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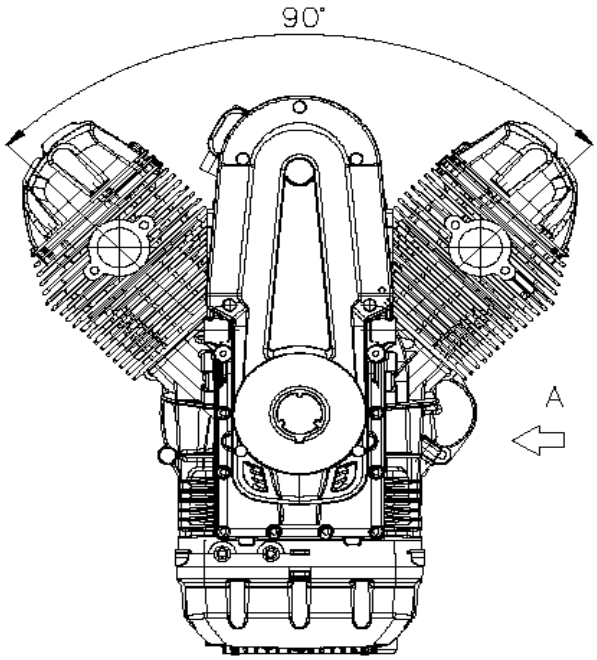
Moto Guzzi technical training

February – March 2010



Training agenda:

- 1st day: Problem solving

- 2nd day: Navigator

Rules:

- We ask you to set your mobile phone in silence option to avoid to disturb all the partecipants
- If you need to answer to the mobile phone, please go out from the training room.
- At launch time all together with the trainer will move to the cantine from where all together you'll come back to the learning center.
- Outside the learning center is forbidden to take photo or video with cameras, videocameras or mobile phone in order to avoid to be invited to leave our factory.
- During the launch time is possible to visit the internal shop together with the trainer.

Index:

PROBLEM SOLVING COURSE

SHEET No. 01

SUBJECT: differences between Stelvio MY 2008 and MY 2009

APPLICABILITY: STELVIO

Before we handle the actual vehicle described in this document, it would be useful to explain how simply reading the chassis number of our vehicles may provide important and helpful information regarding the vehicle itself.

ZGU LZ 000 0 Y M XXXXXX

ZGU= WMI CODE (World manufacturer identifier) = manufacturer identification

LZ = MODEL

000 = VERSION VARIANT (may consist of letters or numerals)

0 = FREE DIGIT (value from 0 to 9)

Y = YEAR OF MANUFACTURE (from 2001 this code is a number)

M = PRODUCTION PLANT (M = Mandello)

XXXXXX = SERIAL NUMBER (6 numerals → 111111 = 1st VEHICLE MANUFACTURED)

Therefore, chassis number *ZGULZ00029M112790*, for example, refers to a base version Stelvio produced by Moto Guzzi at Mandello in 2009. In particular, this would be the 1680th example of the motorcycle produced.

The three character code identifying version variant is alphanumeric (number and/or letters) and indicates the specific characteristics of the vehicle. The following table lists these variants in detail:

ZGULZ 000 ..... BASE MODEL STELVIO "ASSEMBLY A"

ZGULZ A00 ..... STELVIO 1200 ABS (engine with updated valve timing)
ZGULZ A01 ..... STELVIO 1200 WITHOUT ABS (engine with updated valve timing)
ZGULZ B00 ..... STELVIO 1200 NTX ABS (engine with updated valve timing)
ZGULZ B01 .....STELVIO 1200 NTX WITHOUT ABS (engine with updated valve timing)
ZGULZ C01 .....STELVIO 1200 ABS USA (engine with updated valve timing)

"ASSEMBLY B"

It is therefore clear that adequate information cannot be obtained simply from the year of manufacture of the vehicle or from a single character in its chassis number.
For instance, as can be seen from the table above, not all vehicles produced in 2009 have updated valve timing and not all chassis numbers containing the letter "A" indicate a vehicle equipped with ABS

NOTE: vehicles are homologated differently in relation to the type of camshaft, filter box and ECU installed.

This means that in no circumstances whatsoever may these components be interchanged between assembly A and B vehicles.
Motorcycles with hybridised components will no longer be homologated and their behaviour has not been tested.
Moto Guzzi cannot be held responsible for any consequences of using hybrid solutions

In addition to the components of the valve timing system, there are a number of other elements that have also been updated. The following table lists these components and indicates the versions in which they have been installed.

Component	ASSEMBLY A	ASSEMBLY B	Functional differences	Interchangeability
CAMSHAFT	873873	8776384	Difference in power delivery at low and medium engine speeds. Different cold starting behaviour. **TIMING**	**NONE**
ECU (ABS version)	/	883408		
ECU	978447	883653		
Filter box	GU06114000	877062		
Throttle body	873904	976697	No performance difference. Only the throttle body mounting rod linking the two throttle valves differs.	TOTAL
Injector	976555	CM074706	No performance difference. Part number unification with Aprilia vehicles	NONE
Complete clutch	976023	976695	Lighter clutch. Until depletion of parts on 2008 Model	PARTIAL
Crankshaft mounting flange	874213	976703	Until depletion of parts on 2008 Model	PARTIAL

Please note that on this vehicle, and on assembly “A” motorcycles in particular (base models), it is imperative that the throttle body is cleaned at least every 10000 Km.
This operation requires the removal of the component from the vehicle to ensure that both throttle valves are cleaned thoroughly. Tests have demonstrated that in a fouled throttle body, the idle speed bypass air flow is reduced by up to 30% – 35 % compared with a perfectly clean or new component.
This operation is of particular importance to prevent starting problems, especially in extremely cold conditions.
In addition to cleaning the throttle body, the position of the pickup sensor must also be checked (correct position is 0.7 mm), together with the mapping installed on the vehicle and the operation of the throttle valve potentiometer, and the auto-adaptive parameters must be reset.

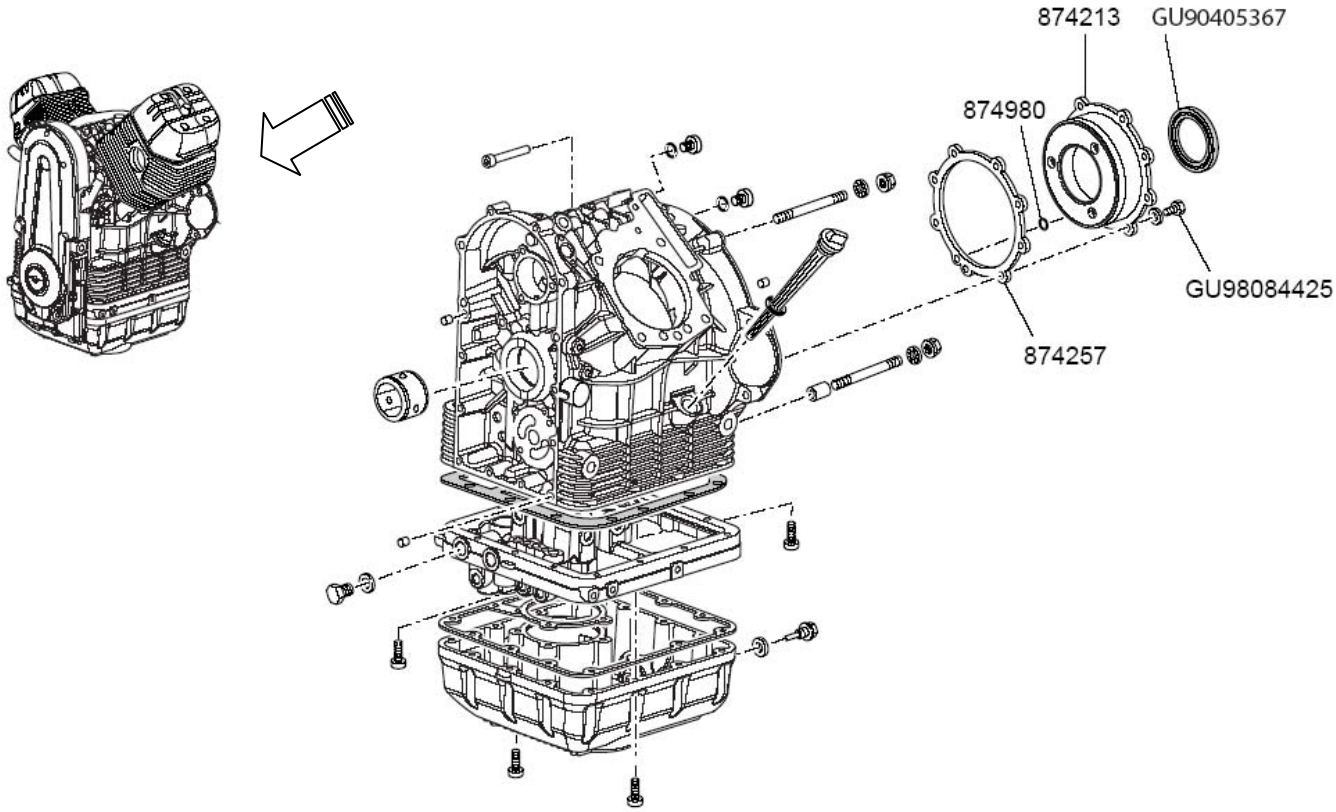
PROBLEM SOLVING COURSE

SHEET No. 02

SUBJECT: Engine oil leakage on gearbox side

APPLICABILITY: STELVIO 1200, GRISO 8V, 1200 SPORT 4V

SYMPTOMS: damage identified during visual inspection.



CAUSES:

1) Possible defect of oil seal p/n GU90405367, gasket p/n 874257 or O-ring p/n 874980.
2) Faulty oil passage bush on crankshaft mounting flange
3) Nonconformity of holes for crankcase/flange mating screws
4) Possible incorrect flange assembly

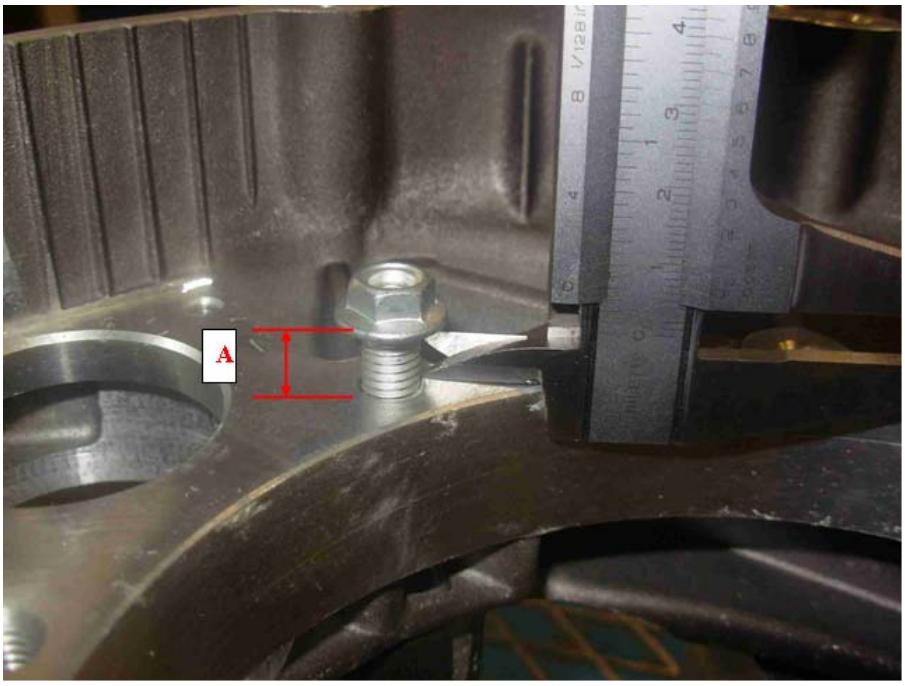
SOLUTIONS:

1) Remove the flange p/n 874213, following the procedure given in the workshop manual, and replace the damaged component.
2) Remove the flange p/n 874213, following the procedure given in the workshop manual and check that the oil passage bush is installed correctly as shown in the figure:

BUSH OK

DAMAGED BUSH -> REPLACE FLANGE

3) Screw a flange fastener screw into one of the crankcase holes without tightening to torque, and measure the gap between the crankcase and the interior of the screw head, as shown in the following figure



If the dimension A is less than 8 mm, the screw hole in the crankcase is conformant. If the dimension is equal to or greater than 8 mm, the hole is non-conformant; replace the standard GU98084425 fastener screws with the shorter GU98084422 screws

4) Two different courses of action are possible:

A. Refit the flange removed previously, after increasing the depth of the seat for the O-ring p/n 874980 (shown in the photo on page 2) from 1 mm to the necessary 1.5 mm. A special grinder is required for this operation, which may be carried out at any specialised grinding/lathing workshop

B. Fit the ready modified flange p/n 976703 (factory fitted on the Stelvio NTX and on all engines manufactured in 2009). In this case, the O-ring seat does not need to be ground.

