Service Bulletin

Circolare Tecnica - Technisches Rundschreiben - Circulaire Technique - Circular Tecnica

Date: 25 September 2017

Subject: **cylinder head replacement**

Product: **F3 675 / 800 MY 2017**

Dear Sirs,
following the quality control procedures, it was discovered the existence of a condition that could affect the functionality of the vehicle on some F3 675 MY 17 \ F3 800 MY 17 model motorcycles.
Although there is no immediate risk to the reliability of the bikes involved, it has been decided to start an inspection and update on the vehicles that are potentially affected.

In this regard, before carrying out the DELIVERY of motorcycles equipped with the chassis numbers listed in the attached list, the cylinder head group replacement should be performed.

The same procedure should also be carried out on vehicles already registered and circulating and we invite you to contact your motorcycle owners with the chassis numbers listed in the list above.

In order to protect your customers' satisfaction and to avoid further aggravated costs, you must ensure that the cylinder head replacement will be carried out on all motorcycles involved as soon as possible.

For any information, doubt or clarification regarding this intervention procedure, please contact MV Agusta's Technical Support Service by e-mail.

Please send a warranty claim in accordance with the instructions given below: the required Cylinder head Kit will be automatically shipped following the approval of the warranty claim.

The Dealers directly involved will receive a communication from MV Agusta with the details of the chassis numbers billed to them.

Warranty claims:

Send the Warranty claim to activate the spare part order and subsequent reimbursement of spare parts and labor time, in addition to the full details of the motorcycle, include the following information:

- Warranty type = 2 available options:
    - New motorcycles in stock = **GX**
    - Sold motorcycles with activated warranty = **GS**

- Special warranty number = 2811 (for both GS and GX)
- N° 1 spare part = 2 available options:
    - W000W1425 x F3 675
    - W000W1426 x F3 800
- Operation code: B 002 (8 hours)
- Problem code: 077
- Date of problem: enter the date in the warranty claim

NOTE: We also remind you that according to the new warranty features and management procedures you will need to complete the claim with the date of the repair of the motorcycle in order to proceed with the correct reimbursement of claim (see technical bulletin No. 004).

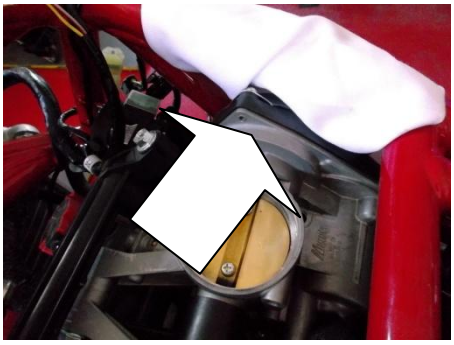
Please pay attention to the identification of the two different kits:

CYLINDER HEAD KIT F3 675: W000W1425
CYLINDER HEAD KIT F3 800: W000W1426

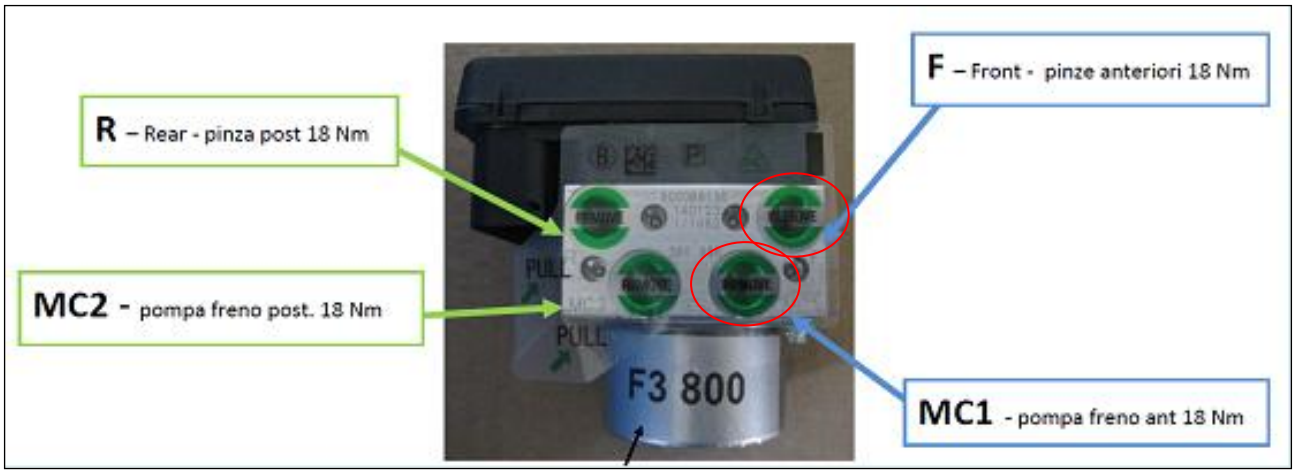
Each cylinder head is identified with a sticker reporting the code of the kit and the bike model:

Cylinder head replacement procedure:

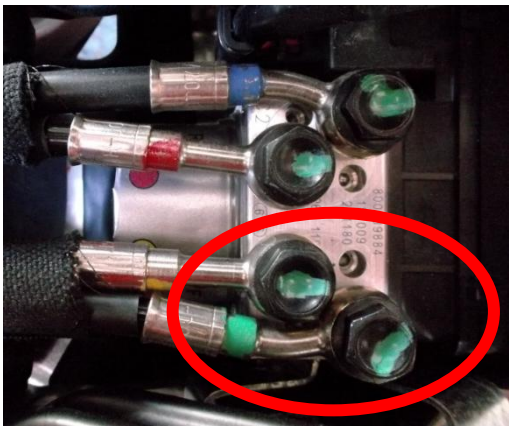
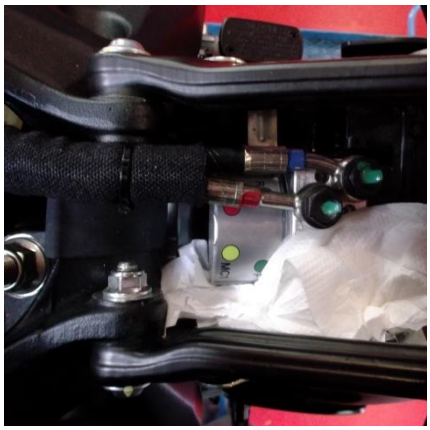
- Place the bike on the central stand
- Remove the driver's seat, the right and left fairings, the belly fairing , the rear fairings and the complete front fairing.
- Remove the fuel tank.
- Disconnect and rremove the battery.
- Remove the left and right intake manifold and the related covers.
- Remove the airbox and the air filter.
- Remove the throttle body by adequately protecting the right frame area.



- Drain the coolant and remove the water radiator.
- Remove the silencer and exhaust manifold; keep both the valve cables and the actuator connected.
- Disconnect the two brake hoses that connect the front brake calipers and the front brake pump called **"MC1" (front brake pump) and "F" (front brake calipers)** from the abs module:

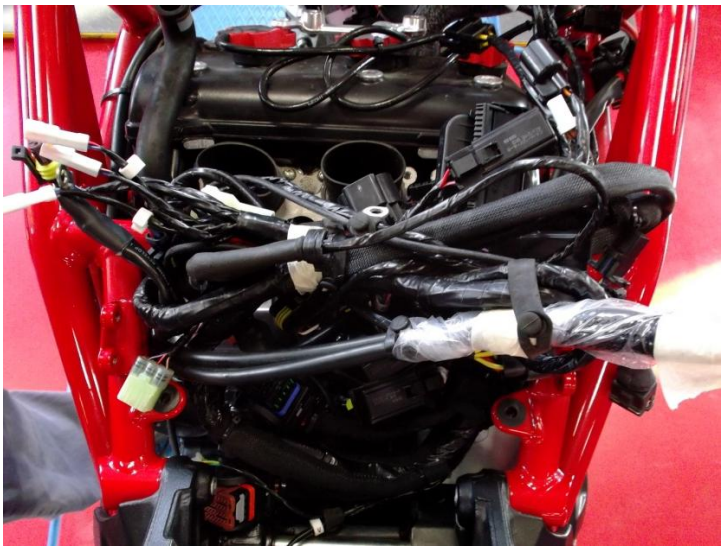


NOTE: Properly protect the brake hoses to prevent the oil from escaping and causing accidental damage.

