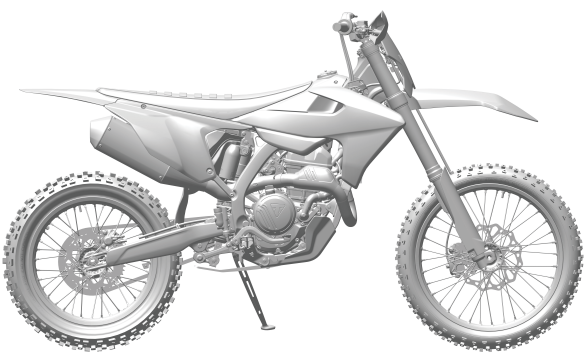
TF250-C and TF450-C



This handbook contains information on the Triumph TF250-C and TF450-C motorcycles. Always store this Owner's Handbook with the motorcycle and refer to it for information whenever necessary.

The information contained in this publication is based on the latest information available at the time of printing. Triumph reserves the right to make changes at any time without prior notice, or obligation.

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This handbook contains a number of different sections. The table of contents below will help you find the beginning of each section where, in the case of the major sections, a further table of contents will help you find the specific subject required.

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Owner's Handbook

⚠ WARNING

The Owner's Handbook or Quick Start Guide (where supplied with the motorcycle), and all other documents that are supplied with your motorcycle, should be considered a permanent part of your motorcycle and should remain with it, even if your motorcycle is subsequently sold.

All riders must read the Owner's Handbook, Quick Start Guide, and all other documents supplied with your motorcycle before riding, in order to become thoroughly familiar with the correct operation of your motorcycle's controls, its features, capabilities and limitations.

Do not lend your motorcycle to others as riding when not familiar with your motorcycle's controls, features, capabilities and limitations may lead to loss of motorcycle control, which could result in serious injury or death.

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

Please read this Owner's Handbook before riding in order to become thoroughly familiar with the correct operation of your motorcycle's controls, its features, capabilities and limitations.

This Owner's Handbook includes safe riding tips, but does not contain all the techniques and skills necessary to ride a motorcycle safely.

Triumph strongly recommends that all riders undertake the necessary training to ensure safe operation of this motorcycle.

The latest version of this Owner's Handbook containing any changes is available from your local dealer and online from www.triumphmotorcycles.co.uk/handbooks in:

- English
- US English
- Arabic
- Chinese
- Dutch
- French
- German
- Italian
- Japanese
- Portuguese (Brazil)
- Spanish
- Swedish
- Thai
- Finnish (available online only from www.triumphmotorcycles.co.uk/handbooks)
- Polish (available online only from www.triumphmotorcycles.co.uk/handbooks)
- Portuguese (available online only from www.triumphmotorcycles.co.uk/handbooks).

The languages available for this Owner's Handbook are dependent on the specific motorcycle model and country.

QR Code

To download the Owner's Handbook;

Enter the address below in to a web browser:

www.triumphmotorcycles.co.uk/handbooks

Or;

Scan the QR code using your smart device:

This QR code can also be found on a label permanently attached to your motorcycle, located either under the seat or behind the side panel.

After entering the web address or scanning the QR code, your browser will be directed to a web page where you can select and download your Owner's Handbook.

Triumph Technical Information (TTI)

For maintenance procedures that require specialist knowledge or service tools, these are referred to the Service Manual which can be accessed at www.triumphtechnicalinformation.com.

Or;

Scan the QR code using your smart device:

Registration is required to access the site.

Dangers, Warnings, Cautions and Notices

Particularly important information is presented in the following form:

⚠ DANGER

This danger symbol identifies special instructions or procedures, which, if not correctly followed, will result in serious injury, or death.

⚠ WARNING

This warning symbol identifies special instructions or procedures, which, if not correctly followed, could result in serious injury, or death.

⚠ CAUTION

This caution symbol identifies special instructions or procedures, which, if not strictly observed, could result in minor or moderate injury.

NOTICE

This notice symbol indicates points of particular interest for more efficient and convenient operation.

Warning Labels



At certain areas of the motorcycle, the symbol (above) can be seen. The symbol means CAUTION: REFER TO THE HANDBOOK and will be followed by a pictorial representation of the subject concerned and/or text.

Never attempt to ride the motorcycle or make any adjustments without reference to the relevant instructions contained in this handbook.

For the location of all labels showing this symbol, see the Warning Label Locations section of this Owner's Handbook. Where necessary, this symbol will also appear on the pages containing the relevant information.

Maintenance

To ensure a long, safe, and trouble-free life for your motorcycle, maintenance should only be carried out by a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

An authorized Triumph motocross and enduro center will have the necessary knowledge, equipment, and skills to maintain your Triumph motorcycle correctly.

To locate your nearest authorized Triumph motocross and enduro center, visit the Triumph web site at www.triumph.co.uk or telephone the authorized distributor in your country. Their address is given in the service record book that accompanies this handbook.

Noise Control System

Tampering with the noise control system is prohibited.

Owners are warned that the law may prohibit:

- The removal or rendering inoperative by any person other than for purposes of maintenance, repair or replacement, of any device or element of design incorporated into any new vehicle for the purpose of noise control prior to its sale or delivery to the ultimate purchaser or while it is in use and,
- The use of the vehicle after such device or element of design has been removed or rendered inoperative by any person.

Among those acts presumed to constitute tampering are the acts listed below:

- Removal of, or puncturing the muffler, baffles, header pipes or any other component that conducts exhaust gases.
- Removal of, or puncturing of any part of the intake system.
- Lack of proper maintenance.
- Replacing any moving parts of the vehicle, or parts of the exhaust or intake system, with parts other than those specified by the manufacturer.

Talk to Triumph

Our relationship with you does not end with the purchase of your Triumph. Your feedback on the buying and ownership experience is very important in helping us develop our products and services for you.

Please help us by ensuring your authorized Triumph dealership has your email address and registers this with us. You will then receive an online customer satisfaction survey invitation to your email address where you can give us this feedback.

Your Triumph Team.

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Motorcycle Use

The parents/guardians of a rider below the age of 18 are directly responsible to ensure it is safe for the rider to operate the Cross Country motorcycle.

Prior to riding this Cross Country motorcycle ALL riders must read, understand the information and carry out the checks listed in the following pages.

⚠ DANGER

Only ride this Cross Country motorcycle within your ability for off-road and in closed-course cross country circuits.

This Cross Country motorcycle is not equipped with headlights, brake/tail lights, turn signals and rear view mirrors.

Riding this Cross Country motorcycle at night, when it is dark, or on public roads, may risk collision with close vicinity objects such as vehicles, property or hidden obstacles.

Collision with such objects will result in serious injury or death.

⚠ DANGER

Never ride this Cross Country Motorcycle outside of closed-course cross country events.

Riding this Cross Country Motorcycle outside closed-course cross country events, may risk collision with close vicinity objects such as vehicles, property or hidden obstacles.

Collision with such objects will result in serious injury or death.

⚠ WARNING

Do not ride this Cross Country motorcycle if you are unable to reach the footrests and the handlebar when sitting on the rider's seat.

Make sure you are able to fully operate the following controls while sitting on the seat with both feet flat on the footrests and both hands on the handlebars:

- Operate the rear brake pedal, full travel.

- Operate the gear shift pedal, full travel up and down.

- Operate the clutch lever, full travel.

- Operate the front brake lever, full travel.

A rider who is unable to reach the footrests, handlebar and operate the controls fully will be unable to sit securely on this motorcycle and maintain control.

Failure to follow the advice above may lead to loss of motorcycle control, which could result in serious injury or death.

This Cross Country motorcycle is designed for off road racing, closed-course Cross Country competition use only. This motorcycle must not be used for Supermoto or Enduro riding.

This Cross Country motorcycle is built to withstand the normal stresses and strains of closed-course competition.

It is the rider's responsibility to make sure that this Cross Country motorcycle complies with the rules and regulations of the event they are competing in.

All Riders

⚠ DANGER

Motocross is a dangerous sport.

Motocross should only be attempted by riders who have been instructed in the necessary techniques for this type of competition and are familiar with the motorcycle's characteristics in all conditions.

Motocross by riders who have not been instructed in the necessary techniques is dangerous, leading to loss of motorcycle control which will result in serious injury or death.

⚠ DANGER

Never ride the Cross Country motorcycle when fatigued or under the influence of alcohol or other drugs.

Riding when under the influence of alcohol or other drugs is illegal.

Riding when fatigued or under the influence of alcohol or other drugs reduces the rider's ability to maintain control, leading to loss of motorcycle control which will result in serious injury or death.

⚠ WARNING

Get used to the handling characteristics of this Cross Country motorcycle before riding in a Cross Country competition.

Know your own ability and what you can and can not do on the race track.

Failure to follow the advice above may lead to loss of motorcycle control, which could result in serious injury or death.

⚠ WARNING

Cross Country motorcycles do not have headlights, turn signals and brake/tail lights.

Do not ride these motorcycles in the dark or in low light conditions.

Riding in the dark or in low light conditions, your visibility will be reduced leading to loss of motorcycle control which could result in serious injury or death.

⚠ WARNING

This Cross Country motorcycle is not designed to carry a passenger.

This motorcycle does not have footrests for a passenger who will be unable to sit securely on this motorcycle.

Operation of this motorcycle with a passenger is dangerous leading to loss of motorcycle control which could result in serious injury or death.

NOTICE

Cross Country motorcycles are designed for off road use only and must not be used on public roads or pavements.

The Cross Country motorcycles are not road legal as they do not have safety features such as headlights, brake/tail lights, turn signals and rear view mirrors.

The purchaser, owner, and/or riders of this motorcycle are directly responsible to know and obey all local, regional, and national laws regarding the riding and use of this Cross Country motorcycle.

The use of this Cross Country motorcycle on public roads may render the user liable to prosecution.

Prior To Any Race Day

- Check the motorcycle frame, suspension, steering and engine are serviceable and in good condition for the race, see page 53.
- The rider is able to fully operate the motorcycle controls while sitting on the seat, with both feet flat on the footrests and both hands on the handlebar while wearing protective equipment.
- The rider knows the handling characteristics of this motorcycle.

Prior To The Race

- The rider is wearing suitable protective clothing and helmet that is in good condition and meets the regulations, see page 12.
- Know your own ability and what you can and can not do on the race track.
- Walk the track to evaluate the condition of the ground, the jumps and jump combinations to help prepare for the race.

Fuel and Exhaust Fumes

⚠ WARNING

Observe the warning advice given in the General Information section on the Fuel Handling Precautions see page page 29.

Before disconnecting any fuel lines, make sure that the engine and exhaust system has cooled down.

A fire could result from spilled fuel or fuel not handled or stored correctly.

Failure to follow the advice above may result in a fire that may cause serious injury or death.

⚠ WARNING

GASOLINE IS HIGHLY FLAMMABLE:

- Always turn off the engine when refueling.

- Pay full attention and remain alert while refueling.

- Do not refuel or open the fuel filler cap while smoking or in the vicinity of any open (naked) flame.

- Take care not to spill any gasoline on the engine, exhaust pipes or mufflers when refueling.

- If gas is swallowed, inhaled or allowed to get into the eyes, seek immediate medical attention.

- Spillage on the skin should be immediately washed off with soap and water and clothing contaminated with gas should immediately be removed.

- Burns and other serious skin conditions may result from contact with gas.

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

Helmet and Clothing



⚠ DANGER

A helmet is one of the most important pieces of riding gear as it offers protection against head injuries. Your helmet should be carefully chosen, be approved for racing and should fit your head comfortably and securely.

A full face closed-course helmet will offer the best protection.

Always wear approved goggles to help vision and to protect your eyes.

All protective gear must be in good condition.

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

⚠ WARNING

When riding the motorcycle, the rider must always wear appropriate clothing including a motorcycle helmet, eye protection, gloves, boots (without laces), trousers, jersey, knee/elbow pads, chest protector/body armor and neck brace.

Always wear protective clothing that is in good condition and meets the legal regulations.

Although complete protection from injury is not possible, wearing correct protective clothing can reduce the risk of serious injury or death.

When choosing a helmet, always look for a DOT (Department of Transport) sticker indicating that the helmet has DOT approval. Do not buy a helmet without DOT approval.

Maintenance and Equipment

⚠ WARNING

If the motorcycle is involved in an accident, collision or fall, it must be taken for inspection and repair.

Inspections and repairs must be completed by a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

Any accident can cause damage to the motorcycle that, if not correctly repaired, may cause a second accident which could result in serious injury or death.

⚠ WARNING

Make sure all equipment that is required by law is installed and functioning correctly.

The removal or alteration of the motorcycle's mufflers, emission or noise control systems can violate the law.

Incorrect or improper modification may affect the handling, stability or other aspect of the motorcycle operation leading to loss of motorcycle control which could result in serious injury or death.

⚠ WARNING

Whenever there is doubt as to the correct or safe operation of this Triumph motorcycle, contact a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

Operation of an incorrectly performing motorcycle may aggravate a fault and may also compromise safety.

Continued operation of an incorrectly performing motorcycle may affect the handling, stability or other aspect of the motorcycle operation leading to loss of motorcycle control which could result in serious injury or death.

⚠ WARNING

All maintenance is vitally important and must not be neglected. Incorrect maintenance or adjustment may cause one or more parts of the motorcycle to malfunction.

Weather, terrain and geographical location affect maintenance. The maintenance schedule should be adjusted to match the particular environment in which the motorcycle is used and the demands of the individual owner.

Special tools, knowledge and training are required in order to correctly carry out the maintenance items listed in the scheduled maintenance table.

Scheduled maintenance must be carried out by a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

Incorrect or neglected maintenance can lead to a dangerous riding condition, leading to loss of motorcycle control which could result in serious injury or death.

Parking

⚠ WARNING

When parking the motorcycle, always remember the following:

- Engage first gear to help prevent the motorcycle from rolling off the stand.

- The engine, radiator, exhaust system, rear suspension unit and brakes will be hot after riding. DO NOT park where spectators are likely to touch the motorcycle.

- Take care when parking on soft ground or on a steeply inclined surface. Parking under these conditions may cause the motorcycle to fall over.

For further details, refer to the How to Ride the Motorcycle, see page 51.

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

Riding

⚠ DANGER

Never ride the motorcycle when fatigued or under the influence of alcohol or other drugs.

Riding when under the influence of alcohol or other drugs is illegal.

Riding when fatigued or under the influence of alcohol or other drugs reduces the rider's ability to maintain control, leading to loss of motorcycle control which will result in serious injury or death.

⚠ WARNING

Always wear the protective equipment mentioned elsewhere in this Safety First chapter, see page 12.

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

Reporting Safety Defects

If you believe your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying Triumph Motorcycles America Limited, 100 Hartsfield Centre Parkway, Suite 200, Atlanta, GA 30354. Telephone (678) 854 2010.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However NHTSA cannot become involved in individual problems between you, your dealer, or Triumph Motorcycles America Limited.

To contact NHTSA, you may either call the Auto Safety Hotline toll-free at 1-888-327-4236 (or 366-0123 in Washington, DC Area) or write to: NHTSA Headquarters 1200 New Jersey Avenue, SE West Building Washington, DC 20590. You can also obtain other information about motor vehicle safety from the hotline.