The gasket p/n 874257 is not used in either case. However, after replacing the oil seal p/n GU90405367 and the O-ring p/n 874980, apply specific Loctite 510 sealant and tighten the 8 screws to a torque of 35 Nm

PROBLEM SOLVING COURSE

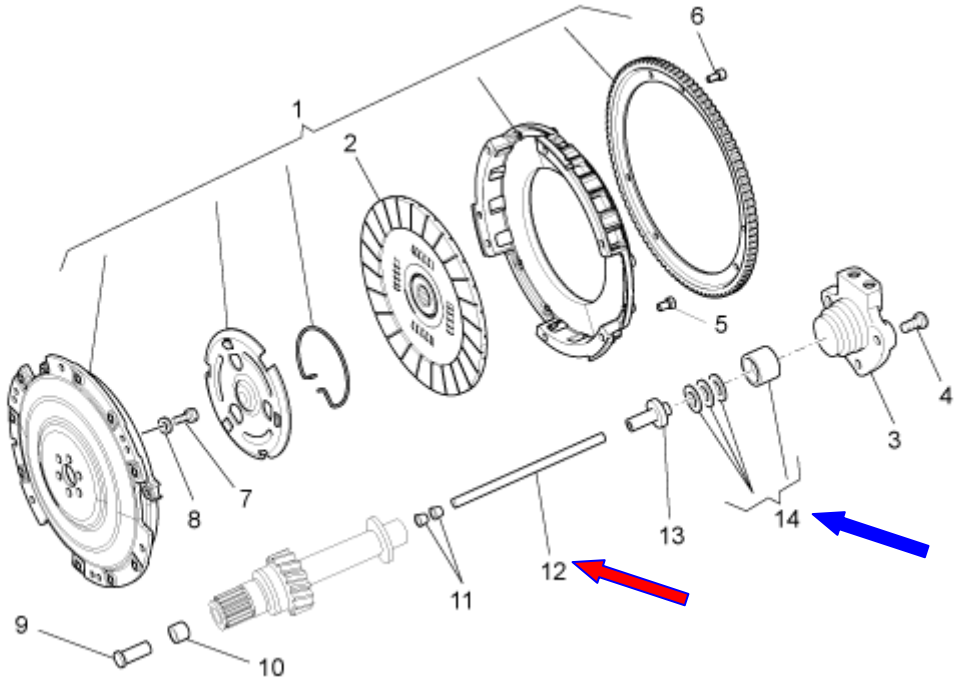
SHEET No. 03

SUBJECT: stiff, noisy clutch

APPLICABILITY: Stelvio 1200, Griso 1200 8V

SYMPTOMS: on certain vehicles, the clutch produces an increasingly loud noise when the clutch lever is pulled and released. Contemporarily, the clutch lever itself may also become progressively more difficult to operate.

NOTE: if the problem described above occurs, stop the vehicle and carry out the indicated repairs immediately, as if allowed to persist, this problem would cause further damage to the clutch control system, requiring significantly longer repair times.



CAUSES: Incipient bearing seizure, with resulting deterioration

SOLUTIONS:

1) Replace the thrust bearing kit (detail 14 in the image, indicated by the blue arrow). Order p/n 976696 complete with spring cup, the two complete roller bearings and the intermediate metal washer. Before assembling the components described above, lubricate with Agip GREASE SM2. NB: before delivering the vehicle to the client, also grease the clutch lever pin on the left hand side of the handlebar

2) Grease the clutch control rod, indicated by the red arrow in the figure.

N.B. P/n 976696 is not listed in the ARCO catalogue. We recommend using the Moto Guzzi service spare parts catalogue only to prevent mistakes.

Vehicles from 23/09/2008 (Stelvio: ZGULZ00088M112646 – Griso 8V: ZGULSE0068M112128) are produced with the new components and do not necessitate any modification.

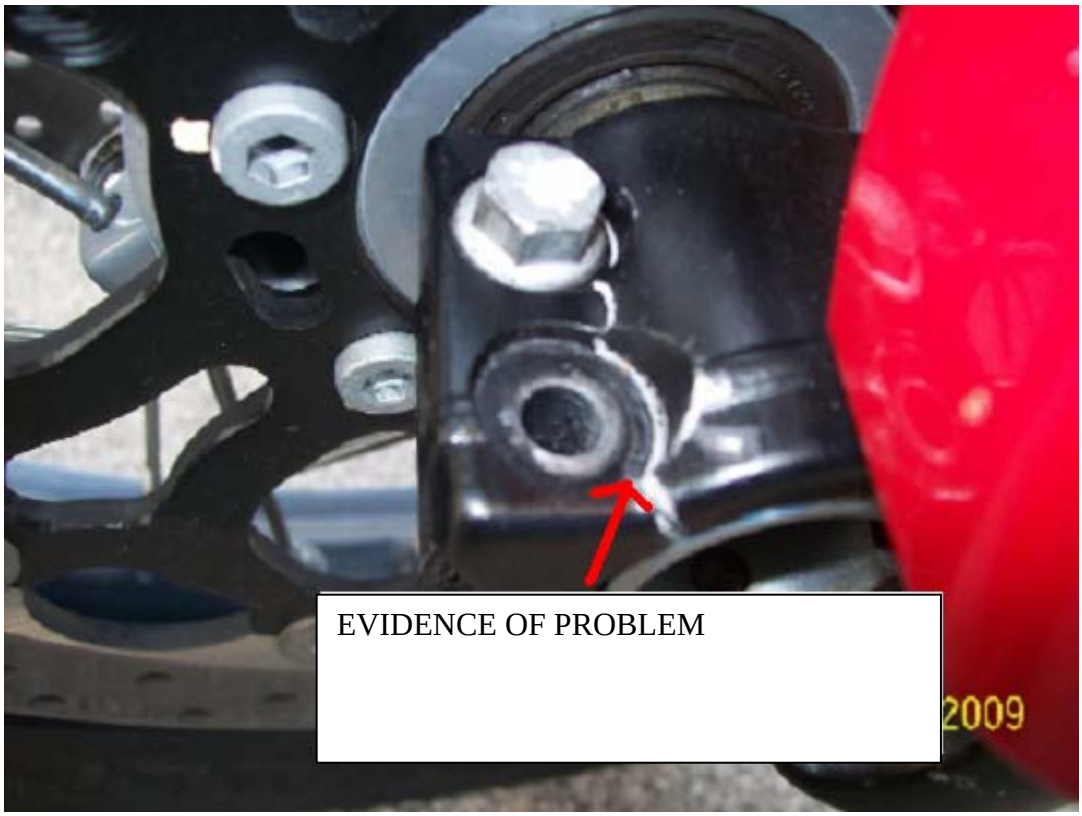
PROBLEM SOLVING COURSE

SHEET No. 04

SUBJECT: LH calliper mounting bracket failure

APPLICABILITY: STELVIO 1200 MY 08

SYMPTOMS: damage identified during visual inspection or when changing front tyre.



EVIDENCE OF PROBLEM

CAUSES: excessive tightening torque applied to screw p/n 981021

SOLUTIONS: replace LH stanchion with fractured calliper mounting bracket with a new stanchion with the same p/n (981029), using the relative Allen screws with p/n AP8150220 (which must also be applied to the LH calliper mounting bracket).

The correct tightening torque of 10 Nm for the 4 screws must be respected.

The following figures illustrate the MY 08 configuration (old stanchion) and the MY 09 configuration (new stanchion)

N.B.: The problem described herein does not constitute a safety risk for the rider.

If evidence of this problem is noted, inspect the fastener screws thoroughly to ensure that none have been tightened excessively, causing damage to the screw heads.

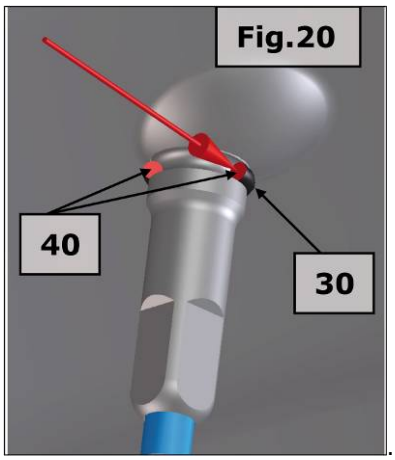
If damage is noted, please take photographs of the damage and contact the Help-desk for your area to ensure that the case is handled correctly.

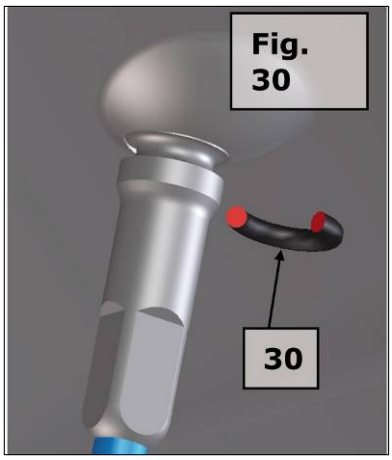
PROBLEM SOLVING COURSE

APPENDIX: Nr. 01

SUBJECT: Replacing Alpina Nipples

Procedure: Fig. 20, 30 Clean the area in which the nipple passes through the rim thoroughly with a brush moistened with water. Remove the retainer ring (30) pressing perpendicularly (see arrow) on one or both of the surfaces (40) of the ring (30) with a fine tipped screwdriver or a punch.
The ring slips off in the direction shown in Fig. 30. Take care not to lose the ring





WARNING

1) We do not recommend cleaning the wheel with high pressure cleaning systems, whether hot or cold water is used.
If you do intend to use a high pressure cleaning system, keep the jet nozzle
at least 50 cm from the area in which the nipple passes through the rim (see Pos. 30 in Fig. 20).
Bringing the jet too close to the nipple may force dirt between the nipple itself and the rim, compromising the air tightness of the assembly and damaging the seal.
2) When using the screwdriver or punch to remove the retainer ring, take care not to injure yourself or damage the rim

Fig. 40 Unscrew the nipple (10) from the spoke (70), turning anticlockwise (see arrows). To unscrew, apply the tool to the square section of the nipple (50) first, then use the hexagonal surface (60).
Never use pliers for this operation. Use only specific wrenches of the correct size. Using other tools may irreparably damage the tool mating surface on the nipple.

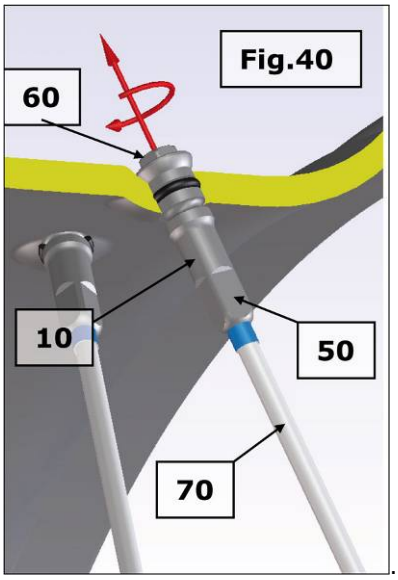


Fig. 50 Remove the nipple (10) from the seat (80) in the rim (20), pulling out in the direction indicated by the arrow. If necessary, remove the spoke (70), detaching from the hub in the direction indicated by the arrow.

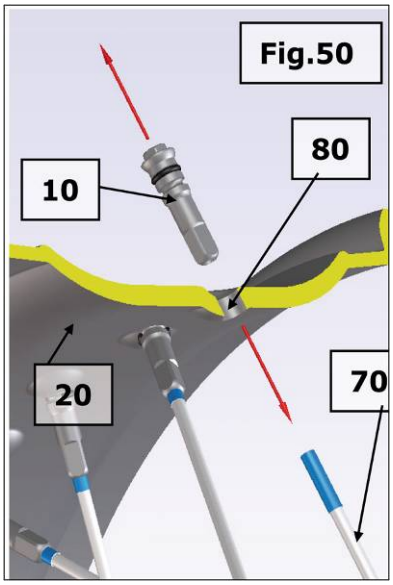


Fig. 60 Whenever a nipple is removed (10), always check the condition of the seal (90) thoroughly using a regular magnifying glass. The seal must not be pinched, crushed or deformed.
If the seal is in good condition, (before refitting the nipple and without removing the seal itself from its seat) clean the seal thoroughly with a small, soft bristled brush and a standard clean solvent (petrol, diesel or other similar product). Ensure that no bristles are left behind after cleaning.
Grease the seal with PTFE based Agip ROCOL FOODLUBE ENDURE 00
Should it be necessary to replace the seal (90), clean the relative seat thoroughly before installing the new seal. Clean the seat thoroughly with a small, soft bristled brush moistened with
a standard clean solvent (petrol, diesel or other similar product). Ensure that no bristles are left behind after cleaning.
The seal (90) is a standard OR-2025-NBR (US standard AS 568 A Cod. 010) type O-ring. Grease the seat and the seal with standard PTFE based Agip ROCOL FOODLUBE ENDURE 00

The seal (90) must be installed from the head side (100) of the nipple (10), not from the square wrench application side (50).

