Accessory Fitting Instructions

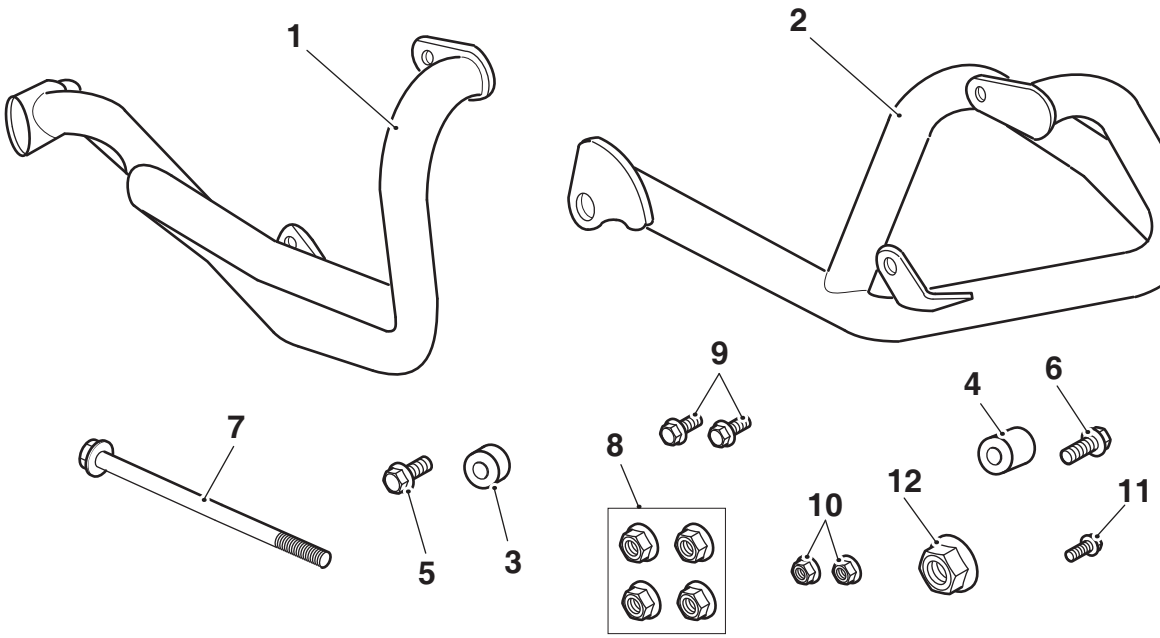
Engine Bars	
Kit Number	**Models Affected**
A9788062	Tiger 1200 XR, Tiger 1200 XRx, Tiger 1200 XRx LRH, Tiger 1200 XRT

Thank you for choosing this Triumph genuine accessory kit. This accessory kit is the product of Triumph's use of proven engineering, exhaustive testing, and continuous striving for superior reliability, safety and performance.

Completely read all of these instructions before commencing the installation of the accessory kit in order to become thoroughly familiar with the kit's features and the installation process.

These instructions should be considered a permanent part of your accessory kit, and should remain with it even if your accessory equipped motorcycle is subsequently sold.

Parts Supplied



1. Engine bar, RH	1 off	7. Bolt, M12 x 265 mm	1 off
2. Engine bar, LH	1 off	8. Lock nut, M12	4 off
3. Spacer, 13 mm long	1 off	9. Bolt, M8 x 25 mm	2 off
4. Spacer, 25 mm long	1 off	10. Locknut, M6	2 off
5. Bolt, M8 x 33 mm	1 off	11. Screw, M5 x 12 mm	1 off
6. Bolt, M8 x 45 mm	1 off	12. Lock nut, M16	1 off

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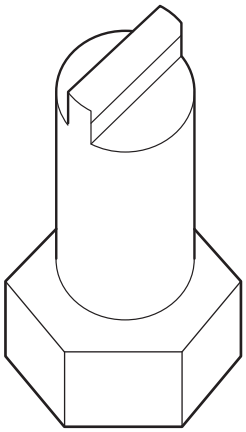
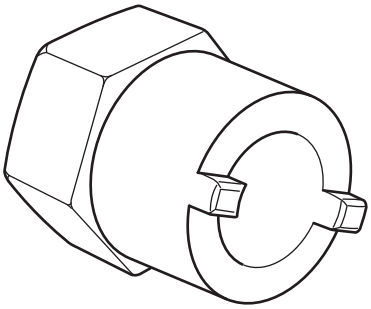
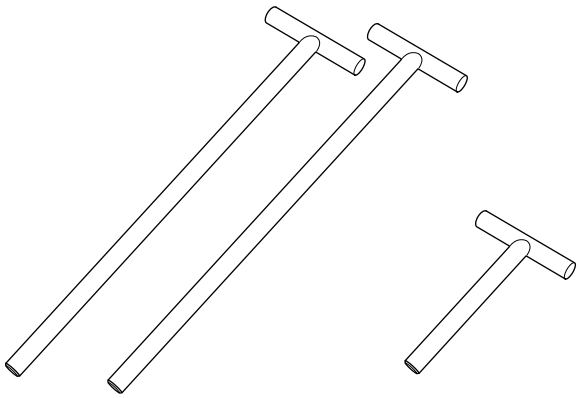
Service Tools Required

	
T3880377 - Engine Mounting Adjuster	T3880182 - Swinging Arm Frame Adjuster
	
T3880637 - Kit, Engine to Frame Alignment Bars	

Warning

The accessory kits covered in this instruction are designed for use on specific models of Triumph motorcycle. The accessory kits and the models applicable are listed at the start of the instruction. They should not be fitted to any other Triumph model or to any other manufacturer's motorcycle. Fitting an accessory kit to a Triumph model not listed, or to any other manufacturer's motorcycle will affect the performance, stability and handling of the motorcycle. This may affect the rider's ability to control the motorcycle and could cause an accident.

Warning

Always have Triumph approved parts, accessories and conversions fitted by a trained technician of an authorised Triumph dealer. The fitment of parts, accessories and conversions by a technician who is not of an authorised Triumph dealer may affect the handling, stability or other aspects of the motorcycle's operation which may result in loss of motorcycle control and an accident.

Warning

Throughout this operation, ensure that the motorcycle is stabilised and adequately supported to prevent risk of injury from the motorcycle falling.

Warning

A torque wrench of known accurate calibration must be used when fitting this accessory kit. Failure to tighten any of the fasteners to the correct torque specification may affect motorcycle performance, handling and stability. This may result in loss of motorcycle control and an accident.

Warning

If the engine has recently been running, the exhaust system will be hot. Before working on or near the exhaust system, allow sufficient time for the system to cool, as touching any part of a hot exhaust could cause burn injuries.

Warning

During this engine bars installation procedure it is necessary to loosen various engine to frame and rear suspension mounting fixings. The engine to frame alignment must then be reset and the mounting fixings retightened in a specific sequence using a number of special service tools. Failure to follow these instructions precisely using the correct service tools, will affect handling, stability and other aspects of the motorcycle's operation which may result in loss of motorcycle control and an accident.

