



Technical News 161
January 2015
Strictly Confidential

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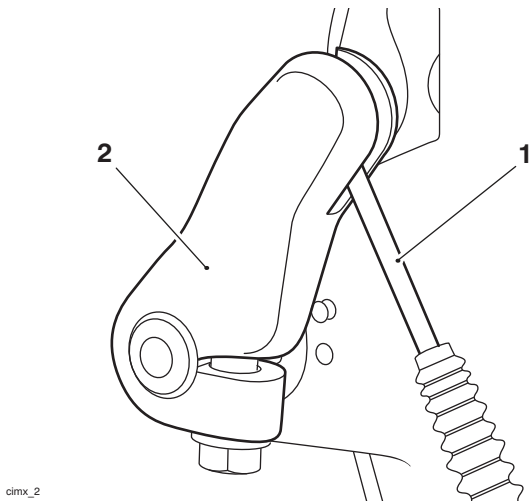
Item 1.

Description: Clutch Cable
Models affected: Thunderbird - All Models Except Thunderbird Commander and Thunderbird LT

A new clutch cable has been introduced to the above models from VIN 693388 and is retrofittable. Parts no longer support the original clutch cable.

The difference between the original and new condition clutch cable is that the inner cable's free length at the clutch actuation lever is 18 mm longer than the original. The additional length is to allow the repositioning of the clutch actuation lever to eliminate any possibility of clutch drag.

The fitting of the new condition clutch cable is the same as for Thunderbird Commander as described in the Service Manual and Technical News 158 issued 07/2014.



- 1. Clutch cable free length
- 2. Clutch actuation lever

Please mark your copy of the Service Manual with this information.

Item 2.

Description: Pannier Strap Parts kit
Models affected: Sprint GT, Tiger 800 (All Models), Tiger Sport, Tiger Explorer, Tiger Explorer XC, Trophy and Trophy SE

New pannier lid retaining straps have been introduced to the panniers on the above models.

Note:

- The new pannier lid retaining straps feature buckles that are not compatible with the old condition straps.
- Parts will no longer support old condition pannier lid retaining straps.

Parts kit T2357006 has been released for use when replacing old condition pannier lid retaining straps.

T2357006 - Spares Kit, Lid Straps, Panniers

Kit Contents	Quantity
T2357004 - Strap, Female, Lid Limit, Pannier	1
T2357005 - Strap, Male, Lid Limit, Pannier	1
T3350010 - Lock nut, M5	2
T3330648 - Screw, M5 x 20 mm	2
T3550249 - Washer	2

Installation



Caution

Care must be taken during the assembly of the pannier lid retaining straps. Damage to the pannier surfaces could result from inadequate care during the assembly process.

1. Remove the pannier from the motorcycle as described in the Owner's Handbook or Accessory Fitting Instructions.
2. Open the pannier and lay it flat on a clean soft surface, with the inside of the pannier facing upwards.

Note:

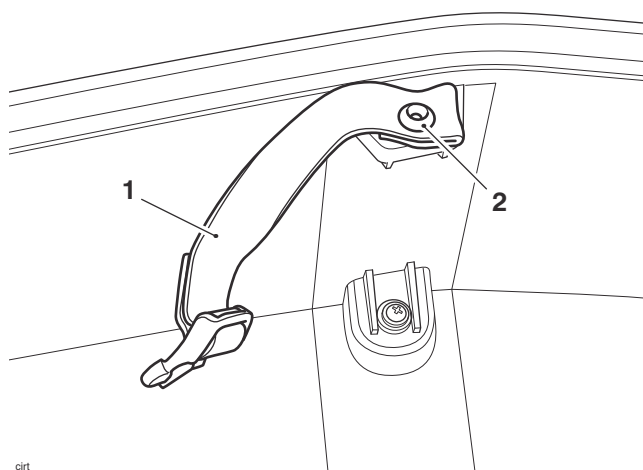
- **Note the position and orientation of the old male and female pannier lid retaining straps before removal.**



Caution

Only drill through the rivet head when removing the pannier lid retaining strap rivets. Take care not to drill into any other part of the pannier lid retaining strap mounting points as this would result in irreparable damage to the pannier.