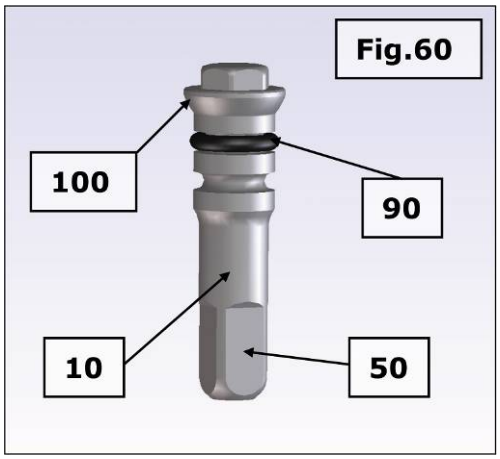


Fig. 70 Whenever a nipple is removed (10 Fig. 60), always clean the seat (80) in the rim (20) thoroughly.
Clean the rim seat with a soft bristled brush moistened with a standard clean solvent (petrol, diesel or other similar product). Ensure that no bristles are left behind after cleaning. Grease the seat with standard PTFE based Agip ROCOL FOODLUBE ENDURE 00

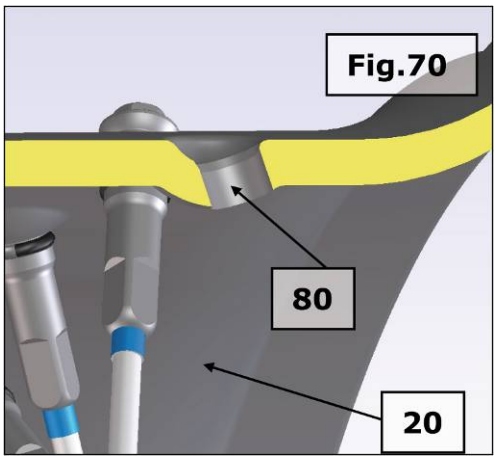


Fig. 80 Partially insert the nipple (10) into the seat (80) in the rim (20). Bring the spoke (70) toward the nipple (10) in the direction indicated by the arrow.

NB: If the nipple is retained axially by a spiral clip, remember to fit the clip onto the spoke before engaging the spoke in the nipple. As the clip is a closed ring, it cannot be installed once the wheel is laced or at any subsequent stage in assembly.

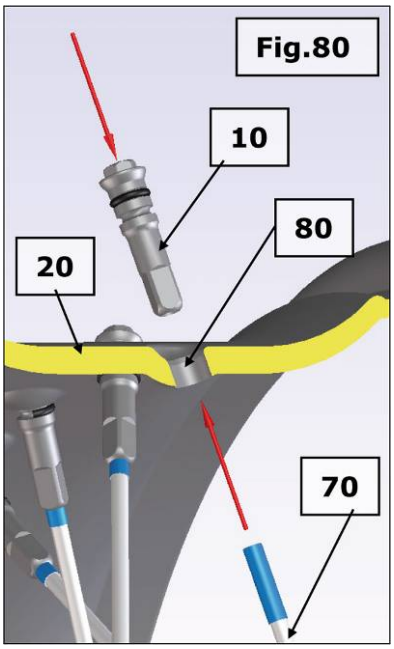


Fig. 90 Turning clockwise as indicated by the arrow, tighten the nipple (10) onto the spoke (70), until the seal (90) is in contact with the recess of the seat (80) on the rim (20).
HOLD THE NIPPLE TO PREVENT IT FROM TURNING (10)

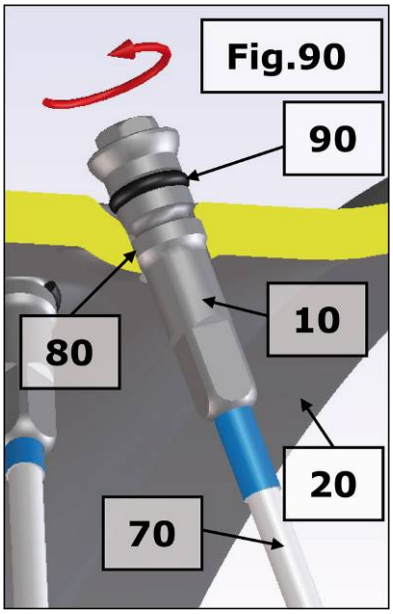


Fig. 100 Press the nipple (10) axially as indicated by the arrow, to bring the head (100) of the nipple (10) flush with the rim (20). This operation also installs the seal in its seat, and must therefore be carried out with bare hands and with the utmost care. Once the head (100) of the nipple (10) is flush with the rim (20), the nipple may be turned (10) to tighten it onto the spoke (70).
Gradually tension the spoke by turning the nipple (10), with the tool applied to the square section (50). Never use pliers for this operation. Use only specific wrenches of the correct size. Using other tools may irreparably damage the tool mating surface on the nipple.

WARNING

Recommended tightening torque is **4-7 Nm. DO NOT exceed the maximum limit**. Using an excessive tightening torque may damage the rim and compromise the air tightness of the system.

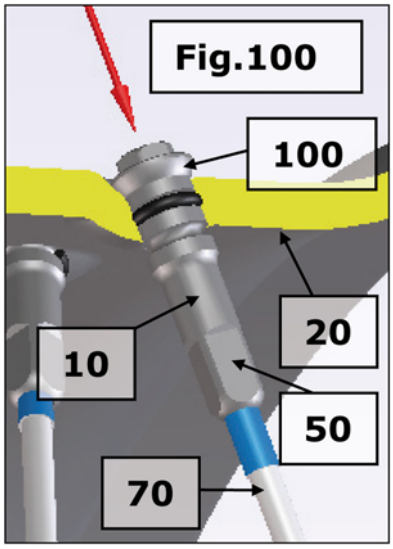


Fig. 110 Once the wheel has been assembled, refit the retainer ring (30) on the nipple (10), installing radially as indicated by the arrow. This may be done by partially fitting the ring (30) in its seat (110) on the nipple (10) and then installing fully with regular needle nose pliers. Performing this procedure incorrectly may scratch the rim.

NB: If the nipple is retained axially by a spiral clip, simply press the clip axially into its seat on the nipple. This must be done with bare hands.

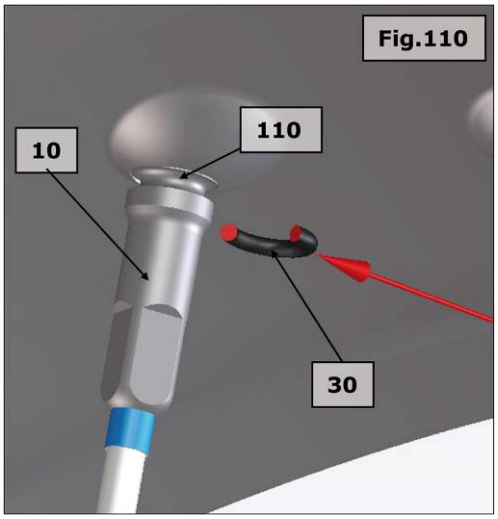
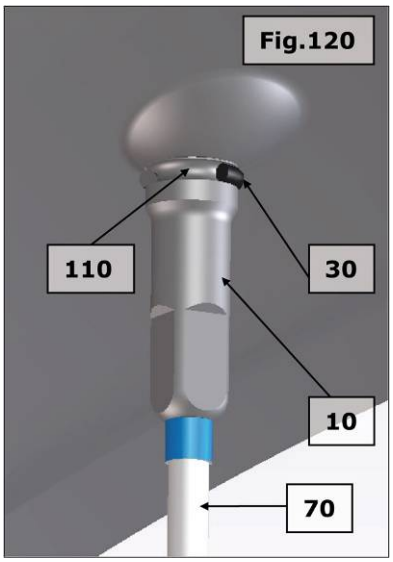


Fig. 120 Ensure that the retainer ring or spiral clip (30) is correctly installed in its seat (110) on the nipple (10).
The ring (30) holds the nipple (10) in position while the wheel is in use or in the event of spoke breakage (70). As a result, failing to reinstall the ring may result in danger.
DO NOT USE THE WHEEL IF EVEN A SINGLE RETAINER RING IS MISSING

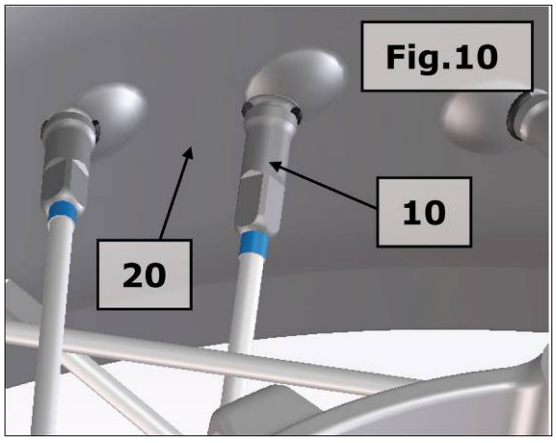


QUICK USER'S GUIDE

1. Store nipples in opaque bags in a clean place. Natural or artificial light will accelerate the deterioration of the seals, while the thin film of grease applied to the seals themselves may attract dirt.
2. Before assembling a wheel or replacing a nipple, ensure that all wheel components and the assembly area are perfectly clean. Seals are coated in the factory with a thin film of grease, which may attract dirt, compromising the effectiveness of the tubeless tyre system.
3. The most delicate stage in the assembly of the wheel is the installation of the O-ring in the hole in the rim when fitting the nipple into the rim. Turning the nipple or forcing to one side may pinch the seal and compromise air tightness.
4. Always check that the retainer ring is installed correctly. This is necessary in order to limit axial play of the nipple during use.

1) The friction between the rubber O-ring of the STS nipple and the calibrated hole in the rim make it almost impossible for the nipple to unscrew itself, which is a typical problem in tube-type wheels (with inner tube). As a result, retensioning the wheels by tightening the nipples is not necessary each time you work on the wheel. For safety, however, manually check for loose spokes. Only if a spoke is found to be loose, tighten the relative nipple carefully, always leaving at least 2 or 3 mm of the spoke thread exposed.
2) The STS nipple is blind (the hole does not pass all the way through as on a traditional nipple) and, as a result, does not allow the spoke to pass through the head of the nipple itself if tightened excessively. This means that the spoke can no longer rotate inside the nipple once fully tightened, meaning that the fibres of the spoke itself are twisted instead, weakening the spoke and eventually causing its failure.
3) Failure to observe the precautions given in steps 1 and 2 with overload and weaken the spoke by torsion (even to the point of failure) and also cause irreparable damage to the nipples, hub and rim (fractures and nipple hole failure)

Fig. 10 **The STS system requires no maintenance for the seal components**. Should it be necessary to remove the nipple (10) from the rim (20), proceed as follows.
The following procedure requires particular skill and must only be carried out by competent personnel with sufficient mechanical experience. Attempting this procedure without the necessary experience may be dangerous for yourself and for others. All sealing components are greased in the factory and must be kept suitably greased. As a result, all indicated maintenance procedures must be carried out.



PROBLEM SOLVING COURSE

SHEET No. 05

SUBJECT: Water infiltrating into oil pressure sensor

APPLICABILITY: ALL 2V ENGINES EXCEPT FOR 750 cc

SYMPTOMS: Warning light and instrument panel errors 07 and 08

CAUSE:

Short circuit to ground due to poor water tightness of component p/n GU31768780

SOLUTION:

Moto Guzzi has decided to introduce a protective rubber cap, shown in fig. 1, as a spare part

Fig. 1

This cap us supplied alone with p/n 976688 and offers greater protection for the sensor. The procedure for installing the cap is as follows:

Disconnect the minimum oil pressure sensor cable from the sensor itself and remove the protective cap on the cable (fig. 2)


Fig. 2

Fit the new cap on the cable (fig. 3 and 4)

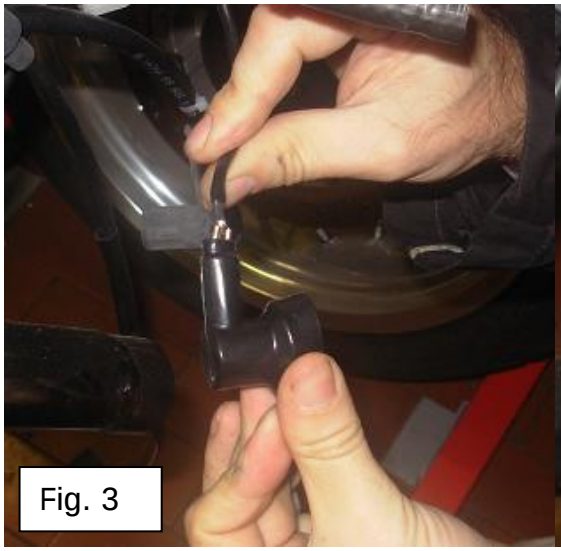


Fig. 3


Fig. 4

Fit the cap onto the pressure sensor, restoring the connection between the cable and the sensor itself (fig. 5 and 6)