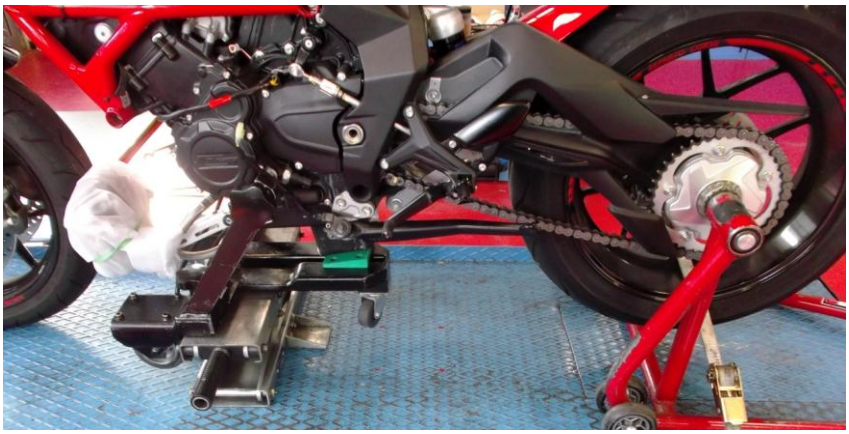




- Disconnect all electrical connections from the engine and from the rear part of the motorcycle, the clutch cable, thekey- lock cable, and the main switch assenbly.

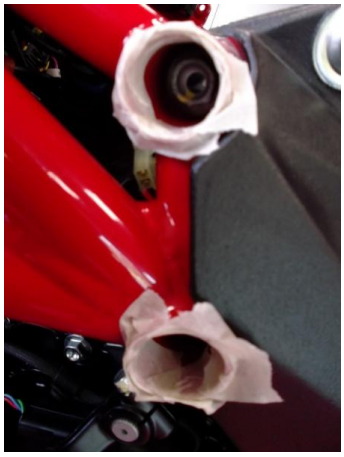
NOTE: The electrical system must be removed with the front part and the chassis; make sure that all the connections are disconnected before removing the parts and be sure that there are no wiring or tubes that may be damaged during handling:



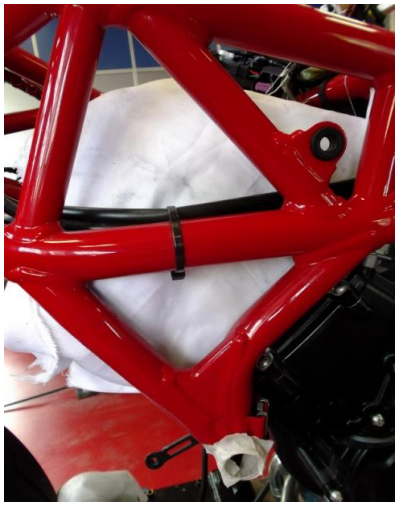
- Secure the rear part of the motorcycle with a strap so you can operate on the chassis front assembly without moving accidentally the back of the bike (secure the rear part preferably acting on the rear wheel axel or on the swingarm).
- Apply a suitable support under the engine to ensure stability during the operation on thecylinder head:

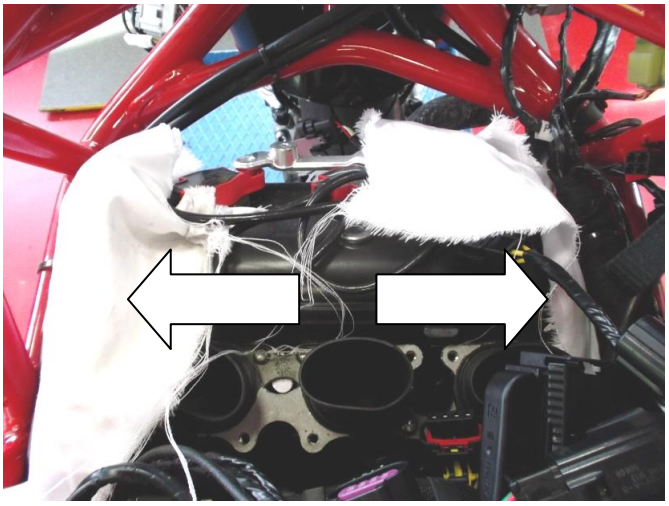


- Remove the two fixing screws 8000B2750; Properly protect all areas that may be subject to accidental contact with work tools:

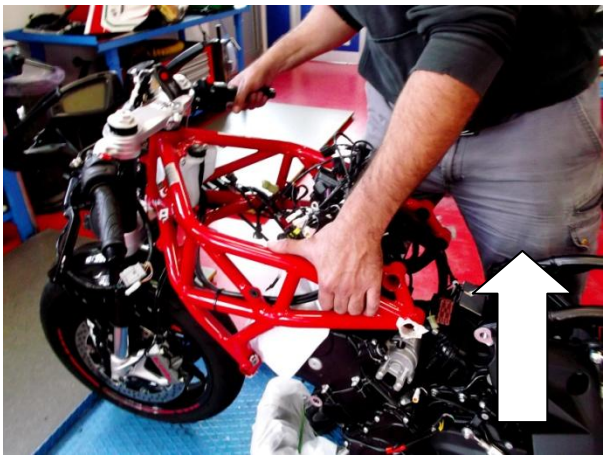


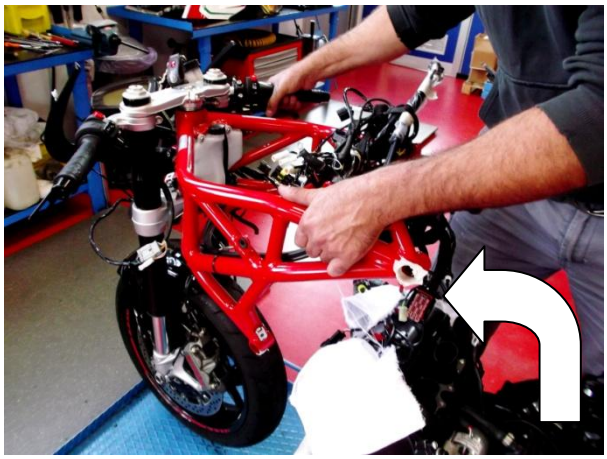
- remove the 8000B2715 nut on the right side of the motorcycle and remove the cod. 8B00B5645.
- remove the two frame \cylinder head fixing screws cod. 8000C3696.
- Place appropriate protections on the chassis in the area that can be subjected to accidental contact with the cylinder head and valve cover:





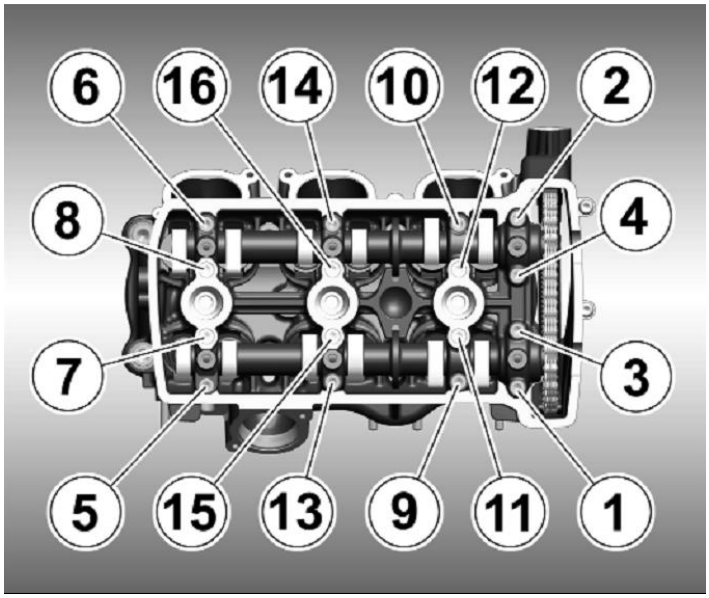
- Remove the front chassis assembly by lifting the front assembly slightly to disengage it and then sliding it forward, paying attention to contact points between the engine and chassis during handling that could cause accidental damage:





- Remove the three plugtops.
- Remove the three spark plugs.
- Remove the blow by pipe.
- Remove the cylinder head’s gas draining pipe.
- Remove the valve cover and the alternator cover.