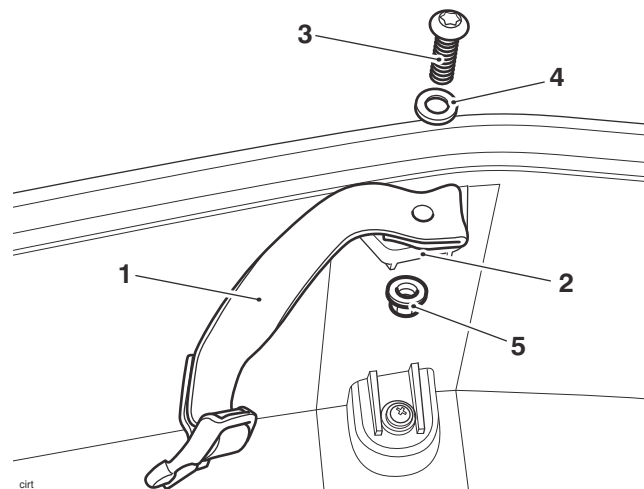
3. To remove the old pannier lid retaining straps, using a suitable drill, drill through the head of the rivets securing the pannier lid retaining straps to their mounting points. Remove and discard the straps, rivets and washers.



1. Pannier lid retaining strap (male shown, female similar)
2. Rivet

4. Carefully remove any swarf or debris created during drilling.

5. Align the new pannier lid retaining straps to their mounting points as noted during removal and secure with the fixings as shown.



1. Pannier lid retaining strap (male shown, female similar)

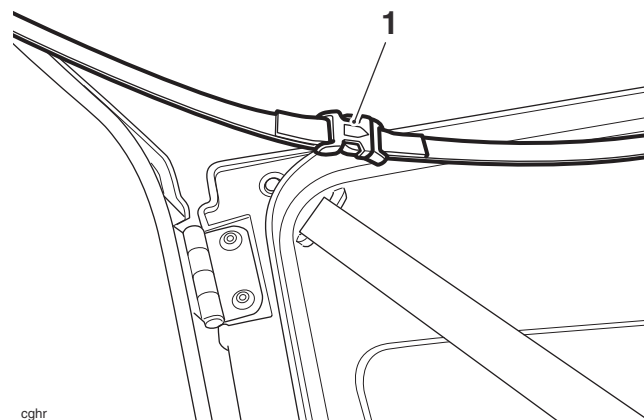
2. Mounting point

3. Screw

4. Washer

5. Nut

6. Ensuring that the straps remain correctly aligned, tighten the fixings to **1.5 Nm**.
7. Partially close the lid and join the lid retaining strap buckles together, then fully close the lid.



1. Buckle

8. Fit the pannier to the motorcycle as described in the Owner's Handbook or Accessory Fitting Instructions.

When ordering replacement parts, always refer to EPC.

Please mark your copy of the Service Manual with this information.

Item 3.

Description: Main Wiring Harness

Models affected: Trophy SE

A new main wiring harness has been introduced to the above model from engine number 693353. The new main harness has the four-pin multiplug for the gear position sensor and can be connected to it without the use of a fly lead.

The new harness is retrofittable to earlier models as described below.

Models with Engines Built from Engine Number 596481 to Engine Number 693352

Note:

- **For engines built from engine number 596481 to engine number 693352 a new gear position sensor and fly lead was introduced to the above models (see Technical News 143 dated April 2013). This gear position sensor has the four-pin multiplug.**

For the replacement of the main harness, the fly lead connecting the gear position sensor to the main harness is to be removed and discarded. The gear position sensor can remain on the engine as the new harness can connect directly to it.

Models with Engines Built up to Engine Number 596480

Note:

- **It is also possible that models with an engine built up to engine number 596480 may have had a new gear position sensor fitted with a fly lead, as described in Technical News 143 dated April 2013.**

If a new gear position sensor is required only, refer to Technical News 143 dated April 2013.

If a new main wiring harness is required, a harness parts kit (part number T2500837) is available and consists of the following components.

