather hoses".



### Part 3: Gear Position Sensor Calibration

1. Through the DDS 2.0 diagnosis instrument, enter the "Settings" section of the engine control unit and perform the "Gear reset"
2. Calibrate the gear position sensor by using the procedure provided with bulletin SRV-TTB-16-003 "Gear storage procedure update"

For questions on this Workshop Campaign,  
please contact your Service Area Manager.