Handlebars and Footrests

⚠ WARNING

Do not ride this motorcycle if you are unable to reach the footrests and the handlebar when sitting on the rider's seat.

Make sure you are able to fully operate the following controls while sitting on the seat with both feet flat on the footrests and both hands on the handlebars:

- Operate the rear brake pedal, full travel.

- Operate the gear shift pedal, full travel up and down.

- Operate the clutch lever, full travel.

- Operate the front brake lever, full travel.

A rider who is unable to reach the footrests, handlebar and operate the controls fully will be unable to sit securely on this motorcycle and maintain control.

Failure to follow the advice above may lead to loss of motorcycle control, which could result in serious injury or death.

Parts and Accessories

⚠ WARNING

Owners should be aware that the only approved parts, accessories and modifications for any Triumph motorcycle are those which carry official Triumph approval.

We recommend accessories and modifications be completed by a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

In particular, it is extremely hazardous to install or replace parts or accessories whose installation requires the dismantling of, or addition to, either the electrical or fuel systems and any such modification could cause a safety hazard.

The installation of any non-approved parts, accessories or modifications may adversely affect the handling, stability or other aspect of the motorcycle operation leading to loss of motorcycle control which could result in serious injury or death.

- Triumph does not accept any liability whatsoever for defects caused:
  - by the installation of non-approved parts, accessories or conversions.
  - by the incorrect installation of approved parts, accessories or conversions.

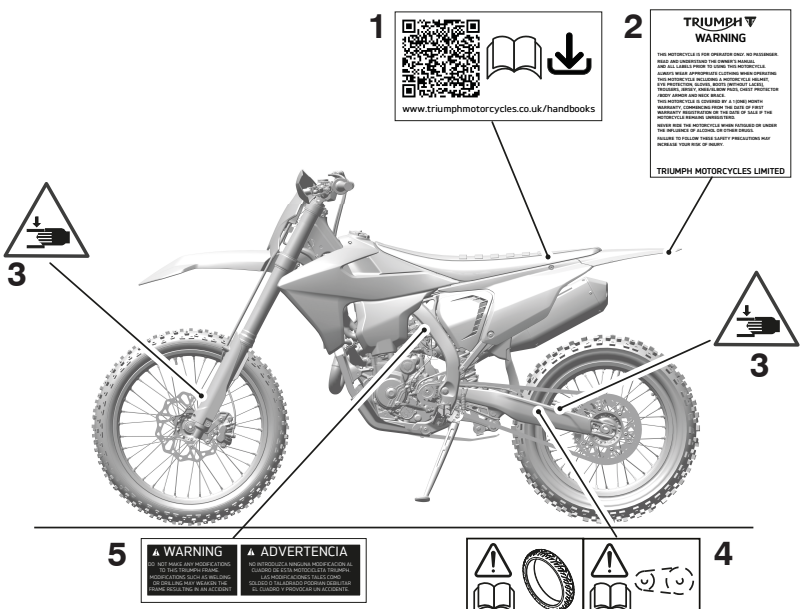
WARNING LABELS

Left Hand Side

TF250-C and TF450-C

NOTICE

The labels detailed on this and the following pages draw your attention to important safety information in this handbook. Before riding, make sure that you have understood and complied with all the information to which these labels relate.

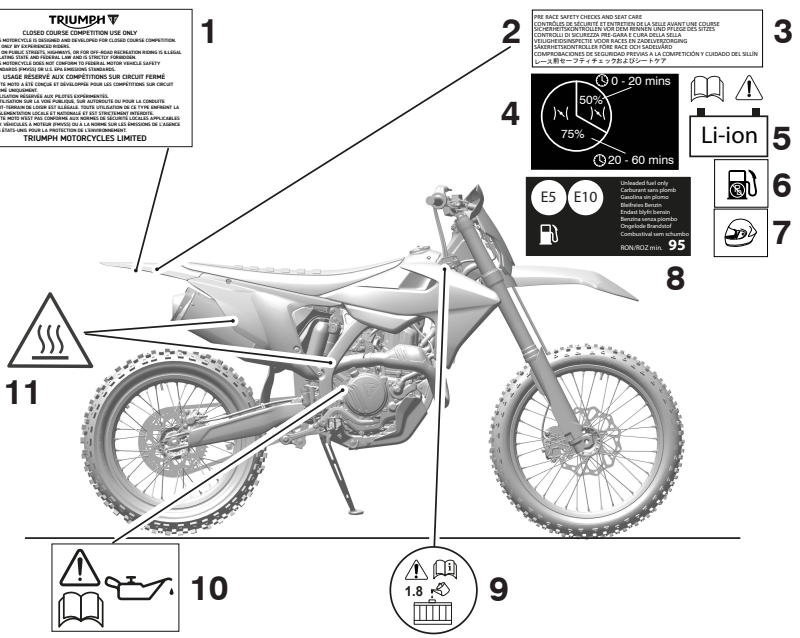


1. QR code label
2. Warranty warning
3. Risk of hand injury area
4. Tires (page 181) and drive chain (page 133)
5. Frame modification warning

Right Hand Side

NOTICE

All warning labels and decals, with the exception of the Breaking-in label, are mounted on the motorcycle using a strong adhesive. In some cases, labels are installed prior to an application of paint lacquer. Therefore, any attempt to remove the warning labels will cause damage to the paintwork or bodywork.

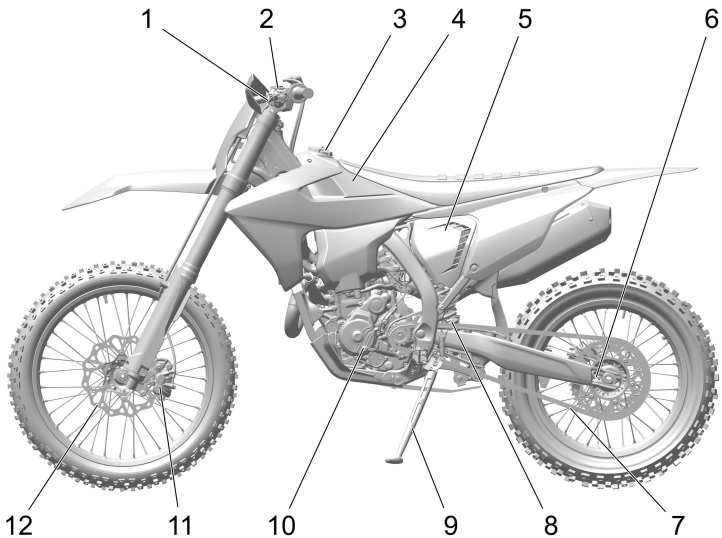


1. Closed course competition use only
2. Multi label (consisting of items 3 - 8)
3. Pre race and safety checks and seat care
4. Breaking-In
5. Lithium battery
6. Fuel
7. Helmet and clothing
8. Fuel grade
9. Coolant
10. Engine oil
11. Hot surface area

PARTS IDENTIFICATION

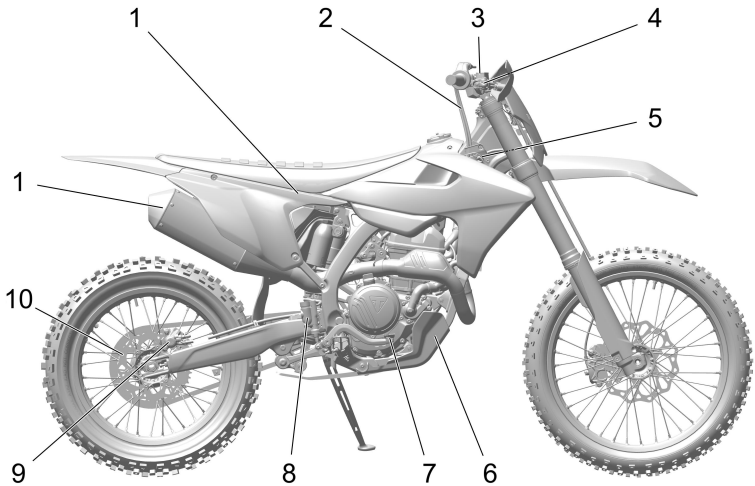
TF250-C and TF450-C

Left Hand Side



1. Clutch lever
2. Clutch fluid reservoir
3. Fuel filler cap
4. Fuel tank
5. Air filter box cover
6. Drive chain adjuster
7. Drive chain
8. Rear suspension unit
9. Side stand
10. Gear shift pedal
11. Front brake caliper
12. Front brake disc

Right Hand Side

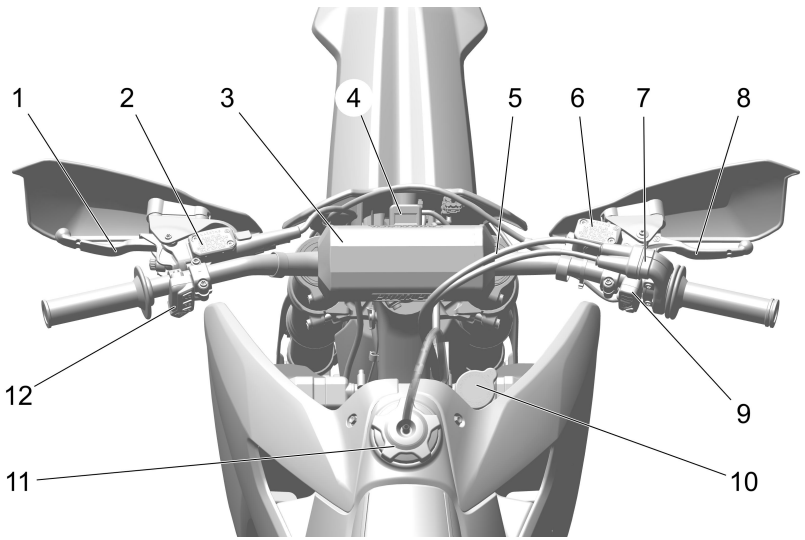


1. Battery (under seat)
2. Throttle cables
3. Front brake fluid reservoir
4. Front brake lever
5. Radiator/Coolant pressure cap
6. Sump guard
7. Rear brake pedal
8. Rear brake master cylinder/fluid reservoir
9. Rear brake caliper
10. Rear brake disk
11. Muffler

PARTS IDENTIFICATION

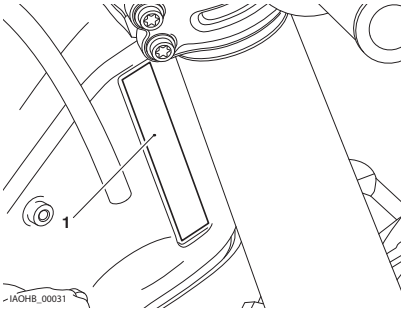
Rider View

TF250-C and TF450-C



1. Clutch lever
2. Clutch fluid reservoir
3. Handlebar pad
4. Service hour counter
5. Throttle cables
6. Front brake fluid reservoir
7. Throttle cable housing
8. Front brake lever
9. Right hand switch housing
10. Radiator/Coolant pressure cap
11. Fuel filler cap
12. Left hand switch housing

Vehicle Identification Number (VIN)

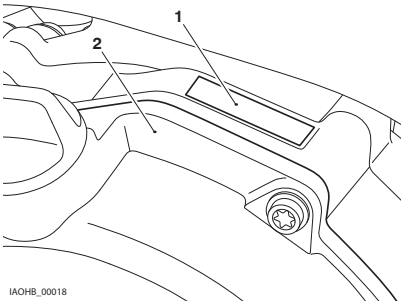


1. Vehicle identification number

The Vehicle Identification Number (VIN) is stamped into the steering head area of the frame. It is also displayed on a label attached to the left hand side of the frame.

Record the vehicle identification number in the Motorcycle Service Handbook.

Engine Serial Number



1. Engine serial number
2. Clutch cover

The engine serial number is stamped on the engine crankcase, directly above the clutch cover.

Record the engine serial number in the Motorcycle Service Handbook.

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Controls

Throttle Control

⚠ WARNING

The throttle grip controls the throttle valve in the throttle body. If the throttle cables are incorrectly adjusted, either too tight or too loose, the throttle may be difficult to control and performance will be affected.

Always be alert for changes in the 'feel' of the throttle system. Changes can be due to wear in the mechanism, which could lead to a sticking throttle.

Check the throttle grip free play in accordance with the scheduled maintenance requirements and, if necessary, make adjustments.

Inspections and repairs must be completed by a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

An incorrectly adjusted, sticking or stuck throttle may lead to loss of motorcycle control which could result in serious injury or death.

⚠ WARNING

Do not continue to ride or race with the Malfunction Indicator Light (MIL) illuminated.

The fault may adversely affect engine performance, exhaust emissions and fuel consumption.

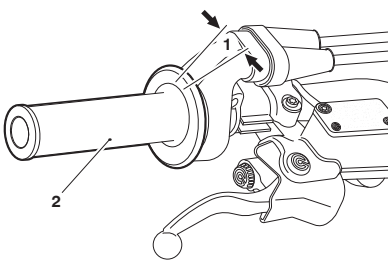
The fault must be checked and rectified by a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

Reduced engine performance could cause a dangerous riding condition, leading to loss of motorcycle control and could result in serious injury or death.

For more information on the Malfunction Indicator Light (MIL), see page 27.

To inspect the throttle:

- Check that the throttle opens smoothly, without undue force and that it closes quickly under its own return spring force without sticking and without manual intervention.
- Check that there is 0.08 - 0.12 in (2 - 3 mm) of throttle grip free play when lightly turning the throttle grip back and forth.

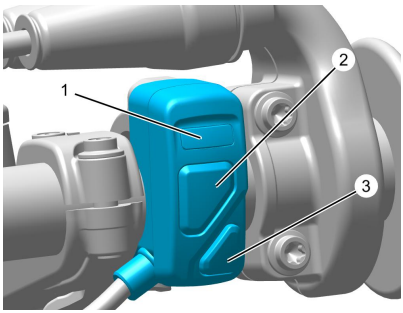


IAOHB_00049

1. **0.08 - 0.12 in (2 - 3 mm)**
2. **Throttle grip**

- If a problem is detected or any doubt exists, or if there is an incorrect amount of free play, the throttle system must be inspected by a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and Enduro center. See page 111.

Right Handlebar Switches



1. **Malfunction Indicator Light (MIL)**
2. **Engine stop**
3. **Engine start**

Malfunction Indicator Light

The Malfunction Indicator Light (MIL) for the engine management system illuminates when the ignition is switched ON (to indicate that it is working) but should not become illuminated when the engine is running.

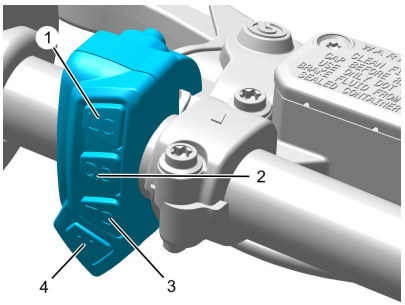
Engine Stop Switch

The STOP switch switches off the engine.

Engine Start Switch

The START switch operates the electric starter.

Left Handlebar Switches



1. **Launch control**
2. **Quickshifter**
3. **Traction control**
4. **Engine map**

Launch Control

A long press on the launch control switch will engage the launch control system and the switch will illuminate, see page 35.

Quickshifter

A short press of the quickshifter switch will enable/disable the actuation of the quickshifter sensor, see page 46.