Model	Parts Kit Number	Parts Kit Contents
Trophy SE	T2500837	T2500857, Main Wiring Harness T1290666, Gear Position Sensor T3700015, Cable Tie

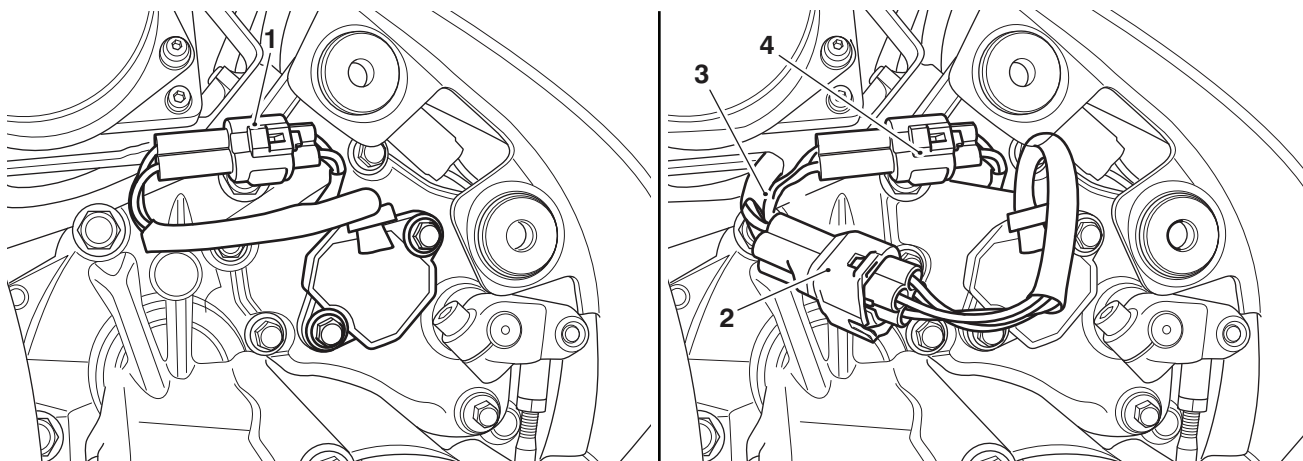
Prior to ordering the parts kit, check to see if the gear position sensor has the four-pin multiplug. If it has the four-pin multiplug only the new main wiring harness (part number 2500857) is required.

To check to see if the gear position sensor has a four-pin multiplug, follow the procedure described below.

1. Disconnect the battery, as described in the Service Manual.
2. Remove the left hand upper and lower fairings, as described in the Service Manual.

Remove the gear linkage cover, as described in the Service Manual.

3. Check to see if the gear position sensor has the three-pin or four-pin multiplug.



1. Three-pin multiplug (up to engine number 596480)

2. Four-pin multiplug (from engine number 596480 to engine number 693352)

3. Fly lead

4. Fly lead three-pin multiplug

If the gear position sensor has the four-pin multiplug, only replace the main wiring harness.

If the gear position sensor has the three-pin multiplug, the gear position sensor must also be replaced using the parts kit T2500837.

After fitting the new main wiring harness and the gear position, cable tie the gear position multiplug to the ABS modulator bracket. Trim off any excess cable tie.

The gear position sensor pinpoint test procedure has also changed. The pinpoint test procedure for the new gear position sensor and old gear position sensors with a fly lead is as follows:

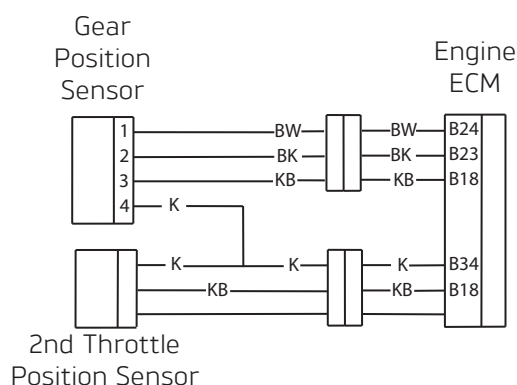
Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ECM pin B44 - ECM pin B18 - ECM pin B23 - ECM pin B34	OK	Disconnect sensor and proceed to test 2
	Faulty	Rectify fault, proceed to test 5
2 Check cable for short circuit: - ECM pin B44 to ground - ECM pin B34 to ground - ECM pin B23 to ground	OK	Proceed to test 3
	Short circuit	Locate and rectify wiring fault, proceed to test 5
3 Check cable continuity: - ECM pin B44 to sensor pin 1 - ECM pin B23 to sensor pin 2 - ECM pin B18 to sensor pin 3 - ECM pin B34 to sensor pin 4	OK	Proceed to test 4
	Open circuit	Locate and rectify wiring fault, proceed to test 5