Note:

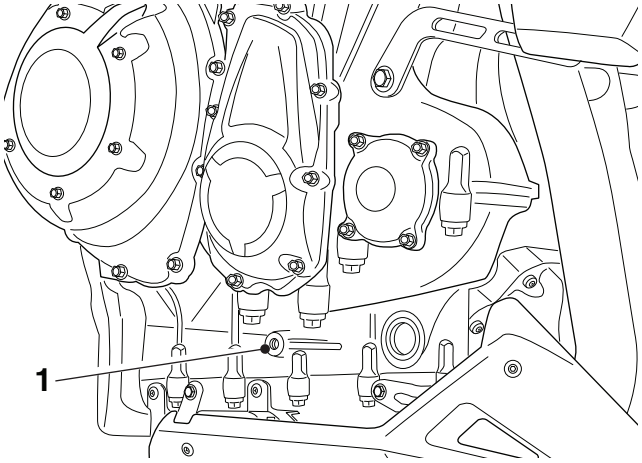
- **Triumph offers a broad range of approved genuine accessories for your motorcycle. We cannot therefore cover all possible equipment variations in these instructions. For removal and installation of Triumph Genuine Accessories, always refer to the instructions supplied with the respective accessory kit. To obtain additional copies of any Triumph accessory instructions, visit www.triumphinstructions.com or contact your authorised Triumph dealer.**
- **Ensure that the motorcycle Service Manual is available for reference during the fitting of this accessory kit.**

Note:

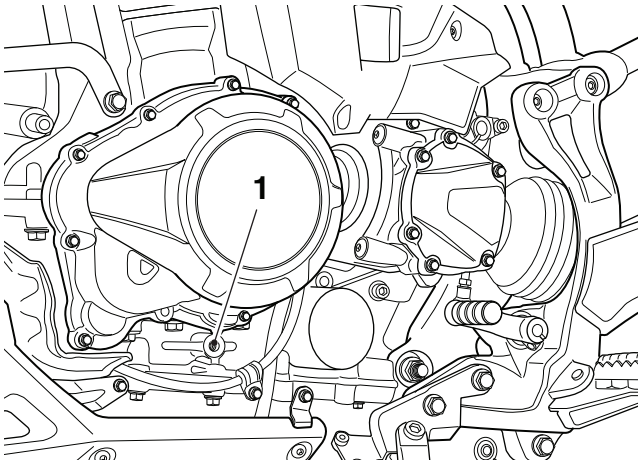
- **The engine MUST be cold prior to starting this procedure.**

1. Remove the seat as described in the Service Manual.
2. Disconnect the battery, negative (black) lead first.
3. Remove the side fairings as described in the Service Manual.
4. Remove the sump guard as described in the Service Manual.
5. Raise and securely support the motorcycle.
6. Place a support beneath the engine and ensure the frame is adequately and securely supported.

7. Remove the left and right hand crankcase blanking plugs. Retain the plugs for reuse if the motorcycle is to be returned to its original condition.

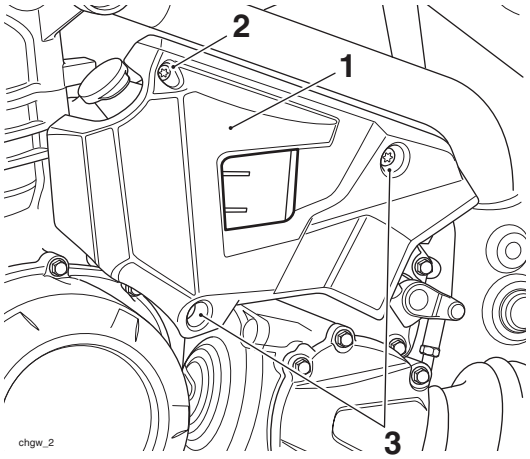


1. Blanking plug location (right hand)



1. Blanking plug location (left hand)

8. Remove the three fixings and remove the expansion tank cover. Discard the upper M5 fixing, Retain the lower M6 fixings for reuse.



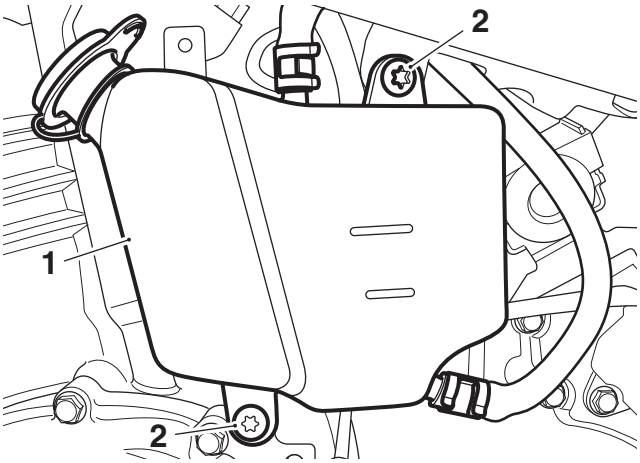
1. Expansion tank cover
2. Upper fixing (M5)
3. Lower fixings (M6)

Model Fitted with Triumph Shift Assist Only

Note:

- **The expansion tank must be detached to allow access to the Triumph shift assist sensor electrical connector. It is not necessary to drain the expansion tank or disconnect the hoses.**

9. Release the two fixings and manoeuvre the expansion tank away from the frame. Collect the washers.



1. Expansion tank
2. Fixings

Note:

- **Note the routing of the Triumph shift assist sensor harness for installation.**

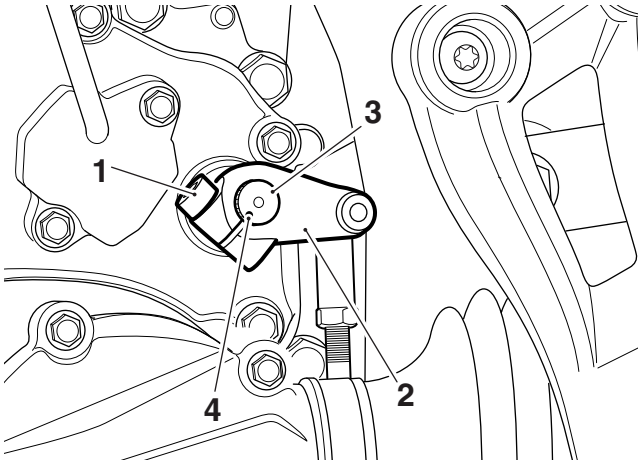
10. Disconnect the Triumph shift assist sensor electrical connector and feed it down to the gear change linkage.