A long press of the quickshifter switch will reset the quickshifter sensor, see page 46.

Traction Control

A short press on the traction control switch will enable/disable traction control, see page 35.

Engine Map

There are two map setting, Map 1 and Map 2. These Maps control the engine response and traction control, see page 36.

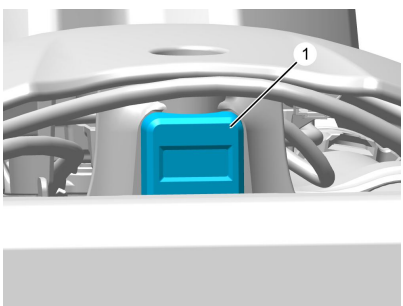
A short press of the engine map switch will change from Map 1 to Map 2 or Map 2 to Map 1.

Service Hour Counter

The service hour counter is located in front of the handlebar behind the front number board.

The service hour counter starts counting the hours and minutes when the engine is running. It will stop counting when the engine is switched off.

The value shown in the hour counter can not be adjusted or cleared.



1. Service hour counter

Fuel Handling Precautions

General

The following information provides basic precautions which must be observed if gasoline is to be handled safely. It also outlines other areas of risk which must not be ignored. This information is issued for basic guidance only and, if in doubt, appropriate inquiries should be made to your local Fire Officer.

Gasoline

When gasoline evaporates it produces 150 times its own volume in vapor which when diluted with air becomes a readily ignitable mixture. The vapor is heavier than air and will always fall to the lowest level. It can readily be distributed throughout any indoor environment by air currents, consequently, even a small spillage of gasoline is potentially very dangerous.

⚠ WARNING

Gasoline is highly flammable and can be explosive under certain conditions. When opening the fuel tank cap always observe all the following items:

- Turn the motorcycle ignition switch OFF.

- Do not smoke.

- Always have a suitable fire extinguisher close at hand when handling or draining fuel or fuel systems. Fire extinguishers must also be present in areas where fuel is stored.

- Always disconnect the vehicle battery, negative (black) lead first, before carrying out, dismantling or draining work on a fuel system.

- Whenever gasoline is being handled, drained, stored or when fuel systems are being dismantled, make sure that the area is well ventilated. All potential forms of ignition must be extinguished or removed (this includes any appliance with a pilot light). Any lead-lamps must be flame-proof and kept clear of any fuel spillage.

- Warning notices must be posted at a safe distance from the site of the work to warn others that gasoline is being openly handled. The notice must instruct the reader of the precautions which must be taken.

Failure to follow the advice above could lead to a fire hazard which could result in serious injury, or death.

⚠ WARNING

No one should be permitted to repair components associated with gasoline without first having specialist training on the fire hazards which may be created by incorrect installation and repair of items associated with gasoline.

Inspections and repairs must be completed by a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

Repairs carried out by untrained personnel could bring about a safety hazard leading to a risk of serious injury or death.

⚠ WARNING

Draining or extraction of gasoline from a vehicle fuel tank must be carried out in a well ventilated area.

The receptacle used to contain the gasoline must be more than adequate for the full amount of fuel to be extracted or drained. The receptacle should be clearly marked with its contents, and placed in a safe storage area which meets the requirements of local authority regulations.

When gasoline has been extracted or drained from a fuel tank, the precautions governing naked lights and ignition sources should be maintained.

Failure to follow the advice above could lead to a fire hazard which could result in serious injury or death.

Fuel Tank Removal

Fuel tanks should have a GASOLINE VAPOUR warning label attached to them as soon as they are removed from the vehicle. In all cases, they must be stored in a secured, marked area.

Chassis Repairs

⚠ WARNING

If the motorcycle is involved in an accident, collision or fall, it must be taken for inspection and repair.

Inspections and repairs must be completed by a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

Any accident can cause damage to the motorcycle that, if not correctly repaired, may cause a second accident which could result in serious injury or death.

Fuel





Fuel Grade

Triumph motorcycles are designed to use unleaded fuel and will give optimum performance if the correct grade of fuel is used. Always use unleaded fuel with a minimum octane rating of 95 RON.

Triumph motorcycles are designed to run on unleaded gasoline with a CLC or AKI octane rating (R+M)/2 of 89 or higher (95 RON). Federal regulations require that pumps delivering unleaded gasoline are marked 'UNLEADED' and that the Cost of Living Council (CLC) or Anti-Knock Index (AKI) octane rating is also displayed. These ratings are an average of the Research Octane Number (RON) and the Motor Octane Number (MON).

Ethanol

In Europe, Triumph motorcycles are compatible with Ethanol E5 and E10 (5% and 10% Ethanol) unleaded fuel.

In all other markets Ethanol up to E25 (25% Ethanol) may be used.

Engine Calibration

In certain circumstances engine calibration may be required. This should be completed by a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

NOTICE

The motorcycle can be permanently damaged if it is allowed to operate with the incorrect grade of fuel or incorrect engine calibration.

Always make sure that the fuel used is of the correct grade and quality.

Damage caused by using the incorrect fuel or engine calibration is not considered a manufacturing defect, and will not be covered under warranty.

NOTICE

The use of leaded fuel is illegal in some countries, states or territories.

NOTICE

If detonation ('knocking' or 'pinging') occurs at a steady engine speed under normal load, use a different brand of gasoline or gasoline that has a higher octane rating.

Oxygenated Gasoline

To help in meeting clean air standards, some areas of the U.S. use oxygenated gasoline to help reduce harmful emissions. These gasolines are a blend of conventional gasoline and another compound, such as alcohol. This Triumph motorcycle will give its best performance when using unleaded gasoline. However, the following should be used as a guide if you use any oxygenated fuels.

Ethanol

Ethanol fuel is a mixture of 10% Ethanol and 90% gasoline and is often described under the names 'gasohol', 'Ethanol enhanced', or 'contains Ethanol'. This fuel may be used in your Triumph motorcycle.

MTBE (Methyl Tertiary Butyl Ether)

The use of gasolines containing up to 15% MTBE (Methyl Tertiary Butyl Ether) is permitted in this Triumph motorcycle.

Methanol

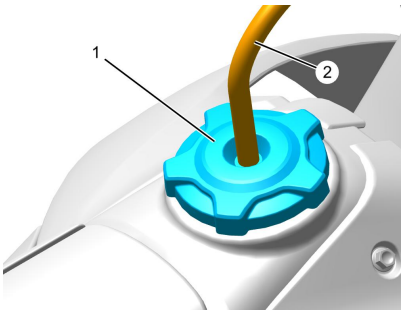
Fuels containing methanol should not be used as damage to components in the fuel system can be caused by contact with methanol.

NOTICE

Because of the generally higher volatility of oxygenated fuels, starting, engine response and fuel consumption may be adversely affected by their use. Should any of these difficulties be experienced, run the motorcycle on normal unleaded gasoline.

Fuel Tank Cap

To open the fuel tank cap, rotate the cap counterclockwise and lift clear of the tank filler neck.



1. **Fuel tank cap**
2. **Breather pipe**

To close the cap, align the cap to the tank filler neck and rotate the cap clockwise until the cap seals against the filler neck.

Route the breather pipe to the front of the fuel tank without any kinks in the pipe.

Filling the Fuel Tank

⚠ WARNING

To help reduce hazards associated with refueling, always observe the following fuel safety instructions:

- Gasoline (fuel) is highly flammable and can be explosive under certain conditions. When refueling, turn the ignition switch to the OFF position.

- Do not smoke.

- Do not use a mobile telephone.

- Make sure that the refueling area is well ventilated and free from any source of flame or sparks. This includes any appliance with a pilot light.

- Pay full attention and remain alert while refueling.

- Never fill the tank until the fuel level rises into the filler neck. Heat from sunlight or other sources may cause the fuel to expand and overflow creating a fire hazard.

- After refueling always check that the fuel filler cap is correctly closed.

- Because gasoline (fuel) is highly flammable, any fuel leak or spillage, or any failure to observe the safety advice given above will lead to a fire hazard, which could cause damage to property, serious injury or death.

⚠ WARNING

Overfilling the tank can lead to fuel spillage.

If fuel is spilled, thoroughly clean up the spillage immediately and dispose of the materials used safely.

Take care not to spill any fuel on the engine, exhaust pipes, tires or any other part of the motorcycle.

Fuel spilled near to, or onto the tires will reduce the tires' ability to grip the road. This will result in a dangerous riding condition potentially causing loss of motorcycle control and an accident.

Because fuel is highly flammable, any fuel leak or spillage, or any failure to observe the safety advice given above may lead to a fire hazard, which could cause damage to property and injury or death to persons.

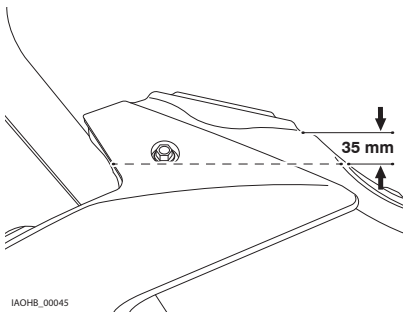
NOTICE

Avoid filling the tank in rainy or dusty conditions where airborne material can contaminate the fuel.

Contaminated fuel may cause damage to fuel system components.

Fill the fuel tank slowly to help prevent spillage. Do not fill the tank to a level above the bottom of the filler neck. This will make sure that there is enough air space to allow for fuel expansion if the fuel inside the tank expands through absorption of heat from the engine or from direct sunlight.

- Switch off the engine.
- Remove the filler cap.
- Fill the fuel tank up to 1.38 in (35 mm) below the fuel tank filler neck.



Fuel level line

- Install the filler cap and tighten.

Launch Control

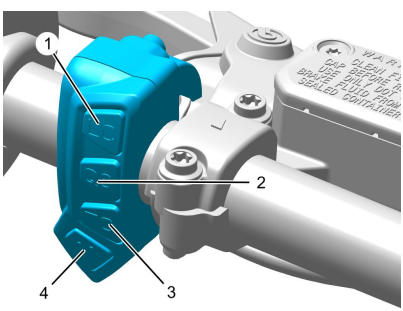
When the launch control has been activated, its LED in the switch will be illuminated to show its ready.

When the race starts, the LED will flash on and off until the launch control has automatically turned off.

With launch control activated, the clutch operation is to be operated the same as if launch control is not activated.

To activate launch control:

- The motorcycle is stationary.
- Engine at idle speed.
- Transmission in neutral.
- Press and hold the **LC** switch on the left hand switch housing until its LED is illuminated.



1. **Launch control**
2. **Quickshifter**
3. **Traction control**
4. **Engine map**

- The launch control is automatically deactivate a few seconds after the race has started.

Launch control can also deactivate with:

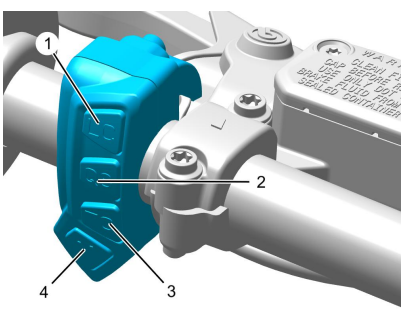
- a long press on the **LC** switch on the left hand switch housing.
- the throttle is fully open.

Traction Control

When the traction control has been activated, its LED in the switch will be illuminated.

To activate traction control:

- A short press of the **TC** switch will activate the traction control.



1. **Launch control**
2. **Quickshifter**
3. **Traction control**
4. **Engine map**

- A short press of the **TC** switch will switch off the traction control.

Engine MAP

The engine MAP switch has two functions:

- switch between MAP 1 and MAP 2.
- change the brightness of the switch housing LEDs.

Engine MAP

The engine Maps control the engine response.

- MAP 1 has the standard settings for engine response and traction control.
- MAP 2 has the full power setting for engine response and traction control.

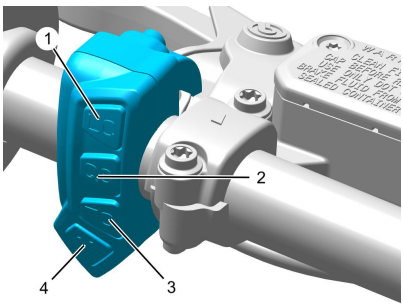
To change the engine MAP:

NOTICE

If MAP 1 is selected, the MAP switch will not be illuminated.

If MAP 2 is selected, the MAP switch will be illuminated.

- A short press of the engine MAP switch will change MAP1 to MAP 2 or MAP 2 to MAP 1.



1. **Launch control**
2. **Quickshifter**
3. **Traction control**
4. **Engine map**

Switch Housings Brightness

To change the brightness of the switch housing LEDs:

- A long press of the engine MAP switch will change the brightness of the switch housing LEDs.

Raising and Lowering the Motorcycle

⚠ CAUTION

The lift stand and the plug in stand are designed only for the weight of the motorcycle.

Do not lean, sit or climb on the motorcycle when it is supported on a lift stand or by the plug in stand.

Failure to follow the advice above may cause the motorcycle to fall over resulting in motorcycle damage and minor or moderate injury.

NOTICE

Park the motorcycle on a firm level surface.

Make sure nobody sits on the motorcycle when it is parked.

Raising the Motorcycle

- While supporting the motorcycle, raise the side stand.
- Using a suitable lift stand, raise the motorcycle by the frame under the engine.

Lowering the Motorcycle

- Lower the motorcycle to the ground and remove the lift stand.
- Park the motorcycle on the side stand.

Seats

Seat Care

NOTICE

To prevent damage to the seat or seat cover, care must be taken not to drop the seat. Do not lean the seat against the motorcycle or any surface which may damage the seat or seat cover. Instead, place the seat, with the seat cover facing upwards, on a clean, flat surface which is covered with a soft cloth.

Do not place any item on the seat which may cause damage or staining to the seat cover.

For seat cleaning information, see Seat Care on page 211.

Seat - Removal

⚠ WARNING

Make sure that the motorcycle is stabilized 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.

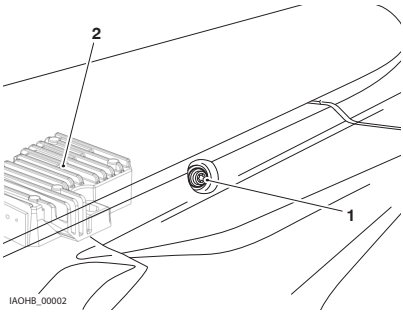
⚠ CAUTION

The regulator/rectifier unit is located under the seat and gets hot when the engine is running.

Avoid contact with the regulator/rectifier by wearing suitable protective clothing when removing the seat.

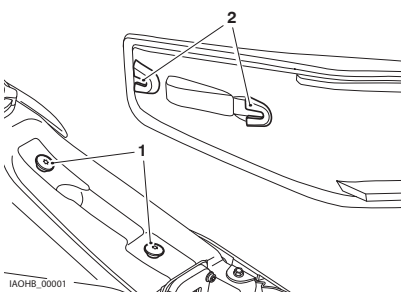
Contact with a hot regulator/rectifier may cause the skin to get burned.

- Remove the two fasteners from the rear of the seat.



1. **Fastener (left hand side shown)**
2. **Regulator/rectifier location**

- Lift the seat up from the back and slide rearwards to release it from the two locating fasteners on the fuel tank.