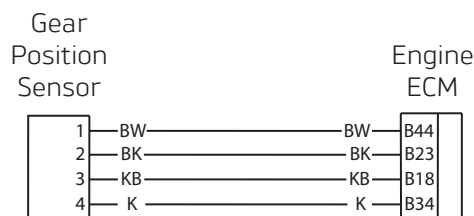
Test	Result	Action
4 Check cable for short circuit: - ECM pin B34 to ECM pin B23 - ECM pin B34 to ECM pin B18 - ECM pin B34 to ECM pin B44 - ECM pin B23 to ECM pin B18 - ECM pin B23 to ECM pin B44 - ECM pin B44 to ECM pin B18	OK	Renew gear position sensor and contact pin and proceed to test 5
	Short circuit	Locate and rectify wiring fault, proceed to test 5
5 Reconnect harness, clear fault code	OK	Action complete, quit test and run engine
	Fault still present	Contact Triumph service

Circuit Diagrams

Old Gear Position Sensor with Fly Lead



New Gear Position Sensor



When ordering replacement parts, always refer to the EPC.

Please mark your copy of the Service Manual with this information.

Item 4.

Description: Throttle Body Intake Rubbers

Models affected: All Models With Push Fit Throttle Body Intake Rubbers

During manufacture, the throttle body intake rubbers are sealed to the airbox housing to eliminate external air leaks into the inlet ports.

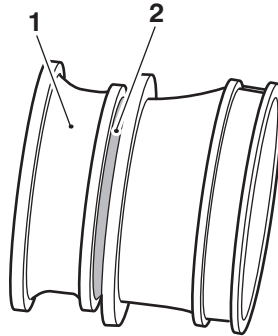
If the throttle body rubbers are removed or replaced for any reason the intake rubbers must be sealed to the air box using either Cemedine 540, U-Pol Tigerseal (Black) or equivalent.

1. Use high flash-point solvent to clean the airbox and intake rubber mating faces. Wipe the surfaces clean with a lint-free cloth.
2. Apply a thin bead of Cemedine 540, U-Pol Tigerseal (Black) or an equivalent sealant to the intake rubber mating face.



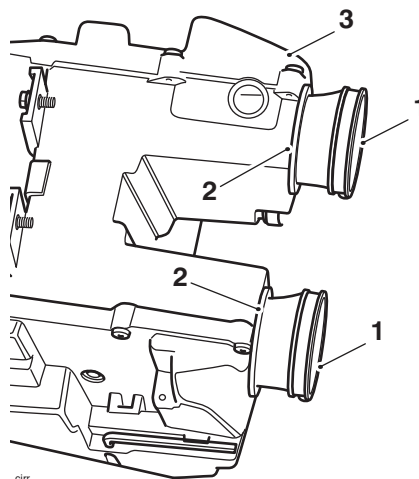
Caution

Do not use excessive amounts of sealer. The extra sealer may become dislodged and could block the carburettor or fuel injection system causing severe engine damage.



clrr_1

1. Throttle body intake rubber
2. Mating face
3. Locate the throttle body intake rubbers into the airbox ensuring the alignment marks are aligned to the tangs on the airbox.



clrr

1. Throttle body intake rubber (Bonneville shown)
2. Sealed area
3. Air box



Caution

Never force the throttle body intake rubbers through the airbox assembly. This may cause damage to the throttle body intake rubbers, resulting in poor engine performance and a lack of power.

4. Using light finger pressure, press the sealing areas together until the intake rubbers are fully seated.



Caution

Always ensure that both intake rubbers seal to the throttles through 360° as poor performance and lack of power can result from incorrect sealing.

Please mark your copy of the Service Manual with this information.

Item 5.