All Models

Note:

- **Note the position of the transmission linkage in relation to the punch mark on the gear change mechanism.**

11. Select neutral, remove the pinch bolt and disconnect the transmission linkage from the gear change mechanism.

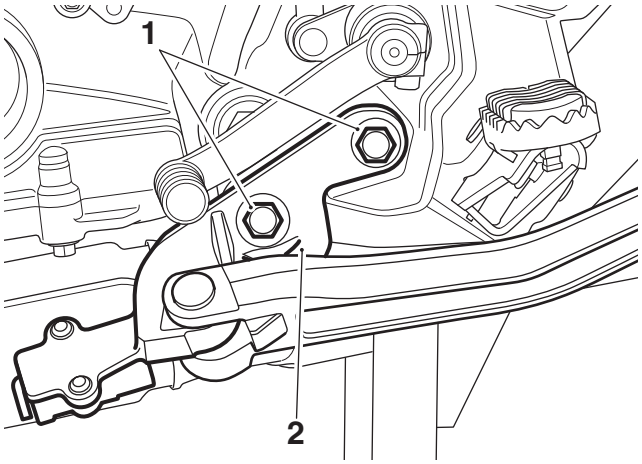


1. **Pinch bolt**
2. **Transmission linkage**
3. **Gear change mechanism**
4. **Punch mark**

Note:

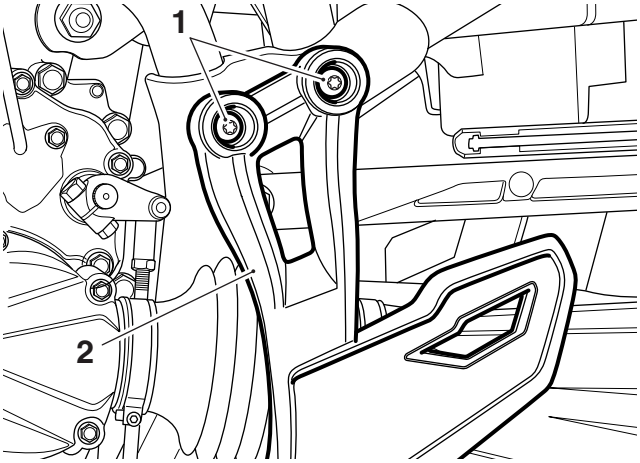
- **Do not allow the side stand to hang on the harness for the side stand switch.**
- **Note the routing of the harness for the side stand switch for installation.**

12. Release the fixing(s), detach the side stand and bracket and position aside.



1. **Fixings**
2. **Side stand bracket**

13. Release the fixings and remove the left hand control plate.



1. **Fixings**
2. **Control plate**

Note:

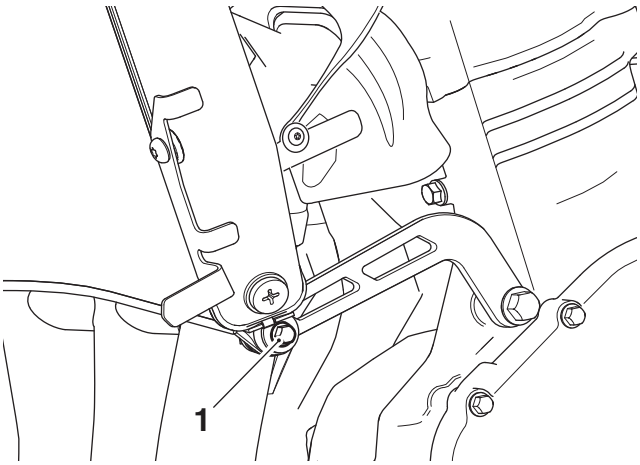
- **It is necessary to loosen the radiator so that it can be positioned to allow access to the front cylinder head mountings and lock nuts.**

Caution

Care must be taken not to damage the radiator when working on the front frame mountings.

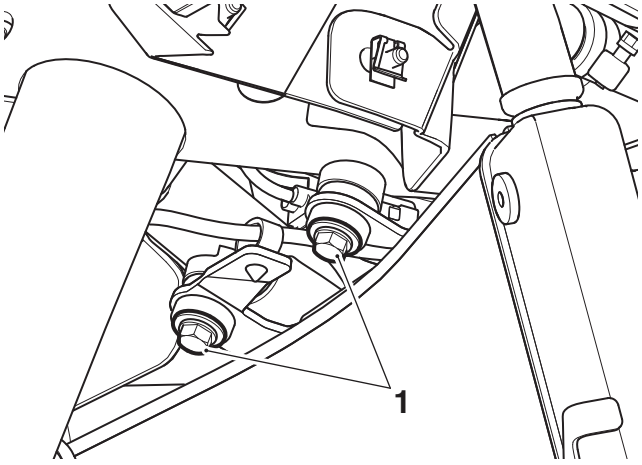
Damaged radiator fins can impair the radiator's efficiency leading to overheating and consequent engine damage.

14. Remove the two fixings securing the radiator to the lower radiator brackets. Discard the lock nuts.



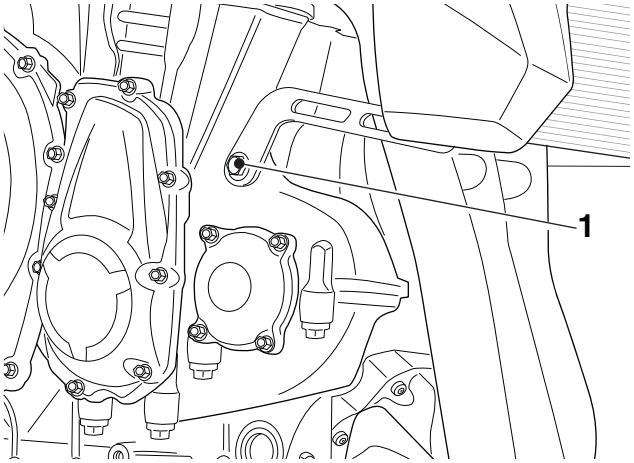
1. **Fixing (left hand side shown)**

15. Loosen the two upper fixings securing the radiator to the frame. Do not fully remove.



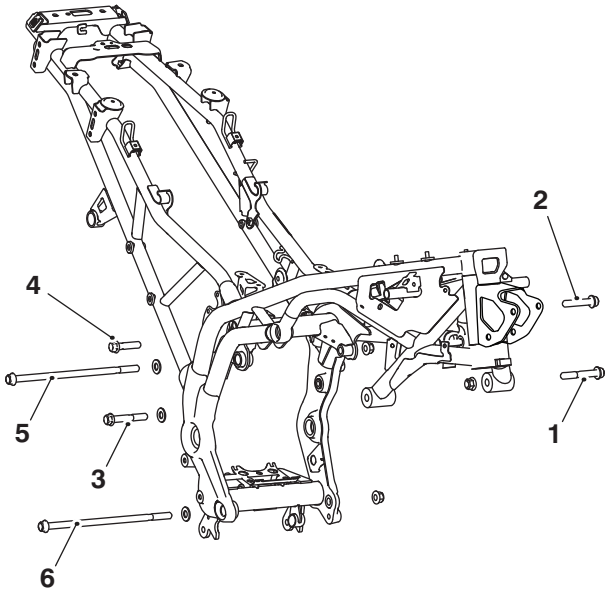
1. Fixings

16. Position the lower end of the radiator forwards to allow access to the front cylinder head frame mountings.
17. Remove the right hand radiator to crankcase mounting bolt and collect the radiator bracket. Retain the bolt for reuse if the motorcycle is to be returned to its original condition.



