



Service Bulletin 638

Issue 1 - 10.2025

Subject: Measure and Replace Camshaft Drive Chain Tensioner			
Bulletin Number	Models Affected	VIN or Date Range	Markets Affected
638	Speed 400, Scrambler 400 X	Up to VIN A38716, plus list of individual VINs	All Markets

Background Information

Dealers are requested to measure and replace the camshaft drive chain tensioner on motorcycles in the above VIN range as described in the procedure below.

In addition, if a measurement is beyond the value stated below, the camshaft drive chain must be replaced also. Claims for this additional action will require manual intervention on the warranty claim as described below.

Customer Contact Instructions

Motorcycles in the affected VIN range must have this Service Bulletin completed prior to delivery to the customer, or at the next visit to the dealership.

Identification of Affected Motorcycles

Speed 400 and Scrambler 400 X motorcycles in the above VIN range.

NOTICE

Some affected motorcycles listed in the VIN range will have been reworked by Triumph prior to their release from the factory.

Unmodified motorcycles can be identified by checking the 'VIN Enquiry' on www.triumphonline.net.

Warranty Claim Instructions

Bulletin Number	Fault Code	Repair Code	Description	Repair Allowance	Time
638	011430938	99638	SB638 Replace Chain Tensioner	0.15 Hrs	
638	011430938	996381	SB638 Replace Tensioner and Chain	1.95 Hrs	

Genuine Parts Information

Bulletin Number	Part Number	Description	Quantity
638	36TA0211	SB638 Cam Chain Tensioner Kit Consisting of: Assembly, Chain Tensioner - Qty 1 Gasket, Chain Tensioner - Qty 1 Washer - Qty 1 Bolt, Flanged M6x1 - Qty 1 Screw, Button Head- Qty 1 Locking pin - Qty 1	1
638	36TA0212	SB638 Cam Chain Kit Consisting of: Cam Chain - Qty 1 Gasket, Clutch Cover - Qty 1 Primary Nut - Qty 1 Breather Bolt - Qty 1 Bolt, Flanged M8x1 - Qty 1 Bolt - Qty 1	1

Parts Ordering Instructions

For Triumph Subsidiary and Overseas Distributor dealers using Triumph Warranty On-Line with Parts Auto Ordering Flag switched on: Order all repair parts by submitting a New Prior through the Warranty On-Line system. Entering the above repair code in a New Prior will automatically add the parts required and labour times for this Service Bulletin.

For Overseas Distributor dealers NOT using Triumph Warranty On-Line or for Overseas Distributor dealers using Triumph Warranty On-Line with Parts Auto Ordering Flag switched off: Orders should be placed using the normal parts ordering procedure.

Genuine Parts Return

Dealer to retain parts for 90 days. All parts must be stored in a secure, non-public accessed area and correctly identified with a completed warranty label. Thereafter, the parts must be rendered unusable prior to scrapping.

Other Instructions

Once completed, please mark the Service Record Book that the requirements of this bulletin have been complied with.

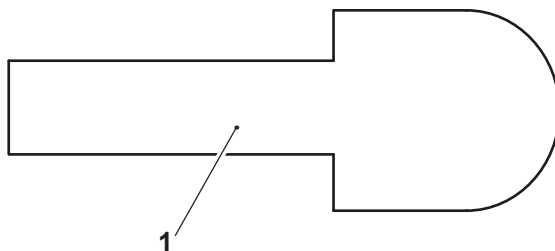
Before returning the motorcycle to the customer, download the latest calibration to the engine control module using the current version of the Triumph diagnostic software.

Locking of Camshaft Drive Chain Tensioner

A locking pin is provided pre-installed within the new camshaft drive chain tensioner. It must be removed in order for it to be used in the instruction steps below.

It is essential that the original camshaft drive chain tensioner is locked using the locking pin provided prior to removal.

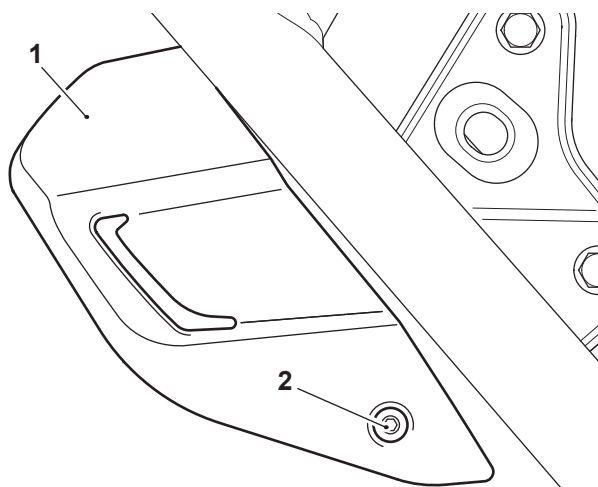
Failure to lock the camshaft drive chain tensioner will result in an incorrect measurement in the procedure below.



1. Locking pin

Removal of Throttle Body Cover

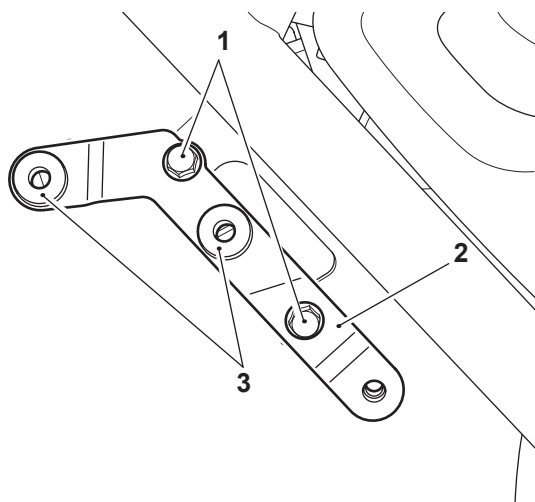
1. Remove the fixing that attaches the left throttle body cover to the frame bracket.



1. Throttle body cover

2. Fixing

2. Release the cover from the two grommets on the bracket.
3. Remove the two fixings and remove the bracket from the frame.



1. Fixings
2. Bracket
3. Grommets

Measure the Camshaft Drive Chain Tensioner

WARNING

Make sure that the motorcycle is stabilised and adequately supported.

Do not support the motorcycle on any ancillary component, the exhaust system or any other non-structural parts of the motorcycle frame.

A correctly supported motorcycle will help prevent it from falling.

Failure to follow the advice above could result in serious injury or death.

NOTICE

The motorcycle must be kept extremely still whilst the camshaft drive chain tensioner is removed.

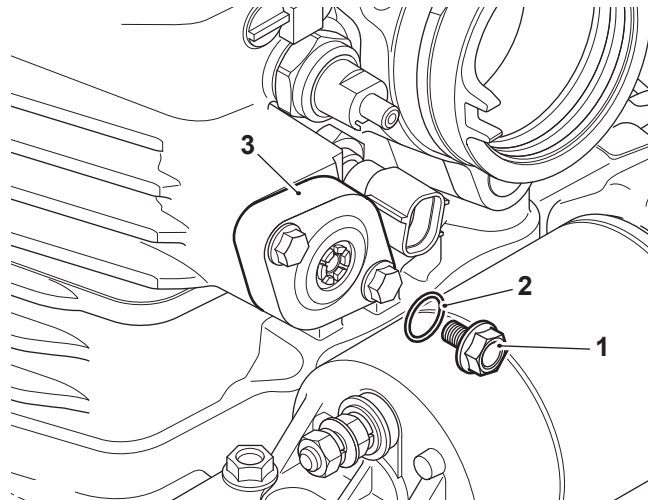
Failure to keep the motorcycle still may result in disturbance of the camshaft timing, which in turn could cause irreparable damage to the engine components.

NOTICE

All measurements described below must be taken with a calibrated vernier caliper.

1. Disconnect the battery as described in the Service Manual.

2. Remove the blanking screw from the centre of the tensioner, discard the O-ring.

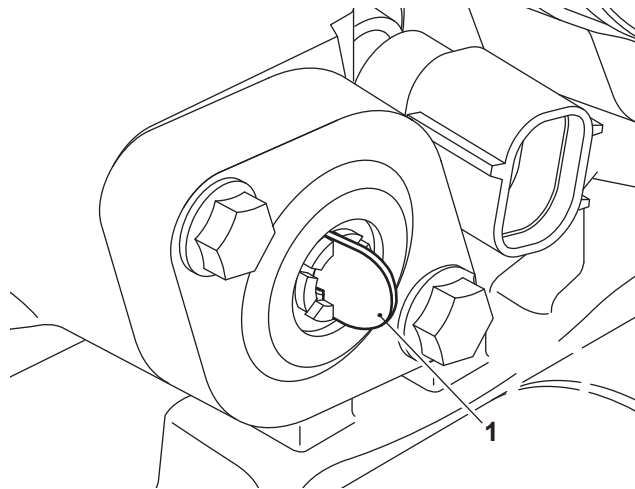


1. Blanking screw
2. O-ring
3. Chain tensioner

NOTICE

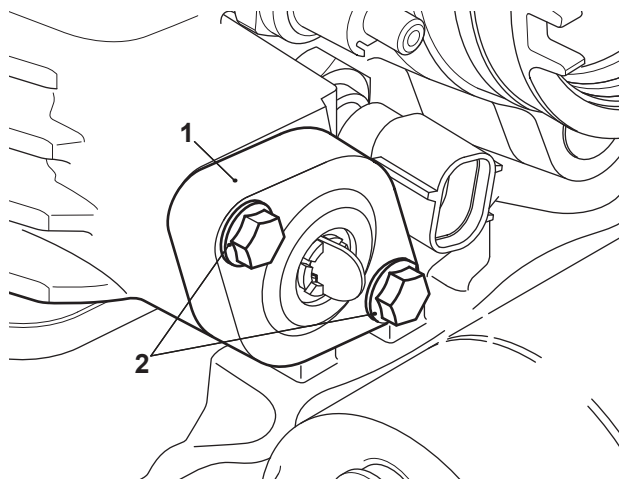
It is essential that the original camshaft drive chain tensioner is locked using the locking pin provided prior to removal.

3. Using the locking pin from the kit, lock the plunger in position.



1. Locking pin

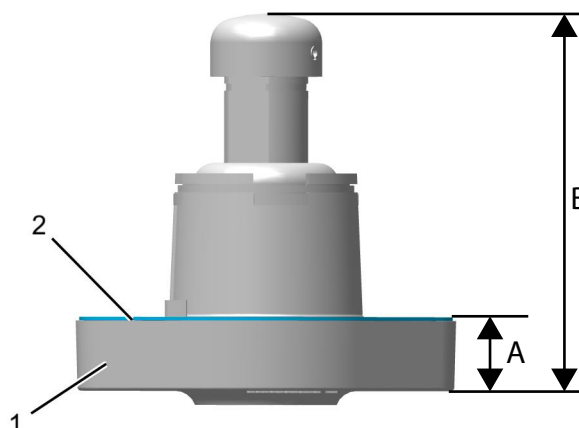
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4. Remove the two fixings and remove the camshaft drive chain tensioner and gasket.



1. Chain tensioner

2. Fixings

5. Measure the distance from the end of the top cap to the bolt face of the camshaft drive chain tensioner (**measurement B**).
6. Measure the distance from the bolt face to the mounting face, **including the gasket**, of the camshaft drive chain tensioner (**measurement A**).



1. Camshaft drive chain tensioner

2. Gasket

7. If measurement B minus measurement A is equal to, or greater than, 49.50 mm, the camshaft drive chain and camshaft drive chain tensioner must be replaced (see **Replace the Camshaft Drive Chain and Tensioner**).
8. If measurement B minus measurement A is less than 49.50 mm, only the camshaft drive chain tensioner must be replaced (see **Replace the Camshaft Drive Chain Tensioner Only**).

Replace the Camshaft Drive Chain Tensioner Only

WARNING

Make sure that the motorcycle is stabilised and adequately supported.

Do not support the motorcycle on any ancillary component, the exhaust system or any other non-structural parts of the motorcycle frame.

A correctly supported motorcycle will help prevent it from falling.

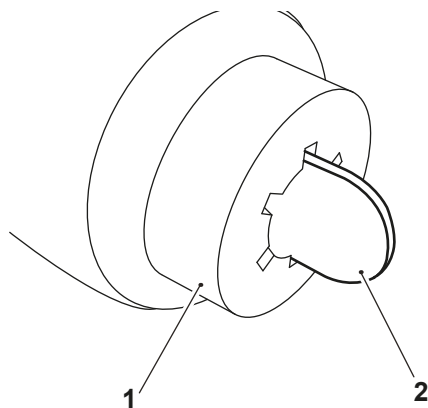
Failure to follow the advice above could result in serious injury or death.