Description: Side Stand Fixing

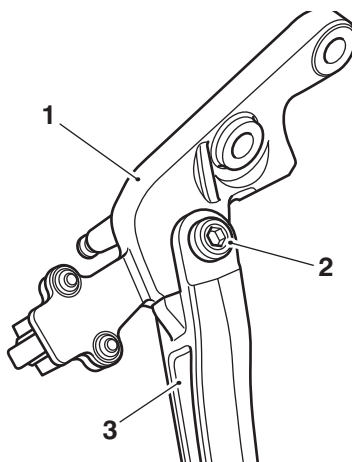
Models affected: Speed Triple 1050 ABS, Speed Triple 1050 R ABS and Tiger Sport from VIN 670401

A revised bolt has been introduced on the above models from VIN 670401. If removed or replaced for any reason tighten the bolt and lock nut as described below.

Note:

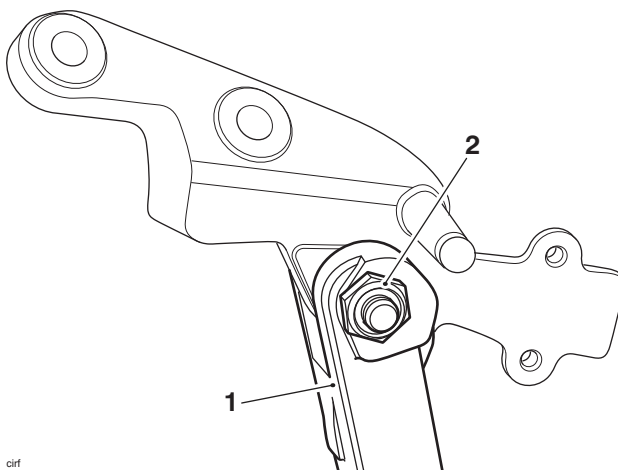
- **Models already in service need not be retightened unless the fixings have been loosened or removed.**

1. Tighten the side stand bolt to **20 Nm**.



1. Side stand bracket
2. Fixing
3. Side stand

2. Whilst ensuring the bolt does not turn, tighten the lock nut to **9 Nm**.



1. Side stand
2. Lock nut

Please mark your copy of the Service Manual with this information.

Item 6.

Description: Front and Rear Direction Indicator Fixings

Models affected: Thunderbird Commander, Thunderbird LT and Rocket III Touring ABS

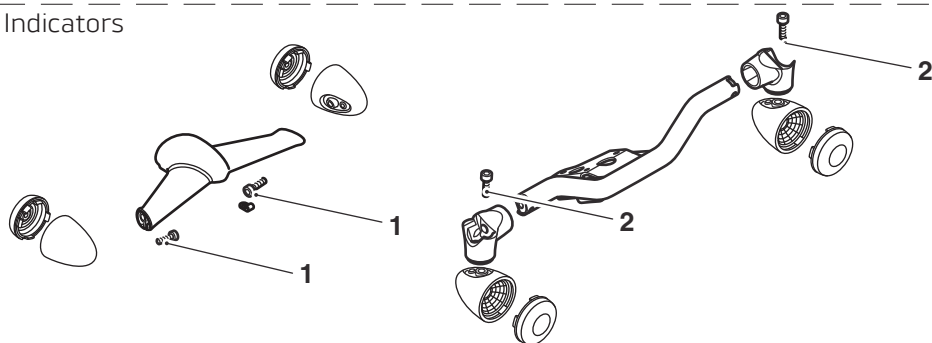
The fixings for the front and rear direction indicators have changed to encapsulated fixings on the above models.

The torque figure for these fixings has changed to **25 Nm**. These fixings must be replaced if they are loosened or removed.