1. Bolt

Frame Bolts Exploded View



1. Left hand front cylinder head bolt
2. Left hand rear cylinder head bolt
3. Right hand front cylinder head bolt
4. Right hand rear cylinder head bolt
5. Upper crankcase bolt
6. Lower crankcase bolt

Note:

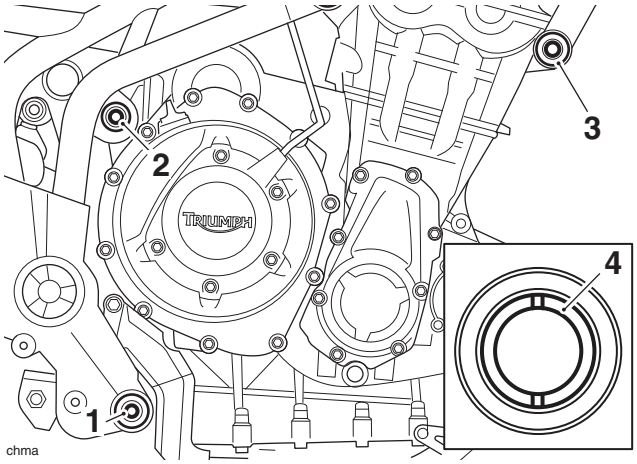
- **Make sure the engine is still adequately supported.**

18. Remove and discard the lock nuts from the front cylinder head bolts.
19. Loosen the rear cylinder head bolts. Do not fully remove.
20. Remove the upper and lower crankcase mounting bolts, washers and lock nuts. Retain the lower crankcase bolt and washer for reuse if the motorcycle is to be returned to its original condition. Discard the lock nuts.
21. Remove the bolt and washer from the right hand front cylinder head mounting.

Note:

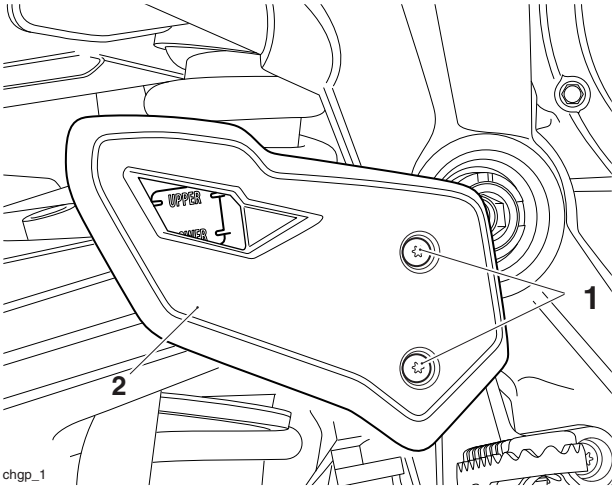
- **There are three frame adjuster sleeves for this model. They are located as follows:**
- **Two of the frame adjuster sleeves are located on the right hand side of the frame.**
- **The third frame adjuster sleeve is located in the front right hand mounting of the cylinder head.**

22. Using service tool T3880377, loosen the frame adjuster sleeves.



1. **Lower crankcase adjuster**
2. **Upper crankcase adjuster**
3. **Cylinder head front right hand adjuster**
4. **Adjuster**

23. Remove the heel guard from the right hand side of the motorcycle. Retain the heel guard and fixings for reuse.

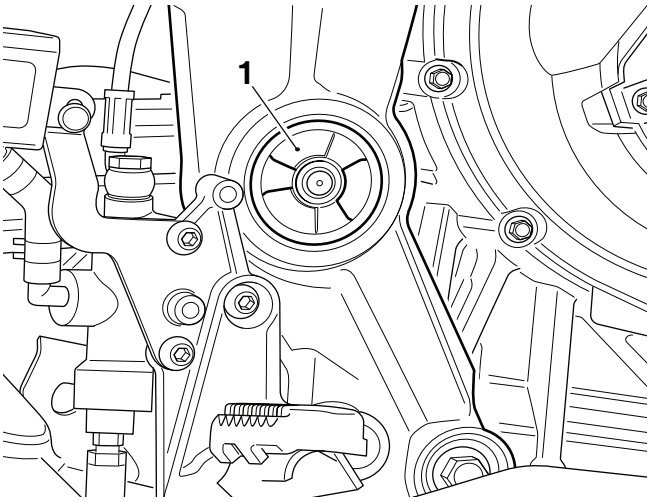


1. **Fixings**
2. **Heel guard, right hand side**

Note:

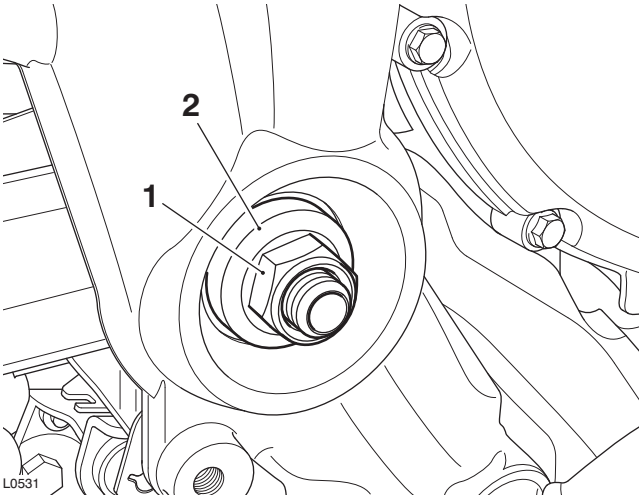
- **The lock nut and adaptor must be removed from the swinging arm spindle before the frame bolts can be tightened.**

24. Carefully remove the cover from the right hand swinging arm spindle.



1. **Cover**

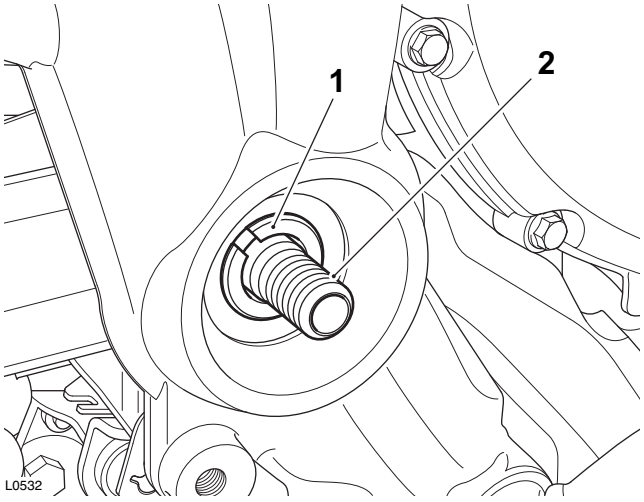
25. Remove the lock nut and adaptor from the swinging arm spindle.