1. **Locating fasteners**
2. **Slots**

Seat - Installation

⚠ WARNING

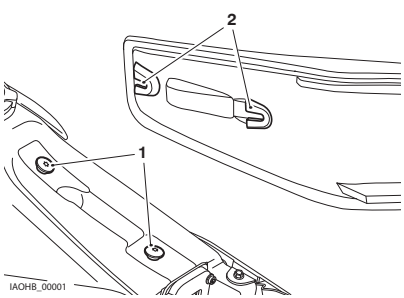
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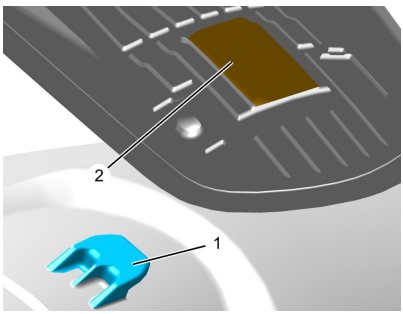
Failure to follow the advice above could result in serious injury or death.

- Align the two slots on the seat with the two locating fasteners on the fuel tank.



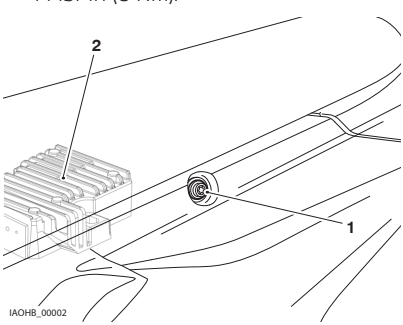
1. **Locating fasteners**
2. **Slots**

- Make sure that the hook on the rear fender aligns with the slot on the seat base.



1. **Rear fender hook**
2. **Seat slot**

- Push the seat fully forwards.
- Install the fasteners and tighten to 71 lbf in (8 Nm).



1. **Fastener (left hand side shown)**
2. **Regulator/rectifier location**

- Grasp the seat and make sure that it is securely retained.

Transporting

NOTICE

Motocross motorcycles are designed for off road use only and must not be used on public roads or pavements.

The Motocross motorcycles are not road legal as they do not have safety features such as headlights, brake/tail lights, turn signals and rear view mirrors.

The purchaser, owner, and/or riders of this motorcycle are directly responsible to know and obey all local, regional, and national laws regarding the riding and use of this Motocross motorcycle.

The use of this Motocross on public roads may render the user liable to prosecution.

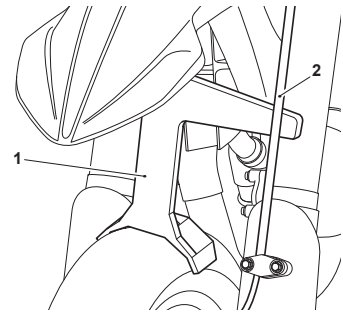
NOTICE

When transporting the closed-course competition motorcycle, make sure the motorcycle is secured with straps to prevent it from moving or falling over while in transit.

Install a front fork support guard to prevent too much load on the front forks when strapping down. Make sure the brake line is in front of the front fork support guard.

Only tighten the front retaining straps to the point that the front fork support guard has made contact with the fender and the tire.

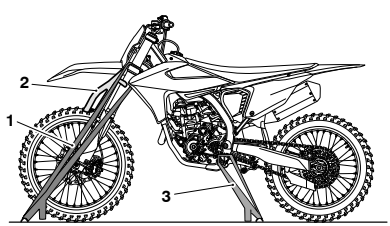
- Load the motorcycle onto its transporting platform.
- Route retaining straps over the lower yoke of the front forks and attach to the transporting platform.
- Install a suitable front fork support guard with the brake line positioned in front of the guard.



TP0421

1. **Front fork support**
2. **Front brake line**

- Tighten the front straps until the front fork support guard has made contact with the fender and the tire.
- Route retaining straps around the rider foot pegs and secure to the transporting platform.



1. **Front retaining strap**
2. **Front fork support**
3. **Rear retaining strap**

- Check to make sure the motorcycle is secure and will not get damaged or fall over.

Owner's Handbook and Tool Kit

CAUTION

The lift stand and the plug in stand are designed only for the weight of the motorcycle.

Do not lean, sit or climb on the motorcycle when it is supported on a lift stand or by the plug in stand.

Failure to follow the advice above may cause the motorcycle to fall over resulting in motorcycle damage and minor or moderate injury.

NOTICE

Park the motorcycle on a firm level surface.

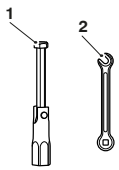
Make sure nobody sits on the motorcycle when it is parked.

The Owner's Handbook or Quick Start Guide and a tool kit are supplied with the motorcycle.

Tool Kit

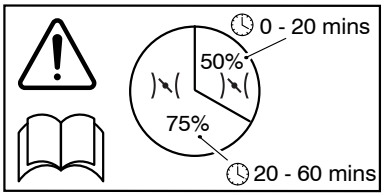
The tool kit includes:

- Spark plug tool
- Wheel spoke wrench



1. **Spark plug tool**
2. **Wheel spoke wrench**

Breaking-In



Running-in is the name given to the process that occurs during the first hours of a new motorcycles operation.

Internal friction of the engine components will be higher when new and will be reduced as the engine is run-in.

A period of careful running-in will optimize exhaust emissions, performance, fuel economy, longevity of the engine and other motorcycle components.

During the first 20 minutes:

- Ride the motorcycle and use 50% or less of the throttle opening
- Avoid high engine speeds at all times
- Avoid riding at one constant engine speed, whether fast or slow, for a long period of time
- Avoid aggressive starts, stops, and rapid accelerations, except in an emergency

At the end of the 20 minute running-in period stop and check the following:

- Mounted areas and fasteners for looseness
- Oil level, see page 96
- Oil leaks
- Fuel leaks.

During the next 40 minutes:

- Ride the motorcycle and use 75% or less of the throttle opening;

At the end of the 40 minute running-in period stop and check and, if necessary adjust the following:

- Engine and swinging arm mounting areas and fasteners for looseness
- Oil level, see page 96.
- Oil leaks
- Fuel leaks
- Throttle cable free play, see page 109
- Drive chain free movement, see page 134.

Both during and after breaking-in has been completed:

- Do not over-rev the engine when cold
- Do not lug the engine. Always downshift before the engine begins to labor

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Starting the Engine 44
Shifting Gears 46
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Braking 48
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Stopping the Engine

⚠ WARNING

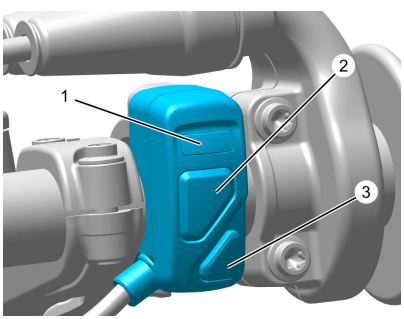
Do not stop the engine using the engine stop switch while the motorcycle is moving.

Always bring the motorcycle to a stop safely and engage Neutral gear prior to stopping the engine.

Stopping the engine while the motorcycle is moving can lock the rear wheel leading to loss of motorcycle control which could result in serious injury or death.

To stop the engine:

- Close the throttle completely.
- Select neutral.
- Press the engine stop switch in the STOP position.



1. **Malfunction Indicator Light (MIL)**
2. **Engine stop**
3. **Engine start**

- Select first gear.
- Support the motorcycle on a firm, level surface with side stand.

Starting the Engine

⚠ DANGER

Never start the engine or run the engine in a confined area.

Always operate the motorcycle in the open air or in an area with adequate ventilation.

Exhaust fumes are poisonous and will cause loss of consciousness and death within a short period of time.

⚠ WARNING

This motocross motorcycle is **not** equipped with radiator cooling fan.

If the engine is left to idle for seven minutes, without operating the throttle, the engine will automatically switch off.

Do not restart the engine until it has cooled down.

Failure to follow the advice above may lead to engine failure, loss of motorcycle control which could result in serious injury or death.

NOTICE

Do not operate the starter continuously for more than five seconds as the starter motor will overheat and the battery will become discharged.

Wait 30 seconds between each operation of the starter to allow for cooling and recovery of battery power.

Do not let the engine idle for long periods as this may lead to overheating which will cause damage to the engine.

NOTICE

At temperatures below 60°F (15°C) several attempts for starting the engine may be necessary to warm up the lithium-ion battery.

The malfunction indicator lamp will illuminate during this start up process.

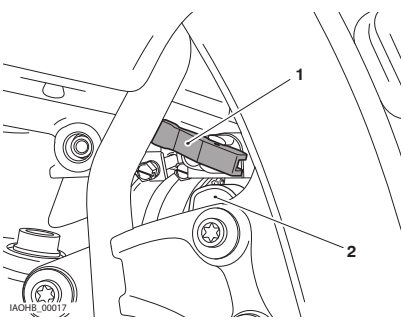
NOTICE

Before starting the engine and before riding, always operate the throttle twist grip to ensure it returns under its own spring force.

Apply the front and rear brake separately to ensure correct operation of the brakes.

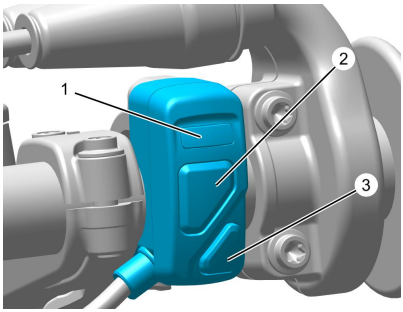
To start the engine:

- Check the engine oil level, see page 96.
- Make sure the transmission is in neutral.
- Remove the plug in stand.
- If the ambient temperature is at 68°F (20°C) or lower and the engine is cold, pull out the cold start lever on the throttle body.



1. **Cold start lever**
2. **Throttle body**

- Leaving the throttle fully closed, push the starter button until the engine starts.



1. **Malfunction Indicator Light (MIL)**
2. **Engine stop**
3. **Engine start**

⚠ CAUTION

The cold start lever will not automatically turn off.

With the cold start lever pulled out, the engine speed will be much higher than the engine idle speed.

The rider must push in the cold start lever before riding the motorcycle or when the engine is warm.

Failure to follow the advice above could lead to loss of motorcycle control which could result in minor or moderate injury.

- Push in the cold start lever at the throttle body before riding the motorcycle or when the engine is warm.

If the engine is left to idle for seven minutes, without operating the throttle, the engine will automatically switch off.

Shifting Gears

⚠ WARNING

Take care to avoid opening the throttle too far or too fast in any of the lower gears, as this can lead to the front wheel lifting from the ground (pulling a 'wheelie') and to the rear tire breaking traction (wheel spin).

Always open the throttle cautiously, particularly if you are unfamiliar with the motorcycle.

Pulling a 'wheelie' or loss of traction may lead to loss of motorcycle control, which could result in serious injury or death.

⚠ WARNING

Do not shift to a lower gear at speeds that will cause excessive engine rpm (r/min).

Shifting down should be done such that low engine speeds will be ensured.

Shifting to a lower gear at high speed can lock the rear wheel, leading to loss of motorcycle control, which could result in serious injury or death.

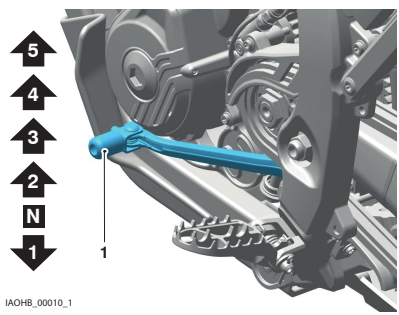
NOTICE

The gear shift mechanism is the 'positive stop' type. This means that, for each movement of the gear shift pedal, you can only select each gear, one after the other, in ascending or descending order.

Gear Shift with the Quickshifter Turned Off

To shift gears:

- Close the throttle while pulling in the clutch lever.
- Shift into the next higher or lower gear.



IAOHB_00010_1

1. Gear shift pedal

- Open the throttle part way, while releasing the clutch lever.
- Always use the clutch when shifting gear.

It is necessary to use a positive pedal force to ensure a smooth gear shift.

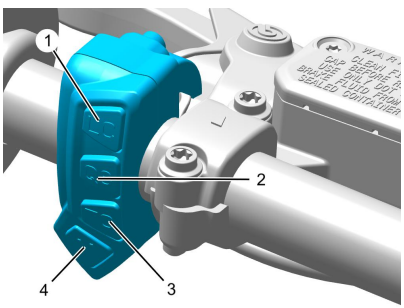
Gear Shift with the Quickshifter Turned On

NOTICE

The quickshifter will only operate for up-shifts from second gear and only then if the engine speed is greater than 2,500 rpm

The clutch must be used for first to second gear shifts, down-shifts, stopping and pulling away.

- A short press of the quickshifter switch on the left hand switch housing will turn on the quickshifter.



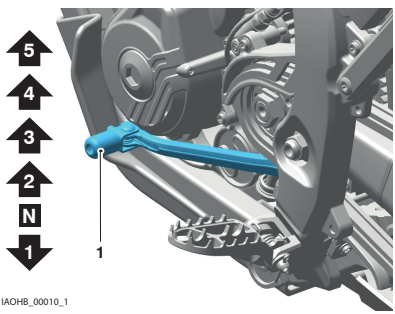
1. **Launch control**
2. **Quickshifter**
3. **Traction control**
4. **Engine map**

- To select first gear and to shift to second gear close the throttle while pulling in the clutch lever.

NOTICE

The quickshifter will not operate if an up-shift is attempted by mistake when in 5th gear.

- To select the gears from second to fifth gear, the operation of the clutch is not required.



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1. **Gear shift pedal**

- Always use the clutch when shifting down the gears.
- A short press of the quickshifter switch will turn off the quickshifter.

If required, a long press of the quickshifter switch will reset the quickshifter system adaption.

Moving Off

- Pull in the clutch lever and select first gear.
- Open the throttle a little and let out the clutch lever slowly.
- As the clutch starts to engage, open the throttle a little more, allowing enough engine speed to avoid stalling.

Braking

⚠ WARNING

WHEN BRAKING, OBSERVE THE FOLLOWING:

- Close the throttle completely, leaving the clutch engaged to allow the engine to help slow down the motorcycle.

- Shift down one gear at a time such that the transmission is in first gear when the motorcycle comes to a complete stop.

- When stopping, always apply both brakes at the same time. Normally the front brake should be applied a little more than the rear.

- Shift down or fully disengage the clutch as necessary to keep the engine from stalling.

- Never lock the brakes, as this may cause loss of control which could result in serious injury, or death.

- Moisture and dirt reduces baking efficiency. Operate the front and rear brakes carefully to remove moisture and dirt from the brake pads and discs.

- On sandy, wet or slippery surfaces, mainly use the rear brake.

Failure to follow the advice above may lead to loss of motorcycle control, which could result in serious injury or death.

⚠ WARNING

When descending a long steep gradient make use of the engine's braking effect by down shifting and use both front and rear brakes intermittently.

Continuous brake application or use of the rear brake only can overheat the brakes and reduce their effectiveness.

Failure to follow the advice above may lead to loss of motorcycle control, which could result in serious injury or death.

⚠ WARNING

For your safety, always exercise extreme caution when braking, accelerating or turning as any improper action can cause loss of motorcycle control.

