

CP0485

# FITTING INSTRUCTIONS FOR CP0485 AERO CRASH PROTECTORS DUCATI V2 2020-



#### THIS KIT CONTAINS THE ITEMS PICTURED AND LABELLED OVER PAGE.

SOME PARTS MAY BE SHOWN FOR CLARITY OF INSTRUCTIONS ONLY.

DO NOT PROCEED UNTIL YOU ARE SURE ALL PARTS ARE PRESENT.

#### PLEASE READ ALL INSTRUCTIONS BEFORE PROCEEDING.

# IF IN ANY DOUBT WHEN FITTING OUR PRODUCTS, CONSULT ONE OF OUR DEALERS OR HAVE FITTED BY A QUALIFIED TECHNICIAN.

PLEASE NOTE THAT THE WAY THE KIT IS PACKED DOES NOT NECESSARILY REPRESENT THE WAY OF

MOUNTING TO THE BIKE.

IN THE EVENT OF RUBBER WASHERS BEING USED TO HOLD COMPONENTS ONTO BOLTS,

THESE RUBBER WASHERS CAN BE THROWN AWAY.

#### **DIGITAL COPIES OF THESE INSTRUCTIONS ARE AVAILABLE FROM:**

WWW.RG-RACING.COM



#### **TOOLS REQUIRED**

- Socket set to include 2.5, 3, 4, 5, 6, 7 & 8mm A/F socket and wrench.
  - Torx head tools
  - Socket set to include a deep 8mm & 19mm socket and wrench.
    - 8 & 10mm spanner.
    - Flat headed screwdriver.
    - Torque wrench (up to 40Nm).
      Suitable centre lift stand to support the chassis during room supportion removal
      - chassis during rear suspension removal

<b>GENERAL TORQUE SETTINGS</b>
M4 BOLT = 8Nm
M5 BOLT = 12Nm
M6 BOLT = $15$ Nm
M8 BOLT = 20Nm
M10 BOLT = $40$ Nm
M12 BOLT = $40$ Nm

# **LEGEND**

ITEM NO.	DESCRIPTION	QTY
ITEM 1	M0382 LHS CRASH PROTECTOR BRACKET	1
ITEM 2	M0383 RHS CRASH PROTECTOR BRACKET	1
ITEM 3	M0384 RHS ENGINE MOUNT PLATE	1
ITEM 4	EB077 ENGINE BAR	1
ITEM 5	B0431 M12 CRASH PROTECTOR	2
ITEM 6	BC002 BOBBIN CAP	2
ITEM 7	M12 x 1.25 x 100mm HEX HEAD BOLT RHS	1
ITEM 8	M12 x 1.25 x 140mm HEX HEAD BOLT LHS	1
ITEM 9	M12 19MM O/D WASHER	2
ITEM 10	LW0001 SHAKE PROOF WASHER	2
ITEM 11	S0670 9mm SPACER (LHS REAR)	1
ITEM 12	S0735 41.5mm SPACER (RHS FRONT)	1
ITEM 13	S0736 6.5mm SPACER (SHOCK MOUNT)	1
ITEM 14	S1252 23.5mm RHS PANEL SPACER	2
ITEM 15	S0757 3mm RHS PANEL SPACER	2
ITEM 16	S0791 82mm SPACER (LHS CRASH PROTECTOR)	1
ITEM 17	S1251 41mm SPACER (RHS CRASH PROTECTOR)	1
ITEM 18	M8 x 1.25 x 25mm BUTTON HEAD BOLT	2
ITEM 19	M8 x 1.25 x 30mm BUTTON HEAD BOLT	1