1. **Lock nut**
2. **Adaptor**

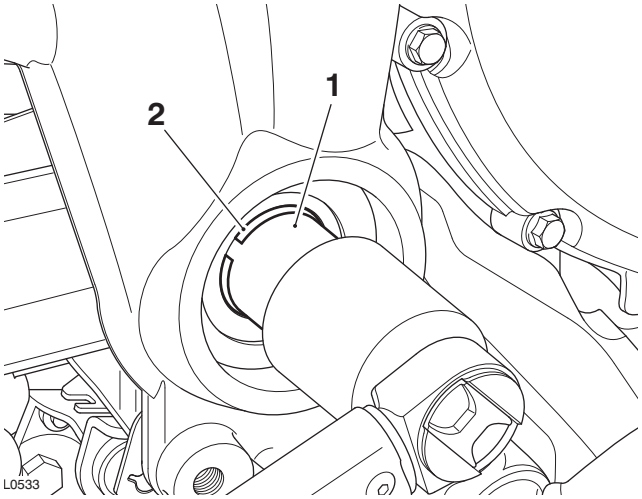
Note:

- **The right hand swinging arm frame adjuster must be loosened before the frame bolts can be tightened.**



1. **Right hand swinging arm adjuster**
2. **Swinging arm spindle**

26. Using service tool T3880182, loosen the swinging arm frame adjuster. Do not remove the swinging arm spindle.



1. **Service tool T3880182**
2. **Swinging arm frame adjuster**

Right Hand Side

Caution

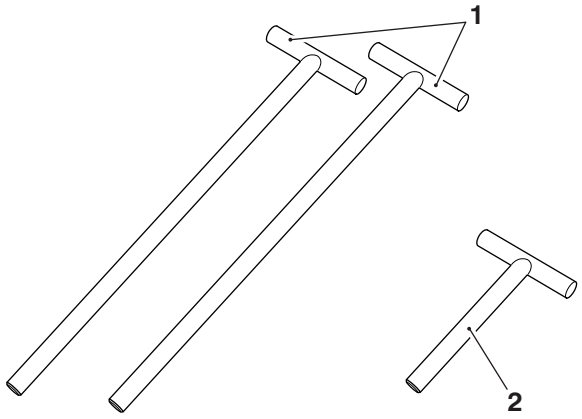
Unless the following dresser bar installation procedure and engine mounting bolt tightening sequence is precisely followed, severe frame damage can occur.

Note:

- **The engine MUST be cold prior to starting the frame bolt tightening sequence.**

Note:

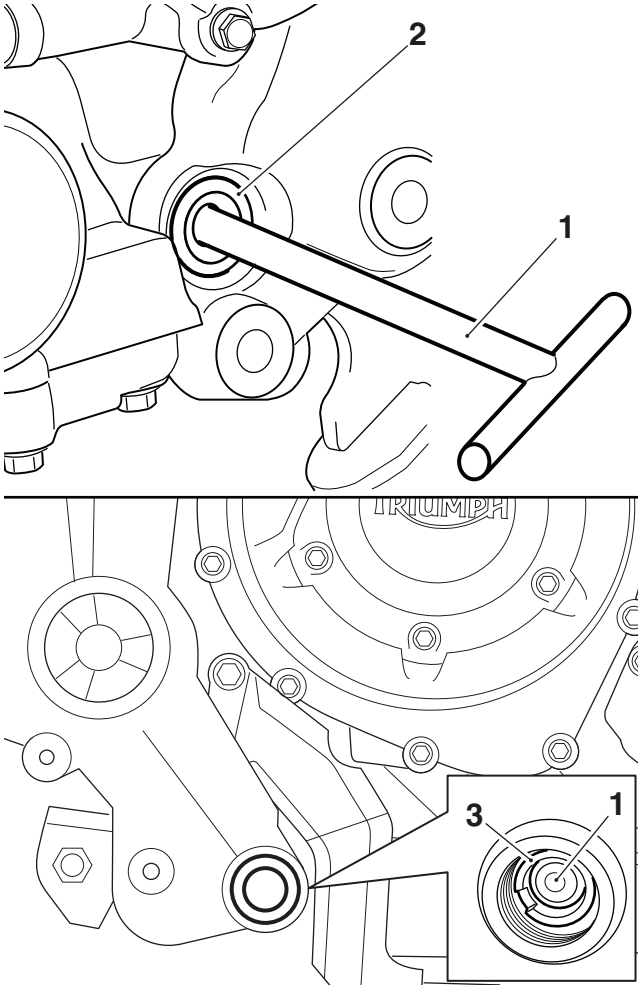
- **Service tool kit T3880637 is required to correctly align the engine to the frame for the following tightening sequence.**
- **Adjust the engine position as necessary to allow the engine to frame alignment bars to be inserted and removed freely.**



T3880637 - Kit, Engine to Frame Alignment Bars

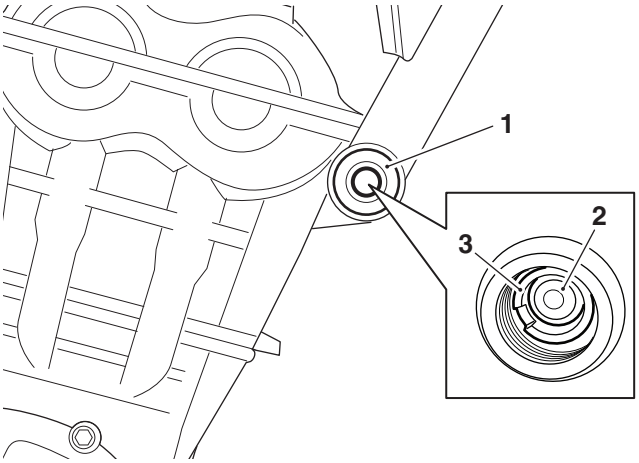
1. **Crankcase alignment bars**
2. **Cylinder head alignment bar**

27. Insert the crankcase alignment bars into the upper and lower crankcase mountings from the left hand side of the frame. Ensure the alignment bars are located through the engine and into the crankcase adjusters on the right hand side of the frame. Allow enough clearance on the right hand side of the frame to enable the threaded adjusters to be adjusted.



1. **Crankcase alignment bar**
2. **Frame to crankcase mounting (lower mounting shown - left hand side of frame)**
3. **Crankcase adjuster (lower mounting shown - right hand side of frame)**

28. Fit the cylinder head alignment bar into the left hand side of the right hand front cylinder head mounting point. Allow enough clearance on the right hand side of the frame to enable the threaded adjuster to be adjusted.