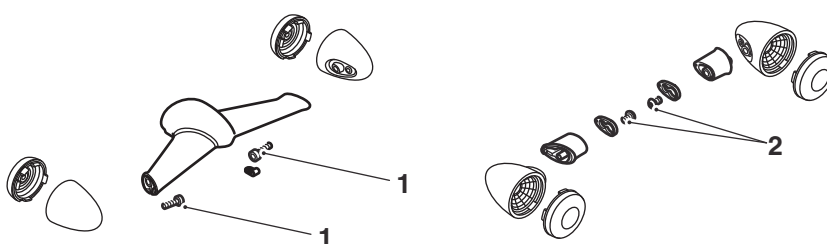
Note:

- **Models already in service need not be retightened unless the fixings have been loosened or removed.**

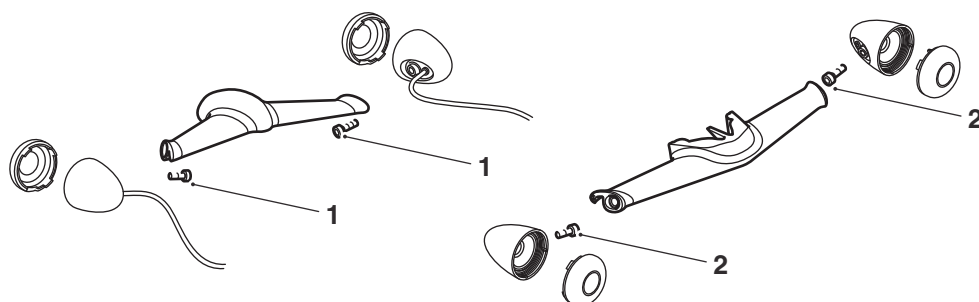
Thunderbird LT Direction Indicators



Thunderbird Commander Direction Indicators



Rocket III Touring Direction Indicators



1. Rear direction indicator fixings
2. Front direction indicator fixings

Please mark your copy of the Service Manual with this information.

Item 7.

Description: Throttle Position Sensor

Models affected: Tiger XCx and Tiger XRx

The throttle position sensor on the above models is an integral part of the throttle body and must not be adjusted or removed. Tampering with or removing the sensor will render the throttle body assembly inoperative and unusable, invalidating any warranty claims against the throttle body assembly.

If for any reason the throttle position sensor or the throttle bodies require replacement they must be replaced as an assembly.

The pin point tests attached as Appendix A must replace the tests displayed in the current Service Manual part number 3856780-EN.

When ordering replacement parts, always refer to the EPC.



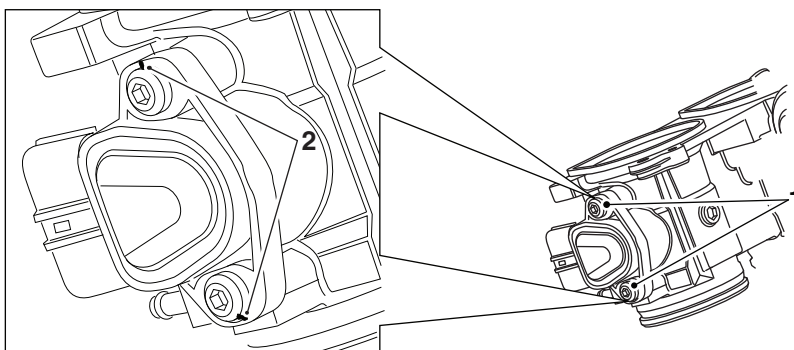
Caution

The fixings for the throttle position sensor are marked with yellow paint and must not be loosened or removed.

If the fixings have been loosened or removed the throttle body assembly must be replaced as there are no means to reset the throttle position sensor to its correct position.

Note:

- The fixings for the throttle position sensor are marked with yellow paint and must not be loosened or removed.
If the fixings have been loosened or removed any warranty claims against the throttle body assembly will be rejected.



1. Throttle position sensor fixings
2. Paint mark (yellow)

Please mark your copy of the Service Manual with this information.

Item 8.

Description: Regulator Rectifier Bracket Fixing

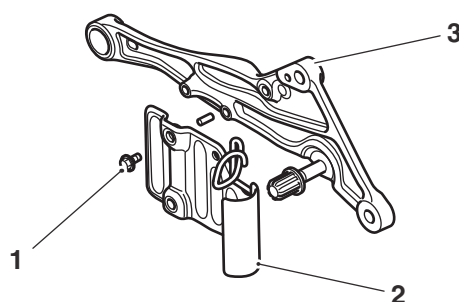
Models affected: Thunderbird ABS, Thunderbird Commander, Thunderbird LT and Thunderbird Storm ABS

A revised fixing securing the regulator rectifier bracket to the rear footrest has been introduced on the above models. The revised fixing is pre-encapsulated and is retrofittable to earlier models.