NOTICE

The motorcycle must be kept extremely still whilst the camshaft drive chain tensioner is removed.

Failure to keep the motorcycle still may result in disturbance of the camshaft timing, which in turn could cause irreparable damage to the engine components.

1. Locate the new camshaft drive chain tensioner and new gasket from the parts kit.
2. Using a suitable screwdriver into the centre of the chain tensioner, turn it clockwise to wind the tensioner plunger back and lock into position with the locking pin.

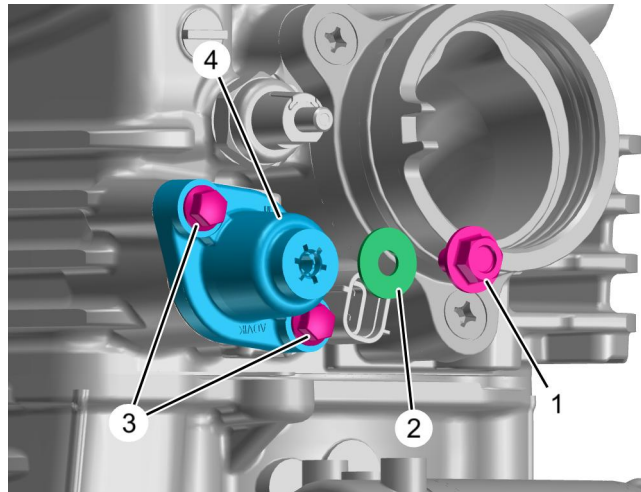


1. Chain tensioner

2. Locking pin

3. Assemble the tensioner to the engine with the new gasket and tighten the two fixings to 11 Nm.
4. Remove the locking pin to release the tensioner plunger.

5. Install the new washer and the blanking screw into the chain tensioner and tighten to 11 Nm.



1. Blanking screw
2. Washer
3. Fixings
4. Chain tensioner

6. Refit the throttle body cover bracket and left hand throttle body cover as described in **Refit the Throttle Body Cover**.

Replace the Camshaft Drive Chain and Tensioner

⚠ WARNING

Make sure that the motorcycle is stabilised and adequately supported.

Do not support the motorcycle on any ancillary component, the exhaust system or any other non-structural parts of the motorcycle frame.

A correctly supported motorcycle will help prevent it from falling.

Failure to follow the advice above could result in serious injury or death.

⚠ CAUTION

The engine oil may be hot.

Avoid contact with the hot engine oil by wearing suitable protective clothing, gloves and eye protection.

Contact with the hot engine oil may cause minor to moderate injury to exposed skin.

NOTICE

To protect the environment, do not pour oil on the ground, down sewers or drains, or into watercourses. Do not place used oil filters in with general waste. If in doubt contact your local authority.

NOTICE

This additional work requires that you manually enter the relevant part numbers as described in the process below if the camshaft drive chain needs replacing.

Additional Work Manual Warranty Claim

- Using VIN Enquiry, follow the Create Prior process and select 'Start New Prior' – do not select 'Submit Prior'.

41425, 11:25 AM Triumph Online - Welcome Start New Prior

6 Digit VIN Number: AW8239 Full Vin Number: SMTAP2ZYUNAV8239

Model: PR11 Tiger 1200 GT Pro (Euro 5a) Model Year: 2022 LKN

Colour: JF Lucerne Blue Engine Capacity: 1160

Build Date: 24/03/2022 Build Factory: F5

Registration Date: 30/12/2023 Warranty End Date: 30/12/2026

Outstanding Service Bulletins

Our records indicate the following service bulletins or safety recalls are outstanding for this VIN. Please check the motorcycle and arrange to have the relevant remedial work carried out as soon as possible.

Bulletin Name: SB638 RECALL REAR REAR TYRE 30 Days

Please Read Customer: 169999 Triumph Branch 15 Internal

Create Prior

Claim Type: [SRV] Service Bulletin / Safety Recall

Odometer: 1 Miles / Kilometers

Odometer reading not consistent with previous claim, please check and ensure odometer reading is accurate

Region: G201 Rear Wheel

Area: G20120 Rear Tyre/Valve

Fault Code: 020120R26 SB626 - RECALL REAR TYRE PIRELLI METZLER

Enter a repair code: 996261 SB626 - CHECK (NOT AFFECTED)

Target Repair Date: No date selected

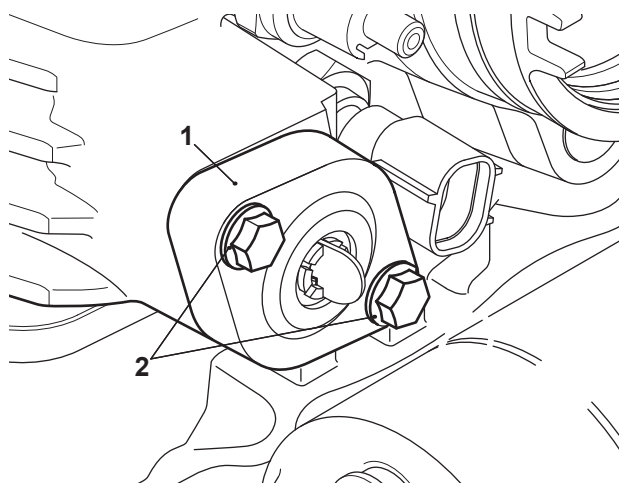
Vehicles Out of Use: No

Service History Help Start New Prior Submit Prior

- The full warranty prior screen will now open, check that the fault and repair codes are correct for SB638.
- Manually change the repair code to 996381.
- Manually add the additional parts kit (36TA0212).
- Complete any additional details on the prior as required, then click 'Submit Prior'.

Replace the Camshaft Drive Chain and Tensioner

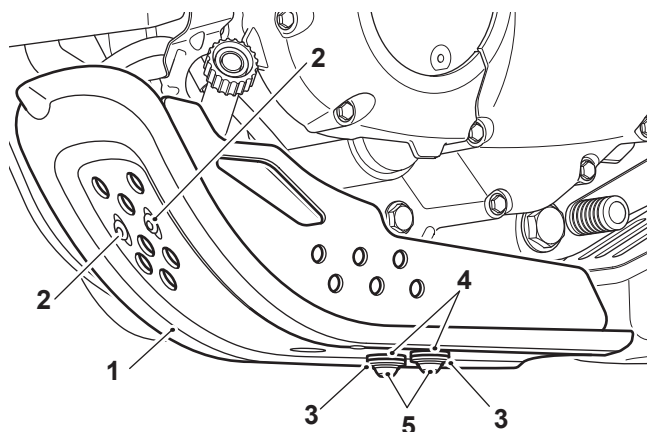
- Remove the locking pin out of the tensioner plunger.
- Using a suitable screwdriver into the centre of the original chain tensioner, turn it clockwise to wind the tensioner plunger back.
- Lock the plunger with the locking pin.
- Assemble the tensioner to the engine with the original gasket and tighten the two fixings to 11 Nm.



- Chain tensioner**
- Fixings**

- Remove the locking pin to release the plunger.

6. **Scrambler 400 X Only:** Remove the two upper fixings of the sump guard
7. Supporting the sump guard, remove the lower fixings and collect the washers.
8. Remove the sump guard.



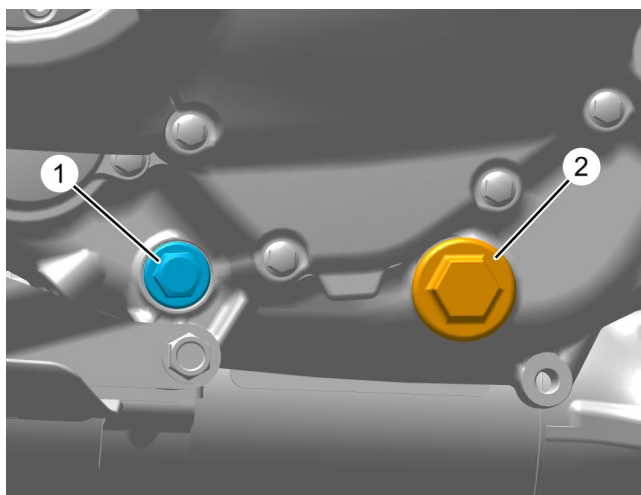
TP0162

1. Sump Guard
2. Upper fixings
3. Washers
4. Grommets
5. Lower fixings

NOTICE

To protect the environment, do not pour oil on the ground, down sewers or drains, or into watercourses. Do not place used oil filters in with general waste. If in doubt contact your local authority.

9. **All models:** Place an oil drain pan beneath the engine.
10. Remove the engine oil drain plug and allow the engine oil to drain.
11. Remove the evacuation strainer plug and allow the engine oil to drain.



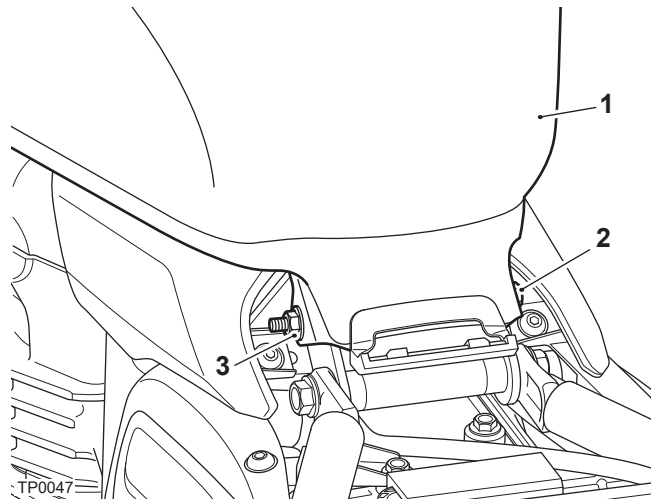
1. Evacuation strainer plug
2. Oil drain plug

12. Dispose of the used engine oil in an environmentally friendly way.

⚠ WARNING

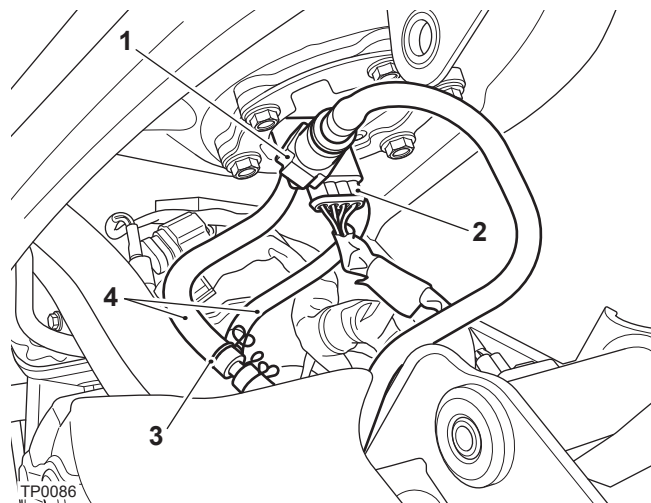
Never drain fuel from the tank using non-approved fuel handling equipment. A fire that causes personal injury or destruction of property can result from use of non-approved fuel handling equipment.

13. Using workshop equipment approved for fuel handling, drain all fuel from the fuel tank.
14. Remove the fixing that attaches the rear of fuel tank to the frame.



1. Fuel tank
2. Bolt
3. Nut

15. Slightly raise the rear of the fuel tank and move it rearwards to release the locating tab at the front from the rubber locating block. Lift the fuel tank horizontally to gain access to fuel line, breather hoses and electrical connectors.
16. With the aid of an assistant, disconnect the electrical connectors for the fuel pump and the fuel level sensor.
17. Detach the EVAP and drain hoses from the fuel tank.



1. Fuel hose connector
2. Electrical connector
3. Wire hose clip
4. EVAP and drain hoses

⚠ WARNING

Do not disconnect the fuel hose unless the fuel pressure has been released.
 If the fuel hose is disassembled without first releasing the pressure, fuel can escape onto clothing and components.
 Escaped fuel is a serious fire hazard that can cause burn injuries and damage to property.

NOTICE

Fuel stored in the fuel rail will be at 3.5 bar (350 kpa/50.8 lb/in²). Therefore it is essential that the fuel pressure is reduced before the fuel system is disassembled.

To reduce the pressure, crank the engine momentarily with the fuel pump disconnected.