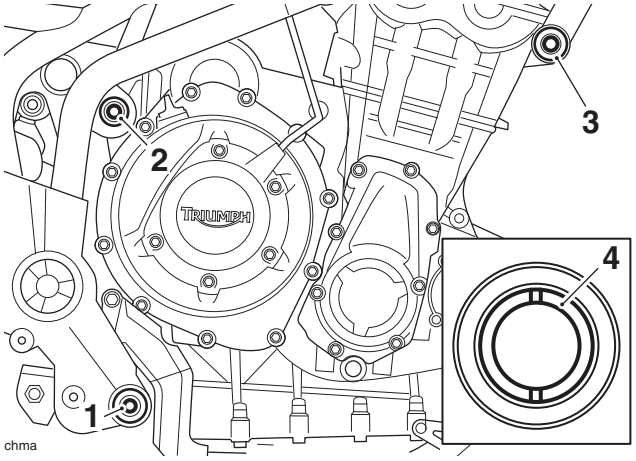
1. **Right hand front cylinder head mounting point**
2. **Cylinder head alignment bar (end of bar shown)**
3. **Cylinder head adjuster**

29. Fit a M12 lock nut from the kit to the left hand front cylinder head bolt and tighten to **24 Nm**.
30. Tighten the left hand rear cylinder head bolt to **85 Nm**.

Note:

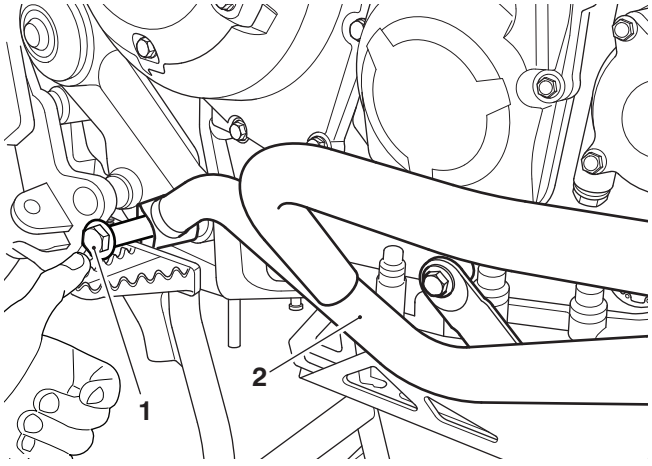
- **If, after tightening each adjuster and frame fixing, any of the engine to frame alignment bars and frame fixings cannot be removed and inserted freely, check that the engine is still adequately supported, loosen all tightened adjusters and frame fixings and restart the tightening sequence from step 29.**

31. Using service tool T3880377, tighten the three adjusters in the following sequence.
    - Tighten the lower crankcase adjuster to **5 Nm**.
    - Tighten the upper crankcase adjuster to **5 Nm**.
    - Tighten the right hand front cylinder head adjuster to **3 Nm**.



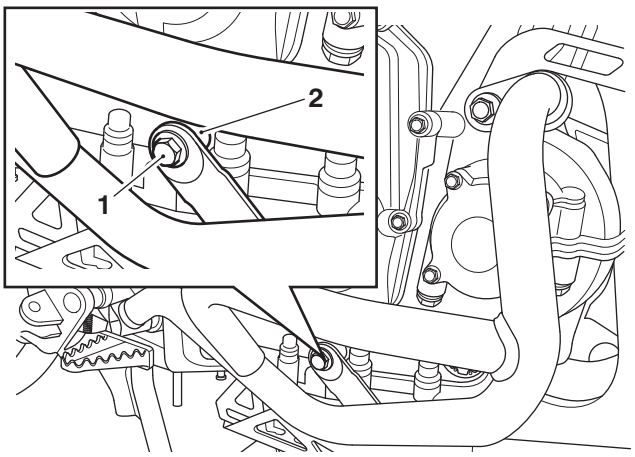
1. Lower crankcase adjuster
2. Upper crankcase adjuster
3. Cylinder head front right hand adjuster
4. Adjuster

32. Remove the upper crankcase alignment bar and fit the upper crankcase bolt and washer from the right hand side. Holding the bolt to prevent rotation, fit a M12 lock nut from the kit and tighten to **100 Nm**.
33. Remove the lower crankcase alignment bar.
34. Position the right hand engine bar to the crankcase mounting bosses, secure using the M12 x 265 mm bolt and M12 lock nut from the kit. Do not tighten the lock nut at this stage.



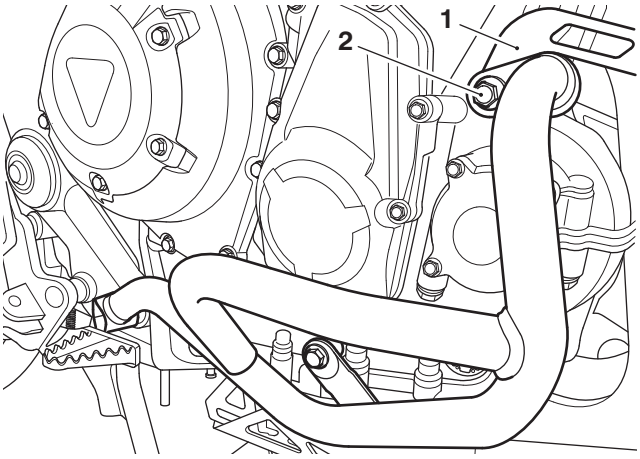
1. Engine mounting bolt
2. Engine bar

35. Position the 13 mm spacer from the kit between the crankcase mounting boss and the engine bar, secure using the M8 x 33 mm bolt from the kit. Do not tighten the bolt at this stage.



1. M8 x 33 mm bolt
2. Spacer 13 mm

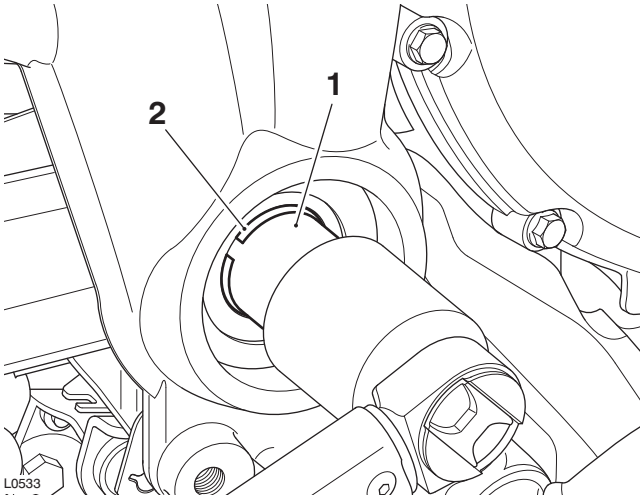
36. Position the right hand radiator mounting bracket between the engine bar and the crankcase mounting boss, secure using a M8 x 25 mm bolt from the kit. Do not tighten the bolt at this stage.