Note:

- Models already in service need not be retightened unless the fixings have been loosened or removed.
- If loosened or removed for any reason the fixings must be replaced.

1. Tighten the regulator rectifier bracket fixing to **7 Nm**.



1. Fixing
2. Regulator rectifier bracket
3. Silencer hanger

Please mark your copy of the Service Manual with this information.

Item 9.

Description: Gear Change Return Spring Abutment Bolt
Models affected: Various

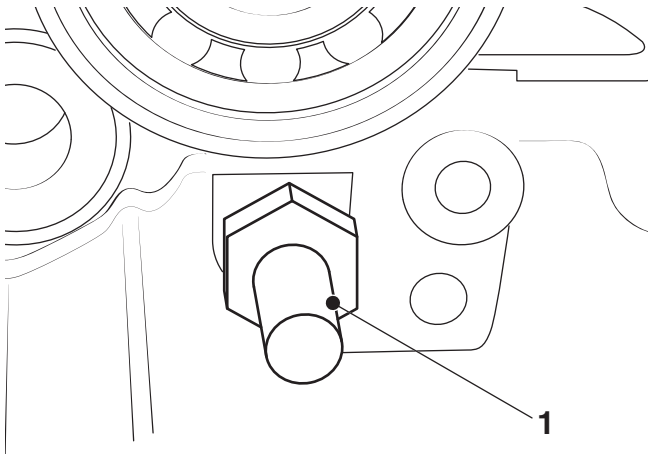
Model	From engine number
Rocket III Touring ABS	684808
Rocket III Roadster ABS	
Speed Triple 1050	
Speed Triple 1050 R	
Sprint GT 1050	
Tiger 1050	
Tiger Sport	

A revised abutment bolt has been introduced on the models listed in the table above. The revised abutment bolt is pre-encapsulated and is retrofittable to earlier models.

Note:

- **Models already in service need not be retightened unless the fixings have been loosened or removed.**
- **If loosened or removed for any reason the fixings must be replaced.**

1. Tighten the abutment bolt to **15 Nm**.



1. Gear change return spring abutment fixing, Tiger Sport shown
Please mark your copy of the Service Manual with this information.

Item 10.

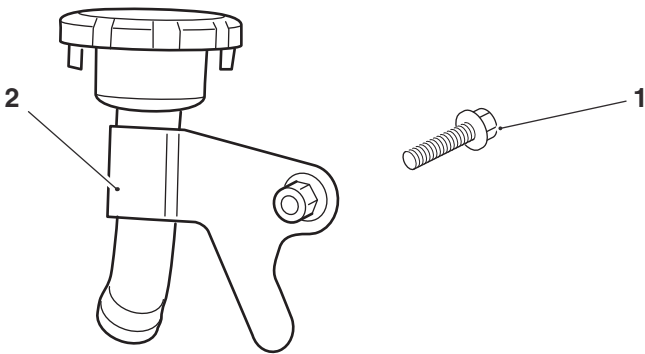
Description: Coolant Filler Neck
Models affected: Thunderbird ABS, Thunderbird Commander, Thunderbird LT and Thunderbird Storm ABS

A revised fixing securing the coolant filler neck to the frame has been introduced on the above models. The revised fixing is pre-encapsulated and is retrofittable to earlier models.

Note:

- Models already in service need not be retightened unless the fixings have been loosened or removed.
- If loosened or removed for any reason the fixings must be replaced.

1. Tighten the coolant filler neck fixing to **9 Nm**.



1. Fixing
2. Coolant filler neck

Please mark your copy of the Service Manual with this information.