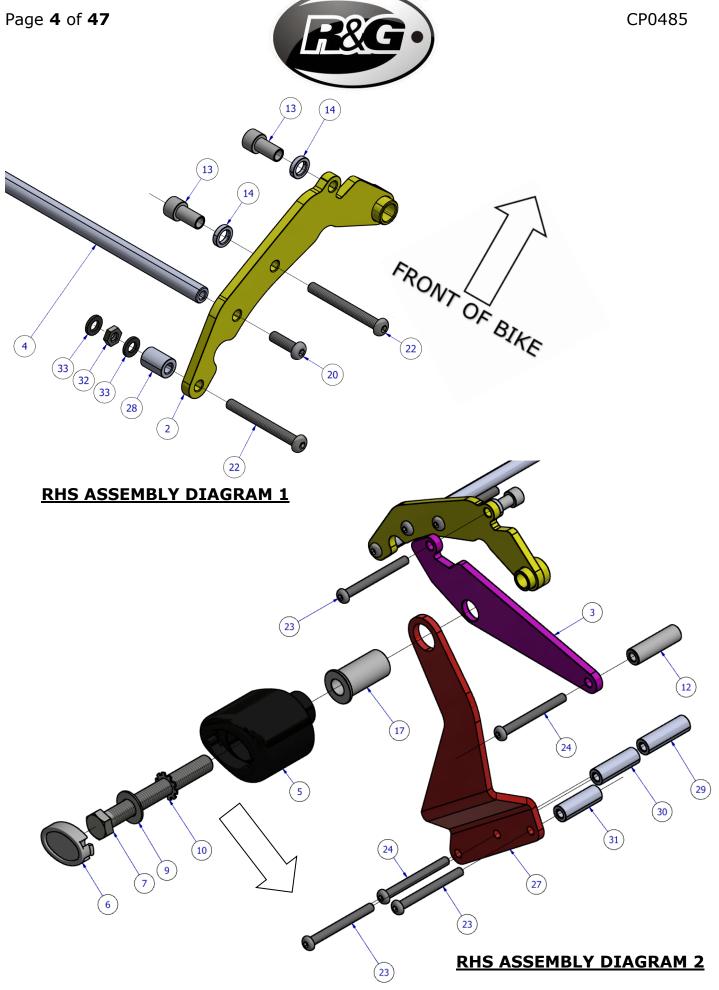


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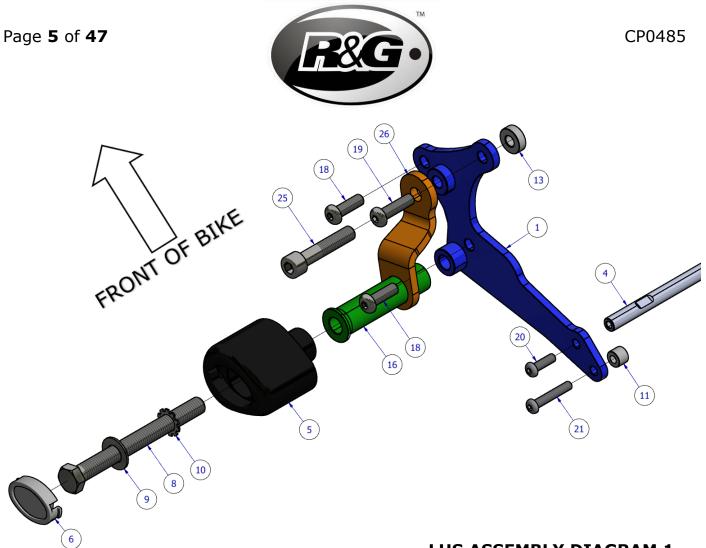
ITEM 20	M6 x 1.00 x 20mm BUTTON HEAD BOLT	2
ITEM 21	M6 x 1.00 x 35mm BUTTON HEAD BOLT	1
ITEM 22	M6 x 1.00 x 55mm BUTTON HEAD BOLT	2
ITEM 23	M6 x 1.00 x 65mm BUTTON HEAD BOLT	3
ITEM 24	M6 x 1.00 x 70mm LONG BUTTON HEAD BOLT	2
ITEM 25	M10 x 1.25 x 50mm CAP HEAD BOLT	1
ITEM 26	MP0116 LHS CRASH PROTECTOR BRACE PLATE	1
ITEM 27	MP0117 RHS CRASH PROTECTOR BRACE PLATE	1
ITEM 28	S0792 16.5mm RHS REAR SPACER	1
ITEM 29	S0793 40mm RHS REAR BRACE SPACER	1
ITEM 30	S0794 36.5mm RHS CENTRAL BRACE SPACER	1
ITEM 31	S0795 35mm RHS FRONT BRACE SPACER	1
ITEM 32	M6 STAINLESS NUT	1
ITEM 33	M6 WASHERS 12mm OD x 1mm	2

# **AERO-STYLE CRASH PROTECTOR ORIENTATION**





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# **LHS ASSEMBLY DIAGRAM 1**