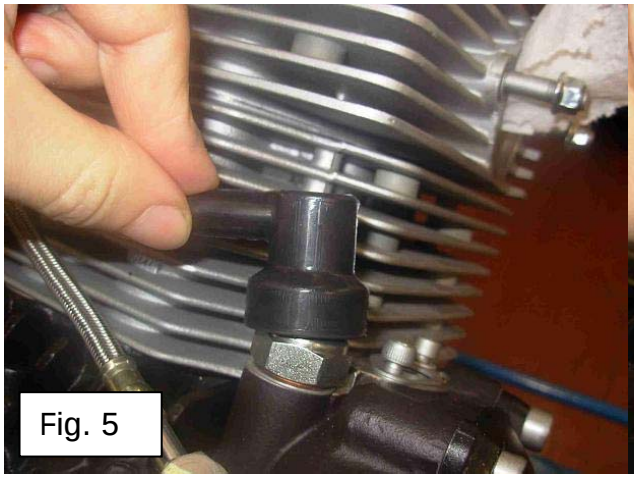


Fig. 5

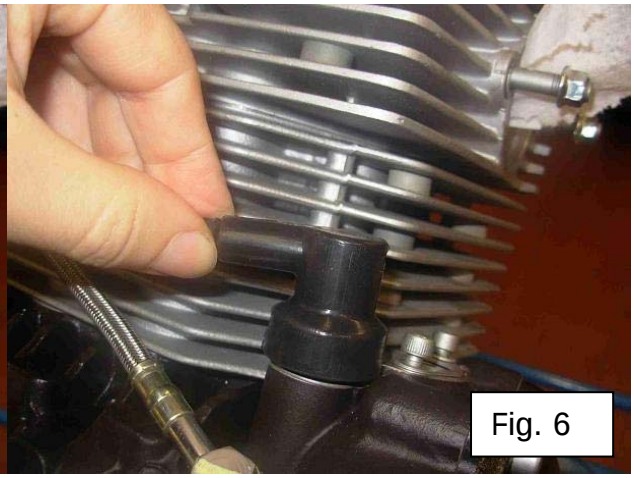


Fig. 6

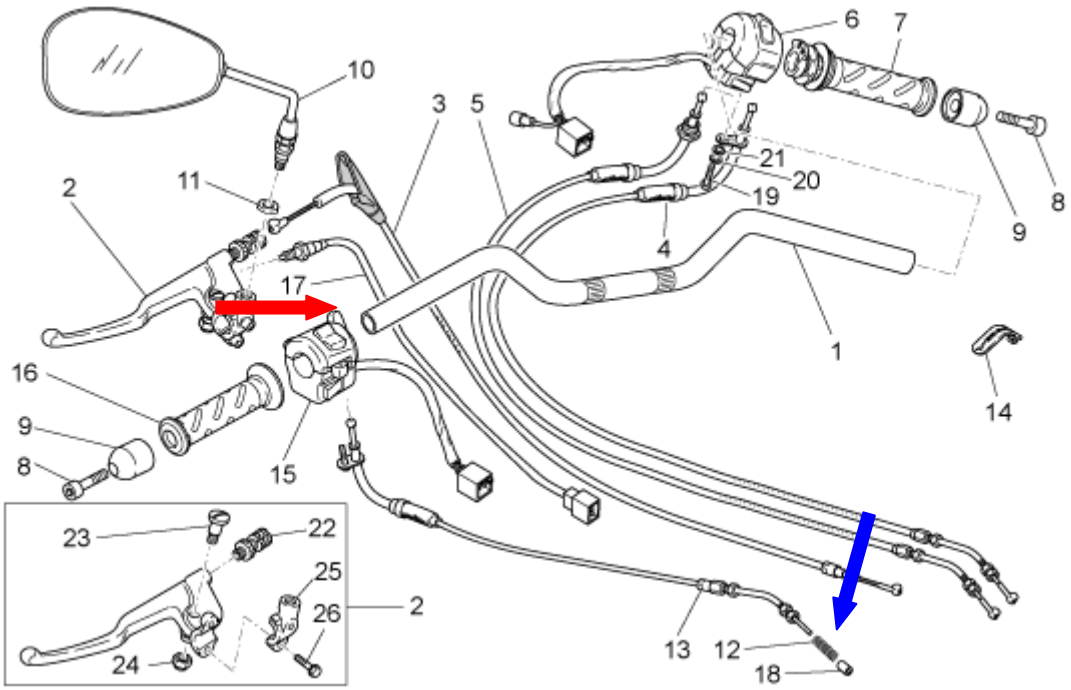
PROBLEM SOLVING COURSE

SHEET No. 06

SUBJECT: Cold starting problems – starter control spring

APPLICABILITY: Nevada 750, Breva 750, V7 all versions.

SYMPTOMS: The vehicle may have difficulty starting, especially when cold, even though the manual choke lever, located on the LH switchgear set and indicated by the red arrow, has been operated correctly.



CAUSES:

The correct degree of movement of the lever on the LH switchgear set may not correspond to a sufficient degree of aperture of the throttle valve. In this case, the engine behaves as if the choke had not been operated.

Alternatively, the lever may not remain in the correct position when operated and, as a result, fail to maintain the cold starting position.

The cause is attributable to an incorrect rigidity of the spring p/n GU94321074, identified in the image by the blue arrow.

SOLUTION:

1) Replace the spring p/n GU94321074 with the new spring, p/n 883752, which will shortly be available and orderable as a normal spare part.

CORSO PROBLEM SOLVING

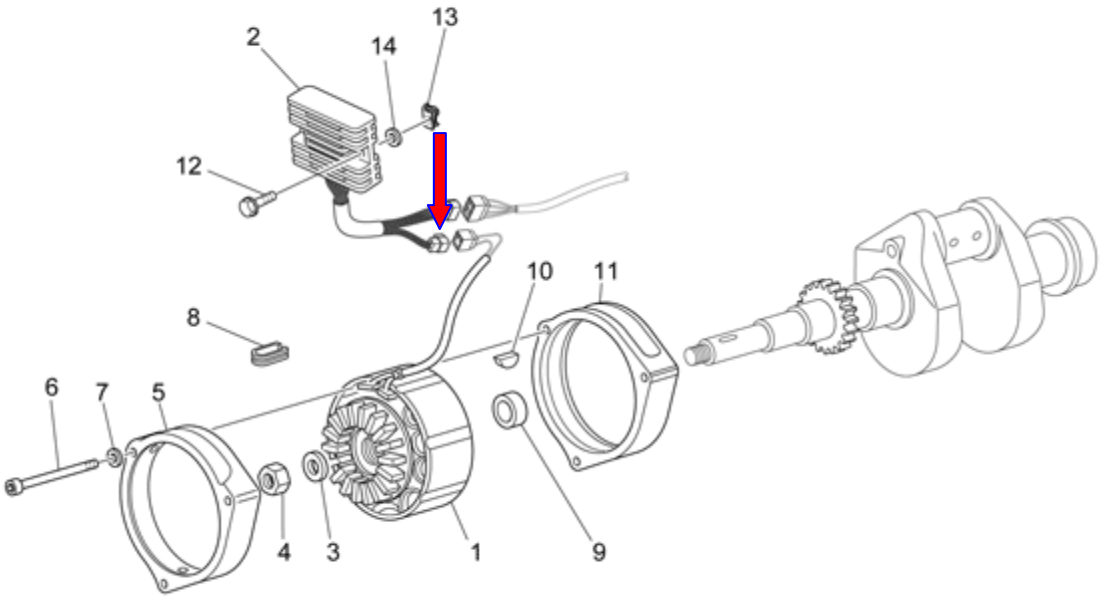
SCHEDA Nr. 07

OGGETTO: bruciatura connessione tra alternatore e regolatore di tensione

APPLICABILITÀ: Breva 750, Nevada 750, V7 all versions

SYMPTOMS: on certain vehicles, the connection between the alternator and the voltage regulator may burn out in the zone indicated by the red arrow.

This may result in damage to both the alternator and the voltage regulator, with possible repercussions on the vehicle battery and wiring harness.



CAUSES: poor connection, particularly in the case of major vibration, resulting in the connector overheating

SOLUTIONS:

1. During the pre-delivery process, bind the connection between the alternator and the voltage regulator with a regular cable tie to keep it securely fastened

2. When the vehicle is in the workshop for normal maintenance, check the area in question. If any signs of incipient burning are noted, we recommend bypassing the original connection between the alternator and the voltage regulator with a terminal block connector, cutting the wiring ahead of and after the connection itself.

PROBLEM SOLVING COURSE

SHEET No. 08

SUBJECT: Oil in filter box and blow-by expansion tank

APPLICABILITY: BELLAGIO

SYMPTOMS: Oil leakage in filter box area

CAUSE: Excessive flow of oil from engine to filter box

SOLUTION: first check that the motorcycle is fitted with the new solution connection pipe (installed from chassis No. ZGULY00078M111989) between the timing cover and the blow-by expansion tank.

The new pipe is distinguishable from the old pipe by its shape.

The old pipe is straight. The new pipe, p/n 978461, has a preformed S shape. If the old pipe is installed, replace with the new pipe.

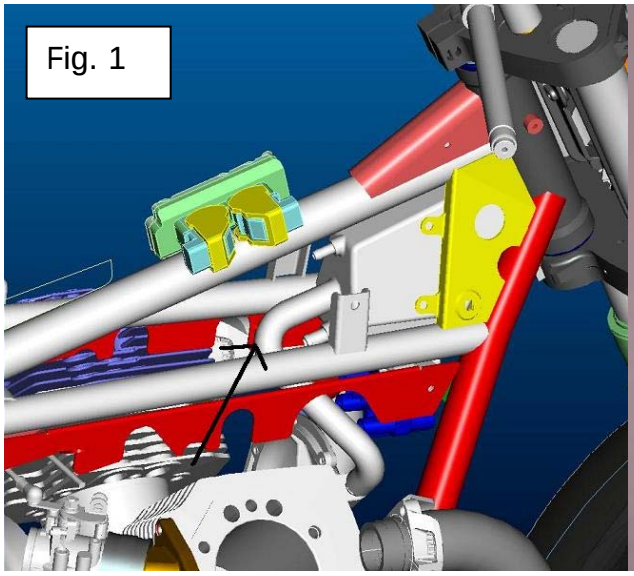


Fig. 1

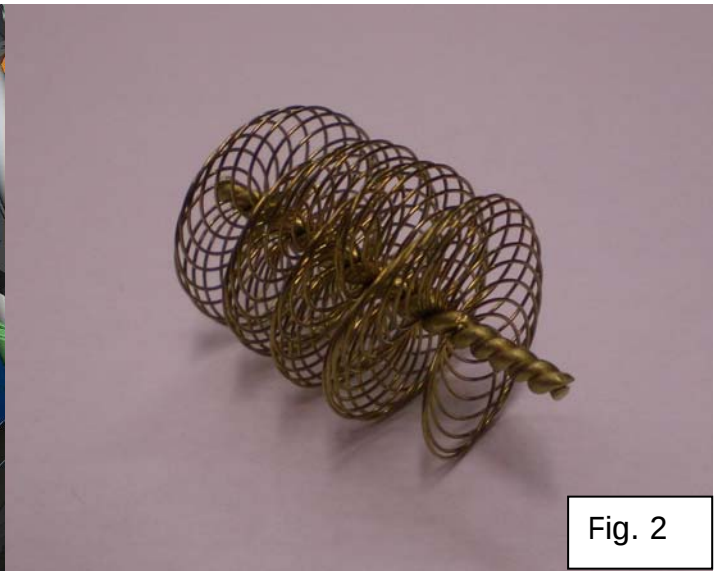
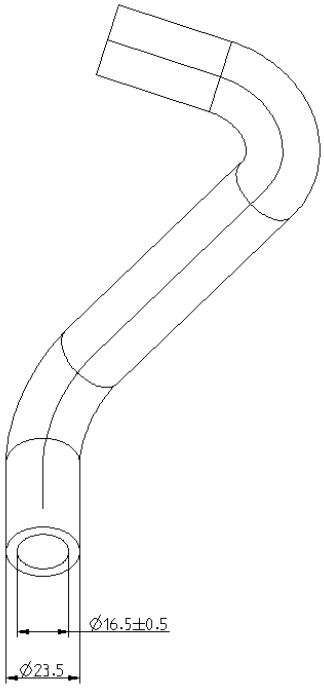


Fig. 2

In certain cases, this solution may not resolve the problem. To solve the problem, simply press a flame baffle filter (fig. 2, commonly available from any auto spares dealer), sized appropriately for the internal diameter of the pipe, into the new pipe p/n 978461.



PROBLEM SOLVING COURSE

SHEET No. 09

SUBJECT: Starting logic – Axone/Navigator errors

APPLICABILITY: 940 Bellagio

1) Part one of this sheet illustrates how the start safety logic for the Bellagio 940 differs from the logic implemented in other Moto Guzzi models, as the maintenance relay used in other vehicles has been omitted from this model (as a design choice).

- in any condition (neutral, side stand retracted etc.) the CLUTCH LEVER MUST BE PULLED IN ORDER TO START THE MOTORCYCLE

- the side stand warning light on the instrument panel does not light up always when the side stand is deployed. The warning light only lights when the deployed side stand poses a problem. For example: ignition on, engine off, side stand deployed, gearbox in neutral - the instrument panel warning light is off. If the bike is now put in gear while all the other conditions are still met, the warning light activates. **The side stand warning light is an ALARM warning.**

2) Part two of this sheet clarifies a query concerning diagnosis of the Bellagio: it is normal for the “stepper motor” error to appear during error readout with Axone/Navigator, as there is no stepper motor installed on this motorcycle.

PROBLEM SOLVING COURSE

SHEET No. 10

SUBJECT: Oil leakage from CARC cardan shaft

APPLICABILITY: BREVA, GRISO, 1200 SPORT, BELLAGIO, STELVIO, NORGE

SYMPTOMS: damage identified during visual inspection.