1. Lower radiator bracket
2. M8 x 25 mm bolt

37. Hold the lower crankcase mounting bolt to prevent rotation and tighten the lock nut to **100 Nm**.

38. Tighten the remaining frame bolts in the following sequence:
    - Tighten the right hand rear cylinder head bolt to **85 Nm**.
    - Tighten the left hand front cylinder head bolt to **115 Nm**.
    - Using service tool, T3880377, re-tighten the right hand front cylinder head adjuster to **3 Nm**.
    - Remove the cylinder head alignment bar from the right hand front cylinder head mounting and fit the bolt and washer. Fit a M12 lock nut from the kit and tighten to **100 Nm**.
39. Tighten the right hand engine bar centre mounting bolt to **18 Nm**.
40. Tighten the right hand engine bar upper mounting bolt to **18 Nm**.
41. Using Service Tool T3880182, tighten the swinging arm frame adjuster to **6 Nm**.

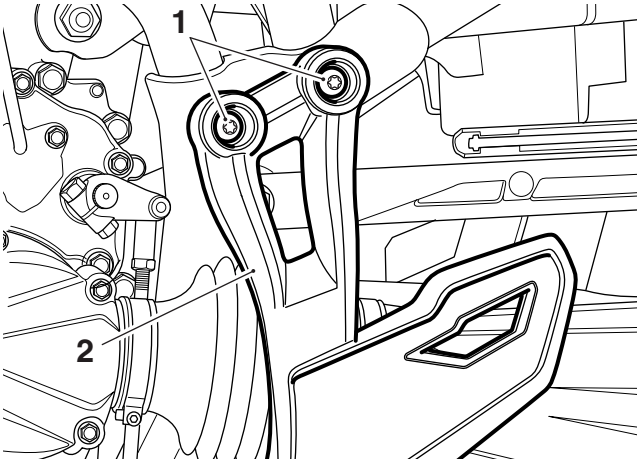


1. Service tool T3880182
2. Swinging arm frame adjuster

42. Fit the original adaptor and new M16 lock nut from the kit to the swinging arm spindle. Hold the spindle to prevent rotation and tighten the lock nut to **110 Nm**.
43. Refit the cover to the right hand swinging arm spindle.
44. Refit the right hand heel guard and secure with the original fixings. Tighten the fixings to **7 Nm**.

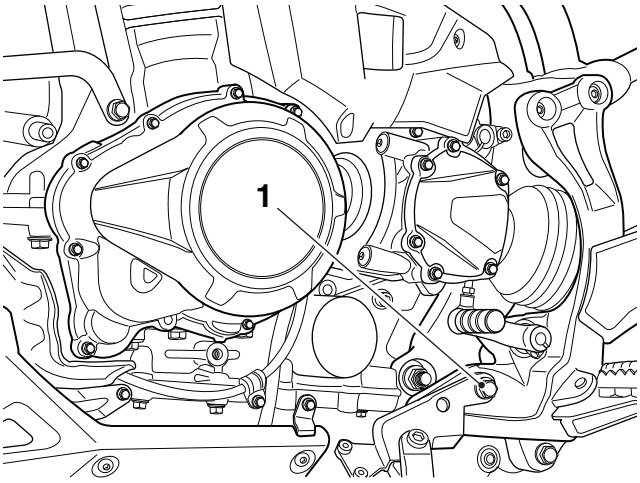
Left Hand Side

45. Align the left hand control plate to the frame and fit the two upper fixings. Do not fully tighten at this stage.



1. Fixings
2. Control plate

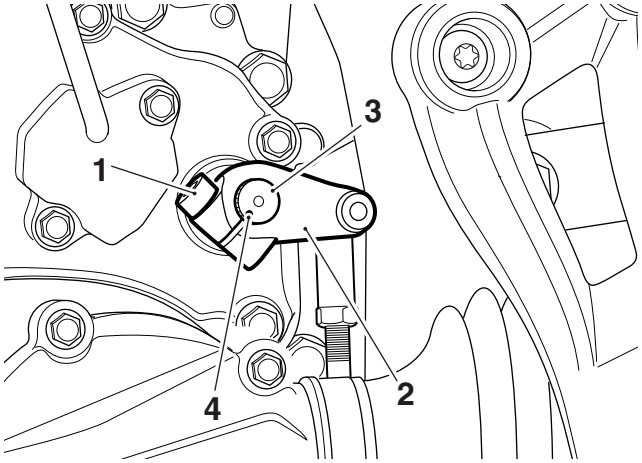
46. Route the harness for the side stand switch as noted for removal.
47. Loosely fit the side stand, using the rear mounting bolt only.



1. Rear mounting bolt

48. Tighten the upper fixings for the left hand control plate to **18 Nm**.
49. Fit the transmission linkage to the gear change mechanism as noted for removal.

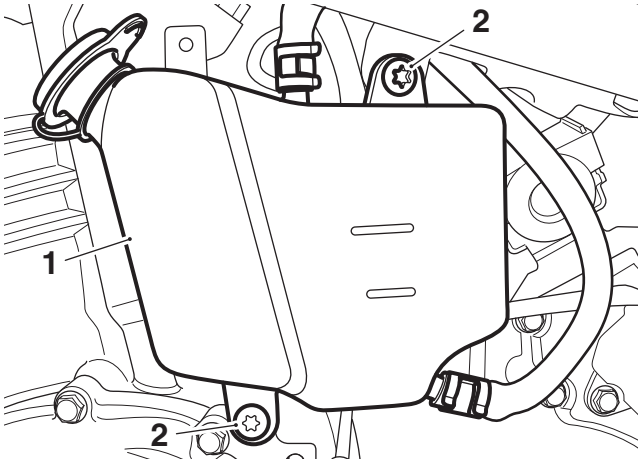
50. Fit the pinch bolt and tighten it to **9 Nm**.



1. **Pinch bolt**
2. **Transmission linkage**
3. **Gear change mechanism**
4. **Punch mark**

Models fitted with Triumph Shift Assist Only

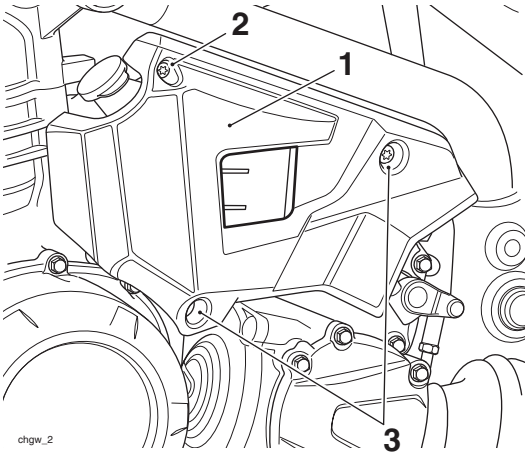
51. Route the Triumph shift assist sensor harness to the main wiring harness as noted during removal. Connect the electrical connector.
52. Position the expansion tank to the frame and secure with the two fixings and washers. Tighten the fixings to **3 Nm**.