Picture 1



Picture 2



Picture 3



Picture 4



Picture 5



Picture 6



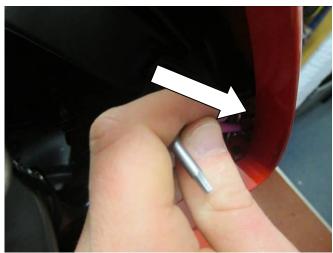
Picture 7



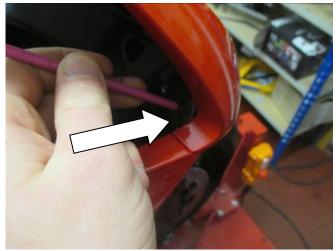
Picture 8



Picture 9



Picture 10



Picture 11



Picture 12



Picture 13



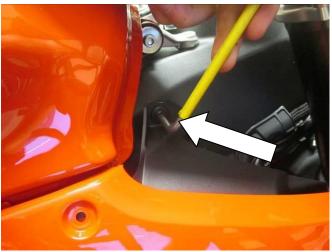
Picture 14



Picture 15



Picture 16



Picture 17



Picture 18



Picture 19



Picture 20







Picture 21



Picture 22



Picture 23



Picture 24



Picture 25



Picture 26





Picture 27



Picture 28



Picture 29



Picture 30



Picture 31



Picture 32





Picture 33



Picture 34



Picture 35



Picture 36



Picture 37



Picture 38







Picture 40





Picture 41

Picture 42



Picture 43

Picture 44





Picture 45



Picture 46



Picture 47



Picture 48



Picture 49



Picture 50





Picture 51



Picture 52



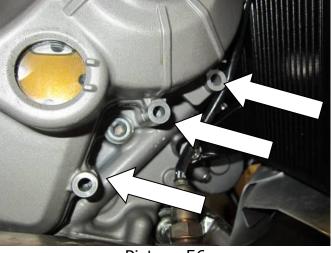
Picture 53



Picture 54



Picture 55



Picture 56





Picture 57



Picture 58



Picture 59



Picture 60



# **FITTING INSTRUCTIONS**

# PLEASE NOTE THAT BEFORE BEGINNING, YOU WILL NEED A SUITABLE STAND TO LIFT THE MOTORCYCLE ALLOWING REMOVAL OF THE REAR SHOCK. DO NOT PROCEED IF YOU ARE NOT COMFORTABLE TO DO THIS. HAVE FITTED BY A QUALIFIED TECHNICIAN. READ ALL STEPS BEFORE PROCEEDING.

- Begin by removing RHS belly pan panels by removing the following bolts using Torx tool and 4mm allen key to remove:
  - $\circ\,$  Row of 3 x Torx bolts along RHS connecting mid fairing to lower fairing, arrowed in Picture 1.
  - $\circ$  2 x 4mm allen bolts underside of belly pan, arrowed in Picture 2.
  - $\circ$  1 x 4mm allen bolt on rear mount, arrowed in Picture 3.
  - $\circ$  1 x Torx head bolt on inside of front cowl, arrowed in picture 4.
- Next, follow the same procedure to remove the LHS belly panel removing the following bolts:
  - $\circ\,$  Row of 4 x Torx head bolts along LHS connecting mid fairing to lower fairing.
  - 1 x allen bolt underside of belly pan forward 1 bolt (removed in previous step).
  - 1 x 4mm Rear mount bolt.
  - $\circ$  1 x Torx bolt inside front cowl.
- The key shroud panel must be removed (Picture 5) using a 3mm & 4mm allen key to remove the following bolts:
  - $\circ$  2 x outer 3mm allen keys bolts, arrowed in Picture 6.
  - 2 x upper 4mm allen head bolts, arrowed in Picture 7.
- Next, remove the RHS inner nose panel (Picture 8) by removing the following bolts:
  - $\circ~2~x$  pop rivets inside fairing surrounding radiator, removed by pressing the centre inwards to release and then removing plastic rivet.
  - $\circ$  1 x 3mm allen at front of panel, arrowed in picture 9.
- To remove RHS Mid fairing panel (main section), remove all the bolts listed below:
  - $_{\odot}$  2 x 3mm behind RHS inner nose panel shown in pictures 10 and 11.
  - $\circ$  1 x 4mm allen bolt under centre nose cone shown in picture 12.
  - 2 x 3mm allen bolts, upper rear fairing.
  - 1 x 3mm allen hidden behind mid fairing accessed from rear, as shown in picture 13.