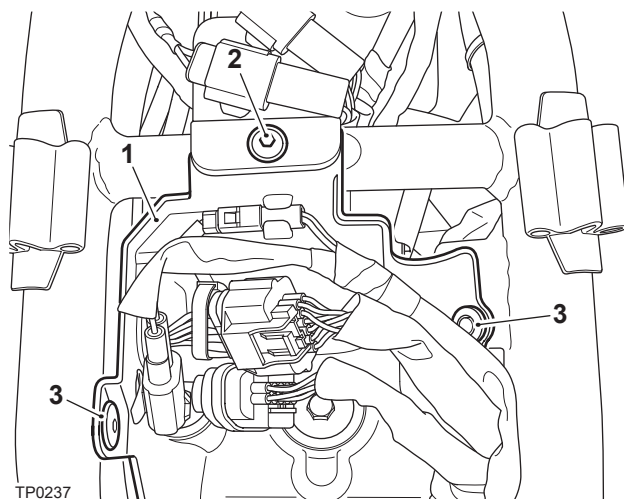
When disconnected, the fuel tank is self-sealing but a small amount of fuel may leak from the hose.

18. Get the help of an assistant to reconnect the battery, positive (red) lead first, and crank the engine to reduce pressure in the fuel rail.
19. Disconnect the battery, negative (black) lead first.

NOTICE

Before disconnection, note the position of the fuel hose, breather and drain hoses so that they can be returned to the same locations when refitting the tank.

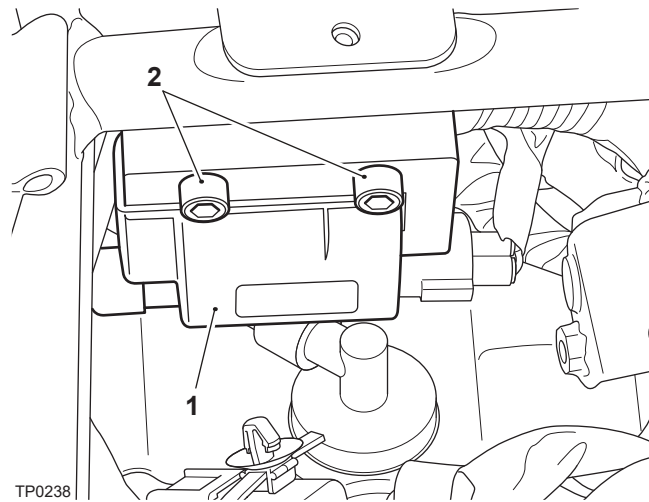
20. Disconnect the fuel hose by squeezing the sides of the connector and pulling the hose free from its spigot on the fuel pump plate.
21. Release the wire hose clips and disconnect the breather and drain hoses at the inline hose joiners.
22. Remove the fuel tank from the frame.
23. Remove the electrical connector carrier fixing and plastic rivets.



1. **Electrical connector carrier**
2. **Fixing**
3. **Plastic rivets**

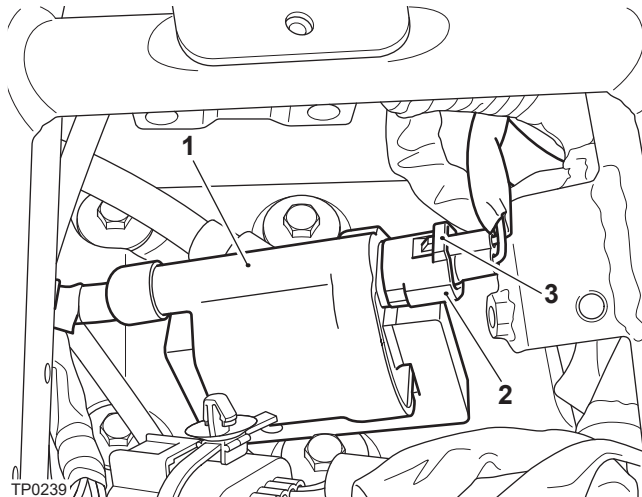
24. Position the electrical connector carrier rearwards to allow access to the ignition coil.

25. Remove the ignition coil fixings.



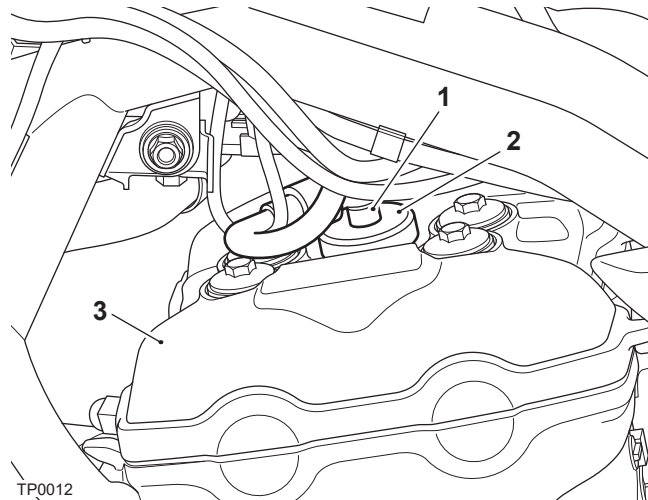
- 1. Ignition coil
- 2. Fixings

26. Rotate the ignition coil to allow access to the electrical connectors locking feature.
27. Release the locking feature and disconnect the electrical connector.



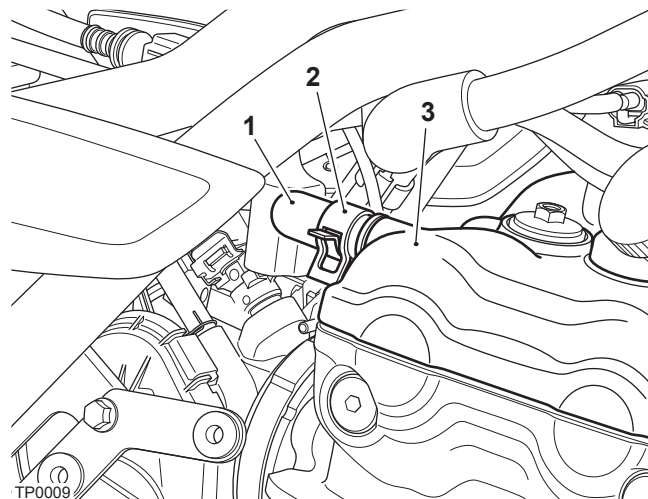
- 1. Ignition coil
- 2. Ignition coil electrical connection
- 3. Locking feature

28. Release the rubber grommet for the spark plug cap and remove the spark plug cap.



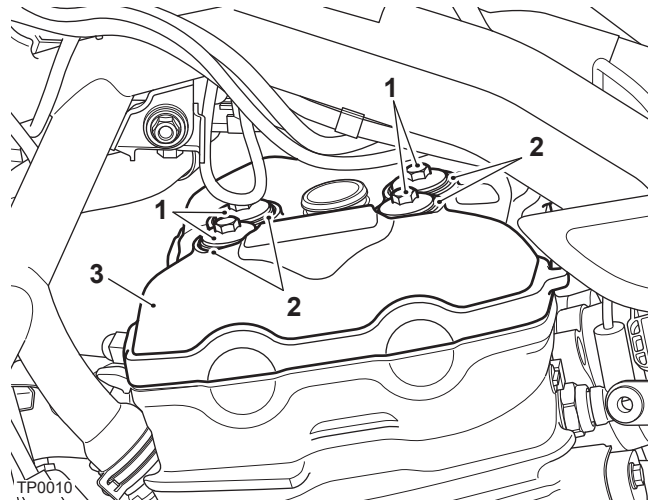
- 1. Spark plug cap
- 2. Grommet
- 3. Camshaft cover

29. Release the hose clip from the breather hose on the camshaft cover and disconnect the hose.



- 1. Breather hose
- 2. Hose clip
- 3. Camshaft cover

30. Loosen the fixings for the camshaft cover in a diagonal sequence. Remove the fixings and recover the four sealing washers.

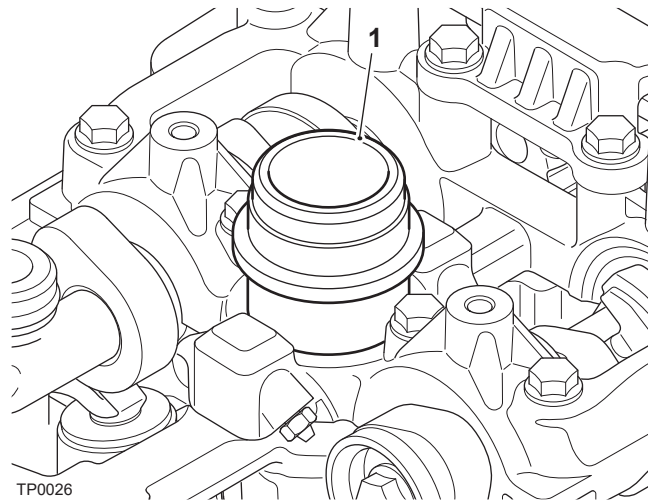


1. Fixings
2. Sealing washers
3. Camshaft cover

⚠ CAUTION

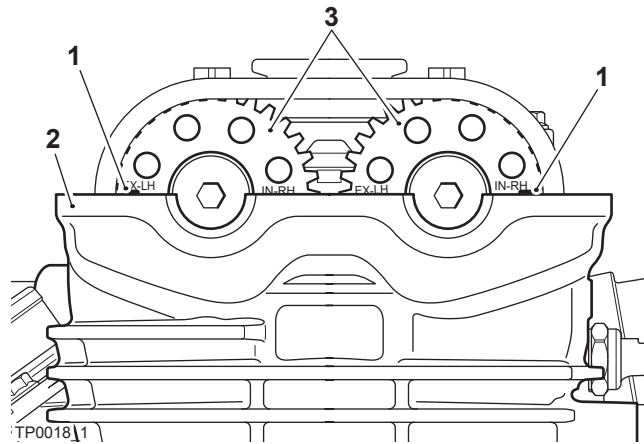
Never use a lever to remove the camshaft cover from the head.
Using a lever will damage the head and camshaft cover which could cause an oil leak.

31. Remove the camshaft cover from the engine.
32. Remove the spark plug sleeve from the cylinder head.



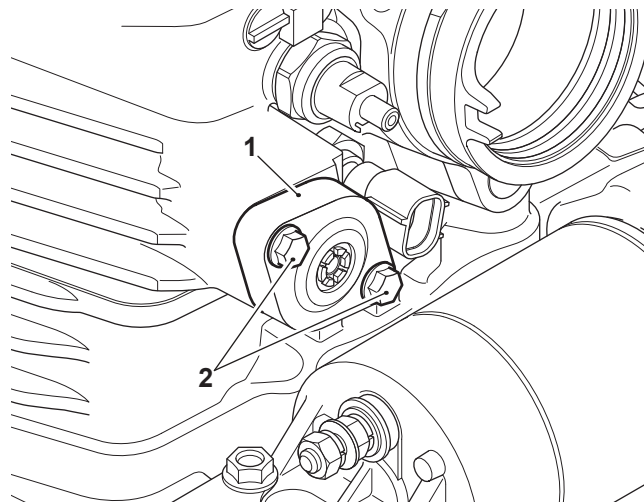
1. Spark plug sleeve

33. Select sixth gear and rotate the rear wheel of the motorcycle to align the engine at Top Dead Centre (TDC).



- 1. Alignment marks
- 2. Cylinder head top face
- 3. Camshaft sprockets

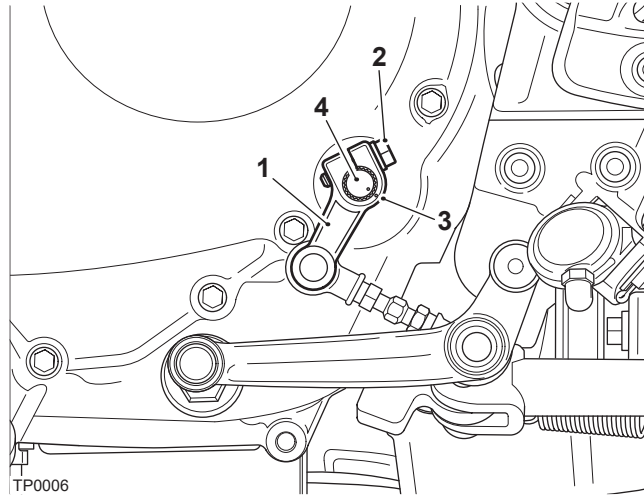
34. Remove the two fixings and remove the original camshaft drive chain tensioner and gasket.