- Turning the generator nut with a 15 mm tool, turn the crankshaft clockwise until piston n ° 3 is on the upper dead point (PMS (In this position, the mark "M" the phonic wheel is aligned with the reference mark shown on the crankcase).
  The reference marks on the camshaft's drive wheels are horizontally positioned and facing outwards: This position provides the minimum pressure of the valve springs and facilitate the disassembling of the camshaft's support.
- Remove the distribution chain's tensioner starting by the spring's nut.
- Remove the camshaft's support by first operating following the pattern shown below in order to balance the pressure imposed by the valve springs:

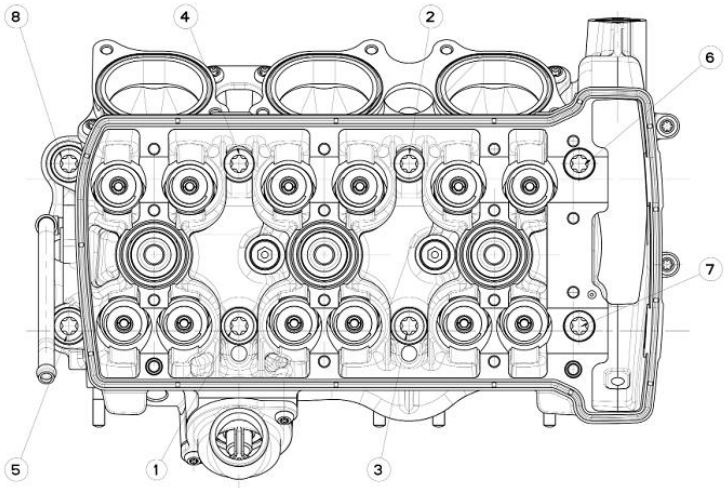


- Move the distribution chain and remove both camshafts starting from theIntake camshaft
- Remove the front slider's fixing screw.
- Remove the two spacers using a 8mm screw:

- Remove the Harmonic Damper's screw
- Loosen the 10 fixing screws of the cylinder head starting from the outer ones and proceeding towards the inner ones, following a crossed pattern
- Remove the cylinder head and place it on a clean surface
- Remove the old gasket 8000B2179 and check the correct position of the centering bushes cod. 800081535 on the crankcase.
- Remove any gasket residue from the crankcase top
- Place the new gasket 8000B2179 provided with the cylinder head's kit.
- Before tightening, lubricate the screw's head with nut oil (on base), screw threads and underside
- Replace the new cylinder head provided in the kit, making sure to avoid damages on the plan surfaces during the assembling: the contact surfaces between the cylinder and the head must be

perfectly clean and free of scratches; place the cylinder head by lifting the distribution chain to avoid having to retrieve it later.

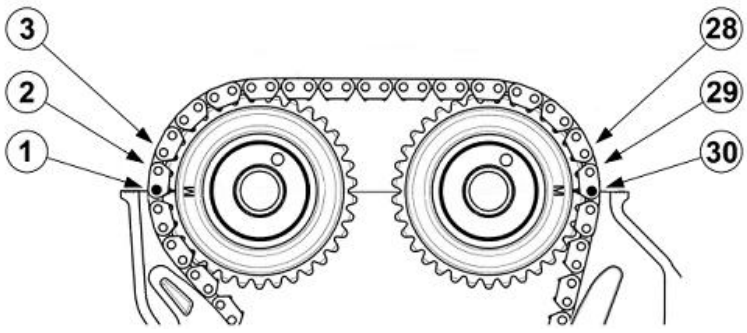
- Once thecylinder head is positioned, manually place the screws without tightening
- Fix the front slider's screw with the tightening torque of 8 Nm.
- Follow the tightening sequence for thecylinder head's screws as shown in the picture below and make a first tightening of the 8 screws at 10 Nm:



- Detight again the 8 screws and repeat the tightening at 10Nm.
- Make the final tightening with the angle of 85 ° ± 1 using a digital angular key that can provide the torque corresponding to the angle applied and verifying that the corresponding torque value is kept between 53.5 ÷ 61.5 Nm.