Independent use of the front or rear brakes reduces overall braking performance. Extreme braking may cause either wheel to lock.

When possible, reduce speed or brake before entering a turn as closing the throttle or braking in mid-turn may cause wheel slip.

When riding in wet or rainy conditions, or on loose surfaces, the ability to maneuver and stop will be reduced. All of your actions should be smooth under these conditions.

Failure to follow the advice above may lead to loss of motorcycle control, which could result in serious injury or death.

⚠ WARNING

For your safety, always exercise extreme caution when braking, accelerating or turning as any improper action can cause loss of motorcycle control.

Independent use of the front or rear brakes reduces overall braking performance. Extreme braking may cause either wheel to lock.

When possible, reduce speed or brake before entering a turn as closing the throttle or braking in mid-turn may cause wheel slip.

Failure to follow the advice above may lead to loss of motorcycle control, which could result in serious injury or death.

⚠ WARNING

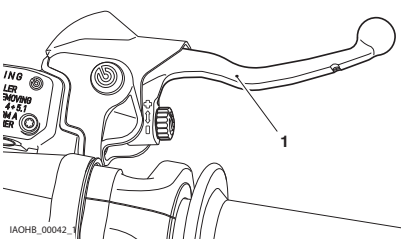
Do not coast with the engine switched off, and do not tow the motorcycle.

The transmission is pressure lubricated only when the engine is running.

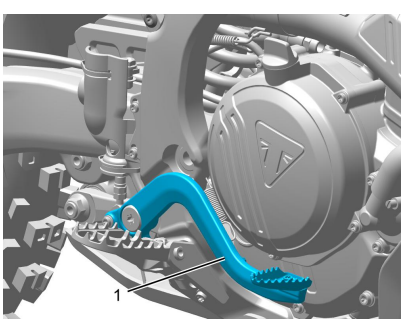
Inadequate lubrication may cause damage or seizure of the transmission, leading to loss of motorcycle control, which could result in serious injury or death.

Applying the Brakes

- On sandy, wet or slippery surfaces, mainly use the rear brake.
- Reduce speed or brake before entering a turn.
- When descending a long steep gradient make use of the engine's braking effect by down shifting and use both front and rear brakes intermittently.



1. **Front brake lever**



1. **Rear brake pedal**

Parking

⚠ WARNING

Gasoline is extremely flammable and can be explosive under certain conditions.

If parking inside a garage or other structure, be sure it is well ventilated and the motorcycle is not close to any source of flame or sparks. This includes any appliance with a pilot light.

Failure to follow the above advice may cause a fire resulting in damage to property, serious injury or death.

⚠ CAUTION

Take care when parking on soft ground or on a steeply inclined surface.

Parking under these conditions may cause the motorcycle to fall over, which could result in minor to moderate injury.

⚠ CAUTION

The engine and exhaust system will be hot after riding.

DO NOT park where spectators are likely to touch the motorcycle.

Touching any part of the engine or exhaust system when hot could result in minor or moderate injury.

⚠ CAUTION

The lift stand and the plug in stand are designed only for the weight of the motorcycle.

Do not lean, sit or climb on the motorcycle when it is supported on a lift stand or by the plug in stand.

Failure to follow the advice above may cause the motorcycle to fall over resulting in motorcycle damage and minor or moderate injury.

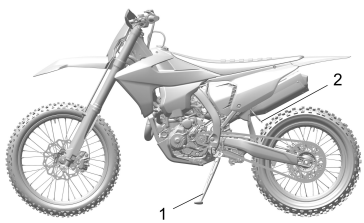
NOTICE

Park the motorcycle on a firm level surface.

Make sure nobody sits on the motorcycle when it is parked.

To park the motorcycle:

- Close the throttle completely.
- Select neutral.
- Press the engine stop switch.
- Select first gear to prevent the motorcycle from moving.
- Park the motorcycle on the side stand.



1. **Side stand**
2. **Rubber strap**

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Pre Race Safety Checks



WARNING

Before each race and before riding this motorcycle, complete the Pre Race Safety Checks as listed below.

The time required is minimal, and these checks will help ensure a safe, and reliable ride.

Failure to perform these checks before each race and you riding may lead to loss of motorcycle control which could result in serious injury or death.

If any faults are found during these checks, the fault must be completed by a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

Check the following items before each race and before you ride the motorcycle.

Check the following:

Chassis and Frame Safety Checks

Frame: Check the frame for damage, cracks, corrosion and deformation, see page 56.

Swinging Arm: Check the swinging arm for damage, cracks, corrosion and deformation, see page 57.

Footrests and their Mountings: Check the footrests and their mountings for damage, cracks, corrosion and deformation, see page 56

Handlebar: Check the handlebar for damage, cracks, corrosion and deformation, see page 58.

Electrical: Check the electrical system is working.

Steering Action: Smooth but not loose from lock to lock. No binding of any of the control cables.

Front Forks: Smooth action. No leaks from fork seals, see page 161. Clean the dust seals on the front forks, see page 165.

Brakes: Pull the brake lever and push the brake pedal to check for correct resistance. Investigate any lever/pedal where the travel is excessive before meeting resistance, or if either control feels spongy in operation.

Brake Fluid Levels: Check for brake fluid leakage. Brake fluid levels must be between the MAX and MIN marks on both reservoirs, see page 139 and page 142.

Front Brake Pads: Check that the correct amount of friction material is remaining on all the brake pads, see page 145.

Rear Brake Pads: Check that the correct amount of friction material is remaining on the brake pads, see page 147.

Tires: Check tire inflation pressures (when cold). Check tread depth/wear. Check tire/wheel damage and punctures, see page 181.

Wheels: Check the wheel rim for damage and wheel run-out, see page 179. Check the tension of the wheel spokes, see page 177.

Fasteners and hose clamps: Check that all fastener and hose clamps are tight and secure.

Engine Safety Checks

Engine Stop: Check that the stop switch turns the engine off, see page 44.

Clutch: Check for clutch fluid leakage. The clutch fluid level must be up to the upper level line in the reservoir, see page 130.

Throttle: Check that the throttle opens smoothly, without undue force and that it closes quickly under its own return spring force without sticking and without manual intervention, see page 109.

Drive Chain and Sprockets: Check the drive chain and sprockets for wear, see page 136.

Drive Chain: Correct adjustment, see page 134. Check that the drive chain is clean and lubricated, see page 133

Engine Oil: Check for correct oil level at sight glass. Add correct specification oil as required. No leaks from the engine, see page 96.

Fuel: Check for adequate supply in fuel tank, check for fuel leaks, see page 31.

Coolant: Check for coolant leakage. Check the coolant level in the radiator (when the engine is cold), see page 102.

Air Filter: Check the air filter and, if required, clean it, see page 116.

Frame Inspection

⚠ WARNING

Make sure that the motorcycle is stabilized 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.

⚠ WARNING

Do not make repairs to a damaged frame.

A repaired frame will not offer the same structural strength as a new one.

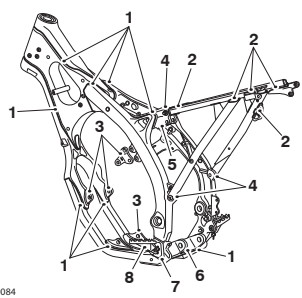
Inspections and repairs must be completed by a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center or, if required, a new one must be installed.

Failure to follow the advice above may lead to loss of motorcycle control which could result in serious injury or death.

Check the frame for damage, cracks and deformation.

While checking the complete frame, pay particular attention to the following areas:

- Subframe mountings.
- All welds.
- Engine mountings.
- Upper mounting for the rear suspension unit.
- Lower mounting for the rear suspension unit drop links.
- Footrest.
- Footrest mountings.



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1. **Welds on main frame**
2. **Welds on subframe**
3. **Engine mountings**
4. **Subframe mountings**
5. **Upper mounting**
6. **Lower mounting**
7. **Footrest mounting**
8. **Footrest**

If the frame is damaged, contact a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center to inspect the frame and, if required, install a new one.

Swinging Arm Inspection

⚠ WARNING

Make sure that the motorcycle is stabilized 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.

⚠ WARNING

Do not make repairs to a damaged swinging arm.

A repaired swinging arm will not offer the same structural strength as a new one.

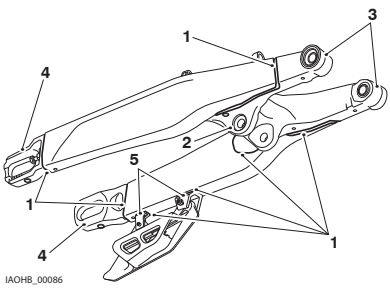
If the swinging arm is damaged, a new one must be installed by a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

Failure to follow the advice above may lead to loss of motorcycle control which could result in serious injury or death.

Check the swinging arm for damage, cracks and deformation.

While checking the complete swinging arm, pay particular attention to the following areas:

- All welds.
- Mounting for the rear suspension unit rocker assembly.
- Mountings to frame.
- Mountings for rear wheel spindle.
- Mounting brackets for lower chain guard.



1. **Welds**
2. **Mounting for rear suspension unit**
3. **Mountings to frame**
4. **Mountings for rear wheel spindle**
5. **Mounting brackets for lower chain guard**

- Check the rear suspension unit mounting for cracks and damage.
- Check the mounting brackets for drive chain rear chain guide for cracks and damage.
- Check the welding on the swinging arm for cracks.
- Check the swinging arm mountings to the frame for cracks.

If the swinging arm is damaged, contact a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center to inspect the swinging arm and, if required, install a new one.

Handlebar Inspection

⚠ WARNING

Make sure that the motorcycle is stabilized 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.

⚠ WARNING

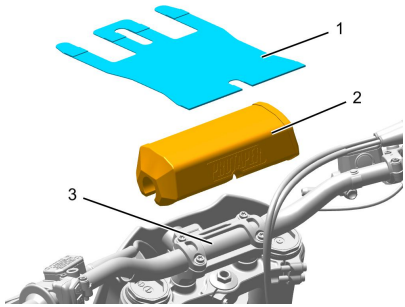
Do not make repairs to a damaged handlebar.

A repaired handlebar will not offer the same structural strength as a new one.

If the handlebar is damaged, a new one must be installed by a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

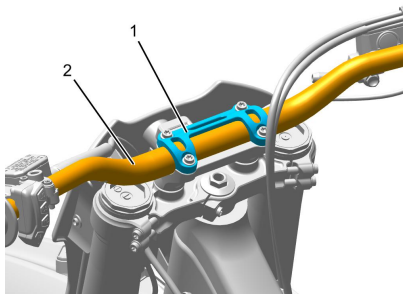
Failure to follow the advice above may lead to loss of motorcycle control which could result in serious injury or death.

- Undo the Velcro pads at the rear of the handlebar pad and release the cover.
- Lift the handlebar pad upwards to remove.



1. **Handlebar pad cover**
2. **Handlebar pad**
3. **Handlebar**

Check the Handlebar for deformation and cracks around the handlebar clamp area.



1. **Handlebar clamp**
2. **Handlebar**

If the handlebar is damaged, contact a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorised Triumph motocross and enduro centre to inspect the handlebar and, if required, install a new one.

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Chassis Setup

⚠ WARNING

Make sure that the correct balance between front and rear suspension is maintained.

Suspension imbalance could significantly change handling characteristics and control of control motorcycle.

Refer to the following chassis setup procedures for further information.

Whenever there is doubt as to the correct or safe operation of this Triumph motorcycle, contact a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

Suspension imbalance may lead to loss of motorcycle control which could result in serious injury or death.

The chassis setup provides good handling characteristics and also avoids damage to the suspension components and the frame.

The motorcycle is delivered from the factory with all the suspension settings set for an average rider's weight wearing full protective clothing **(165 - 187 lb (75 - 85 kg))**.

If the rider's weight is above or below **165 - 187 lb (75 - 85 kg)** the setting of the suspension components must be adjusted.

After the static sag has been set up, the motorcycle is now ready for the rider to set up the front and rear suspension to suit their level of riding style, so the motorcycle feels good when racing.

Each rider has their own individual riding style and must choose suspension settings to suit their level of riding style and track conditions. Each rider must set their own suspension settings to their own motorcycle.

NOTICE

When adjusting the chassis setup, adjust the rear suspension unit first and then the front forks.

Rear Suspension Unit Settings

The rear suspension unit setting includes the following:

- Static sag, see page 62.
- Rider sag, see page 64.
- Compression damping, see page 66.
- Rebound damping, see page 68.

Small weight differences can be compensated by adjusting the spring pretension on the rear suspension unit, see Rear Suspension Unit Static Sag - Adjustment in the Service Manual.

For large weight differences, the spring on the rear suspension unit must be replaced, see Rear Suspension Unit Riding Sag - Adjustment in the Service Manual.

Front Fork Settings

The front fork setting includes the following:

- Spring characteristics - change of fork oil volume, see page 72.
- Setting of the spring rate - change the spring, see page 69
- Rebound and Compression damping, see page 71

Rear Suspension Unit Spring

⚠ WARNING

Make sure that the correct balance between front and rear suspension is maintained.

Suspension imbalance could significantly change handling characteristics and control of control motorcycle.

Refer to the following chassis setup procedures for further information.

Whenever there is doubt as to the correct or safe operation of this Triumph motorcycle, contact a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

Suspension imbalance may lead to loss of motorcycle control which could result in serious injury or death.

NOTICE

The rear suspension unit spring preload is adjustable, see Rear Suspension Static Sag - Adjustment in the Service Manual.

There are five springs with spring ratings ranging from 52 N/mm to 60 N/mm available.

The TF250-C and TF450-C are delivered from the factory with the rear suspension unit spring rating of 56 N/mm

Spring Rate	Color Identification Marking
52 N/mm	Yellow
54 N/mm	Pink
56 N/mm	White
58 N/mm	Gold
60 N/mm	Brown

The table below is a guide to select a rear suspension unit spring for the rider weight.

Rider Weight kg (lbs)	Spring Rate
65 - 75 (143 - 165)	52 N/mm
75 - 85 (143 - 187)	56 N/mm
85 - 95 (187 - 209)	60 N/mm

For the rear suspension spring part numbers refer to your local Triumph motocross and enduro center to obtain the parts.

NOTICE

For the removal, disassembly, assembly and installation of any suspension or steering components, contact a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

To change the rear suspension unit spring with a higher or lower spring rating, see Rear Suspension Unit - Disassembly and Rear Suspension Unit - Assembly in the Service Manual.

After replacing the rear suspension unit spring with a lower or higher spring rating, if required, adjust the spring rebound and compression damping, see page 68 and page 66.

Rear Suspension Unit Static Sag - Check

⚠ WARNING

Make sure that the motorcycle is stabilized 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

For the motorcycle to be at its correct weight check and, if necessary, adjust the following:

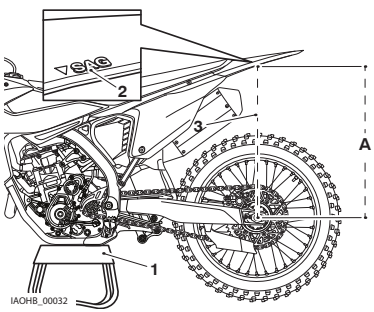
Full fuel tank, see page 33.

Engine oil level, see page 96.

Coolant level, see page 102.