- 1. Chain tensioner
- 2. Fixings

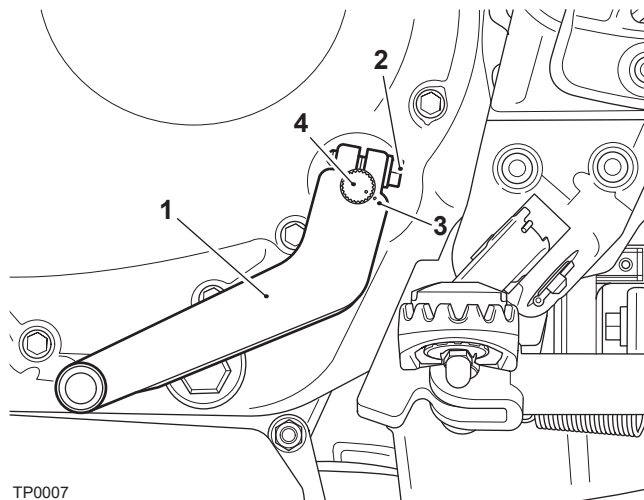
35. Place an oil catch tray beneath the clutch cover to collect any oil that may spill out on removal.

36. Remove the pinch bolt from the gear change arm and remove the arm from the gear change shaft.



Speed 400

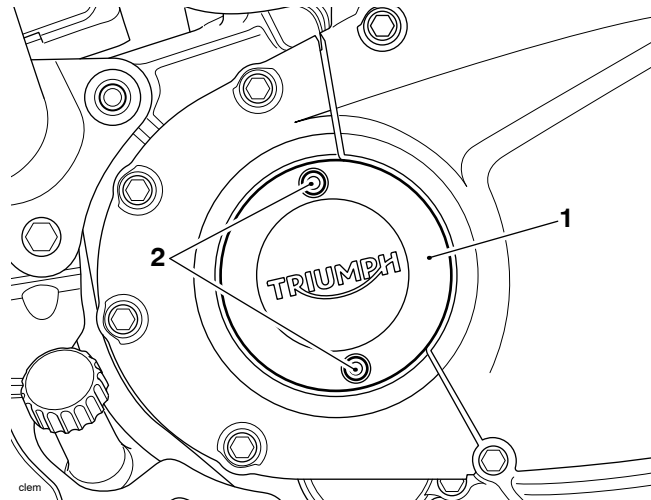
- 1. Gear change arm
- 2. Pinch bolt
- 3. Alignment marks
- 4. Gear change shaft



Scrambler 400 X

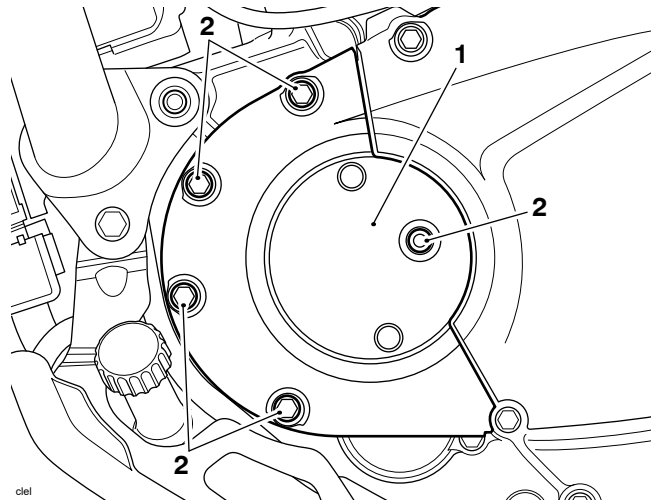
- 1. Gear change arm
- 2. Pinch bolt
- 3. Alignment marks
- 4. Gear change shaft

37. Remove the two fixings that attach the front left cover finisher and remove the finisher.



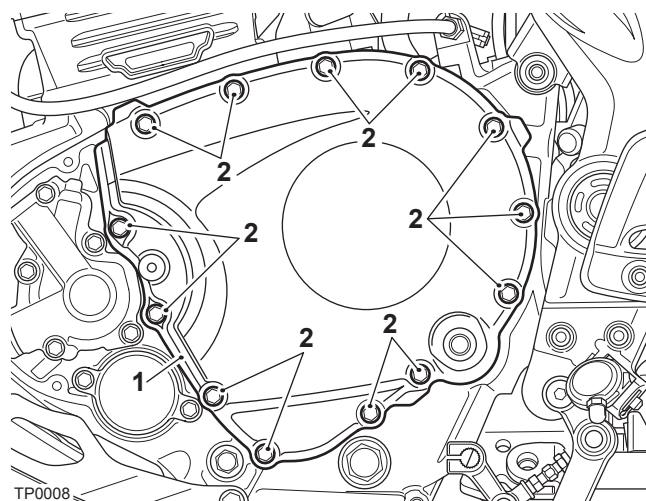
- 1. Front left cover finisher
- 2. Fixings

38. Remove the fixings that attach the front left engine cover and remove the cover.



- 1. Front left engine cover
- 2. Fixings

39. Remove the 13 fixings that attach the clutch cover and remove the cover.

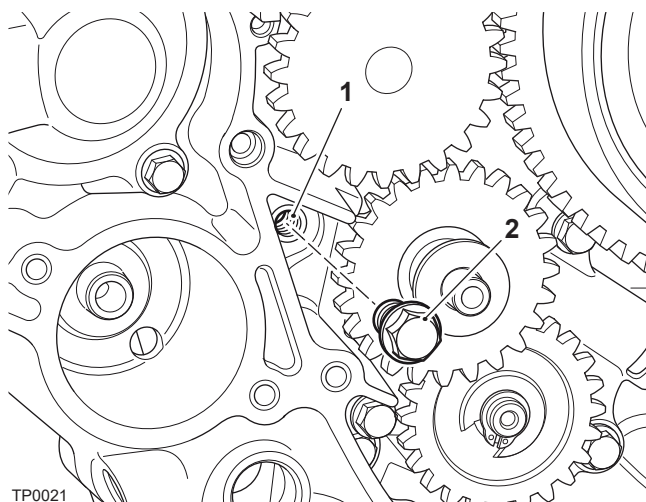


1. Clutch cover

2. Fixings

40. Remove the gasket and use a lint free cloth to clean the surfaces of the crankcase and the clutch cover.

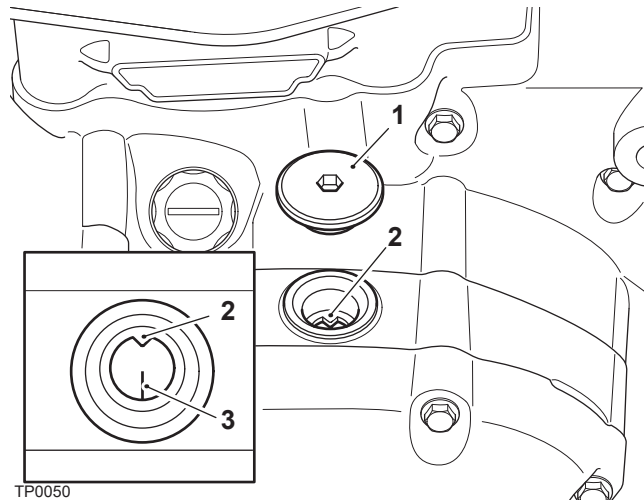
41. Remove the blanking screw that covers the hole for the crankshaft locking tool in the crankcase.



1. Crankcase hole

2. Blanking screw

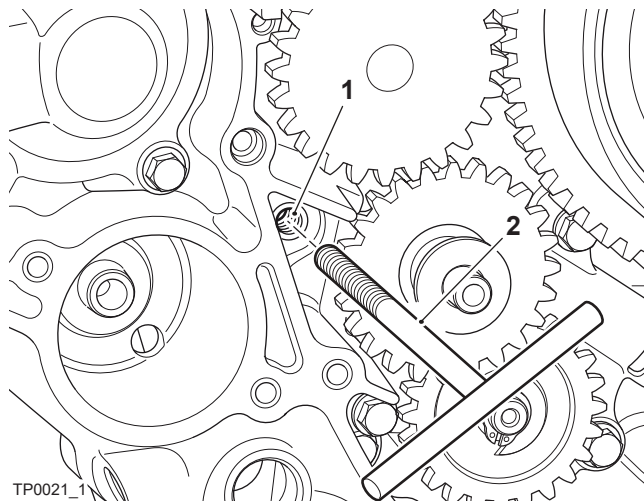
42. Remove the plug and O-ring that covers the Top Dead Centre (TDC) indicator on the alternator rotor.



- 1. **Plug**
- 2. **Pointer**
- 3. **TDC indicator**

43. Make sure that the TDC mark on the alternator rotor is still aligned with the pointer in the cover.

44. Insert Service Tool 37104427 into the timing holes in the crankcase and crankshaft.

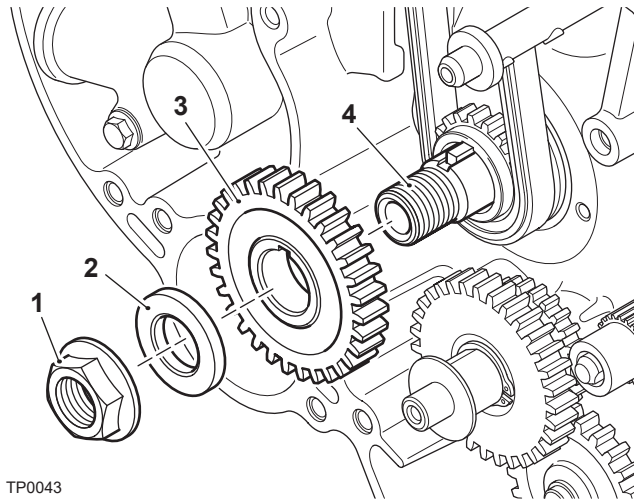


- 1. **Crankcase hole**
- 2. **Service Tool 37104427**

45. Remove the nut that attaches the primary gear to the crankshaft.

NOTICE

The primary gear nut has a right hand thread.

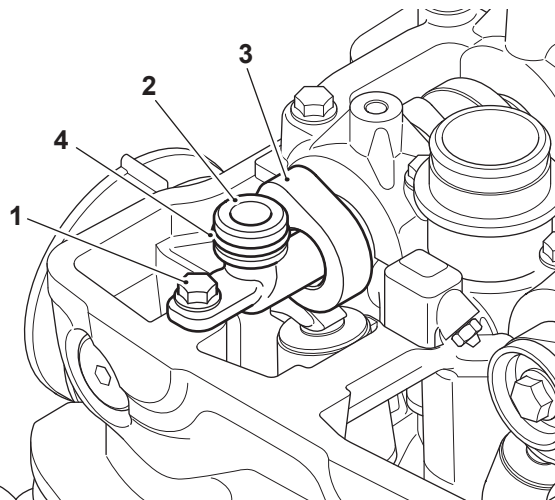


TP0043

1. **Nut**
2. **Washer**
3. **Primary gear**
4. **Crankshaft**

46. Remove the washer and the primary gear.

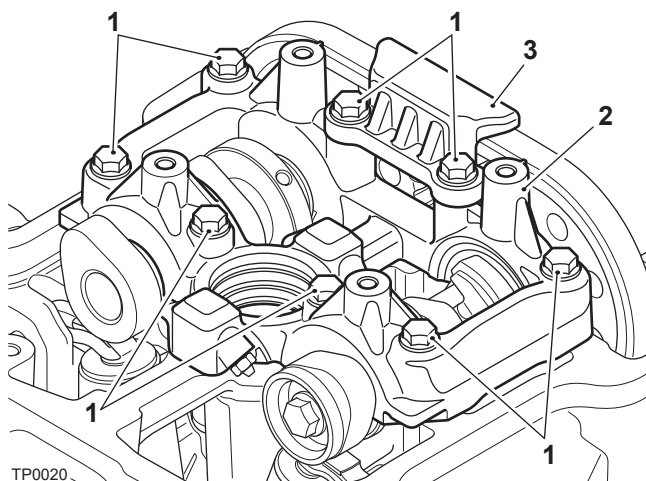
47. Remove the fixing that attaches the breather tube to the cylinder head and remove the breather tube from the end of the inlet camshaft.



TP0017

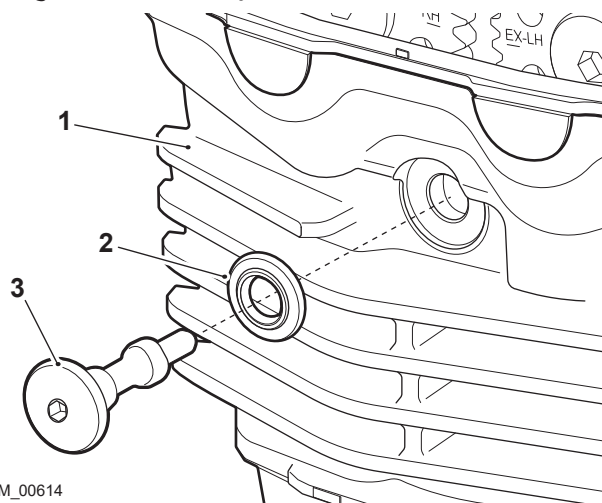
1. **Fixing**
2. **Breather tube**
3. **Inlet camshaft**
4. **O-ring**

48. Starting with the outside fixings, gradually release the eight fixings for the camshaft ladder.



- 1. Fixings
- 2. Camshaft ladder
- 3. Camshaft chain guide

- 49. Remove the camshaft chain guide and the camshaft ladder.
- 50. Collect the two dowels.
- 51. Remove the sound dampening bolt from the cylinder head. Retain the seal.