CAUSE:

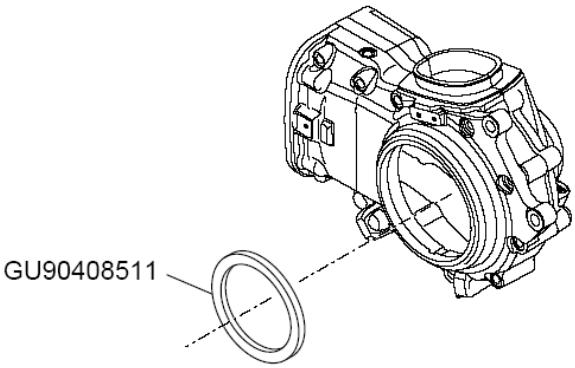
1) Faulty oil seal p/n GU90408511, if the leak occurs in the lateral part of the CARC on the wheel side

2) Faulty oil seal p/n GU90404558 and/or no sealant paste if the leak occurs in the link area between the CARC and the swingarm.

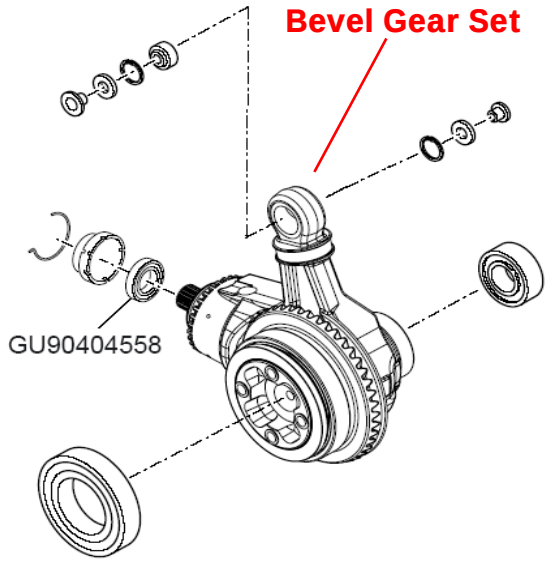
3) Poor seal tightness of sealant at the mating surface between the two halves of the transmission case

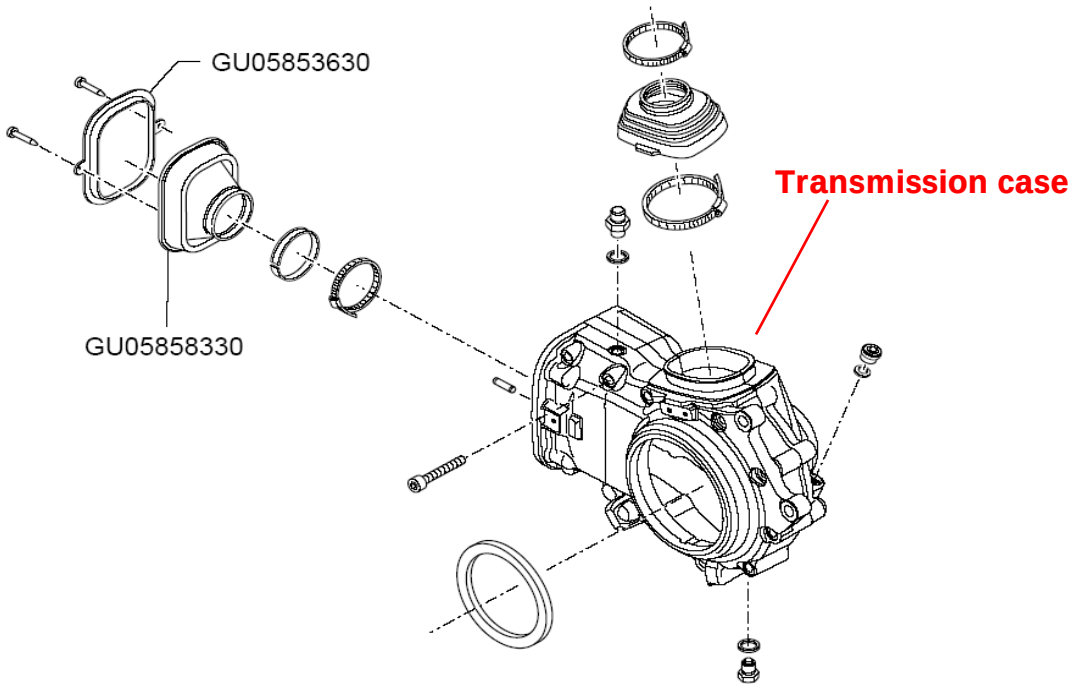
SOLUTION:

1) Remove the complete transmission case from the vehicle following the procedure described in the workshop manual and replace the damaged component.



2) Remove the complete transmission case from the vehicle and access the bevel gear set, following the procedure described in the workshop manual, then replace the damaged component. During reassembly, apply black Three-Bond 1215B sealant paste (the same paste used when assembling the two crankcase halves of the 750 engine) between the dust gaiter p/n GU05858330 and the metal gasket p/n GU05853630, and on the surface of the CARC in contact with the swingarm.





3) Open the transmission case following the procedure described in the workshop manual, clean the surfaces of the case halves thoroughly, and apply a layer of Loctite 510.

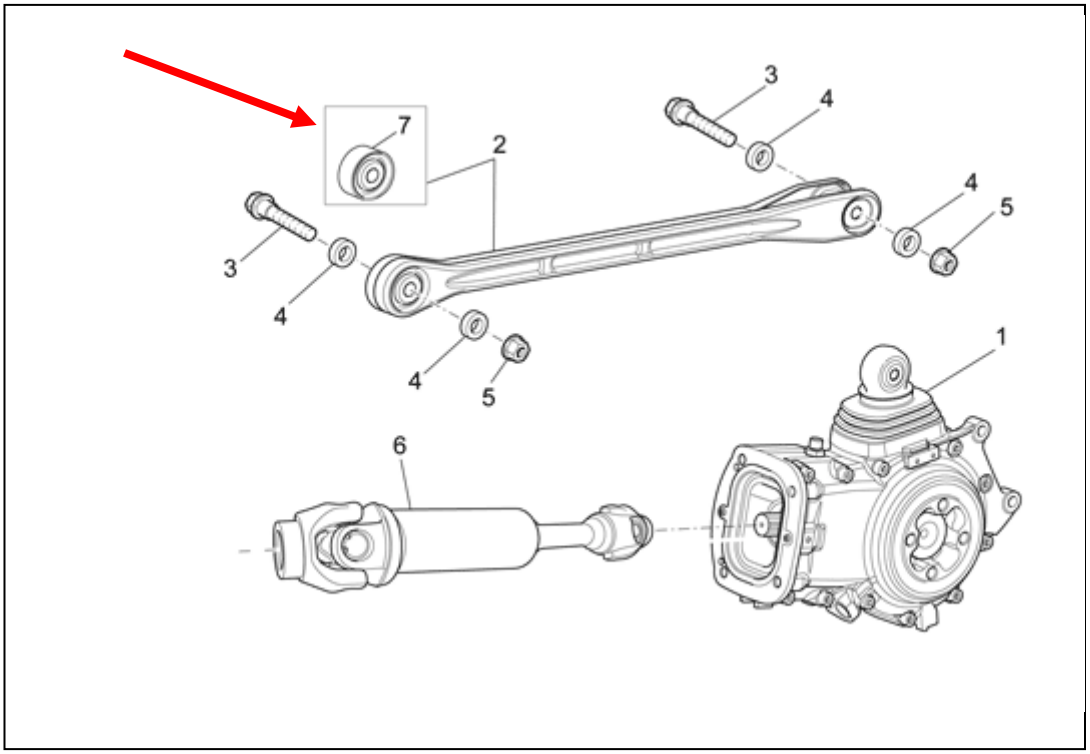
PROBLEM SOLVING COURSE

SHEET No. 11

SUBJECT: Noisy transmission

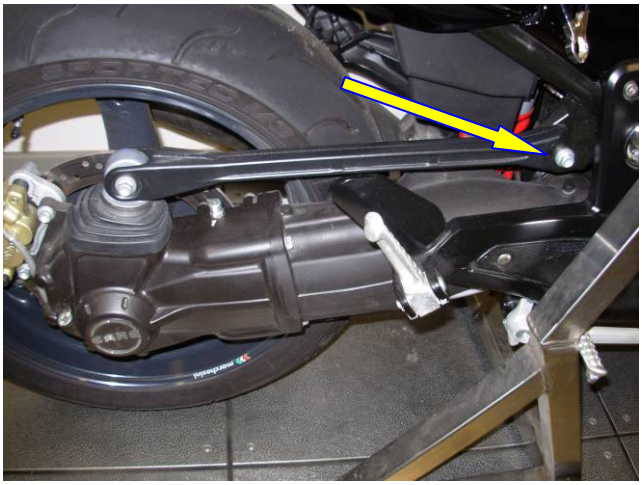
APPLICABILITY: Breva 850,1100,1200 - Griso 850,1100,1200 – Norge 850,1200 – 1200 Sport – 940 Bellagio

SYMPTOMS: Metallic noise coming from gearbox area on right hand side of motorcycle under acceleration and/or deceleration



CAUSE: Excessive clearance in frame side bearing on reaction rod. on certain vehicles, a noise may be heard from the gearbox area under acceleration and lift-off. This noise may be caused by the excessive rigidity of the ball joint on the gearbox side end of the reaction rod. The rigid joint cannot absorb the longitudinal flexing to which the reaction rod is subjected, generated by the inversion in the direction of acceleration (such as when lifting off immediately after accelerating or accelerating hard immediately after decelerating).

SOLUTIONS: Remove the reaction rod following the procedure described in the workshop manual, then extract the frame side bearing and replace with the silent block p/n 883045.



The following table indicates the chassis number from which this problem has been rectified in production: all vehicles with higher chassis numbers are already fitted with the updated silent block in the factory.

GRISO 850	all vehicles involved
GRISO 1100	ZGULS----9M115195
GRISO 8V	ZGULSE---8M111648
BREVA 850	ZGULPB---8M111888
BREVA 1100	all vehicles involved
BREVA 1200	ZGULPG---8M111284
NORGE 850	all vehicles involved
NORGE 1200	ZGULPH---8M114156
1200 SPORT	ZGULPM---8M112512
BELLAGIO 940 *	all vehicles involved

*: the Luxury version is already fitted with the updated component

This noise, which is produced ONLY with the vehicle in motion, must not be mistaken for other noises due to the normal construction of the motorcycle or for noises caused by different problems with different solutions.

N.B.: This noise should not be mistaken for the noise coming from the gearbox at idle speed described in technical bulletin 011-2006, which necessitates the installation of two contoured washers on the clutch shaft.