1. **Expansion tank**
2. **Fixings**

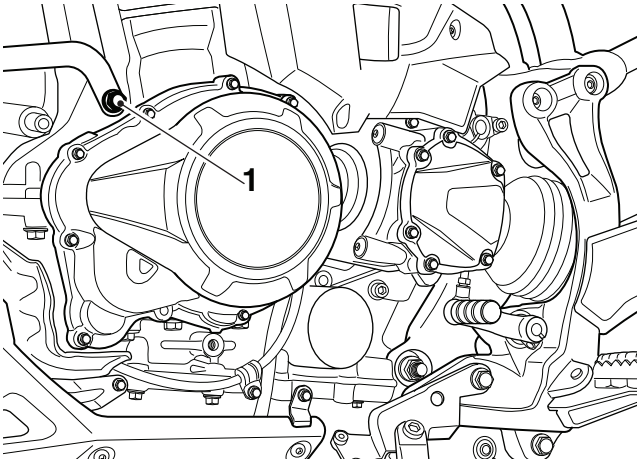
All Models

53. Refit the expansion tank cover. Secure the upper mounting with the M5 x 12 mm encapsulated fixing provided in the kit. Secure the lower mountings with the two original M6 fixings. Tighten the upper fixing to **3 Nm** and the lower fixings to **7 Nm**.



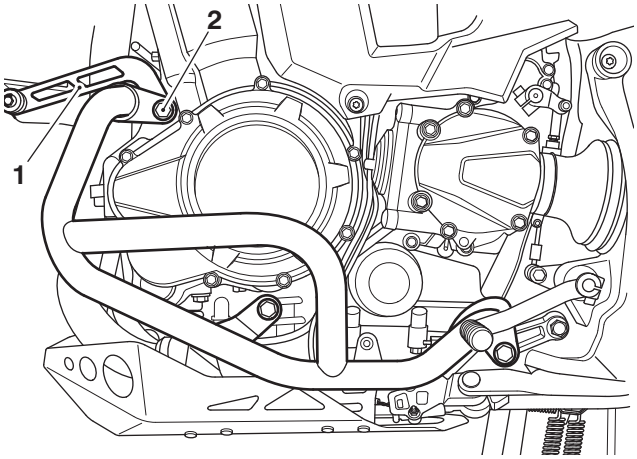
1. **Expansion tank cover**
2. **Upper fixing (M5)**
3. **Lower fixings (M6)**

54. Remove the left hand radiator to crankcase mounting bolt and collect the radiator bracket. Retain the bolt for reuse if the motorcycle is to be returned to its original condition.



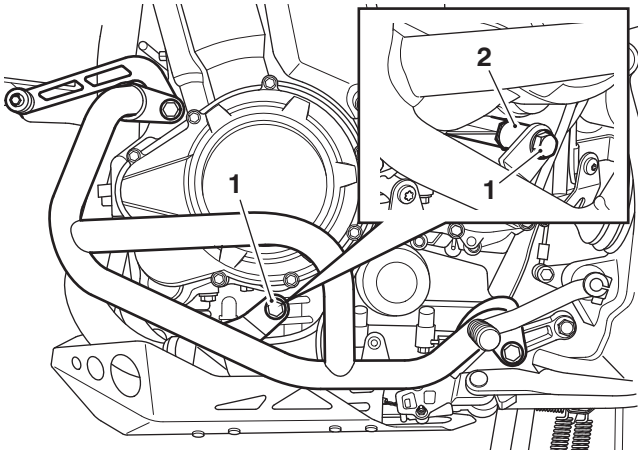
1. **Bolt**

55. Position the left hand engine bar, making sure the left hand radiator mounting bracket is positioned between the engine bar and the crankcase mounting boss. Secure using the remaining M8 x 25 mm bolt from the kit. Do not tighten the bolt at this stage.



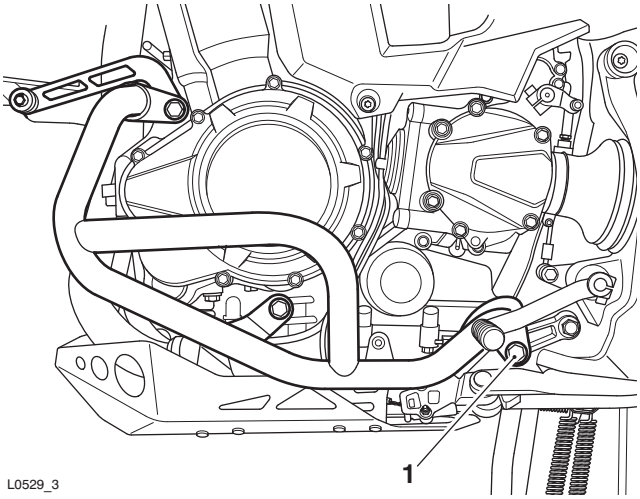
1. Lower radiator bracket
2. M8 x 25 mm bolt

56. Position the 25 mm spacer from the kit between the crankcase mounting boss and the engine bar. Secure using the M8 x 45 mm bolt from the kit. Do not tighten the bolt at this stage.



1. M8 x 45 mm bolt
2. Spacer 25 mm

57. Position the engine bar to the side stand mounting bracket. Secure using the bolt removed earlier. Do not tighten the bolt at this stage.



1. Side stand bolt

58. Tighten the side stand bolts to **70 Nm**.
59. Tighten the radiator mounting bolt to **18 Nm**.
60. Tighten the centre mounting bolt to **18 Nm**.
61. Refit the two fixings securing the radiator to the lower radiator brackets and secure with the M6 lock nuts provided in the kit. Tighten to **9 Nm**.
62. Tighten the radiator upper fixings to **9 Nm**.
63. Remove the support from beneath the engine.
64. Refit the sump guard as described in the Service Manual.
65. Refit the side fairings as described in the Service Manual.
66. Reconnect the battery, positive (red) lead first and tighten the terminals to **4.5 Nm**.
67. Refit the seat as described in the Service Manual.

Warning

If, after fitting this accessory kit, you have any doubt about the performance of any aspect of the motorcycle, contact an authorised Triumph dealer and do not ride the motorcycle until the authorised dealer has declared it fit for use. Riding a motorcycle when there is any doubt as to any aspect of the performance of the motorcycle may result in loss of control of the motorcycle leading to an accident.

Warning

Never ride an accessory-equipped motorcycle at speeds above 80 mph (130 km/h).

The presence of accessories will cause changes in the stability and handling of the motorcycle. Failure to allow for changes in motorcycle stability may lead to loss of control or an accident.

Remember that the 80 mph (130 km/h) limit will be reduced by the fitting of non-approved accessories, incorrect loading, worn tyres, overall motorcycle condition and poor road or weather conditions.

Warning

The motorcycle must not be operated above the legal road speed limit except in closed-course conditions.

Warning

Only operate this Triumph motorcycle at high speed in closed-course, on-road competition or on closed-course racetracks. High-speed operation should only be attempted by riders who have been instructed in the techniques necessary for high-speed riding and are familiar with the motorcycle's characteristics in all conditions.

High-speed operation in any other circumstances is dangerous and will lead to loss of motorcycle control and an accident.