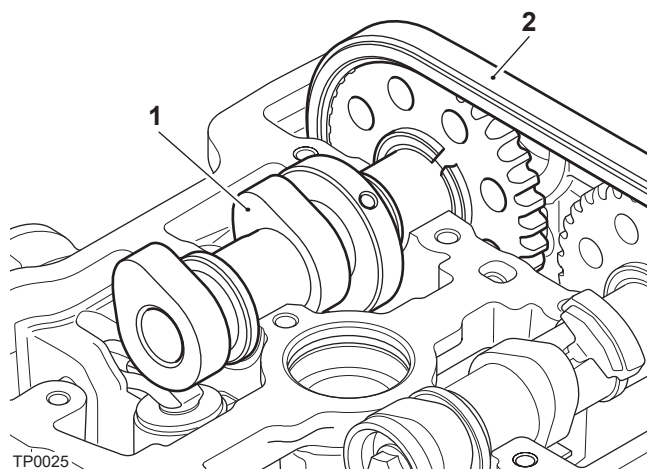


- 1. Cylinder head
- 2. Seal
- 3. Sound dampening bolt

NOTICE

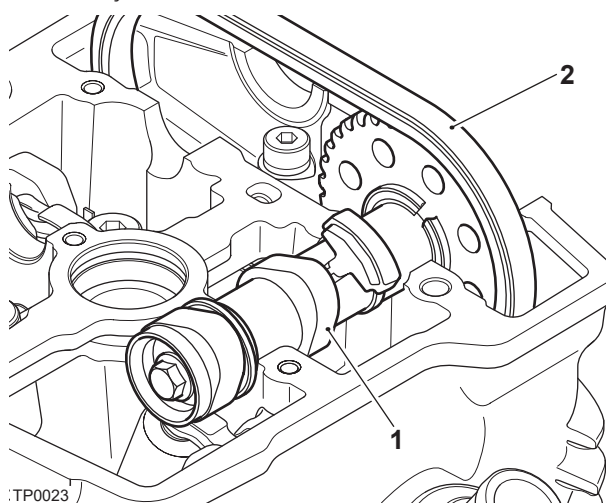
Each camshaft and sprocket is removed as an assembly.

-
52. Lift the camshaft drive chain off the inlet camshaft sprocket and carefully remove the inlet camshaft and sprocket assembly.



- 1. Inlet camshaft and sprocket assembly**
2. Camshaft drive chain

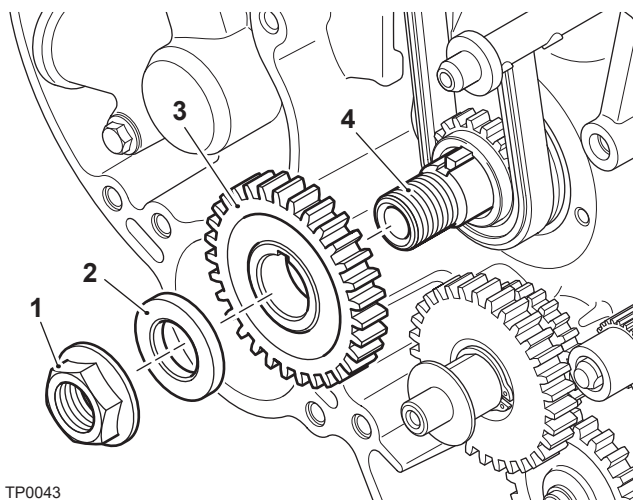
53. Lift the camshaft drive chain off the exhaust camshaft sprocket and carefully remove the exhaust camshaft and sprocket assembly.



- 1. Exhaust camshaft and sprocket assembly**
2. Camshaft drive chain

54. Remove the camshaft drive chain from the crankshaft sprocket then remove the chain from the engine.
55. Fully clean the threads on the crankshaft and the crankshaft nut.
56. Make sure that Top Dead Centre (TDC) is still set and the crankshaft locking tool is installed.
57. Pass the new camshaft drive chain through the opening in the top of the crankcase and position the chain around the crankshaft sprocket. Attach wire or similar to the chain to allow it to be pulled up through the cylinder head.
58. Install the primary gear.
59. Install the washer.

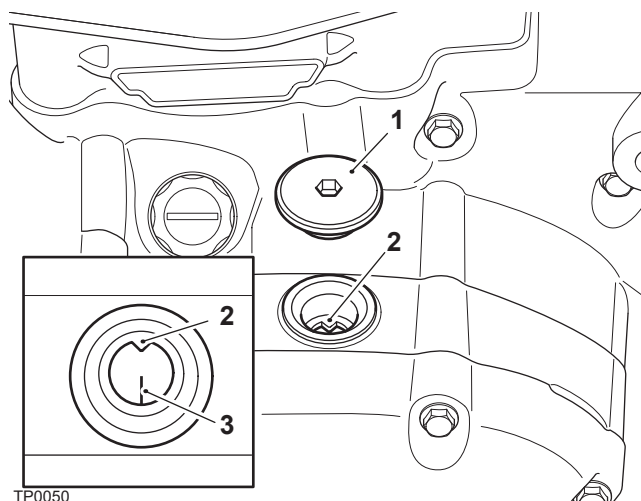
60. Install the new primary gear nut from the parts kit and tighten to 136 Nm.



TP0043

- 1. **Nut**
- 2. **Washer**
- 3. **Primary gear**
- 4. **Crankshaft**

61. Check that Service Tool 37104427 is installed, the TDC indicator is still aligned and that the crankshaft cannot rotate.



TP0050

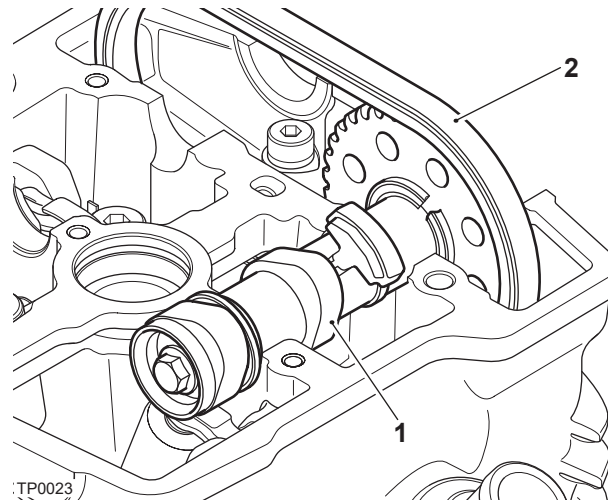
- 1. **Plug**
- 2. **Pointer**
- 3. **TDC indicator**

- 62. Thoroughly clean the camshafts and journals.
- 63. Make sure that the valve shims are installed in their original positions.
- 64. Make sure the cam followers are in their correct operating positions touching the valve shims.
- 65. Lubricate the camshafts with clean engine oil before fitting to the cylinder head.

NOTICE

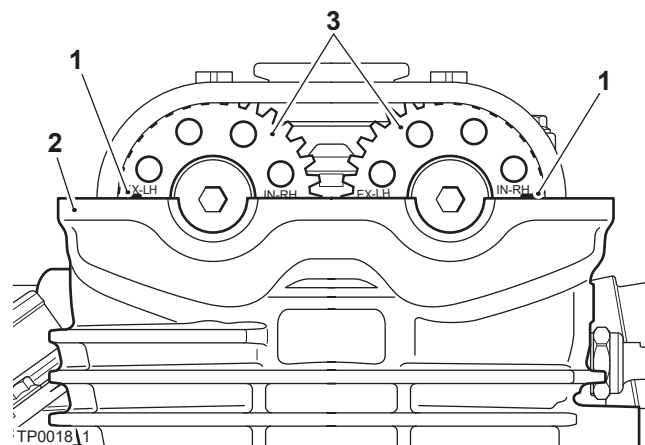
Make sure that the camshafts are correctly identified (inlet and exhaust) and are also correctly located over their respective valve banks.

66. Refit the exhaust camshaft to the cylinder head, hooking the camshaft drive chain over the sprocket as you do so. Make sure that the camshaft drive chain is taut between the crankshaft sprocket and the front edge of the exhaust cam sprocket.



- 1. Camshaft drive chain
- 2. Exhaust camshaft and sprocket assembly

67. Make sure there is no slack between the crankshaft and exhaust sprocket when the alignment marks on the camshaft sprocket align with the cylinder head top face.



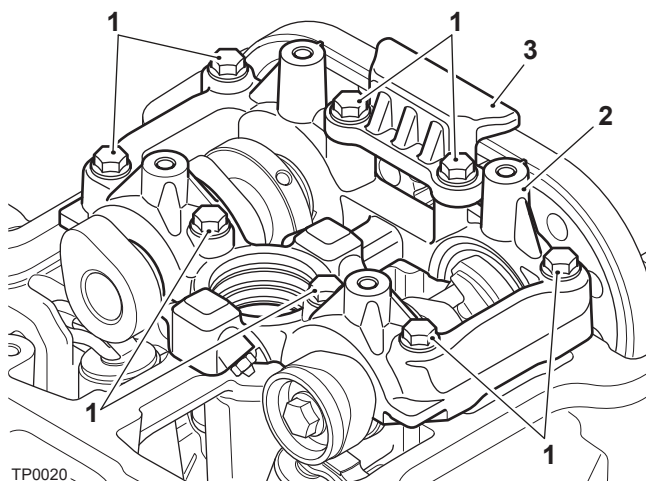
- 1. Alignment marks
- 2. Cylinder head top face
- 3. Camshaft sprockets

68. Refit the inlet camshaft to the cylinder head, hooking the chain over the sprocket as you do so.
69. Make sure there is no slack between the exhaust sprocket and the inlet sprocket when the alignment marks on the camshaft sprockets align with the cylinder head top face.
70. Check that the chain is correctly located around the crankshaft, and both camshaft sprockets.

CAUTION

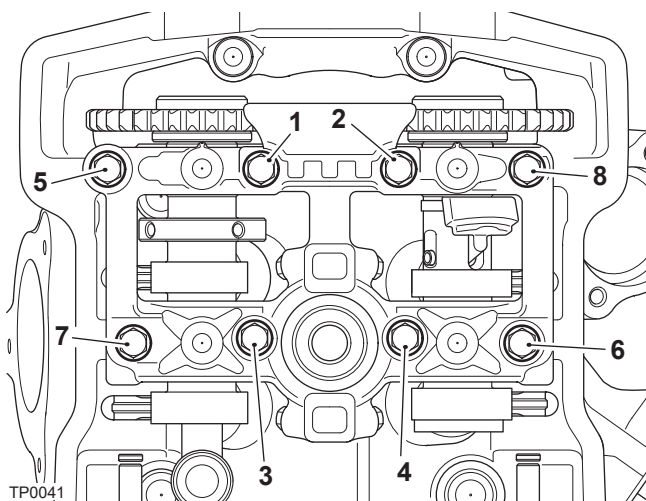
Severe engine damage will result from incorrect valve timing adjustment.

71. Assemble the camshaft ladder and chain guide in the same location and orientation as before removal.



- 1. Fixings
- 2. Camshaft ladder
- 3. Camshaft chain guide

72. Install and tighten the camshaft ladder fixings until finger tight.
73. Gradually tighten the fixings in the sequence shown below to 8 Nm.

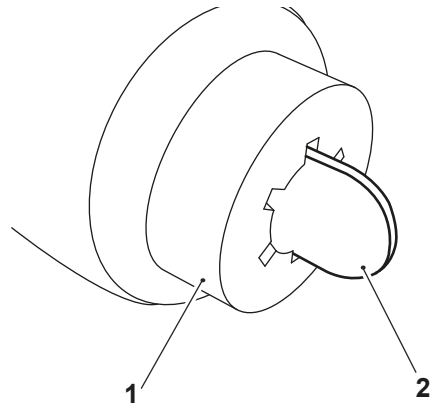


Camshaft Cover Fixings Tightening Sequence

NOTICE

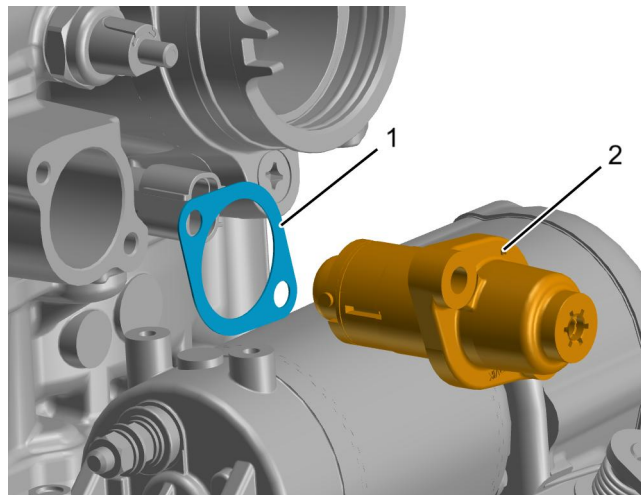
When installing a new chain tensioner, do not release the plunger before fitting.