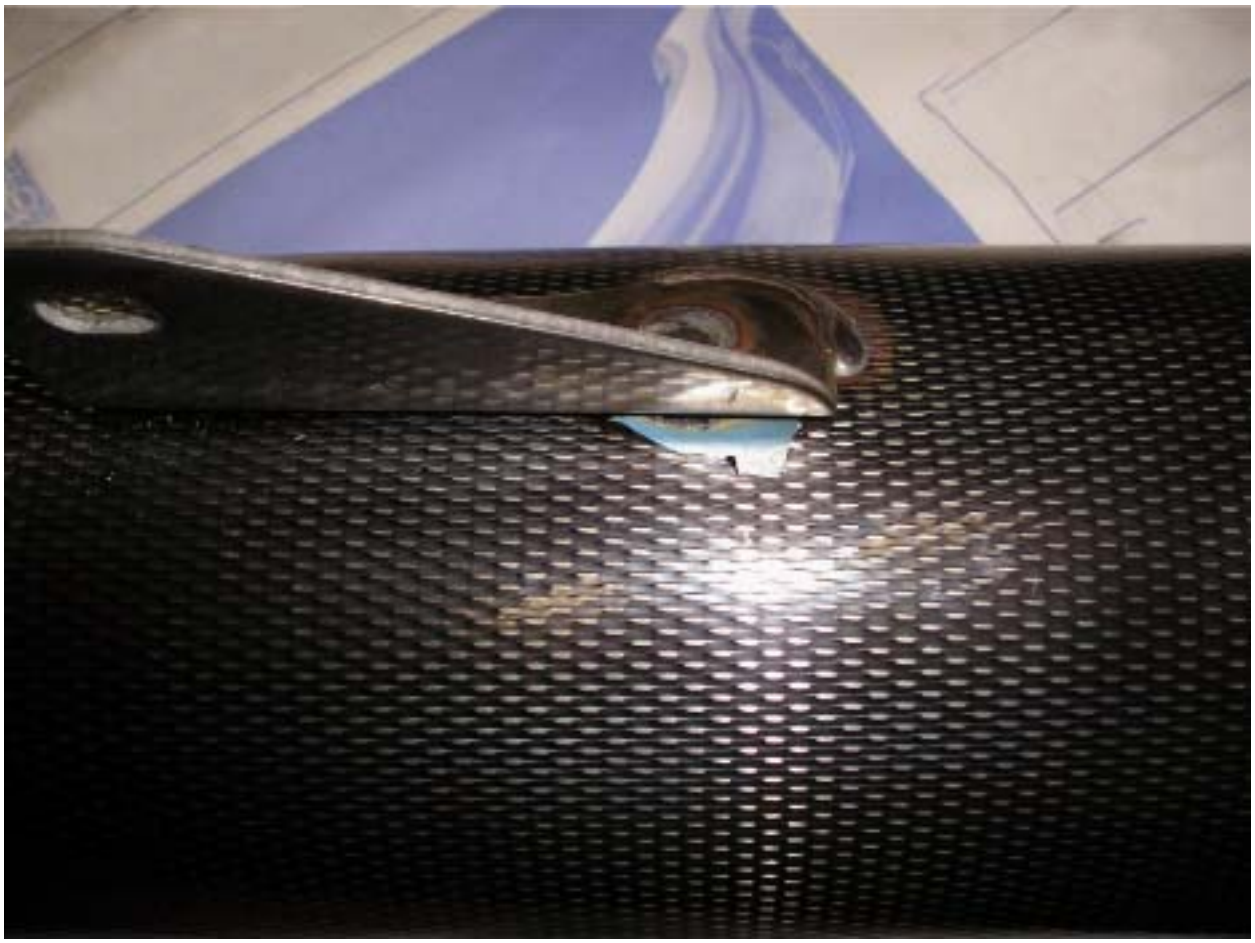
PROBLEM SOLVING COURSE

SHEET No. 12

SUBJECT: 1200 Sport silencer

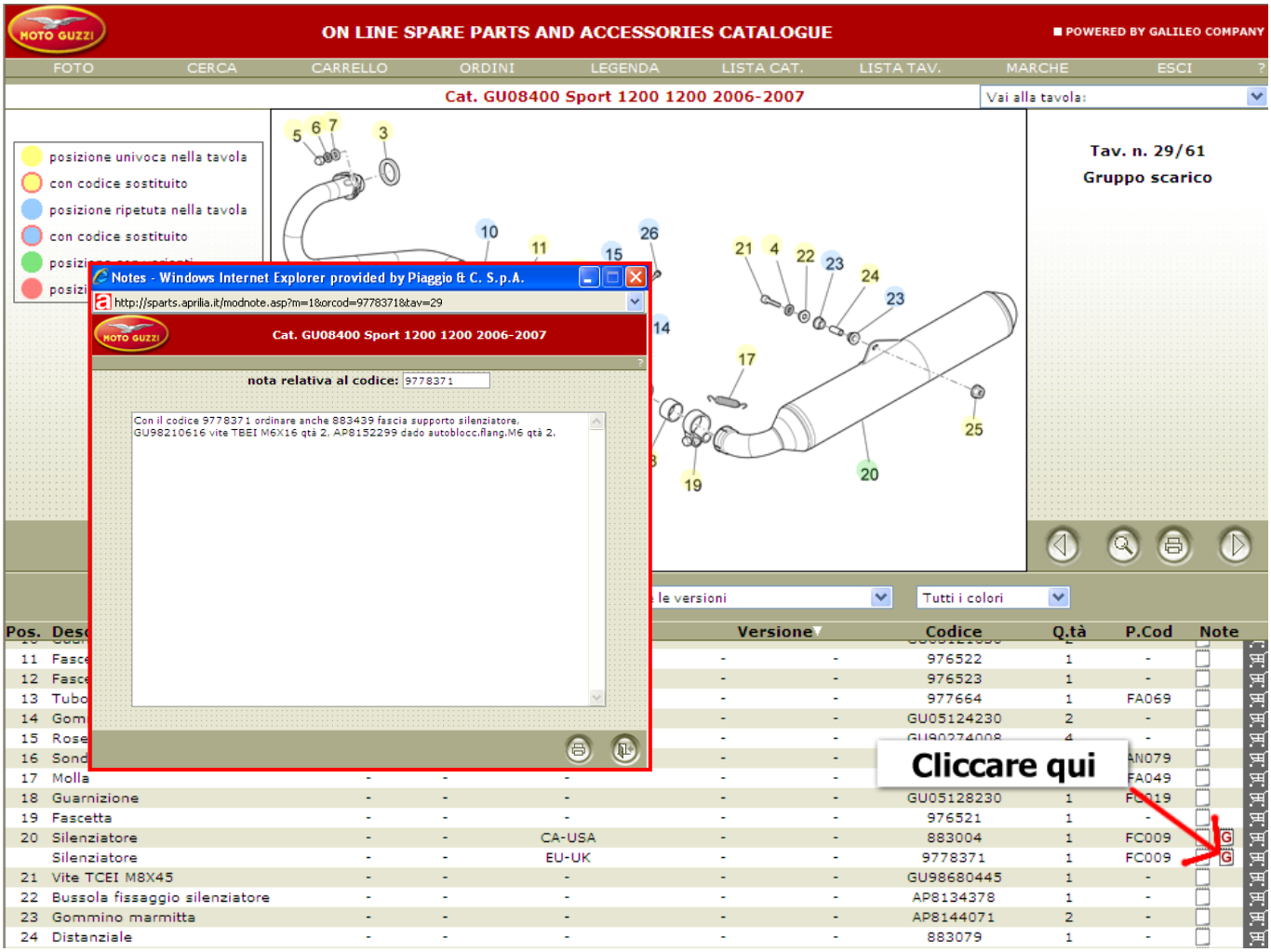
APPLICABILITY: 1200 Sport 2V

SYMPTOMS: Noisy exhaust, corrosion and subsequent detachment of frame mounting bracket.



CAUSES: non conformant welding

SOLUTIONS: replacement of faulty exhaust with the new exhaust p/n 9778371, also ordering the silencer mounting clamp p/n 883439, two TBEI M6X16 screws, p/n GU98210616, and two M6 self-locking flanged nuts, p/n AP8152299, as indicated by the note in the spare parts catalogue (table 29). Photo by Tiso.



N.B.: In some cases, a discolouration of the silencer cap has been noted. This necessitates the replacement of the entire silencer.

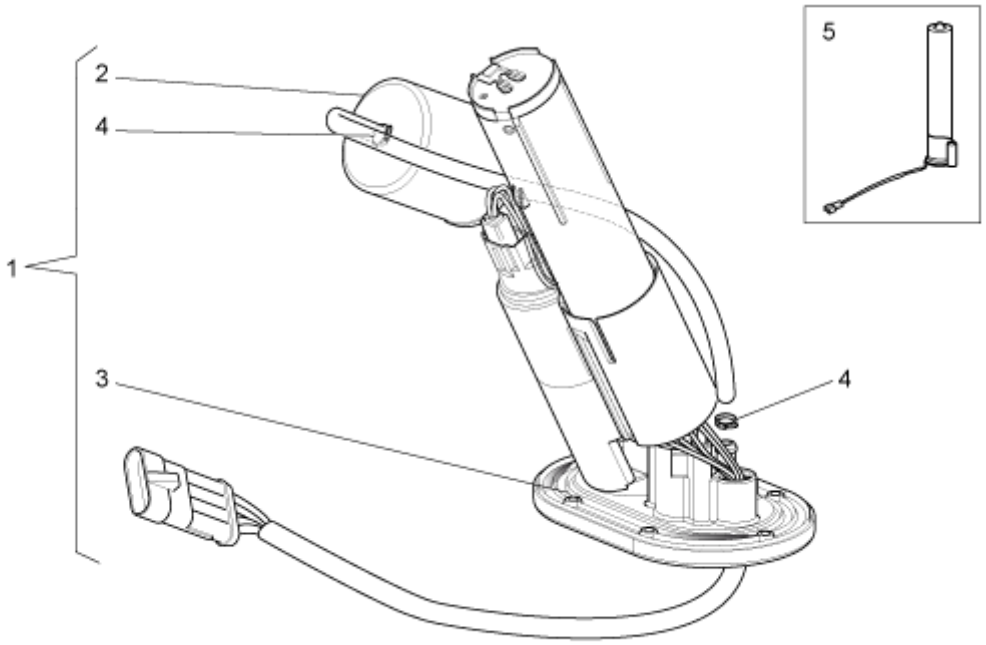
PROBLEM SOLVING COURSE

SHEET No. 13

SUBJECT: Fuel level sensor

APPLICABILITY: STELVIO, BREVA, NORGE, 1200 SPORT 2V

SYMPTOMS: Incorrect fuel level indication on instrument panel



CAUSE: Jammed fuel pump float

SOLUTION:

Replace the float only, p/n AP8127817, not the complete fuel pump, p/n GU05107230.

To replace the component, follow the instructions given in technical bulletin No. 011-2008.

PROBLEM SOLVING COURSE

SHEET No. 14

SUBJECT: Water infiltration into panniers

APPLICABILITY: Norge 1200 – Breva 1100 (accessory)

SYMPTOMS: on certain vehicles, the panniers (left or right) may fail to close properly after a very few kilometres of use.
Specifically, the hinged shell fails to close correctly against the fixed part of the pannier: in some cases, there is a visible gap in the upper area where the two shells should seal against one another. This gap may reach significant dimensions (to assess the size of the gap, remove the seals and close the two shells together): and it is through this gap that water infiltrates in rainy conditions or when washing the bike.

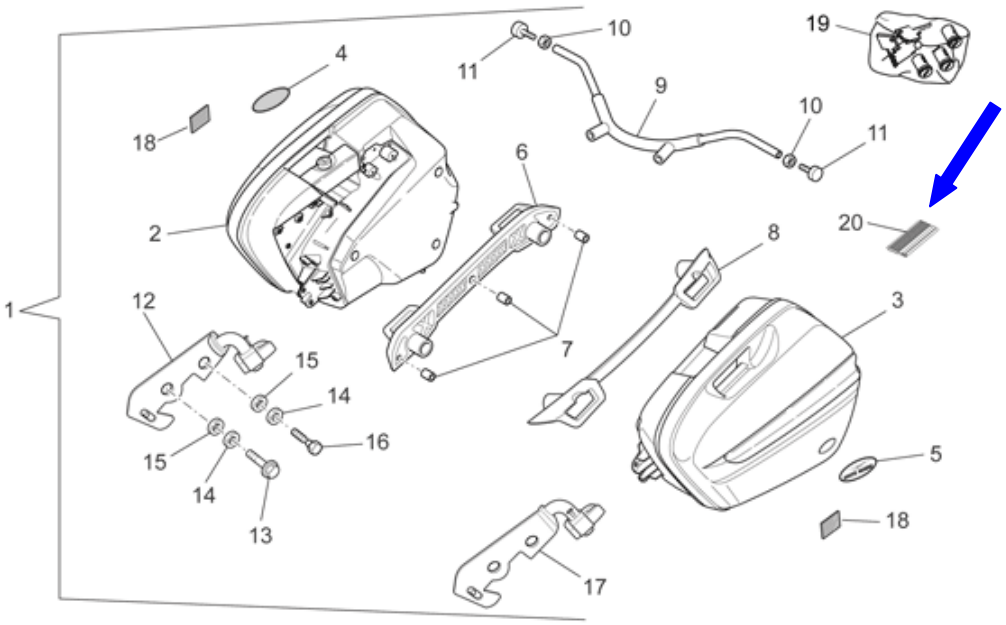


Figure 1

CAUSES: Warping of one of the two pannier shells resulting in poor closure, as shown in figure 1.

SOLUTIONS:

1) Replace the seal, using the new component with p/n 883246 (detail 20 in the image, indicated by the blue arrow). The new seal differs in thickness and stiffness (all contact surfaces must be lubricated with petroleum jelly). Immediately after replacement, the hinged shell may not seal easily against the fixed part of the pannier and the pannier itself may be difficult to close. Open and close the pannier repeatedly until the new seal settles correctly between the two shells.

2) As mentioned earlier, if a significant gap between the shells is revealed when test closing the shells without seals, it may be possible that even replacing the seal may not be sufficient to solve the problem (see figure 2). In this case, the replacement of the entire pannier is necessary, after sending photographic documentation to the respective department for evaluation of the case.

Figure 2

Norge models produced from 30/06/2008 (ZGULP----8M114458) are factory fitted with the new updated seals.

PROBLEM SOLVING COURSE

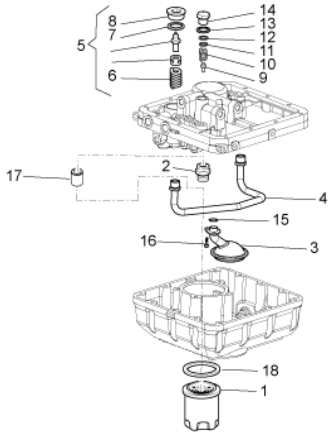
SHEET No. 15

SUBJECT: Leakage from oil filter gasket

APPLICABILITY: NORGE, BREVA, GRISO 850/1100, 1200 SPORT 2V, BELLAGIO, CALIFORNIA VINTAGE

SYMPTOMS: damage identified during visual inspection

File from spare parts catalogue



CAUSE:

Filter cartridge p/n GU30153000 with non conformant gasket

SOLUTION:

Replace the original filter assembly gasket with a new gasket with p/n 981115, which is identical in size but has different rubber characteristics.

NOTE: Check the production date indicated on the exterior of the filter (see figure). If the year of production is earlier than 2009, the gasket must be replaced with a conformant component.