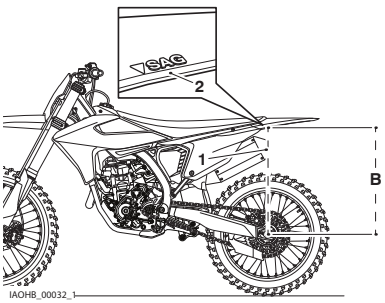
Static Sag	
Static Sag	1.42 in (36 mm)

- Place the motorcycle on a suitable stand with the rear wheel off the ground and the rear suspension fully unloaded.
- For measurement A, use a suitable sag gage to measure the distance from the center of the rear wheel to the SAG marking on the rear fender.



1. **Stand**
2. **SAG text**
3. **Sag gage**

- Note the value of measurement A.
- Remove the motorcycle from the stand and have an assistant hold the motorcycle upright.
- For measurement B, use a suitable sag gage to measure the distance from the center of the rear wheel spindle to the SAG marking on the rear fender.



1. **Sag gage**
2. **SAG text**

- Note the value of the measurement B and deduct it from measurement A.

NOTICE

To adjust the static sag, the rear suspension unit must be removed to adjust the spring preload.

For the removal, disassembly, assembly and installation of any suspension component, contact a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

- If the static sag is less or more than the specified value, adjust the spring preload of the rear suspension unit, see Rear Suspension Static Sag - Adjustment in the Service Manual.

Rear Suspension Unit Riding Sag - Check

⚠ WARNING

Make sure that the motorcycle is stabilized and adequately supported.

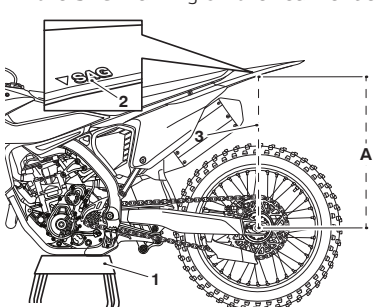
Do not support the motorcycle on any ancillary component, the exhaust system or any other non-structural parts of the motorcycle frame.

A correctly supported motorcycle will help prevent it from falling.

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

Riding Sag	
Riding Sag	4.1 in (105 mm)

- Place the motorcycle on a suitable stand with the rear wheel off the ground and the rear suspension fully unloaded.
- For measurement A, use a suitable sag gage to measure the distance from the center of the rear wheel to the SAG marking on the rear fender.



1. **Stand**
2. **SAG text**
3. **Sag gage**

- Note the value of measurement A.
- Remove the motorcycle from the stand and have an assistant hold the motorcycle upright.

NOTICE

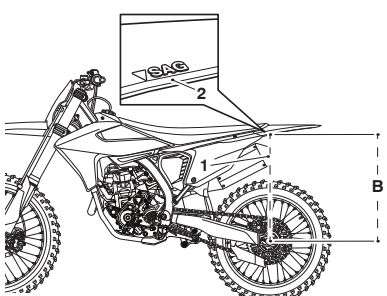
For the motorcycle to be at its correct weight check and, if necessary, adjust the following:

Full fuel tank, see page 33.

Engine oil level, see page 96.

Coolant level, see page 102.

- Have the rider, in full protective clothing, sit on the motorcycle with feet on the footrests to bounce several times to level out the rear suspension.
- With the rider sitting on the motorcycle, use a suitable sag gage to measure distance B from the center of the rear wheel to the SAG marking on the rear fender.



1. **Sag gage**
2. **SAG text**

- Note the value of the measurement B and deduct it from measurement A.

NOTICE

Small weight differences can be compensated by adjusting the spring pretension of the rear suspension unit.

Large weight differences, the spring must be replaced.

NOTICE

To adjust the riding sag, the rear suspension unit must be removed to adjust the spring preload.

For the removal, disassembly, assembly and installation of any suspension component, contact a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

- If the riding sag is less or more than the specified value, adjust the spring preload of the rear suspension unit, see Rear Suspension Riding Sag - Adjustment in the Service Manual.

Rear Suspension Settings

The details shown in the Rear Suspension Settings Table is the standard setting set at the factory. Setting requirements may vary for rider weight and personal preferences.

Rear Suspension Settings - TF250-C

Loading	Rebound Damping[1]	Low Speed Compression Damping[1]	High Speed Compression Damping[2]
Standard	12 clicks	12 clicks	1 1/2 turns

[1] Number of adjuster clicks counterclockwise from the fully clockwise position.

[2] Number of adjuster turns counterclockwise from the fully clockwise position.

Rear Suspension Settings - TF450-C

Loading	Rebound Damping[1]	Low Speed Compression Damping[1]	High Speed Compression Damping[2]
Standard	12 clicks	12 clicks	1 3/4 turns

[1] Number of adjuster clicks counterclockwise from the fully clockwise position.

[2] Number of adjuster turns counterclockwise from the fully clockwise position.

Rear Suspension Unit Compression Damping Adjustment

⚠ WARNING

Make sure that the motorcycle is stabilized 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.

The compression damping of the rear suspension unit is divided into two ranges.

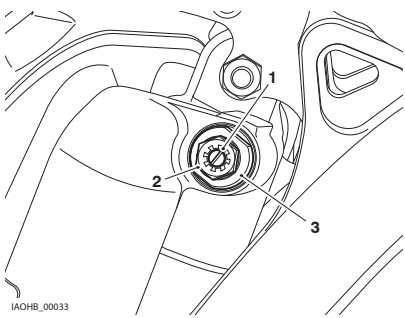
- High speed - When landing after a jump the rear suspension unit compresses quickly.
- Low speed - When riding over long uneven ground the rear suspension unit compresses slowly.

NOTICE

When adjusting the low speed and high speed compression damping adjusters, do not loosen the adjuster housing.

The high speed and low speed compression damping can be adjusted separately.

The high speed and low speed compression damping adjusters are located at the top of the rear suspension unit on the right hand side of the motorcycle.



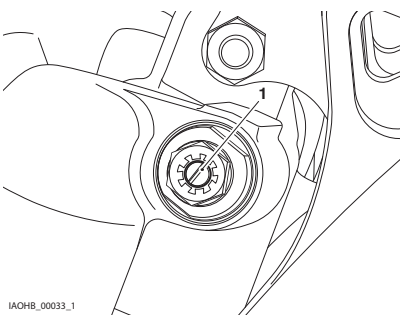
1. **Low speed compression damping adjuster**
2. **High speed compression damping adjuster**
3. **Adjusters housing**

Adjusting the Low Speed Compression Damping

NOTICE

The effect of the low speed compression adjuster can be seen in slow to normal compression of the rear suspension unit.

- Rotate the slotted adjuster clockwise to increase, or counterclockwise to decrease the low speed compression damping.



1. **Low compression damping adjuster**

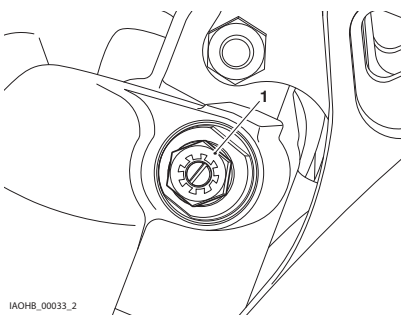
- To reset the adjuster to the factory settings, refer to the Rear Suspension Settings table, see page 65.

Adjusting the High Speed Compression Damping

NOTICE

The effect of the high speed compression adjuster can be seen in fast compression of the rear suspension unit.

- Rotate the adjuster clockwise to increase, or counterclockwise to decrease the high speed compression damping.



1. **High compression damping adjuster**

- To reset the adjuster to the factory settings, refer to the Rear Suspension Settings table, see page 65.

Rear Suspension Unit Rebound Damping Adjustment

⚠ WARNING

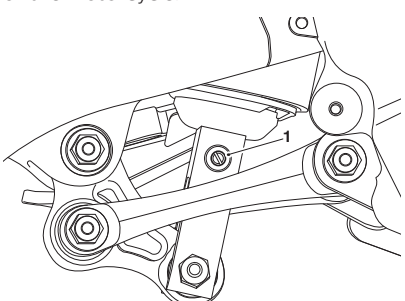
Make sure that the motorcycle is stabilized and adequately supported.

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.

The rebound damping adjuster is located at the bottom of the rear suspension unit on the right hand side of the motorcycle.



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1. **Rebound damping adjuster**

To adjust the rebound damping setting:

NOTICE

Rotate clockwise to increase damping and rotate counterclockwise to reduce damping when the rear suspension unit rebounds.

- Rotate the slotted adjuster clockwise to increase, or counterclockwise to decrease.
- To reset the adjuster to the factory settings, refer to the Rear Suspension Settings table see page 65.

Front Suspension Spring

⚠ WARNING

Make sure that the correct balance between front and rear suspension is maintained.

Suspension imbalance could significantly change handling characteristics and control of control motorcycle.

Refer to the following chassis setup procedures for further information.

Whenever there is doubt as to the correct or safe operation of this Triumph motorcycle, contact a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

Suspension imbalance may lead to loss of motorcycle control which could result in serious injury or death.

⚠ CAUTION

The two front forks are installed with the same rated spring.

When changing the front fork spring with a higher or lower rated spring, make sure both front forks are installed with the same rated springs.

Front forks installed with different rated springs may lead to loss of motorcycle control which could result in minor or moderate injury.

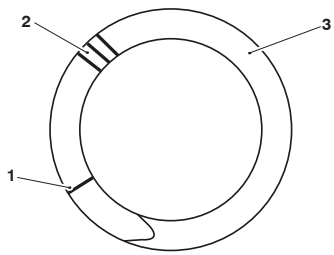
NOTICE

The front fork spring preload is not adjustable.

For TF250-C and TF450-C models, there are five springs with spring ratings ranging from 4.5 N/mm to 4.9 N/ mm available.

The motorcycle is delivered from the factory with the front fork spring rating of 4.7 N/mm

Spring Rate	Identification Marks
4.5 N/mm	1 - 2
4.6 N/mm	1 - 3
4.7 N/mm	1 - 4
4.8 N/mm	1 - 5
4.9 N/mm	2 - 2



1. One to two markings
2. One to five markings
3. Front fork spring (4.6 N/mm rate shown)

For the front suspension spring part numbers refer to your local Triumph motocross and Enduro center to obtain the parts.

NOTICE

For the removal, disassembly, assembly and installation of any suspension or steering components, contact a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

To change the front fork spring with a higher or lower spring rating, see Front Fork Spring - Removal and Front Fork Spring - Installation in the Service Manual.

After replacing the fork springs with a lower or higher spring rating, if required, adjust the spring rebound and compression damping springs, see page 71.

Front Suspension Settings

The details shown in the Front Suspension Settings table is the standard setting set at the factory. Setting requirements may vary for rider weight and personal preferences.

Front Suspension Settings - TF250-C		
Loading	**Compression Damping**[1]	**Rebound Damping**[1]
Standard	12 clicks	13 clicks
[1] Number of adjuster clicks counterclockwise from the fully clockwise position.		

Front Suspension Settings - TF450-C		
Loading	**Compression Damping**[1]	**Rebound Damping**[1]
Standard	11 clicks	13 clicks
[1] Number of adjuster clicks counterclockwise from the fully clockwise position.		

Front Suspension Rebound and Compression Damping

⚠ WARNING

Make sure that the correct balance between front and rear suspension is maintained.

Suspension imbalance could significantly change handling characteristics and control of control motorcycle.

Refer to the following chassis setup procedures for further information.

Whenever there is doubt as to the correct or safe operation of this Triumph motorcycle, contact a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

Suspension imbalance may lead to loss of motorcycle control which could result in serious injury or death.

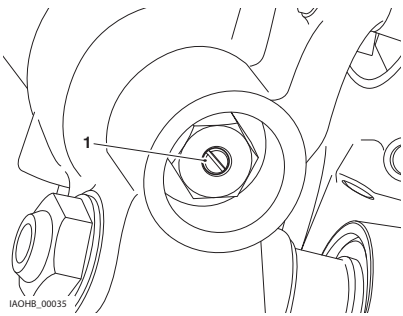
The motorcycle is delivered from the factory with all the suspension settings set for an average rider's weight wearing full protective clothing (165 - 187 lb (75 - 85 kg)).

Rebound Damping

NOTICE

The rebound damping adjuster is located at the lower end of the front fork.

- Rotate the slotted adjuster clockwise to increase, or counterclockwise to decrease.
- Always count the number of clicks from the fully clockwise position.



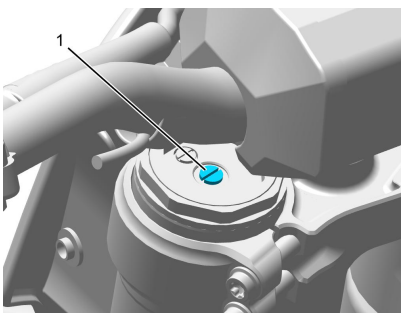
1. **Rebound adjuster**

Compression Damping

NOTICE

The compression damping adjuster is located at the upper end of the front fork.

- Rotate the slotted adjuster clockwise to increase, or counterclockwise to decrease.
- Always count the number of clicks from the fully clockwise position.



1. **Compression adjuster**

Front Suspension Fork Oil Level

⚠ WARNING

Make sure that the correct balance between front and rear suspension is maintained.

Suspension imbalance could significantly change handling characteristics and control of control motorcycle.

Refer to the following chassis setup procedures for further information.

Whenever there is doubt as to the correct or safe operation of this Triumph motorcycle, contact a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

Suspension imbalance may lead to loss of motorcycle control which could result in serious injury or death.

NOTICE

To adjust the front fork oil level, the front fork must be removed.

For the removal, disassembly, assembly and installation of any suspension component, we recommend that you contact a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

NOTICE

Adjust the oil volume by increasing or decreasing the amount by 0.17 fl oz (5 cc) at a time.

Not enough oil in the front fork - at full rebound the fork will make a noise or the rider will feel pressure in their hands or body.

Too much oil in the front fork - the spring characteristics will be stiffer due to reduced air gap spring characteristics.

When adjusting the front fork oil level, stay within the minimum to maximum range fork oil volume as shown in the Fork Oil Volume Table.

Fork Oil Volume Table

Front Fork Component	Oil Volume
Fork damper assembly	11.9 cu in (195 cc)
Fork outer tube	19.2 cu in (315 cc)
Total	31.1 cu in (510 cc)

The damping characteristic near the end of a stroke can be altered by changing the amount of oil in the front fork.

Only adjust the fork oil level within the range specified in the table below.

Fork Outer Tube Oil Adjustment Range
17.7 - 22.3 cu in (290 - 365 cc)

To adjust the front fork oil volume, see Front Fork - Disassembly and Front Fork - Assembly in the Service Manual.

Handlebar Adjustment

⚠ WARNING

Make sure that the motorcycle is stabilized 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.

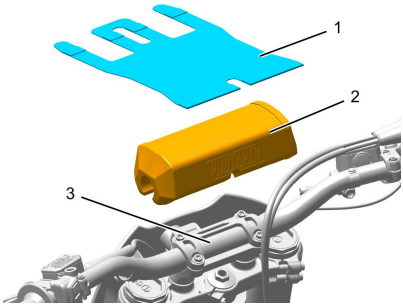
A correctly supported motorcycle will help prevent it from falling.