-
74. Insert a small screwdriver into the centre of the new chain tensioner and turn it clockwise to wind the tensioner plunger back. Lock into position with the locking pin.



- 1. Chain tensioner
- 2. Locking pin

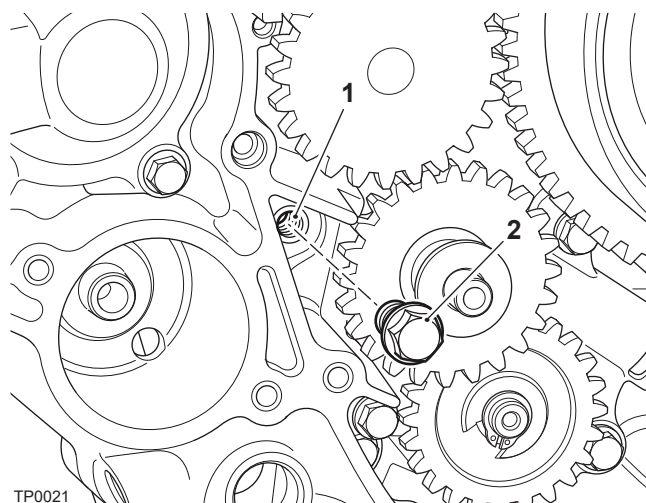
75. Fit a new gasket from the kit to the chain tensioner.



- 1. Gasket
- 2. Chain tensioner

76. Fit the chain tensioner to the cylinder head as noted for removal. Tighten the fixings to 11 Nm.
77. Remove Service Tool 37104427.
78. Fully clean all thread locking compound from the threads of the blanking screw for the hole for the crankshaft locking tool in the crankcase.

79. Fit and tighten the new blanking screw to 11 Nm.

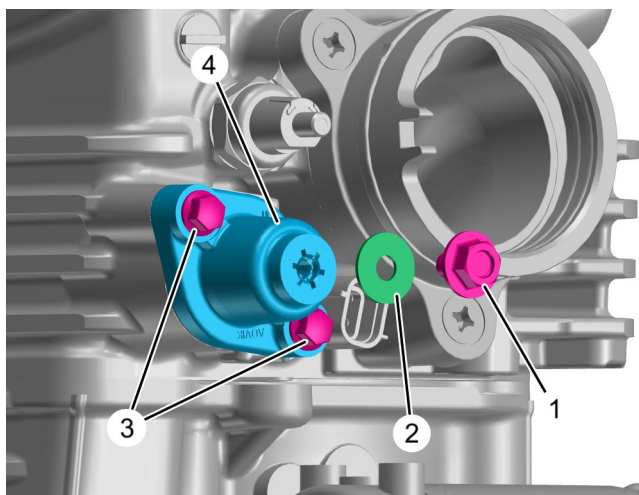


1. Crankcase hole

2. Blanking screw

80. Remove the locking pin to release the tensioner plunger.

81. Install the new washer and the blanking screw into the chain tensioner and tighten to 11 Nm.



1. Blanking screw

2. Washer

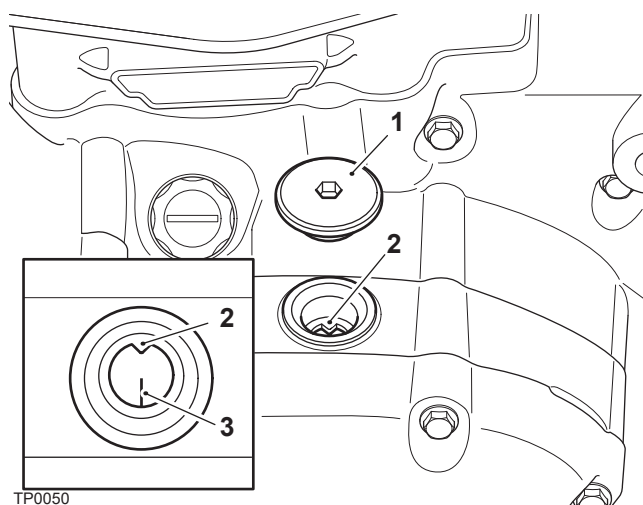
3. Fixings

4. Chain tensioner

82. Check that there is tension in the camshaft drive chain and the timing marks of the camshaft sprockets are correctly aligned.

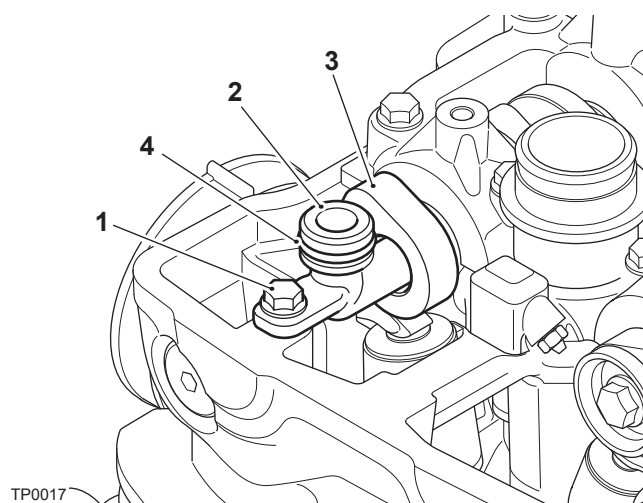
83. Check that the tensioner plunger is correctly located in the middle of the camshaft drive chain tensioner blade when viewed from above.

84. Refit the plug and O-ring that covers the Top Dead Centre (TDC) indicator on the alternator rotor. Tighten to 11 Nm.



1. Plug
2. Pointer
3. TDC indicator

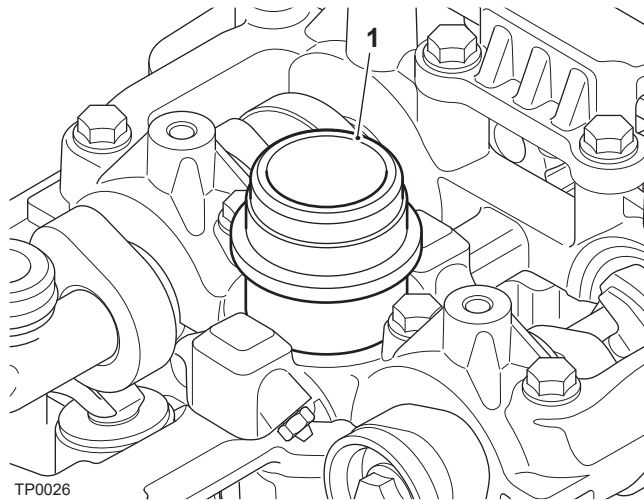
85. Install the breather tube into the end of the inlet camshaft.



1. Fixing
2. Breather tube
3. Inlet camshaft
4. O-ring

86. Install the fixing that attaches the breather tube to the cylinder head and tighten to 10 Nm.

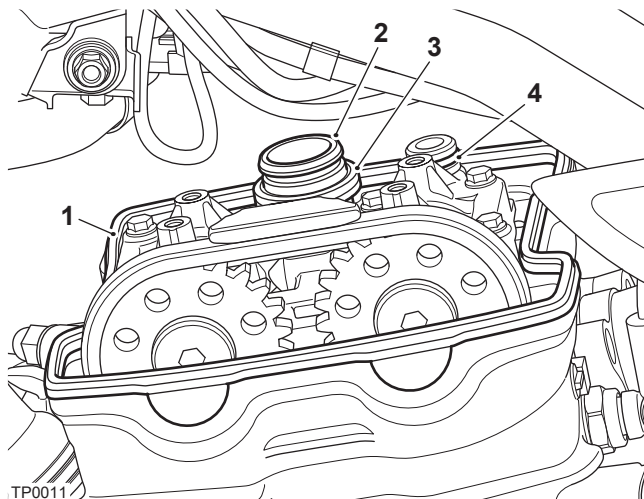
87. Fit the spark plug sleeve.



1. Spark plug sleeve

88. Clean all oil and contamination from the gasket faces of the camshaft cover and cylinder head.

89. If removed, fit the original camshaft cover gasket to the cylinder head. Make sure the groove in the gasket is correctly seated to the head.



1. Camshaft cover gasket

2. Spark plug sleeve

3. Sleeve seal

4. Breather outlet O-ring

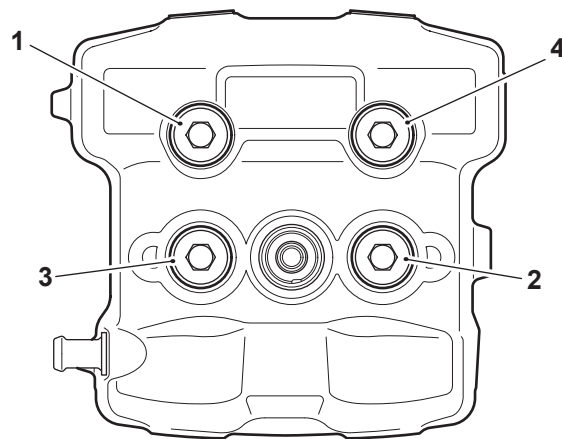
90. Make sure the seal is fitted to the spark plug sleeve.

91. Make sure the O-ring is fitted onto the breather outlet.

92. Fit the camshaft cover. Make sure that the gasket stays in the correct position.

93. Fit the camshaft cover screws and screw seals, and tighten until finger tight.

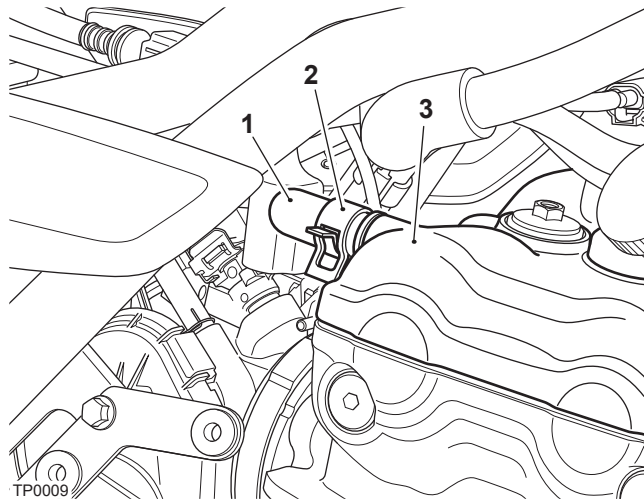
94. Tighten the fixings in the sequence shown to 11 Nm.



TP0080

Camshaft cover torque tightening sequence

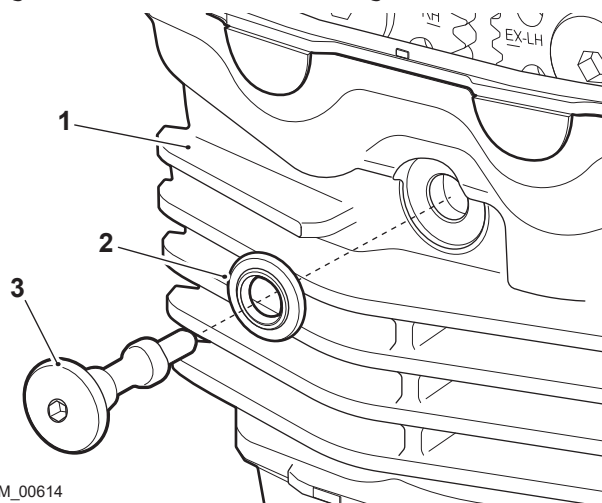
95. Connect the breather hose to the spigot on the camshaft cover and secure with the hose clip. Align the hose clip with the marks on the hose.