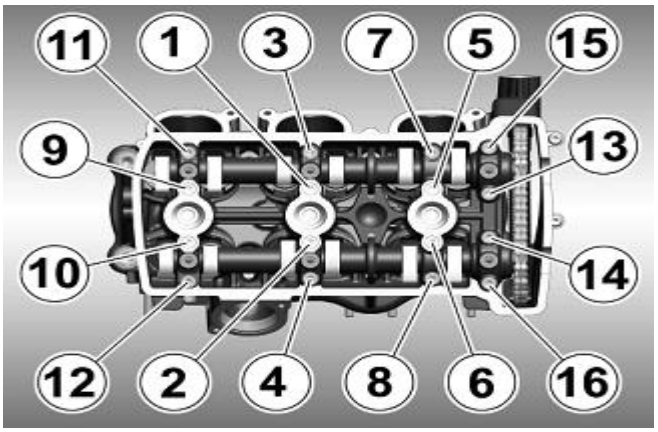
  WARNING: If the tightening angle of 85 ± 1 ° does not correspond with a torque value between 53.5 ÷ 61.5 Nm, you will need to replace the screw with a new one and repeat the entire tightening sequence from the start.
- Insert the two spacers with the previously greased sealing O-rings.
- Check that the "M" mark on the phonic wheel is aligned with the reference mark on the crankcase (piston n° 3 is at the upper dead point - "PMS").
- While holding the chain in tension, insert the exhaust camshaft with the timing mark on the driven wheel parallel to the cylinder head's upper plane and positioned outwards.

- Insert the intake camshaft with the "M" mark placed in corrispondence of the pin n°30 of the distribution chain, starting to count from the pin allighed with the "M" mark on the exhaust camshaft timing wheel:



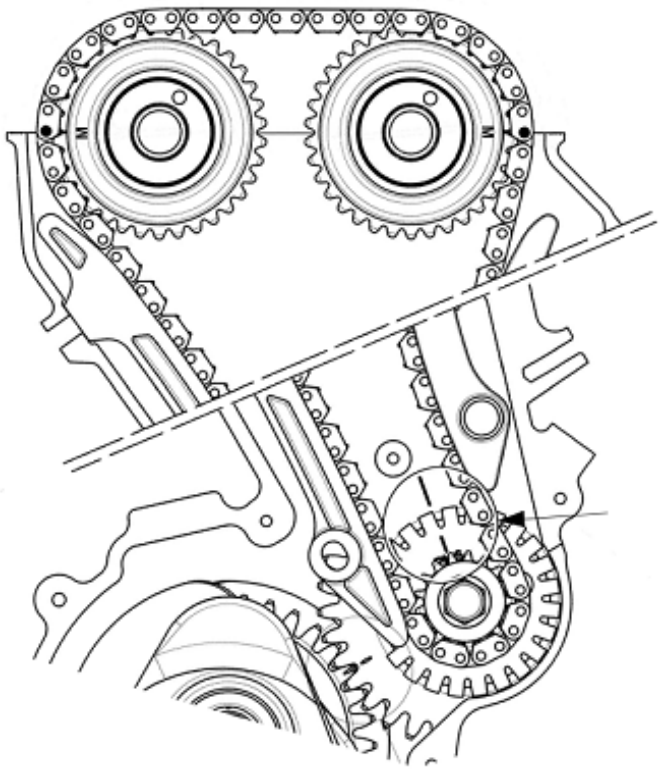
WARNING: camshaft timing marks can be represented by a double bevel or a "M" letter.