PROBLEM SOLVING COURSE

SHEET No. 16

SUBJECT: Vehicle speed sensor malfunction

APPLICABILITY: STELVIO, BELLAGIO, GRISO 850, 1100, 1200 8V

SYMPTOMS: No speed indication or incorrect speed indication on instrument panel, warning light, error indicated by ECU.

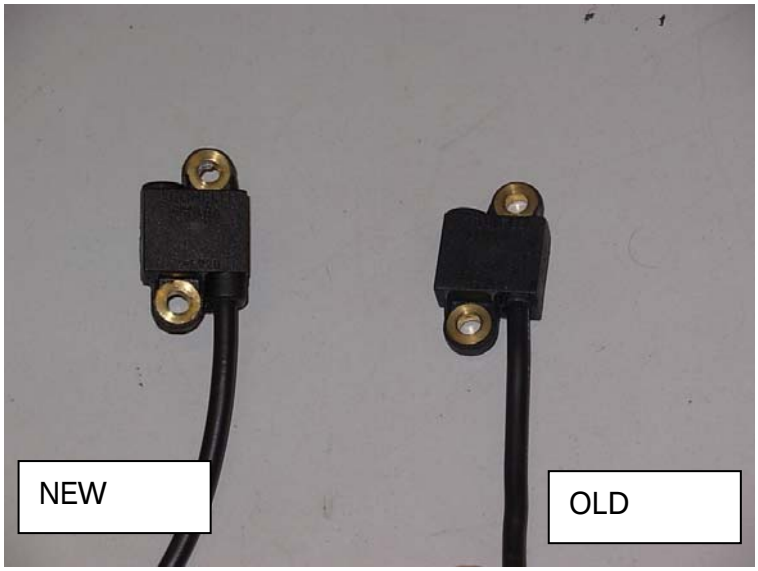
CAUSE:

Water infiltration into vehicle speed sensor p/n GU06765400

SOLUTION:

Replace speed sensor with a more recent equivalent sensor with the same p/n.

Refer to the following figure to identify sensors:



PROBLEM SOLVING COURSE

SHEET No. 17

SUBJECT: Water infiltration in instrument panel

APPLICABILITY: Breva 850,1100,1200 - Griso 850,1100,1200 – Norge 850,1200 – 1200 Sport – 940 Bellagio - Stelvio

SYMPTOMS: Water or severe condensation in instrument panel.

CAUSES: Non conformant seals.

SOLUTIONS: Replace the component under warranty

In this case, the most important aspect is to determine whether or not instrument panel replacement is necessary. It is necessary to differentiate between cases in which water is effectively infiltrating into the instrument panel and cases where there is merely light condensation inside the instrument panel (see image below)

In the latter case, condensation generally forms near the instrument panel perimeter surround and usually disappears within a few minutes of riding the vehicle. It is important that the instrument panel is always legible (both the analogue and digital areas) and that the condensation disappears within the first 5 – 7 minutes of riding the motorcycle. In this case, the instrument panel does not need to be replaced as it is still conformant with project specifications and, therefore, with the quality standards required.

A table containing the new part numbers currently used in production is given below.

In the event of work subject to warranty claims, only the part numbers given below may be ordered. Please note that when ordering any 6 digit part number (883xxx), the MG prefix or any other prefix is not needed.

When submitting a warranty claim, a photo illustrating the problem and a photo of the batch number applied to the back of the component must be attached to the claim itself.

Moto Guzzi P/N	MODEL
883474	SATURN BREVA
883475	SATURN BREVA USA
883343	SATURN NORGE
883344	SATURN NORGE USA
883345	SATURN 1200 SPORT KM
883346	SATURN 1200 SPORT USA (DUAL SCALE)
883347	SATURN BREVA 1200 KM
883348	SATURN BREVA 1200 GB
883340	GRISO
883342	CUSTOM 940
883341	STELVIO

PROBLEM SOLVING COURSE

SHEET No. 18

SUBJECT: Norge headlight problem

APPLICABILITY: NORGE 850/1200

SYMPTOMS: Vehicle cuts out while in motion when the high beam lights are switched on due to failure of 30A fuse

CAUSE:

Short circuit to ground of positive lamp wire

SOLUTION:

A modification has been developed for the high beam lamp cables, introducing a sheath (fig. 1) to offer greater protection for the cables themselves.

Fig. 1

As a result, Moto Guzzi has decided to recall all Norge vehicles in circulation in order to replace the old lamps with the lamps with the modified cable (p/n GU30530558). To change the lamp proceed as follows:

Remove the headlamp from the vehicle as described in the workshop manual

Uncover the high beam lamp cable, detaching the protective cap at the back of the headlight (fig. 2 and 3)

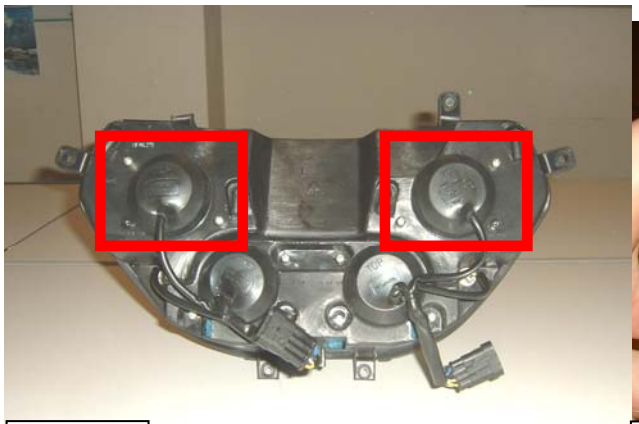


Fig. 2

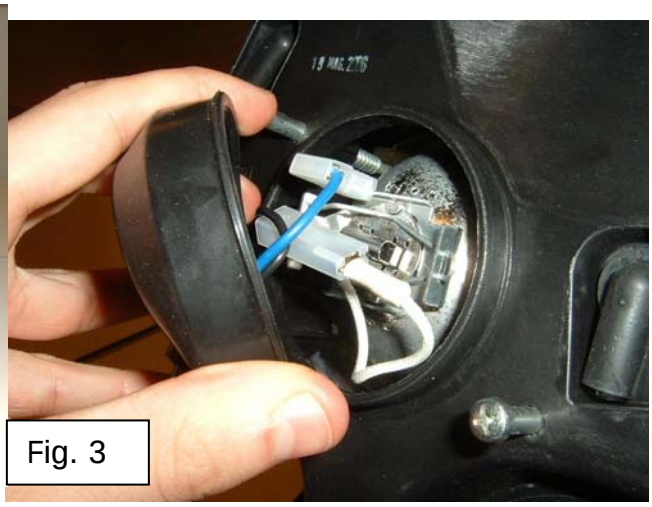


Fig. 3

Disconnect the blue cable from the plate fixed to the bulb (fig. 4)

Disconnect the high beam lamp (fig. 5)

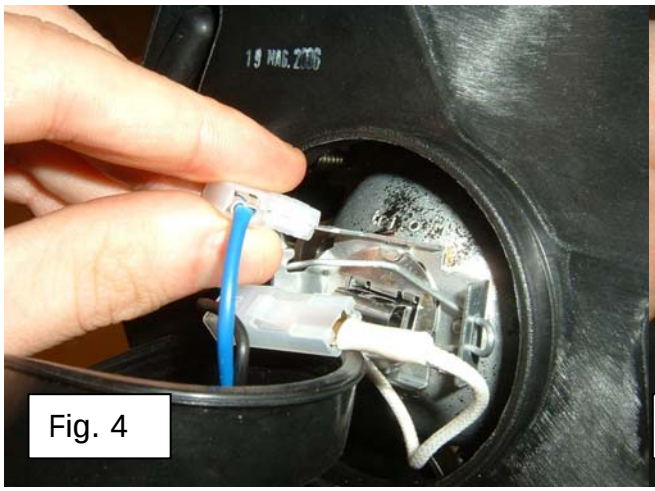


Fig. 4

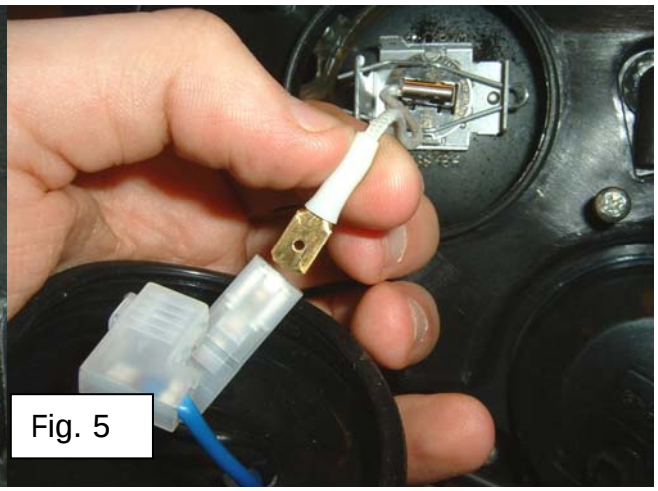


Fig. 5

Open the lamp retainer clip (fig. 6)

Remove the lamp and replace with the new lamp. The position is rendered obligatory by the semi rectangular and semicircular section made in the lamp base plate (fig. 7)

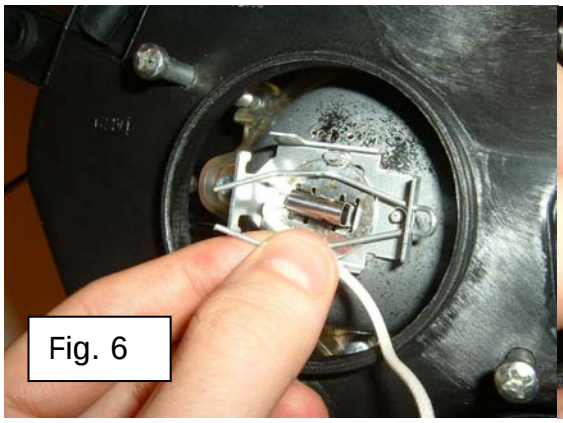


Fig. 6

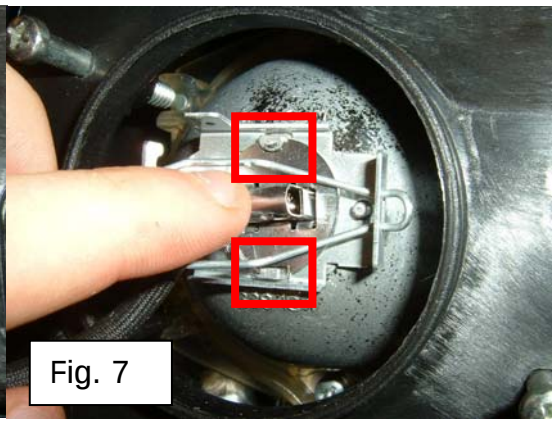


Fig. 7

When remounting, make sure the cable harness goes under the lock fork.

Carry out the steps described above in reverse order, then repeat the entire procedure to change the second high beam lamp

Refit the headlamp on the vehicle

PROBLEM SOLVING COURSE

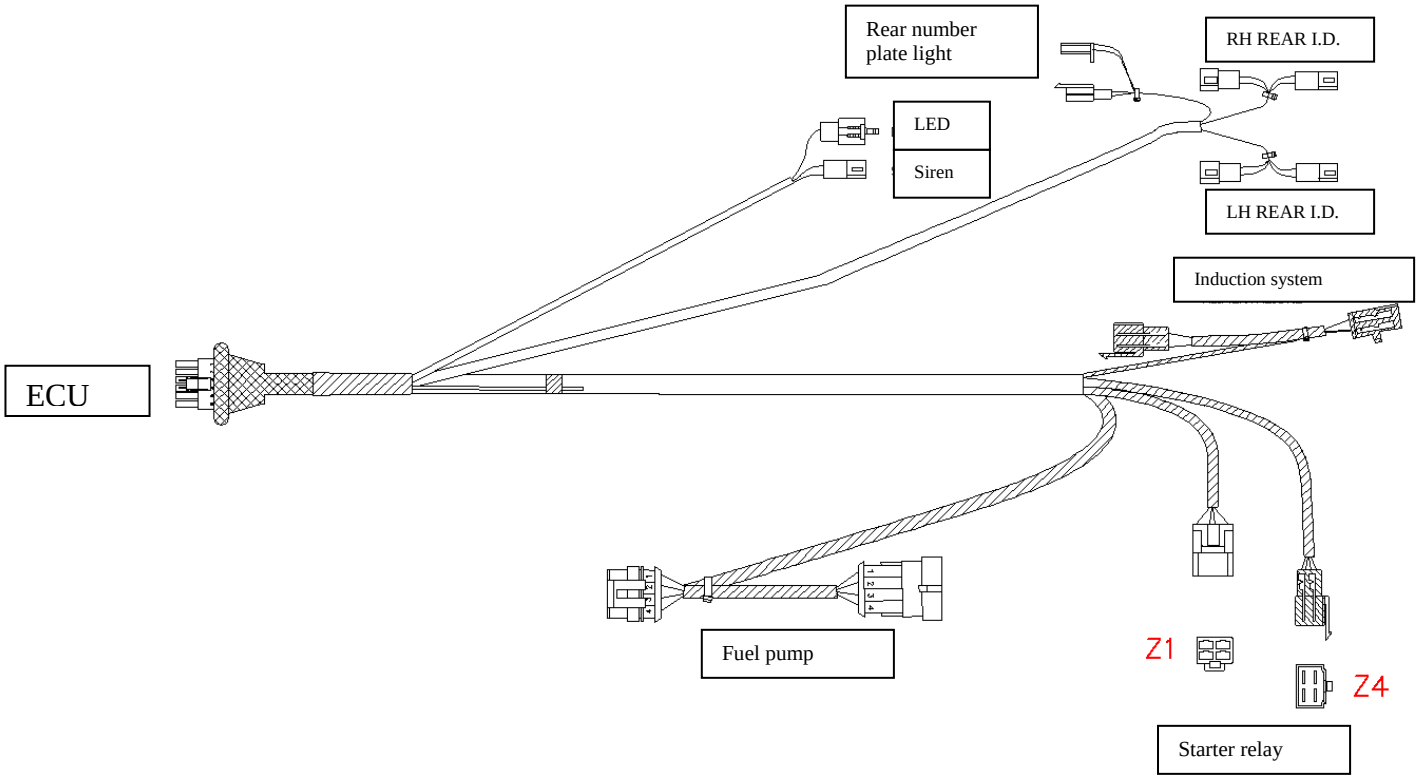
SHEET No. 19

SUBJECT: Problems with Moto Guzzi antitheft system accessory

APPLICABILITY: NORGE, BREVA, 1200 SPORT

SYMPTOMS: Starting failure with warm engine

CAUSE: Probable electromagnetic disturbance in antitheft system/vehicle wiring harness