TP0009

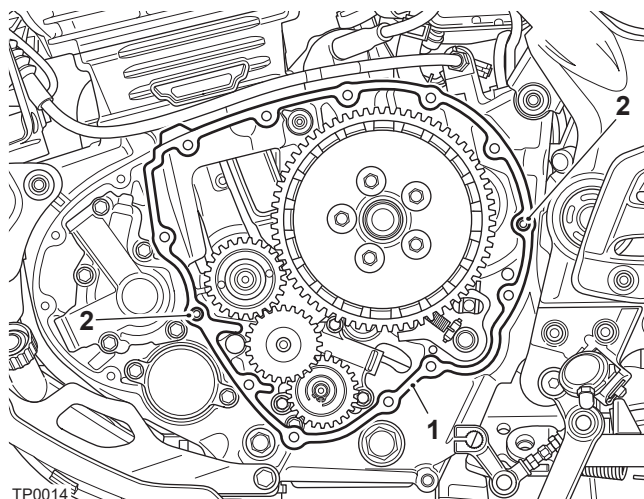
1. Breather hose
2. Hose clip
3. Camshaft cover

96. Install the sound dampening bolt with the rubber seal. Tighten to 11 Nm.



- 1. **Cylinder head**
- 2. **Seal**
- 3. **Sound dampening bolt**

97. Make sure that the two dowels are correctly fitted in the crankcase.

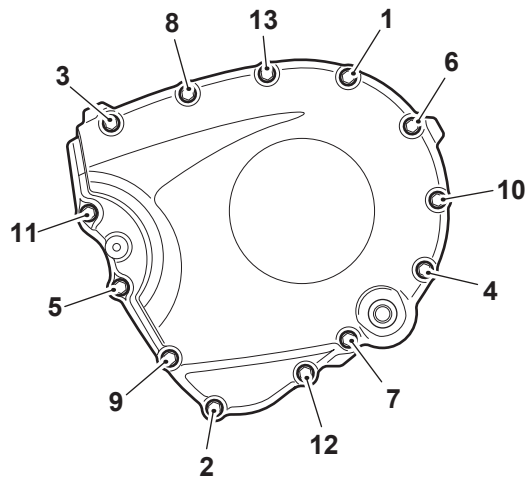


- 1. **Gasket**
- 2. **Dowels**

98. Position a new gasket over the dowels.

99. Position the clutch cover and install the 13 fixings. Do not tighten at this stage.

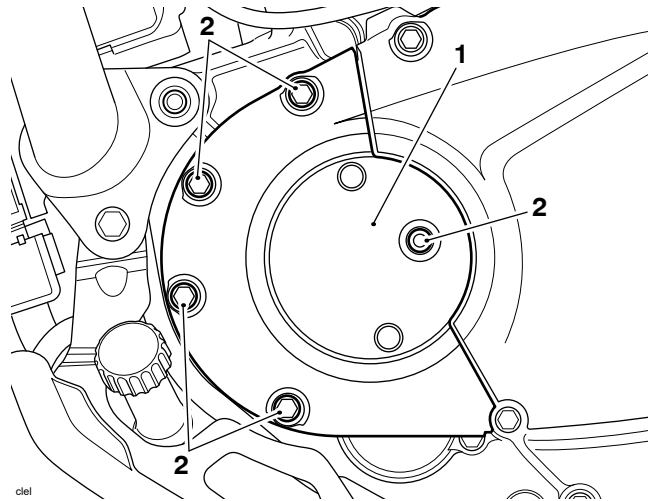
100. Tighten the clutch cover fixings to 11 Nm in the sequence shown below:



TP0013

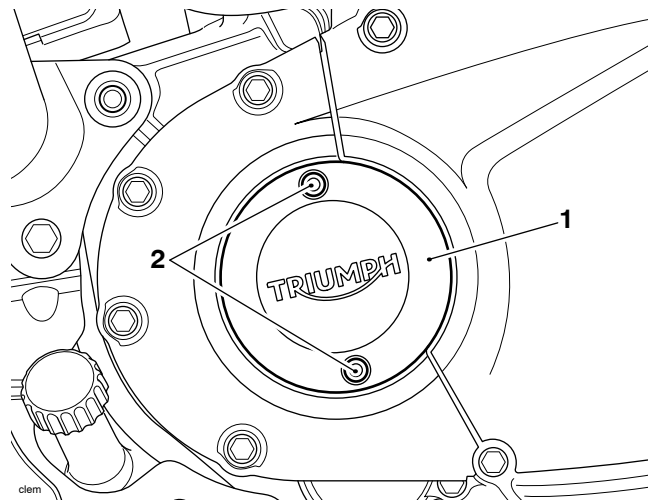
Clutch cover torque tightening sequence

101. Position the front left engine cover and install the fixings. Tighten to 11 Nm.



- 1. Front left engine cover
- 2. Fixings

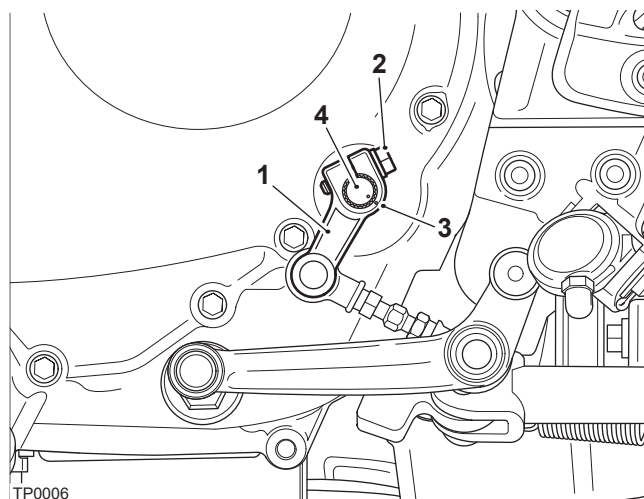
102. Refit the left hand cover finisher with two fixings and tighten to 7 Nm.



- 1. Front left cover finisher
- 2. Fixings

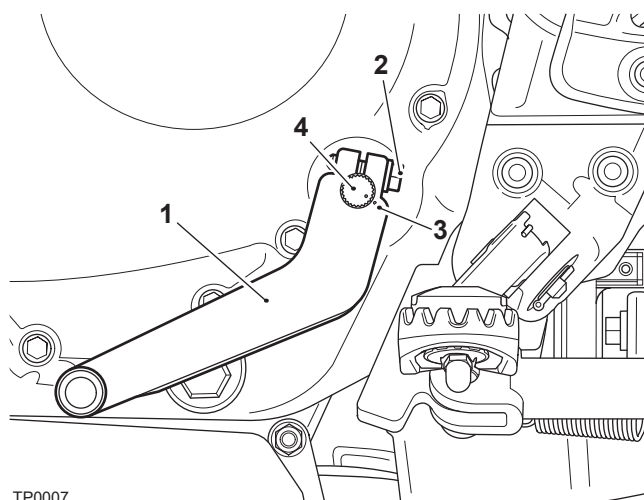
103. Fit the gear change arm onto the gear change shaft. Align the alignment marks on the arm and the shaft.

104. Install the pinch bolt and tighten to 16 Nm.



Speed 400

1. Gear change arm
2. Pinch bolt
3. Alignment marks
4. Gear change shaft



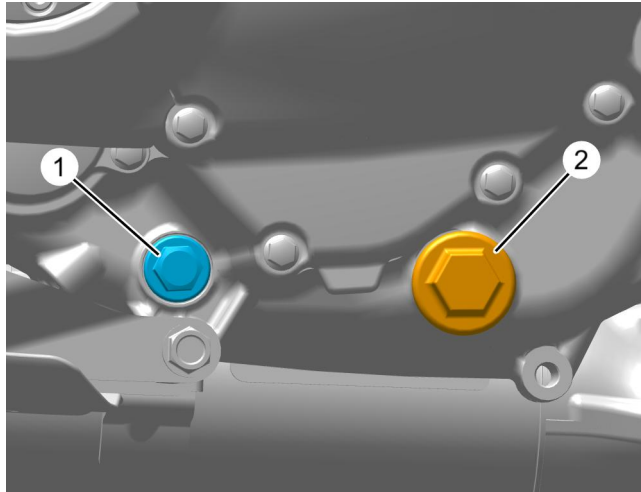
Scrambler 400 X

1. Gear change arm
2. Pinch bolt
3. Alignment marks
4. Gear change shaft

105. Make sure the seals are fitted to the oil drain plug and evacuation strainer plug.

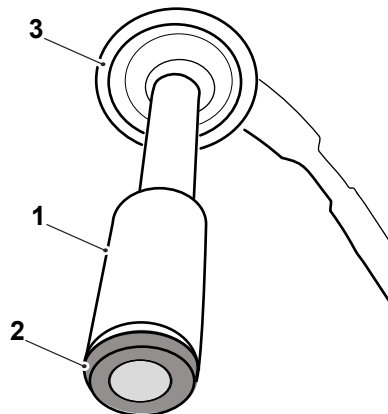
106. Fit the oil drain plug and tighten to 13 Nm.

107. Fit the evacuation strainer plug and tighten to 10 Nm.



- 1. Evacuation strainer plug
- 2. Oil drain plug

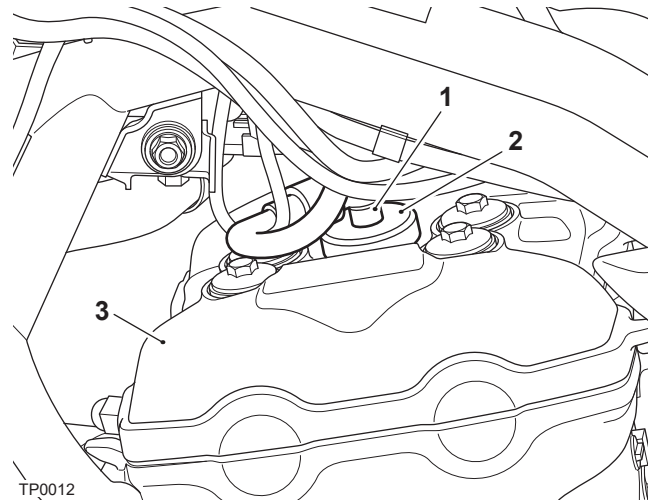
108. Insert the rubber seal into the spark plug cap.



- 1. Spark plug cap
- 2. Rubber seal
- 3. Rubber grommet

109. Push the spark plug cap fully onto the spark plug.

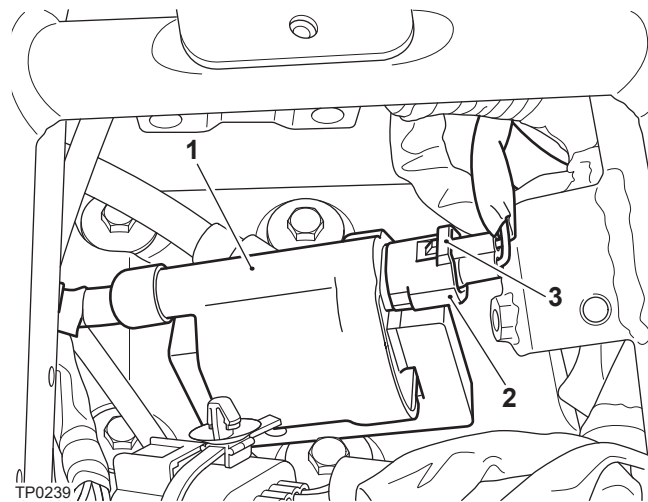
110. Fit the rubber grommet onto the camshaft cover.



1. Spark plug cap
2. Grommet
3. Camshaft cover

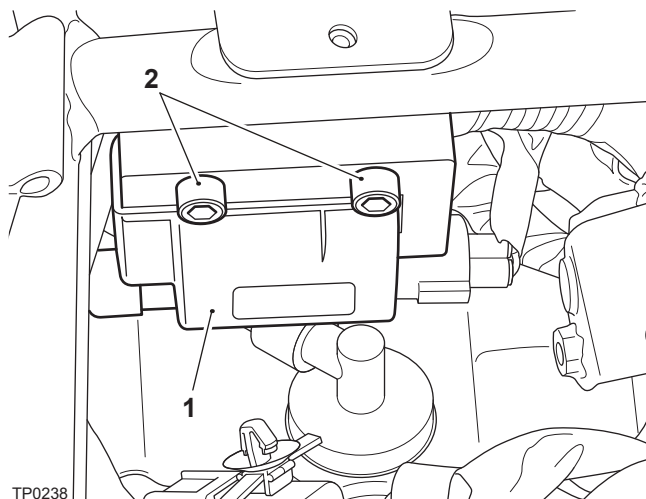
111. Position the ignition coil to allow access to the electrical connection.