# At this point the fairing is free to be removed and should be supported at all times during the next steps.

 pry the fairing carefully away from the bike so 3 x plastic pop pins inside fairing can be accessed and help disengage them from the rubber mounts as required. **DO NOT TRY TO FULLY REMOVE FAIRING.**

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- Shift the whole fairing panel towards the rear of the bike to disengage the final pop pin at the top rear of the panel below the fuel tank, as shown in Picture 14.
- Remove the RHS mid fairing inner panel, shown in picture 15:
  - Remove the locking nut from the engine stud at the base of the panel using an 8mm socket, arrowed in picture 16.
  - Remove the upper 3mm allen bolt arrowed in picture 17.
  - Remove the forward 4mm bolt found behind the radiator, shown in picture 18.
  - Pull the panel section away from the bike and disengage the rubber pop pin and remove the panel completely.
- Next, the RHS Engine case panel must be removed permanently from the bike.
  - $_{\odot}~$  First remove the 2 x 4mm allen bolts shown in picture 19.
  - $_{\odot}$  Remove the two 4mm allen bolts shown in picture 20 & 21.
  - Remove the 3mm allen bolt securing the ABS unit in position as shown in picture 22.
  - Move the ABS unit away from the bike as shown in picture 23 to reveal a 3<sup>rd</sup> allen bolt to be removed, as shown in picture 24. Do not disconnect any wiring.
  - Remove the 2 x 8mm hex nuts shown in pictures 25 & 26, making sure to remove the retaining spacers also.
  - Now the lower engine panel can be removed. Pull the front two mounts from the studs and carefully remove the brake pressure switch line from the plastic panel and slide the panel downwards and away from the bike, as shown in picture 27.
- Now remove the engine case panel mount bracket by removing the two 8mm engine case bolts, as shown in picture 28. You can re-fit these engine bolts as originally mounted and re-torque the bolts to the manufactures specified amount.
- Re-fit the plastic ABS unit, using the original 3mm allen bolt.
- Remove 2 x 8mm shaft nuts arrowed in picture 29 to allow the brake reservoir panel to be pulled away from the bike and off the engine studs. **Do not remove the panel completely.**
- Remove the two studs below the panel using an 8mm deep socket.
- Take the single stepped spacers (item 14 S1252) and insert into the rearward holes from behind the plastic hose guide, as shown in picture 30.
- The plastic hose guide should now relocate into place, with both spacers aligning with the bolt holes in the engine case.
- Fit the small spacer with the smaller diameter centre (item 15 S0757 3mm long) over the exposed smaller step of spacer S0756, as shown in picture 31.
- On all model variants, remove the remaining 8mm head engine case bolt, as arrowed in picture 32.
- Referring to RHS Assembly Diagram 1, take the right side rearward mounting plate (item 2 M0383) and fit one M6 x 55mm long button head bolt (item 22) through the rearward hole and then through the plastic spacer (item 28 –

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S0792 – 16.5mm long). Now fit one M6 washer (item 33), followed by the M6 nut (item 32) and then the remaining M6 washer (item 33), as shown in picture 33.

- Tighten the nut onto the bolt so that it just begins to tighten onto the plastic spacer.
- Now the RHS rearward mounting plate with the rearward bolt can be offered up to the bike as shown in picture 34.
- Take the remaining M6 x 55mm long button head bolt (item 22) and place though the third hole from the rear, locating through the set of spacers already fitted which secure the rear of the plastic hose guide in place, before loosely tightening into the engine case, as shown in picture 34.
- To ensure the rear bolt is correctly mounted into the engine case, tighten the bolt into the casing and then lock it using the M6 nut which is already fitted. This will allow the plastic spacer to be slightly pinched in place and will help absorb forces in the event of a crash.
- Re-fit the front 8mm hex head bolt cap to secure the front of the plastic hose guide in place and relocate any wiring connectors that were previously unmounted.
- Remove the engine case bolt from behind the hydraulic hose, as arrowed in picture 35.
- Referring to RHS Assembly diagram 2, offer the right side forward mounting plate (item 3 M0384) into place, ensuring the large hole locates over the threaded boss of the previously installed mounting plate, before fitting one M6 x 65mm long button head bolt (item 23) through the top mounting hole, then the other mounting plate and spacers before loosely tightening into the engine case as shown in picture 36.
- Take the long spacer (item 12 S0735 41.5mm long) and position it between the mounting plate and engine case in alignment with the front mounting hole, before inserting the M6 x 70mm long button head bolt (item 24) and loosely tightening, as shown in picture 37.
- With all four mounting bolts now in place and the 2 mounting plates correctly mounted, tighten the bolts to the manufacturers recommended torque settings, as shown in picture 38.
- From the left side of the bike, insert the engine bar (item 4 EB077 252.5mm long) behind the rear cylinder, allowing the other end to locate with the remaining hole on the right-side mounting plate. *Please note insert the engine bar so that the end with the 8mm spanner flats sits on the left side of the bike, as shown in picture 39.* Fit one M6 x 20mm long button head bolt (item 20) through the mounting plate and loosely tighten into the engine bar.