SOLUTION:

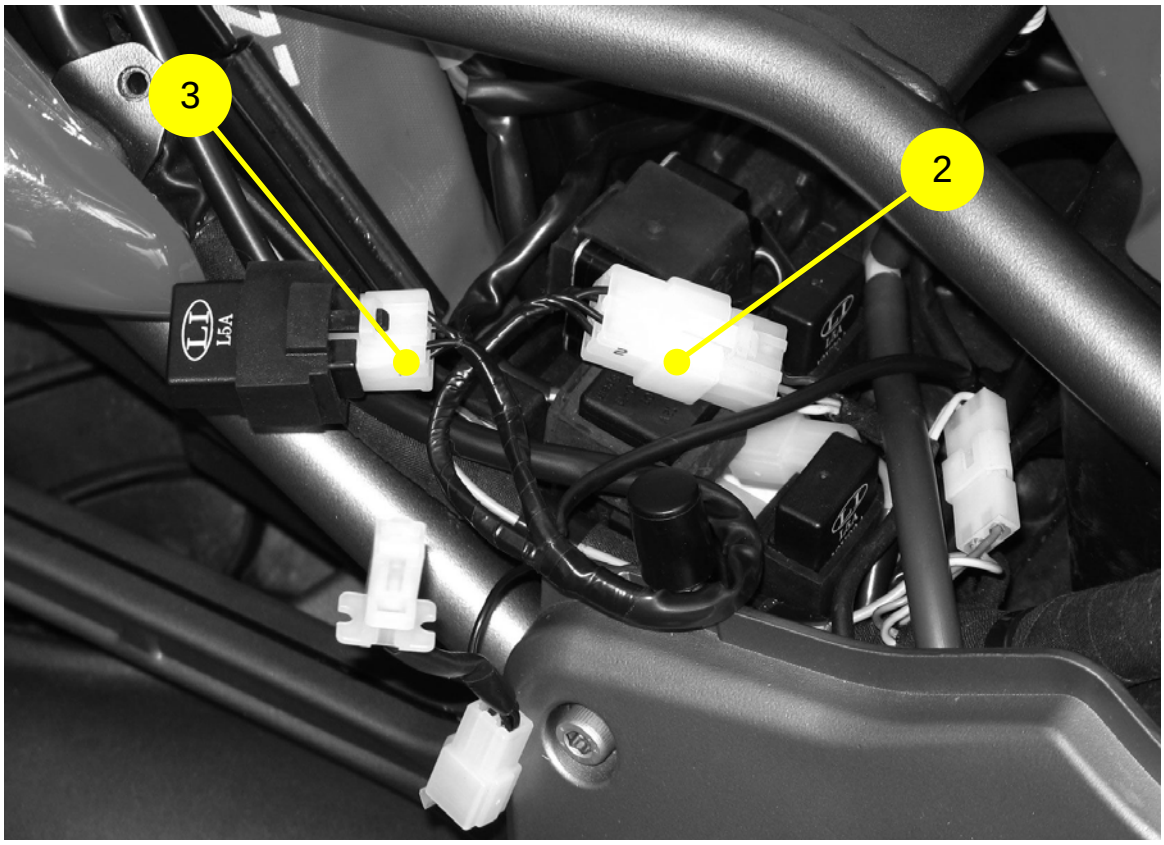
In the event of an attempted theft, the system uses two different measures to immobilise the vehicle:

a) inhibiting the starter relay

b) inhibiting the fuel pump

As the problem is related to starter relay inhibition, the engine immobiliser function must be disabled.

To disable the engine immobiliser function of the antitheft system, restore the starter relay to its original position on the main wiring harness. Using the photo as reference, remove the relay from connector 3 (Z1 in the wiring harness layout) and disconnect connector 2 (Z4 in the wiring harness layout), then reconnect the relay where connector 2 was connected. This disables the engine immobiliser function while leaving the fuel pump inhibitor function enabled (the fuel pump connectors are not visible in the photo). Seal the loose connectors 2 and 3 with insulating tape.



The two connectors at the bottom which are loose in the photo are the positive connections for the antitheft system and must be connected normally.

NOTE: On these models, only the rear turn indicators flash when the antitheft system is armed. This is normal and is not a defect.

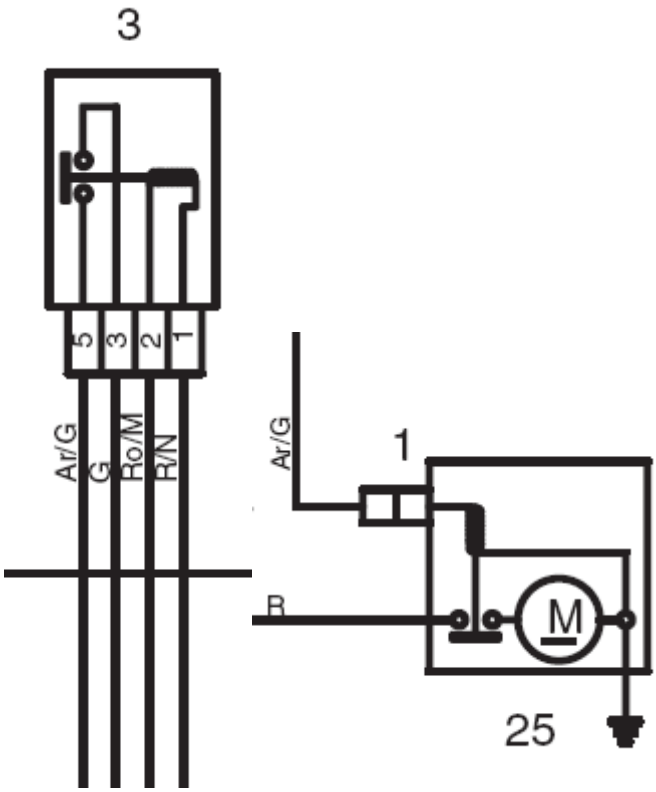
PROBLEM SOLVING COURSE

SHEET No. 20

SUBJECT: Starting failure with warm engine

APPLICABILITY: BREVA 850/1100/1200, GRISO 850/1100, NORGE 850/1200, 1200 SPORT 2V

SYMPTOMS: starting failure with warm engine.



CAUSE:

Insufficient cross section of the +12V wire energising the starter relay

SOLUTION:

a) Identify the starter relay (orange/yellow, yellow, brown/pink and red/black cables)

b) Remove the relay and detach the Faston connector from orange/yellow cable, pushing the tab down with a pin.

c) Prepare the additional length of cable (cross section 2.5mm^2, as long as necessary)

d) Fit the Faston connector with the tab on the relay connector instead of the orange/yellow cable.

e) Insulate the Faston connector from the previously disconnected orange/yellow cable.

f) Disconnect the Faston connector from the starter motor and fasten to the wiring harness with a clamp to prevent it from dropping onto the silencer.

g) Connect the Faston on the additional cable in place of the old Faston connector.

h) Fasten the additional cable with the same clamp used to secure the starter cables

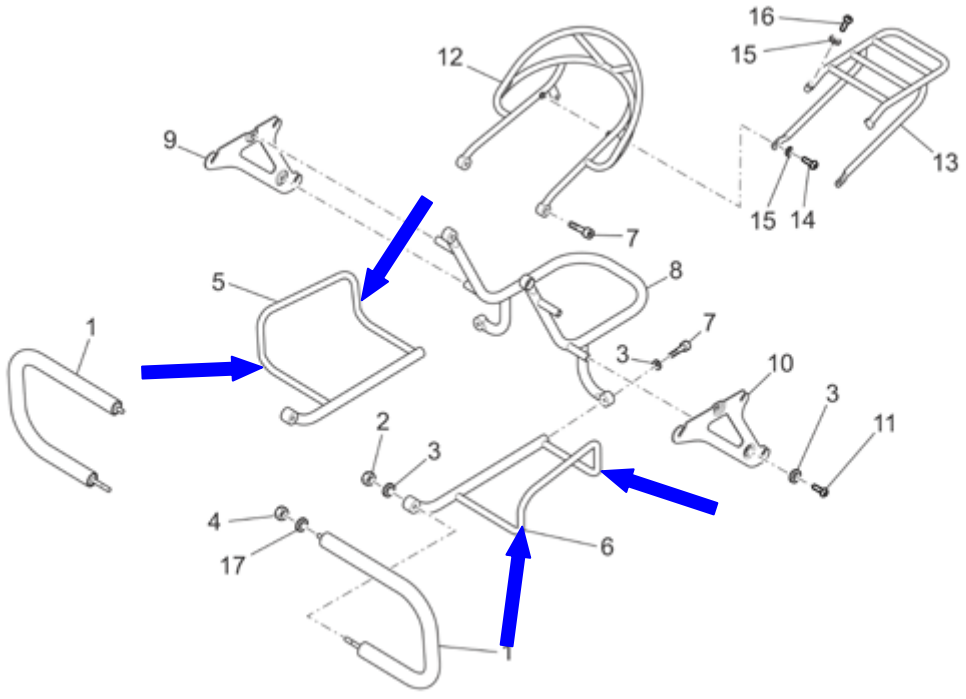
PROBLEM SOLVING COURSE

SHEET No. 21

SUBJECT: abrasion on panniers caused by fretting against mounting

APPLICABILITY: California Vintage

SYMPTOMS: on certain vehicles, the pannier may come into contact with the bag mounting (details 5 and 6 in the following image). As it frets against the mounting, the paintwork on the pannier is damaged. The area in which contact between the mounting and the pannier normally occurs is localised around the curved section of the mounting itself (see blue arrows in figure below)



CAUSES: excessively tight curvature in pannier mounting

SOLUTIONS:

1) You may try to widen the curvature by pulling the pannier mounting outward. Take particular care not to damage the mounting irreparably when performing this operation.

2) Install a rubber spacer or rubber pad between the mounting and the pannier, at the curved section of the mounting (indicated by the blue arrows), to prevent contact between them.

PROBLEM SOLVING COURSE

SHEET No. 22

SUBJECT: Cold starting failure

APPLICABILITY: NORGE 1200, 850 BREVA 1200, 1100, 850, 1200 SPORT 2V

SYMPTOMS: When pressing the starter button of the motorcycle, I hear the relay click but the starter motor does not turn.

CAUSES:
The control unit that manages the injection of this motorcycle during starting also checks the battery charge status. If it is low (11-10.5 volts), the control unit does not allow the engine to be started.

SOLUTIONS:

1. The problem was once and for all solved on the Stelvio, Griso 8 V, Bellagio and 1200 Sport motorcycles by adopting a relay called a maintenance relay. If the battery is slightly down, it directly connects the battery to the starter motor, bypassing control unit management.

2. This system cannot be applied to the motorcycles this sheet discusses because it would entail tampering with the electrical system. We can however solve the problem by applying a capacitor code AP9100739 and a diode code AP8212588 to the motorcycle (see photo). This application is simple because the electrical system already has a prearrangement for these two electrical components, found on the right side of the battery area of the motorcycle.

PROBLEM SOLVING COURSE

SHEET No. 23

SUBJECT: Positioning the battery cables

APPLICABILITY: STELVIO 1200 version ‘08

SYMPTOMS: positive and negative cable which could become damaged when the saddle is inserted

CAUSES: It is possible that as there are no constraints for the electrical system/battery connection, when the saddle is being repositioned its two metal hooks might irreparably damage the cables during vehicle maintenance, whether performed by your dealers or by yourself.

SOLUTIONS:

Follow these instructions to solve the problem:

1. Remove the battery retainer
2. Make a hole having an 8.5 mm diameter in its centre
3. Apply the elastic band code **AP8120177**
4. Pass the positive and negative cables inside the elastic band
5. Reconnect the positive and negative cables to the battery

The end result must be like the following image.