112. Insert the electrical connector making sure the locking feature is fully inserted.



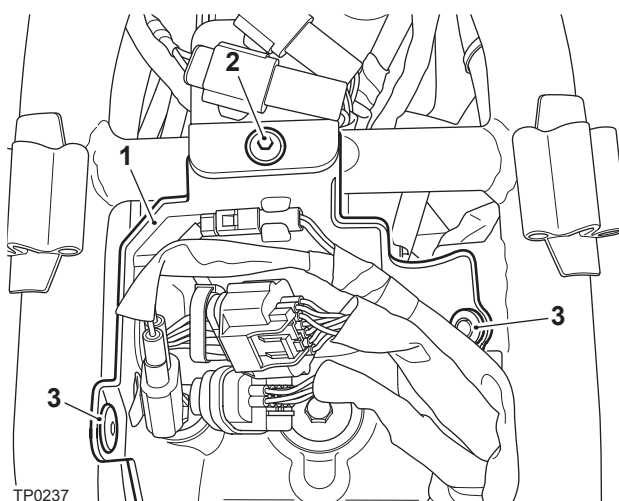
1. Ignition coil
2. Ignition coil electrical connection
3. Locking feature

113. Position the ignition coil to the frame, fit and tighten the fixings to 8 Nm.



- 1. Ignition coil
- 2. Fixings

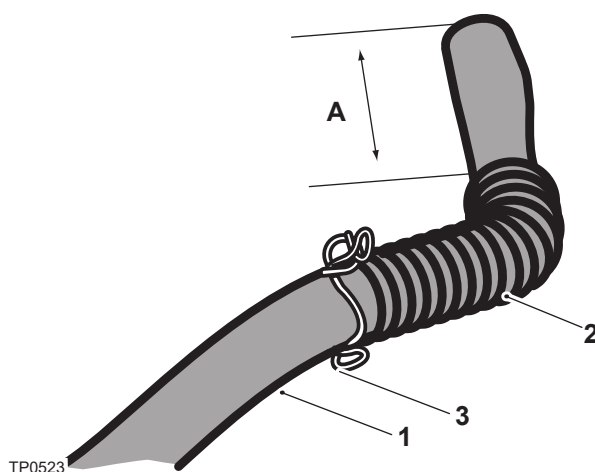
- 114. Position the electrical connector carrier forwards.
- 115. Position the tab below the front electrical connector carrier.
- 116. Make sure the electrical connectors are located into the locating features.
- 117. Insert the plastic rivets.
- 118. Fit and tighten the new fixing to 7 Nm.



- 1. Electrical connector carrier
- 2. Fixing
- 3. Plastic rivets

- 119. Measure the hose at the fuel tank end so that there is 7mm of clearance (A) between the end of the spring and the end of the EVAP hose.

120. Position the wire hose clip to hold the spring in the correct position.



- **A** = 7mm

1. EVAP hose

2. Spring

3. Wire hose clip

121. With the aid of an assistant, align the fuel tank above its mountings.

122. Connect the electrical connector for the fuel pump and level sensor.

123. Connect the fuel feed hose by gently pushing the connector inwards until the hose engages onto the fuel pump spigot with a click.

124. Pull the hose connector gently to make sure it is correctly secured.

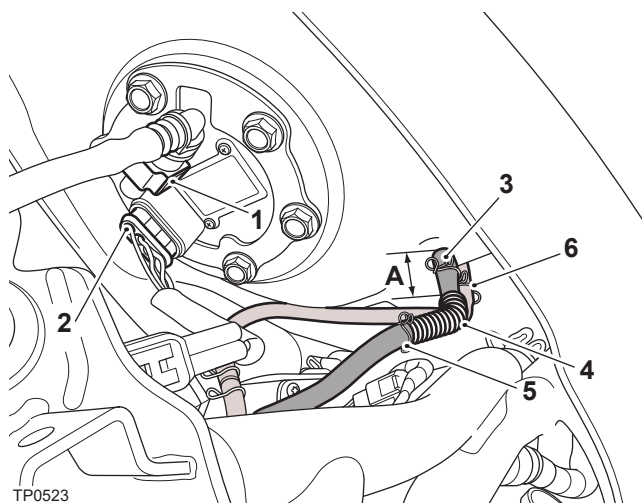
NOTICE

Make sure the wire hose clips are placed over the drain hose and EVAP hose before fitting them to the fuel tank.

125. Fit the EVAP hose to the corresponding fuel tank boss and secure with the wire hose clip.

126. Fit the drain hose to the corresponding fuel tank boss and secure with the wire hose clip.

127. Check the end of the spring is 7 mm from the end of the EVAP hose (**A**) and secure with the wire hose clip.



• **A** = 7mm

1. **Fuel hose connector**
2. **Electrical connector**
3. **EVAP hose wire hose clip**
4. **Spring**
5. **Wire hose clip**
6. **Drain hose wire hose clip**

WARNING

Make sure that the fuel hose is correctly routed. If the fuel hose is incorrectly routed, it can become kinked and reduce the fuel flow. This can cause the engine to misfire or stop.

An engine that misfires or stops may lead to a dangerous riding condition, leading to loss of motorcycle control which could result in serious injury or death.

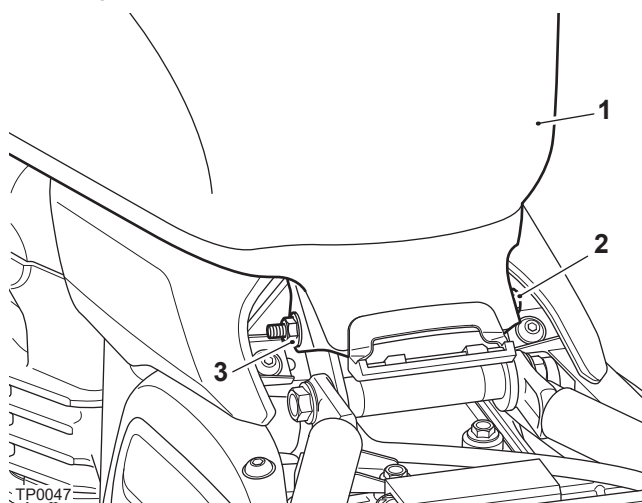
128. Route the fuel and EVAP hoses as noted during removal.

129. Lower the fuel tank onto its mountings. Make sure that the fuel hose does not become kinked.

130. Make sure that the spacer is still positioned in between the rubber grommets at the rear mounting.

131. Insert the bolt through the spacer, fit the nut but do not fully tighten at this stage.

132. Hold the bolt in position and tighten the nut to 9 Nm.



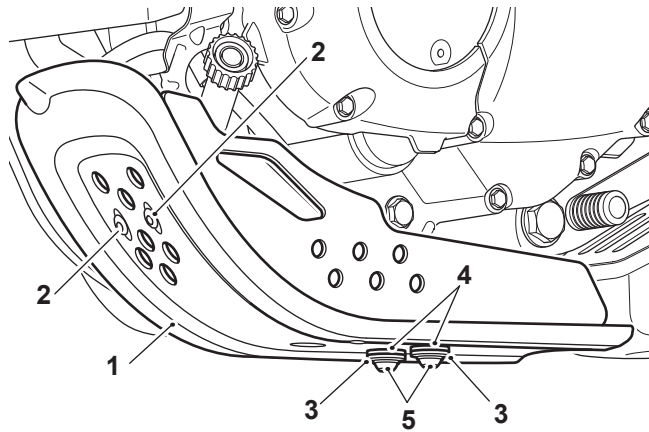
1. **Fuel tank**
2. **Bolt**
3. **Nut**

WARNING

Follow the warning advice given in the General Information section on the safe handling of fuel and fuel containers.

A fire that causes personal injury and damage to property could result from spilled fuel or fuel not handled or stored correctly.

133. Use workshop equipment approved for fuel handling to refill the fuel tank with the fuel previously removed.
134. **Scrambler 400 X Only:** Position the sump guard to the brackets.
135. Fit the lower fixings and washers, do not fully tighten at this stage.
136. Fit the two upper fixings, do not fully tighten at this stage.



TP0162

1. Sump Guard
2. Upper fixings
3. Washers
4. Grommets
5. Lower fixings

137. Tighten the upper sump guard fixings to 8 Nm.

138. Tighten the lower sump guard fixings to 8 Nm.

139. **All models:** Remove the engine oil filler plug.

NOTICE

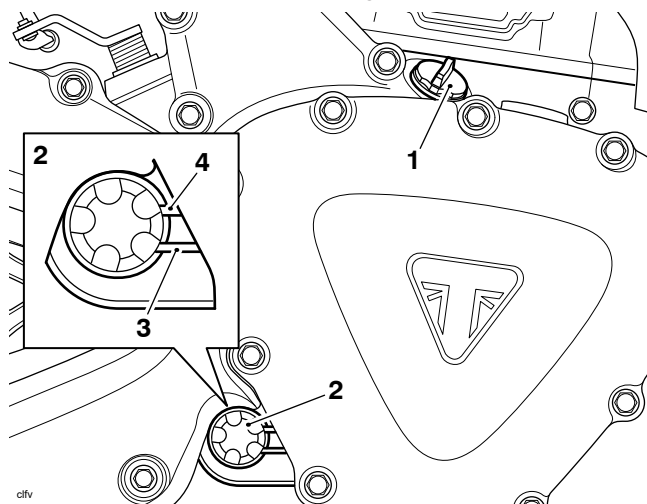
The engine oil grade specified must be used.

Using the incorrect engine oil grade may result in engine damage.

NOTICE

When filling the engine with oil, clean engine oil must be used.

140. Using a suitable funnel, fill the engine with clean fully synthetic 10W/50 motorcycle engine oil that meets specification API SN (or higher) and JASO MA2. Semi-synthetic engine oil must not be used. Triumph Performance Ester based fully synthetic engine oil is recommended.



1. Engine oil filler plug
2. Sight glass
3. Lower marking (minimum)
4. Upper marking (maximum)

141. Refit the oil filler plug.

142. Start the engine and allow it to idle for a minimum of 30 seconds.

NOTICE

Raising the engine speed above idle before the oil reaches all parts of the engine can cause engine damage or seizure.

Only raise engine speed after running the engine for 30 seconds to allow the oil to circulate fully.

143. Make sure that the low oil pressure warning light remains off.

NOTICE

If the engine oil pressure is too low, the low oil pressure warning light will illuminate.

If the low oil pressure indicator remains on, stop the engine immediately and investigate the situation.

Running the engine with low oil pressure will cause severe engine damage.

144. Stop the engine, then wait for at least five minutes to allow the engine oil to settle.

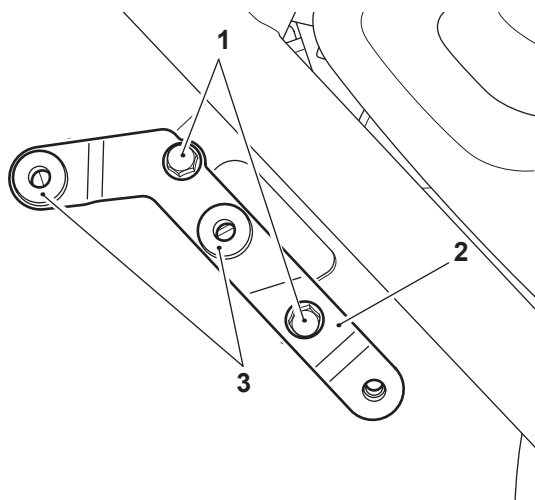
145. Position the motorcycle on level ground and in an upright position. The sight glass can be viewed from the right hand side of the motorcycle, towards the rear of the engine.

146. Recheck the engine oil level. Adjust if necessary.

147. Refit the throttle body cover bracket and left hand throttle body cover as described in **Refit the Throttle Body Cover**.

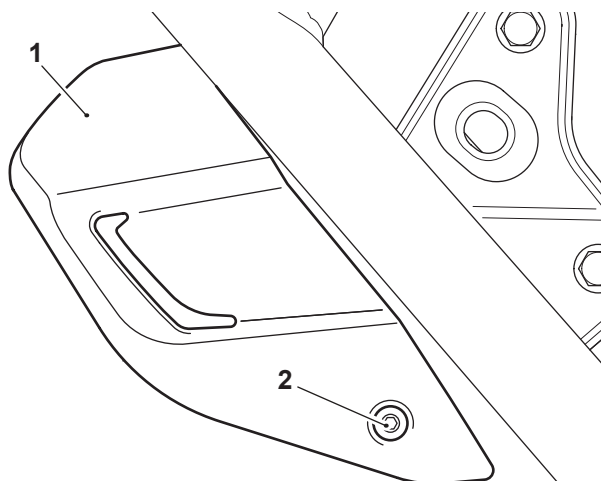
Refit the Throttle Body Cover

1. Position the throttle body cover bracket onto the frame and install the two fixings. Tighten to 7 Nm.



1. **Fixings**
2. **Bracket**
3. **Grommets**

2. Engage the pins on the throttle body cover into the grommets on the bracket and push the cover into position.
3. Install the new fixing from the kit and tighten to 4.5 Nm.



1. **Throttle body cover**
2. **Fixing**