The next steps will require removal of the LHS upper and mid fairing and entails similar process to the steps performed for the RHS fairing:

- Remove the LHS inner nose panel (picture 8) by removing the following bolts:
  - 2 x pop rivets inside fairing surrounding radiator, removed by pressing the centre inwards to release and then removing plastic rivet.
    - 1 x 3mm allen at front of panel (picture 9).
- Remove the LHS upper fairing panel in the same method as the RHS by removing:
  - 2 x 3mm allen bolts, upper rear fairing
  - 2 x 3mm behind LHS inner nose panel (RHS shown in pictures 10 and 11)
  - $\circ\,$  1 x 4mm allen head bolt, top. (previously hidden behind key shroud removed earlier)
  - 1 x 3mm allen hidden behind mid fairing accessed from rear (as shown in picture 13)
  - 1 x pop rivet to inner nose cone
  - At this point the fairing is free to be removed and should be supported at all times during the next steps.
  - Pry the fairing carefully away from the bike so 3 x plastic pop pins inside fairing can be accessed and help disengage them from the rubber mounts as required. **DO NOT TRY TO FULLY REMOVE FAIRING.**
  - Shift the whole fairing panel towards the rear of the bike to disengage the final pop pin at the top rear of the panel below the fuel tank as shown in picture 14.
- Remove the LHS mid fairing inner panel:
  - Remove the locking nut from the engine stud at the base of the panel using an 8mm socket, arrowed in picture 40.
  - Remove the forward 4mm bolt found behind the radiator as shown in picture 41.
  - Pull the panel section away from the bike and disengage the rubber pop pin and remove the panel completely.
- The regulator/ rectifier mounting panel should be moved to access upper suspension mount:
  - $\circ$  Remove 2 x 4mm black cap bolts shown in pictures 42 & 43.
- The motorcycle now needs to be mounted onto a suitable stand which supports the bike from the swingarm pivot to allow for the rear suspension to be removed, as shown in picture 44. The rear wheel will also need to be supported to prevent it from dropping when the shock absorber is removed.
- Remove the 3 x allen bolts securing the plastic shock cover.
- Remove the two bolts which secure the shock absorber in place using an 8mm allen key, as shown in picture 45, and remove the shock from the bike completely.
- With the shock absorber removed, remove the three bolts which secure the front mounting plate in place to the rear cylinder head, as shown in picture 46.
- Remove the engine case bolt which sits near the previously installed engine bar and above the rear shock linkage, as shown in picture 47.

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- Take the left side mounting plate (Item 1 M0382) and offer it up to the bike as shown in picture 48. Insert one M8 x 25mm long button head bolt (Item 18) through the front hole of the mounting plate and into the threaded boss on the side of the cylinder head, also shown in picture 48.
- On the top mounting hole, place the M8 x 30mm long button head bolt (item 19) through the mounting plate, then through the short spacer (item 13 S0736 6.5mm long) and loosely tighten into the thread boss on the side of the rear cylinder head, as shown in picture 49.
- Fit the remaining M8 x 25mm long button head bolt (item 18) into the remaining hole, above the threaded boss.
- At the rear of the mounting plate, fit the M6 x 35mm long button head bolt (item 21) through the mounting plate hole, then through the small spacer (item 11 - S0670 - 9mm long) and loosely tighten into the engine case, as shown in picture 50.
- The previously fitted engine bar should now be in a location where it can align with the remaining hole on the mounting plate. Fit the remaining M6 x 20mm long button head bolt (item 20) and loosely tighten into the engine bar, as shown also in picture 50.
- With the mounting plate correctly mounted it should look like picture 51. Tighten all the bolts to the manufacturers recommended torque settings. For the bolt that tightens into the engine bar, hold the engine bar in place using an 8mm open ended spanner on the flats of the bar, whilst tightening the button head bolt, as shown in picture 39. **Please ensure to tighten the button head bolt on the other end of the engine bar as well.**
- Re-fit the shock absorber to the bike using the OEM bolt on the rear mount but using the M10 x 1.25 x 50mm long 10.9 grade cap head bolt supplied in the kit (item 25) on the front mount. When fitting, first place through the recessed OEM spacer and then fit through the smaller hole of the left brace plate (item 26 MP0116) so that the bend in the plate comes out from the bike, as shown in pictures 52 & 53. Tighten this loosely, so that the brace can still be moved.
- The LHS crash protector can now be fitted. Referring to **LHS Assembly Diagram 1** and following the steps below:
  - Slide one of the 12mm washers (item 9) onto the M12 x 1.25 x 140mm long hex head bolt (item 8) so the washer sits against head of bolt.
  - Slide one shake proof washer (item 10) over the bolt so it sits against the washer just fitted.
  - Next slide the bolt with washers through either crash protector (item 5) so the head of the bolt and washers goes into counter-bore in the bobbin.
  - Locate the longer crash protector spacer (item 16 S0791 82mm long) over the exposed end of the bolt, ensuring the larger diameter end sits against the crash protector, as shown in picture 54.
  - Offer the crash protector up to the mounting plate by locating the spacer through the larger hole in the left brace plate and tighten the bolt into the