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

Handlebar Height Adjustment

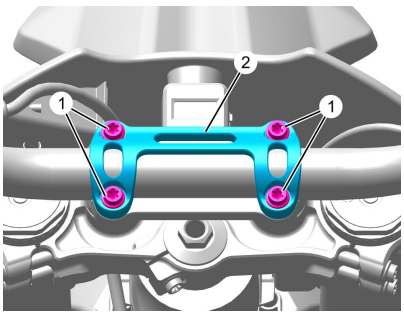
To adjust the height:

- Undo the Velcro pads at the rear of the handlebar pad and release the cover.
- Lift the handlebar pad upwards to remove.



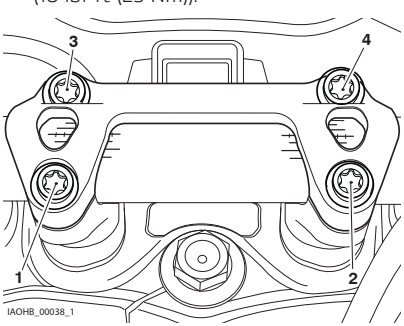
1. **Handlebar pad cover**
2. **Handlebar pad**
3. **Handlebar**

- Loosen the four fasteners for the handlebar clamp until the handlebar can freely rotated.



1. **Fasteners**
2. **Handlebar clamp**

- Rotate the handlebar to the required height within the degree makings on the handle bar.
- Tighten the fasteners in the sequence shown below to 18 lbf ft (18 lbf ft (25 Nm)).



Handlebar Clamp Tightening Sequence (Normal Position)

- Start the engine.
- With the engine at idle, move the handlebars to left and right full lock while checking that the engine speed does not change.
- If the engine speed changes, check and, if necessary, adjust the throttle cables routing see page 107 and throttle cables free play see page 109.

Handlebar Reach Adjustment

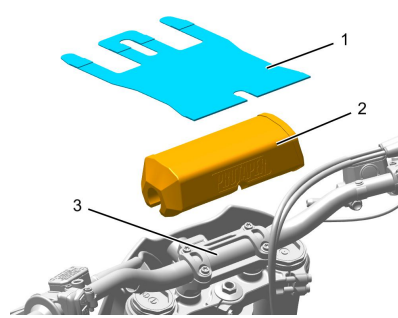
To adjust the reach:

NOTICE

From the factory the handlebar is set to the rear position.

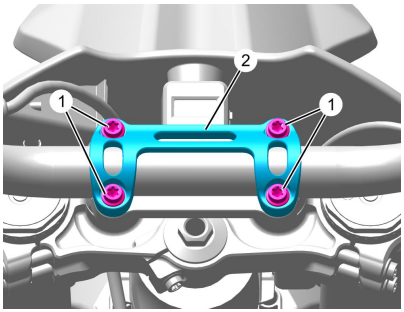
To position the handlebar 0.35 in (9 mm) forward, follow the procedure described below.

- Undo the Velcro pads at the rear of the handlebar pad and release the cover.
- Lift the handlebar pad upwards to remove.



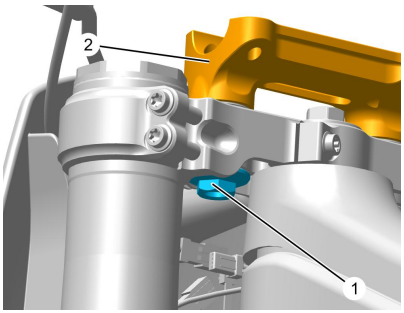
1. **Handlebar pad cover**
2. **Handlebar pad**
3. **Handlebar**

- Note the alignment marking to the handlebar clamp for installation.
- Remove the four fasteners and remove the handlebar clamp.



1. **Fasteners**
2. **Handlebar clamp**

- Lift the handlebars out of the lower handlebar clamp and support with the aid of an assistant. Make sure the front brake and clutch master cylinders remain in an upright position.
- Hold the handlebar clamp nut.



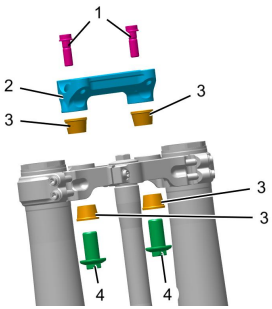
1. **Nut (left hand side shown)**
2. **Lower handlebar clamp**

NOTICE

The bolt threads for the lower handlebar clamp have a locking agent applied to them.

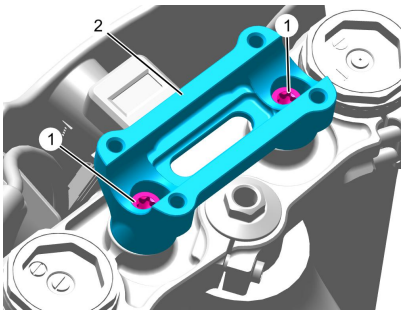
When the bolts have been removed, clean the threads and the threads in the nuts.

- Remove the bolts securing the lower handlebar clamp to the upper yoke.
- If removed, install the rubber bushes to the upper yoke as shown in the illustration below.



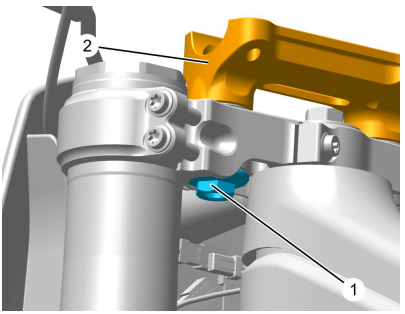
1. **Bolts**
2. **Lower handlebar clamp**
3. **Rubber bushes**
4. **Nuts**

- Rotate the lower handlebar clamp through 180°.



1. **Bolts**
2. **Lower handlebar clamp (turned 180°)**

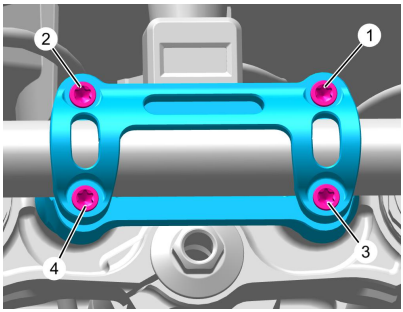
- Clean the threads of the bolts and make sure old thread lock is removed from the nuts.
- Apply ThreeBond 1324, or an equivalent locking agent, to the threads of the lower handlebar clamp bolts.
- Install the bolts to the lower handlebar clamp.
- Hold the handlebar riser nut and tighten the riser bolt to 30 lbf ft (30 lbf ft (40 Nm)).



1. **Nuts**
2. **Lower handlebar clamp**

- Reposition the handlebars to the lower handlebar clamp.
- Reinstall the handlebar clamp, and secure with the four fasteners. Do not fully tighten the fasteners at this stage.
- Rotate the handlebar so that the alignment marking on the handlebar aligns with the handlebar clamp as noted for removal.

- Tighten the fasteners in the sequence shown below to 18 lbf ft (18 lbf ft (25 Nm)).



Handlebar Clamp Tightening Sequence (Extended Reach Position)

- Start the engine.
- With the engine at idle, move the handlebars to left and right full lock while checking that the engine speed does not change.
- If the engine speed changes, check and, if necessary, adjust the throttle cables routing see page 107 and throttle cables free play see page 109.

Brake Lever Adjustment

⚠ WARNING

Do not attempt to adjust the levers with the motorcycle in motion as this could lead to loss of motorcycle control.

After adjusting the levers, operate the motorcycle in a safe area to gain familiarity with the new lever setting.

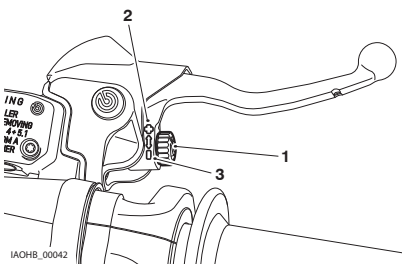
Do not loan your motorcycle to anyone as they may change the lever setting from the one you are familiar leading to loss of motorcycle control which could result in serious injury or death.

A span adjuster is installed to the brake lever. The adjuster allows the distance from the handlebar to the brake lever to be changed to suit the span of the rider's hand.

Always check the front brake operation after adjusting the brake lever.

To adjust the brake lever:

- Rotate the span adjuster counterclockwise to decrease the distance to the handlebar or clockwise to increase the distance from the handlebar.
- The distance from the handlebar grip to the released brake lever is shortest when the span adjuster is rotated fully counterclockwise.



1. **Span adjuster**
2. **+ mark**
3. **- mark**

- With the front wheel off the ground, check that the front wheel rotates without the brake binding.
- Apply the front brake and then release the brake lever. Check that the front wheel rotates without the brake binding.

Brake Pedal Adjustment

⚠ WARNING

Make sure that the motorcycle is stabilized 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.

⚠ WARNING

If the rear brake pedal position has been adjusted, the rear brake pedal free play must be checked.

Check and, if necessary, adjust the brake pedal free play page 78.

Without correct free play at the rear brake pedal the rear brake may overheat, reducing braking effectiveness, or lock the rear wheel leading to loss of motorcycle control which could result in serious injury or death.

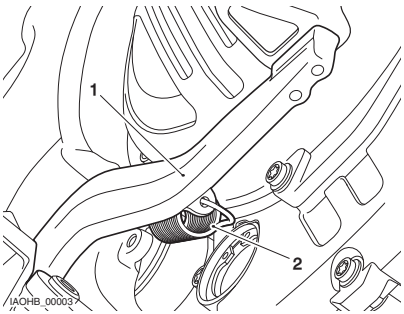
NOTICE

The range of the foot brake pedal adjustment is limited.

If the foot brake pedal is adjusted too low, it is possible that the 0.24 - 0.35 in (6 - 9 mm) free play movement can not be achieved.

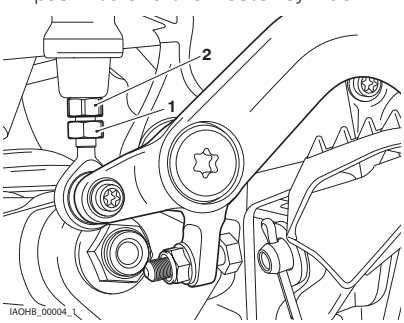
If the foot brake pedal is too high, it is possible that the brake pedal free play movement would be greater than 0.24 - 0.35 in (6 - 9 mm).

- Detach the spring from the foot brake pedal.



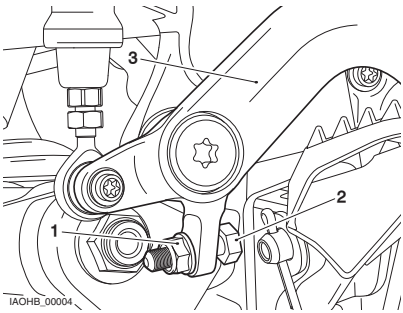
1. **Foot brake pedal**
2. **Spring**

- Loosen the rear master cylinder push rod lock nut.
- Turn the master cylinder push rod for maximum free play between the push rod and the master cylinder.



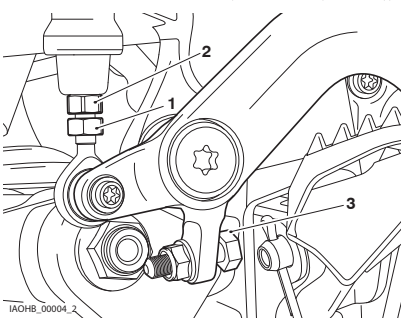
1. **Lock nut**
2. **Push rod**

- Loosen the lock nut on the foot brake pedal height adjuster screw.
- Turn the adjuster screw for the required brake pedal height.
- Hold the brake pedal height adjuster screw and tighten the lock nut to 89 lbf in (89 lbf in (10 Nm)).



1. **Lock nut**
2. **Adjuster screw**
3. **Foot brake pedal**

- Turn the master cylinder push rod until the adjuster screw contacts the frame, then loosen by 1.5 turns.
- Hold the push rod and tighten the lock nut to 89 lbf in (89 lbf in (10 Nm)).



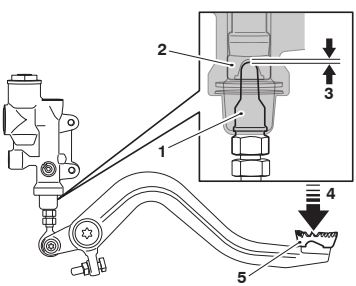
1. **Lock nut**
2. **Push rod**
3. **Foot brake pedal**

NOTICE

The free play between the push rod and the master cylinder plunger is to be 0.04 in (1 mm) minimum.

To measure the push rod free play, press down on the brake pedal between the fasteners for the brake pedal toe piece. Divide the measured distance (brake pedal free play) by 6 for the free play at the push rod.

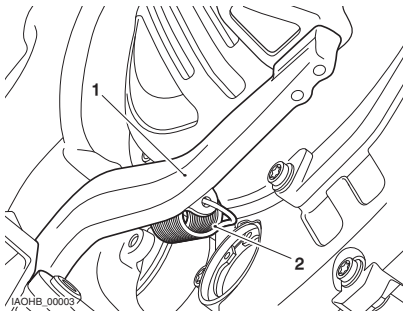
- Check that there is 0.24 - 0.35 in (6 - 9 mm) free play movement at the foot brake pedal. If required, adjust the brake pedal height to achieve the 0.24 - 0.35 in (6 - 9 mm) free play.



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1. **Push rod**
2. **Plunger**
3. **Free play**
4. **Press down point**
5. **Brake pedal toe piece**

- Attach the spring to the foot brake pedal.



1. **Foot brake pedal**
2. **Spring**

- After the brake pedal height and free play movement adjustment, raise and support the motorcycle, see page 37.
- With the rear wheel off the ground, check that the rear wheel rotates freely without the rear brake binding.
- Apply the rear brake and then release the brake pedal. Check that the rear wheel rotates without the brake binding.

⚠ WARNING

After adjusting the brake pedal, operate the motorcycle in a safe area to gain familiarity with the new brake pedal setting.

Do not loan your motorcycle to anyone as they may change the lever setting from the one you are familiar leading to loss of motorcycle control which could result in serious injury or death.

Clutch Lever Adjustment

⚠ WARNING

Do not attempt to adjust the levers with the motorcycle in motion as this could lead to loss of motorcycle control.

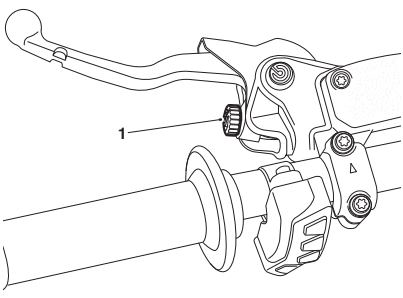
After adjusting the levers, operate the motorcycle in an area free from traffic to gain familiarity with the new lever setting.

Do not loan your motorcycle to anyone as they may change the lever setting from the one you are familiar leading to loss of motorcycle control which could result in serious injury or death.

A span adjuster is installed to the clutch lever. The adjuster allows the distance from the handlebar to the clutch lever to be changed to suit the span of the rider's hand.

To adjust the clutch lever span:

- Rotate the span adjuster counterclockwise to decrease the distance to the handlebar or clockwise to increase the distance from the handlebar.
- The distance from the handlebar grip to the released clutch lever is shortest when the adjuster wheel is adjusted fully counterclockwise.