- Ensure the correct positioning of the new 3 O-Ring 8A0023111 contained in the kit under the camshaft's support and fix it by gradually approaching the screws;
  WARNING: Do not tighten the camshaft's support screws before mounting the chain tensioner.
- After lubricating each component and with the chain tensioner at the minimum extension (tensioner's feet all inside the tensioner's body), fit the tensioner by approaching the two screws by hand without tightening;
- Tighten the 2 screws at 8 Nm;
- tighten the camshaft's support according to the tightening sequence shown in the illustration (tightening torque 12Nm)

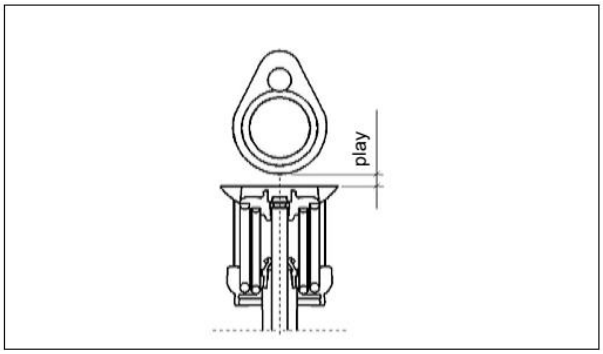


- Insert the tensioner spring and tighten the screw cap until it extends the tensioner; tighten the spring's screws to 12 Nm.

- After the assembling of the camshaft's support and the chain tensioner, perform a few revolutions of the crankshaft (clockwise) and finally put the reference mark on the crankcase in corrispondence of the letter "M" on the phonic wheel to check if the timing is correct ,following the position on the picture below:

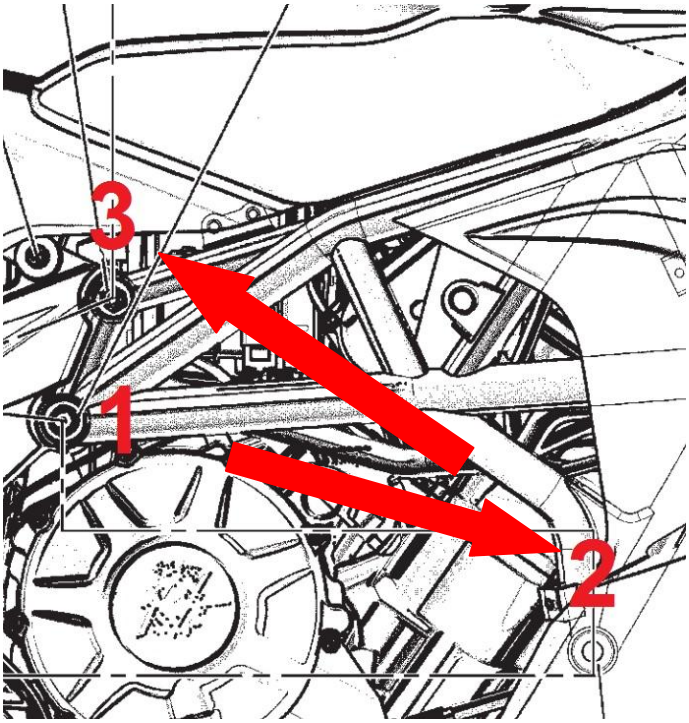


- Check the valve clearance:



inlet valve play	exhaust valve play
0,15 ÷0,24 mm	0,20 ÷0,29 mm

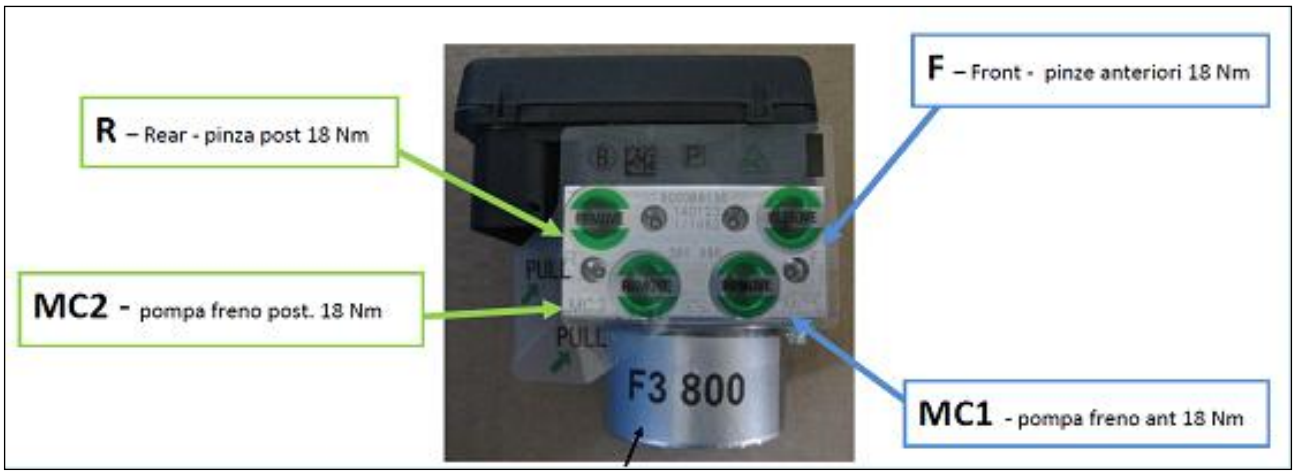
- Insert the thermostat and fix the cover with the grease on the new O-ring provided in the kit and tighten the screws to 8 Nm.
- Insert the cylinder head's gas draining pipe with grease on the O-Ring. Fix the support plate and tighten the screw to the torque of 10 Nm.
- Reassemble the screw the Harmonic Damper screw and tighten it to the torque of 10Nm and applying Loctite 243.
- Apply on the valve cover the three new spark plug's gasket cod. 8000B4285 provided in the kit.
- Apply a silicon-sealing layer on the half-lugs on the cylinder head in corrispondence of camshafts lavoration holes.
- Place the new valve cover gasket supplied with cod. 8000B4284 and fit the valve cover; place the screws by hand, then tighten them to 8 Nm.
- Refit the spark plugs, the plugtops and the support plate of the filter box; tighten the screws to 8 Nm.
- Replace the alternator cover using the new gasket cod. 8000B2617 supplied with kit and applying the silicone seal in corrispondence of the matching of the two sides of the crankshaft; tighten the screws to 8 Nm.
- Replace the front part \ chassis assembly, taking care not to damage the parts during the operations.
- Replace the fixing screws ,the pin and the nut and tighten them to 60Nm torque in the following sequence:



1-cod. 8B00B5645 screw for chassis\ engine assembling M12x1,25 55/60 5,5/6,0
2-cod. 8B00B2715 screw for chassis\ engine assembling M12x1,25 55/60 5,5/6,0
3-cod. 8000B2750 screw for chassis\ engine assembling M12x1,25 55/60 5,5/6,0

- Refit the exhaust manifold using the new gasket cod. 8000B4242 supplied with kit and then reassemble the exhaust silencer; Check that the exhaust valve has the correct operating play.

- Refit the brake hoses previously removed from the ABS module by carefully placing them in the correct positions, then bleed the brake system by using new brake fluid that comes from a sealed container



- **<u>WARNING: Do not use the motorcycle before bleeding the brake system to prevent air bubbles from entering the ABS module, compromising the functionality.</u>**
- Place the wire harness
- Replace the water radiator and fill the cooling system by keeping the front wheel raised at least 70-80cm, keeping the coolant level in the expansion tank at the minimum level.
- reposition all superstructures in reverse order with respect to disassembly.
- Once bike's reassembling is completed, connect the Texa Diagnostic System: Check the "Calibration Version" code in the "INFO ECU" menu (if an updated mapping is available, update it before executing other operations making reference to the dedicated service bulletins);
- Then select "petrol Injection" – ECU model - "settings" and perform thecommand "Reset self-Adaptive Parameters" following the program instructions.
  Check also the correct operation of the exhaust valve using the control "exhaust valve control".
- Check the oil level and coolant level ,idle the engine until the radiator fan starts up.
- Perform a road test of the bike.

NOTE: For informations not shown in this manual, please refer to the workshop manuals.

Thanks in advance for your cooperation, we are at your disposal for any technical / commercial support

Best regards,

MV AGUSTA MOTOR S.p.A.

Technical assistance service

List of VINs involved:

ZCGF310BAHV006981
ZCGF310BAHV006989
ZCGF310BAHV006991
ZCGF310BAHV006992
ZCGF310BAHV006993
ZCGF310BAHV006994
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