main mounting plate, as shown in picture 55, taking care to ensure the wiring runs above the spacer.

- Tighten the bolt until you feel some compression from inside the protector using a 19mm socket and wrench, PLEASE NOTE THE CRASH PROTECTOR MUST BE POSITIONED AS AERO-STYLE CRASH PROTECTOR ORIENTATION DIAGRAM ON PAGE 3, WITH BIGGER END TOWARD FRONT OF BIKE.
- Turn a little more so that you feel the compression increase slightly. Then apply a quarter turn. Do not over tighten as damage can occur to the bike. Do not exceed 40Nm of torque.
- Tighten the front shock bolt. Do not exceed 40Nm of torque.
- On the right side of the bike, remove the three M6 bolts which mount into the lower casing, as shown in picture 56.
- To fit the RHS brace plate (item 26 MP0116), refer to **RHS Assembly Diagram 2** and following the steps below:
  - $\circ~$  Take the right brace plate (item 27 MP0117) and offer it up to the bike as shown in picture 57.
  - Fit two M6 x 65mm long button head bolts (item 23) through the two forward holes on the bottom of the plate and the remaining M6 x 70mm long button head bolt (item 24) through the remaining rear hole.
  - On the back of the plate locate the 40mm long spacer (item 29 S0793 40mm long) over the exposed thread of the rearward bolt, the 36.5mm long spacer (item 30 S0794 36.5mm long) over the central bolt and the 35mm long spacer (item 31 S0795 35mm long) over the front bolt.
- The brace plate should now be securely located in place as shown in picture 58.
- The LHS crash protector can now be fitted. Referring to **RHS** Assembly **Diagram 2** and following the steps below:
  - Take one of the 12mm washers (item 9) and slide onto the M12 x 1.25 x 100mm long hex head bolt (item 7) so the washer sits against head of bolt.
  - Slide one serrated locking washer (item 10) over the bolt so it sits against the washer just fitted.
  - Next slide the bolt with washers through the remaining crash protector (item 5) so head of bolt and washers goes into counter-bore in crash protector.
  - Locate the remaining crash protector spacer (item 17 S1251 41mm long) over the exposed end of the bolt, ensuring the larger diameter end sits against the crash protector, as shown in picture 59.
  - Locate the crash protector and spacer through the upper hole of the brace plate and tighten the bolt into the main mounting plate, as shown in picture 60.
  - Tighten the bolt until you feel some compression from inside the protector using a 19mm socket and wrench.



# PLEASE NOTE THE CRASH PROTECTOR MUST BE POSITIONED AS IN AERO-STYLE CRASH PROTECTOR ORIENTATION DIAGRAM ON PAGE 3, WITH BIGGER END TOWARD FRONT OF BIKE.

- Turn a little more so that you feel the compression increase slightly. Then apply a quarter turn. Do not over tighten as damage can occur to the bike. Do not exceed 40Nm of torque.
- Re-fit the small plastic cover by the rear shock on the left side of the bike.
- Re-fit the upper fairing on the right and lower fairings on both sides of the bike by reversing the steps for each panel ensuring all bolts are returned to their correct location.
- Ensure all fairings are correctly fitted with all bolts fully tightened.
- Fit crash protector caps (item 6) into both crash protectors.
- Before riding, check both sides are secure, and the crash protectors cannot rotate.
- Check tightness of each side regularly.

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