Circulation

Initial and date when read and return to central file holder

Service Manager	Parts Manager	Sales Manager	Workshop Supervisor	Technician 1	Technician 2

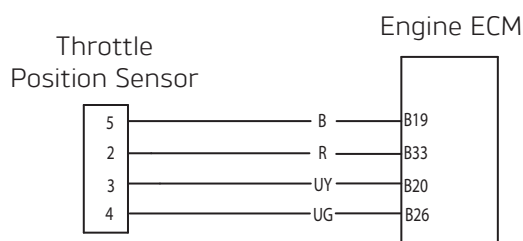
Throttle Position Sensor 1 - Tiger XCx and Tiger XRx

Fault Code	Possible cause	Action
P0122	Throttle position sensor 1 short to ground or open circuit	View and note diagnostic software freeze frame data if available.
P0123	Throttle position sensor 1 short circuit to battery Voltage	View and note diagnostic software sensor data. Ensure sensor connector is secure. Disconnect the engine ECM and proceed to pinpoint test 1:

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ECM pin B19 - ECM pin B20 - ECM pin B33	OK	Disconnect sensor and proceed to test 2
	Faulty	Rectify fault, proceed to test 5
2 Check cable for short circuit: - ECM pin A20 to ground	OK	Proceed to test 3
	Short circuit	Locate and rectify wiring fault, proceed to test 5
3 Check cable continuity: - ECM pin B19 to sensor pin 5 - ECM pin B20 to sensor pin 3 - ECM pin B33 to sensor pin 2	OK	Proceed to test 4
	Open circuit	Locate and rectify wiring fault, proceed to test 5
4 Check cable for short circuit: - ECM pin B20 to ECM pin B19 - ECM pin B20 to ECM pin B33	OK	Contact Triumph service, proceed to test 5
	Short circuit	Locate and rectify wiring fault, proceed to test 5
5 Reconnect harness, clear fault code and run engine to verify fault cleared	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram



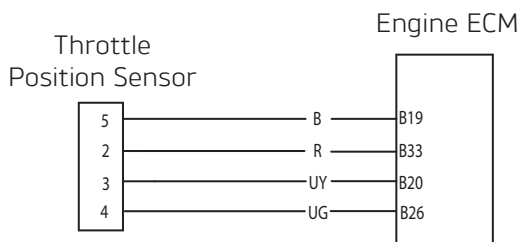
Throttle Position Sensor 2 - Tiger XCx and Tiger XRx

Fault Code	Possible cause	Action
P0227	Throttle position sensor 2 short circuit to ground or open circuit	View and note diagnostic tool freeze frame data if available
P0228	Throttle position sensor 2 short circuit to battery Voltage	View and note diagnostic tool sensor data Ensure sensor connector is secure Disconnect the engine ECM and proceed to pinpoint test 1:

Pinpoint Tests

Test	Result	Action
1 Check cable and terminal integrity: - ECM pin B19 - ECM pin B26 - ECM pin B33	OK	Disconnect sensor and proceed to test 2
	Faulty	Rectify fault, proceed to test 5
2 Check cable for short circuit: - ECM pin B26 to ground	OK	Proceed to test 3
	Short circuit	Locate and rectify wiring fault, proceed to test 5
3 Check cable continuity: - ECM pin B19 to sensor pin 5 - ECM pin B26 to sensor pin 4 - ECM pin B33 to sensor pin 2	OK	Proceed to test 4
	Open circuit	Locate and rectify wiring fault, proceed to test 5
4 Check cable for short circuit: - ECM pin B26 to ECM pin B19 - ECM pin B26 to ECM pin B33	OK	Contact Triumph service, proceed to test 5
	Short circuit	Locate and rectify wiring fault, proceed to test 5
5 Reconnect harness, clear fault code and run engine to verify fault cleared	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram



Throttle Position Sensor 1 Correlation Error with Throttle Position Sensor 2 - Tiger XCx and Tiger XRx

Fault Code	Possible cause	Action
P2136	Throttle position sensor 1 correlation error with throttle position sensor 2	View and note diagnostic tool freeze frame data if available View and note diagnostic tool sensor data Ensure throttle position sensor connector is secure Disconnect the engine ECM and proceed to pinpoint test 1:

Pinpoint Tests

Test	Result	Action
1 Turn the ignition on and measure the Voltage between: - ECM pin B33 and ECM pin B19	5 V DC	Contact Triumph service before proceeding to test 2
	Faulty	Rectify fault, proceed to test 2
2 Reconnect harness, clear fault code and run engine to verify fault cleared	OK	Action complete - quit test
	Fault still present	Contact Triumph service

Circuit Diagram