1. Span adjuster

Gear Shift Pedal Adjustment

⚠ WARNING

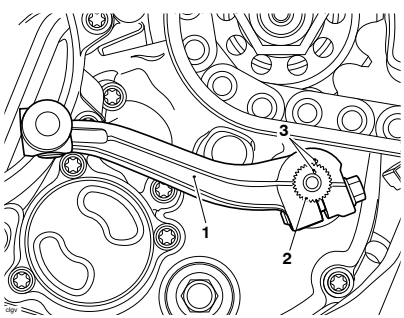
Make sure that the motorcycle is stabilized and adequately supported.

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.

The factory setting for the gear shift pedal is when the alignment mark on the gear shift pedal aligned with the alignment mark on the gear selector shaft, as shown in the illustration below.



1. **Gear shift pedal**
2. **Gear selector shaft**
3. **Alignment marks**

⚠ WARNING

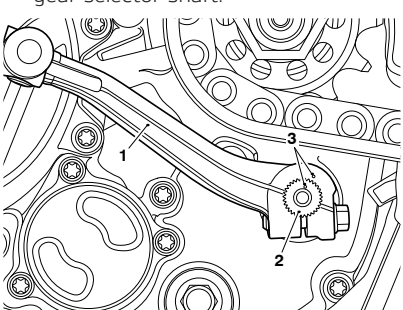
After changing the gear shift pedal, make sure the gear shift pedal does not contact any other motorcycle components when operating the pedal up or down to shift gears.

⚠ WARNING Continued

After adjusting the gear shift pedal, operate the motorcycle in a safe area to gain familiarity with the new gear shift pedal setting.

Do not loan your motorcycle to anyone as they may change the lever setting from the one you are familiar leading to loss of motorcycle control which could result in serious injury or death.

- Remove the gear shift pedal pinch bolt.
- Remove the gear shift pedal from the gear selector shaft.
- Clean the splines on the gear shift pedal and on the gear selector shaft.
- Align the splines so the gear shift pedal is at the required position and install the gear shift pedal to the gear selector shaft.



1. **Gear shift pedal**
2. **Gear selector shaft**
3. **Alignment marks (out of alignment)**

- Install the pinch bolt and tighten to 89 lbf in (89 lbf in (10 Nm)).

The addition of accessories and carrying of additional weight can affect the motorcycle's handling characteristics, causing changes in stability and necessitating a reduction in speed. The following information has been prepared as a guide to the potential hazards of adding accessories to a motorcycle and carrying passengers and additional loads.

Accessories

⚠ WARNING

Do not install accessories that impairs the control of the motorcycle.

Make sure that you have not adversely affected any ground clearance, control operation, wheel travel, front fork movement, visibility in any direction, or any other aspect of the motorcycle's operation.

Failure to follow the advice above may lead to loss of motorcycle control, which could result in serious injury or death.

⚠ WARNING

Install only genuine Triumph accessories to the correct Triumph motorcycle model.

Always check the Triumph Installation Instruction associated with the genuine Triumph accessory. Make sure the Triumph motorcycle model that the Triumph accessory is to be installed on, is listed as approved for the genuine Triumph accessory. For all Triumph Installation Instructions, see www.triumphinstructions.com.

Never install genuine Triumph accessories on a Triumph motorcycle model that is not listed in the associated Triumph Installation Instruction, as this may affect handling, stability or other aspects of the motorcycle operation that may lead to loss of motorcycle control, which could result in serious injury or death.

⚠ WARNING

Owners should be aware that the only approved parts, accessories and modifications for any Triumph motorcycle are those which carry official Triumph approval.

We recommend accessories and modifications be completed by a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

In particular, it is extremely hazardous to install or replace parts or accessories whose installation requires the dismantling of, or addition to, either the electrical or fuel systems and any such modification could cause a safety hazard.

The installation of any non-approved parts, accessories or modifications may adversely affect the handling, stability or other aspect of the motorcycle operation leading to loss of motorcycle control which could result in serious injury or death.

- Triumph does not accept any liability whatsoever for defects caused:
  - by the installation of non-approved parts, accessories or conversions.
  - by the incorrect installation of approved parts, accessories or conversions.

⚠ WARNING

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 motorcycle control and an accident. When riding at high speed, always be aware that various motorcycle configuration and environmental factors can adversely affect the stability of your motorcycle. For example:

- Incorrectly adjusted front and rear suspension settings

- Incorrectly adjusted tire pressures

- Excessively or unevenly worn tires

- Side winds and turbulence from other vehicles

- Loose clothing.

The addition of non-approved accessories, overall motorcycle condition and weather conditions will cause changes in the stability and handling of the motorcycle.

Failure to follow the advice above may lead to loss of motorcycle control, which could result in serious injury or death.

Loading

⚠ WARNING

Never attempt to store any items between the frame and the fuel tank. This may restrict the steering aspect of the motorcycle.

Weight attached to the handlebar or front fork will increase the mass of the steering assembly. This may affect the handling, stability or other aspects of the motorcycle operation.

Failure to follow the advice above may lead to loss of motorcycle control, which could result in serious injury or death.

⚠ WARNING

This motorcycle is not designed to carry a load of any size.

Operation of this motorcycle carrying a load is dangerous leading to loss of motorcycle control which could result in serious injury or death.

Passengers

⚠ WARNING

This motorcycle is not designed to carry a passenger.

This motorcycle does not have footrests for a passenger who will be unable to sit securely on this motorcycle.

Operation of this motorcycle with a passenger is dangerous leading to loss of motorcycle control which could result in serious injury or death.

⚠ WARNING

Do not carry animals on your motorcycle.

An animal could make sudden and unpredictable movements, which may affect the handling, stability or other aspects of the motorcycle operation.

Failure to follow the advice above may lead to loss of motorcycle control, which could result in serious injury or death.

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Scheduled Maintenance

⚠ WARNING

Triumph Motorcycles cannot accept any responsibility for damage or injury resulting from incorrect maintenance or improper adjustment.

Scheduled maintenance must be carried out by a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

Incorrect or neglected maintenance may lead to a dangerous riding condition, leading to loss of motorcycle control which could result in serious injury or death.

⚠ WARNING

All maintenance is vitally important and must not be neglected. Incorrect maintenance or adjustment may cause one or more parts of the motorcycle to malfunction.

Weather, terrain and geographical location affect maintenance. The maintenance schedule should be adjusted to match the particular environment in which the motorcycle is used and the demands of the individual owner.

Special tools, knowledge and training are required in order to correctly carry out the maintenance items listed in the scheduled maintenance chart. An authorized Triumph motocross and enduro center will have the necessary knowledge, equipment, and skills to maintain your Triumph motorcycle correctly.

Scheduled maintenance must be carried out by a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

Incorrect or neglected maintenance may lead to a dangerous riding condition, leading to loss of motorcycle control which could result in serious injury or death.

- To maintain the motorcycle in a safe and reliable condition, the maintenance and adjustments outlined in this section must be carried out as specified in the Pre Race and Riding Safety Checks, see page 53, and also in line with the scheduled maintenance chart, see page 92.

The information that follows describes the procedures to follow when carrying out the pre race and riding safety checks and some simple maintenance and adjustment items.

For maintenance procedures that require specialist knowledge or service tools, these are referred to the service manual which can be accessed at www.triumphtechnicalinformation.com. Registration is required to access the site.

Scheduled maintenance for this motorcycle is carried out after each race, by the hours the engine has been running and yearly as described in the scheduled maintenance table.

In all cases, maintenance must be carried out at or before the specified maintenance intervals shown. For advice on which maintenance schedule is most suitable for your motorcycle, contact a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

Triumph Motorcycles cannot accept any responsibility for damage or injury resulting from incorrect maintenance or improper adjustment.

NOTICE

Items marked * in the Scheduled Maintenance Table are subject to additional labor charge, above the cost and time allowance for the basic service, which includes time to check only.

Disposal of Used Fluids

To protect the environment, do not pour the following on the ground, down sewers, drains or into groundwater sources:

- Engine oil
- Coolant
- Fuel
- Clutch and brake fluid
- Front fork oil.

Do not place used oil filters in with the general waste.

If in doubt for the disposal of the above, contact your local authority.

Scheduled Maintenance Table

Operation description	After the first operating hour	Every 2.5 hours of race riding conditions	Every 15 operating hours	Every 30 operating hours	Every 45 operating hours	Every 90 operating hours	Every 24 months
Lubrication							
Engine oil - replace	•	•	•	•	•	•	•
Engine oil filter - replace	•	•	•	•	•	•	•
Engine oil filter screens - clean	•	•	•	•	•	•	•
Fuel System and Engine Management							
Fuel system - check for leaks	•		•	•	•	•	•
Fuel system - check the fuel pressure	•				•	•	•
Fuel system - check the idle speed	•		•	•	•	•	•
Throttle cables - check function, routing and adjust as necessary	•		•	•	•	•	•
Air filter - clean the air filter element and housing			•	•	•	•	•
Fuel system - replace the fuel filter and fuel pre-filter					•	•	•
Spark plug and spark plug cap - replace					•	•	
Exhaust muffler - replace wadding					•	•	
Fuel system - replace the fuel screen							•
Cooling System							
Cooling system - check for leaks	•		•	•	•	•	•
Cooling system - check coolant hoses for chafing, cracks or damage. Replace if necessary	•		•	•	•	•	•
Coolant level - check/adjust	•		•	•	•	•	
Coolant - replace*							•
Engine							
Valve clearances - check/adjust*	•				•	•	
Clutch friction plates - check and if necessary replace		•					
Clutch - steel plates - check for damage and wear		•					
Clutch - inner and outer drum - check for damage and wear		•					
Clutch - check operation		•	•	•	•	•	
Clutch fluid level - check		•	•	•	•	•	
Primary Gear Nut - Replace					•		
Engine - minor service (refer to service manual)					•	•	
Engine - major service (refer to service manual)						•	
Clutch fluid - replace*							•

Operation description	After the first operating hour	Every 2.5 hours of race riding conditions	Every 15 operating hours	Every 30 operating hours	Every 45 operating hours	Every 90 operating hours	Every 24 months
Wheels and Tires							
Tire wear/tire damage - check	•		•	•	•	•	•
Tire pressures - check/adjust	•		•	•	•	•	•
Wheels - check wheel rim run out	•		•	•	•	•	
Wheels - check for broken or damaged spokes and check spoke tightness	•		•	•	•	•	
Wheel bearings and seals - check for wear/smooth operation			•	•	•	•	
Wheels - check hubs and rims for damage			•	•	•	•	
Steering and Suspension							
Steering - check for free operation	•		•	•	•	•	
Steering head bearings - check/adjust	•	•	•	•	•	•	•
Front forks - check for leaks and wear			•	•			
Swinging arm - check for damage and cracking			•	•	•	•	
Swinging arm - check for bearing free play			•	•	•	•	
Rear suspension linkage - check for wear			•	•	•	•	
Rear suspension unit - check for leaks and wear			•	•	•	•	
Handle bar grips - replace				•		•	
Front forks - service					•	•	
Rear suspension unit - service					•	•	
Steering head bearings - lubricate						•	•
Upper yoke center clamp fastener-replace						•	
Brakes							
Brake fluid levels - check	•		•	•	•		
Brake pads and discs - check wear levels*	•		•	•	•	•	•
Brake system - check lines and hoses for damage and leaks. Check brake union tightness	•		•	•	•	•	•
Front brake lever - check travel	•		•	•	•	•	•
Rear brake pedal - check travel	•		•	•	•	•	•
Brake system - check operation			•	•	•	•	•
Brake fluid - replace*						•	•

Operation description	After the first operating hour	Every 2.5 hours of race riding conditions	Every 15 operating hours	Every 30 operating hours	Every 45 operating hours	Every 90 operating hours	Every 24 months
Final Drive							
Drive chain slack - check/adjust	•		•	•	•	•	•
Drive chain - lubricate	•		•	•	•	•	•
Drive chain and sprockets - check for wear*			•	•	•	•	
Drive chain rubbing strips - check*			•	•	•	•	
Electrical							
Electrical system - check operation	•		•	•	•	•	
12 Volt battery - check and charge	•		•	•	•	•	•
General							
Fasteners - check tightness (accessible fasteners only)	•		•	•	•	•	•
Engine ECM - check for latest calibration download using the Triumph diagnostic tool	•		•	•	•	•	•
Carry out test ride	•		•	•	•	•	•
Safety check - carry out a final check for operating safety	•		•	•	•	•	•
Complete the service record	•		•	•	•	•	•
Frame - check for damage and cracking			•	•	•	•	
Side stand - check for wear/smooth operation			•	•	•	•	•
Carry out all outstanding Service Bulletin and warranty work			•	•	•	•	•

Engine Oil





WARNING

Make sure that the engine oil level is correct and the oil is changed in accordance with the scheduled maintenance requirements.

Motorcycle operation with insufficient, deteriorated, or contaminated engine oil will cause accelerated engine wear and may result in engine or transmission seizure.

Seizure of the engine or transmission may lead to sudden loss of motorcycle control, which could result in serious injury or death.

In order for the engine, transmission, and clutch to function correctly, maintain the engine oil at the correct level, and change the engine oil and oil filter in accordance with scheduled maintenance requirements.

Disposal of Used Engine Oil and Oil Filters

To protect the environment, do not pour oil on the ground, down sewers or drains, or into groundwater sources.

Do not place used oil filters in with general waste. If in doubt contact your local authority.

Engine Oil Specification and Grade (10W/50)

Triumph's high performance fuel injected engines are designed to use 10W/50 fully synthetic motorcycle engine oil that meets specification API SN (or higher) and JASO MA-2. Triumph Performance fully synthetic engine oil is recommended.

Do not add any chemical additives to the engine oil. The engine oil also lubricates the clutch and any additives could cause the clutch to slip.

Do not use mineral, vegetable, non-detergent oil, castor based oils or any oil not conforming to the required specification. The use of these oils may cause instant, severe engine damage.

Make sure that no foreign matter enters the crankcase during an engine oil change or top off.

Engine Oil Level Inspection

⚠ DANGER

Never start the engine or run the engine in a confined area.

Always operate the motorcycle in the open air or in an area with adequate ventilation.

Exhaust fumes are poisonous and will cause loss of consciousness and death within a short period of time.

⚠ WARNING

Make sure that the motorcycle is stabilized 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.

⚠ WARNING

Make sure that the engine oil level is correct and the oil is changed in accordance with the scheduled maintenance requirements.

Motorcycle operation with insufficient, deteriorated, or contaminated engine oil will cause accelerated engine wear and may result in engine or transmission seizure.

Seizure of the engine or transmission may lead to sudden loss of motorcycle control, which could result in serious injury or death.

⚠ CAUTION

If the engine has recently been running, the exhaust components may be hot to the touch.

To avoid skin damage, always allow the hot parts to cool before touching the exhaust system.

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

To inspect the engine oil level:

NOTICE

An accurate indication of the level of oil in the engine is only shown when the motorcycle is upright and level (not on the side stand).

This method of checking the engine oil is very important to make sure that the oil capacities are distributed correctly, because this model has a dry sump engine.

Failure to follow this method will result in an inaccurate indication of the oil in the engine.

NOTICE

The engine oil level sight glass is located on the right hand side of the engine next to the lower end of the clutch cover.

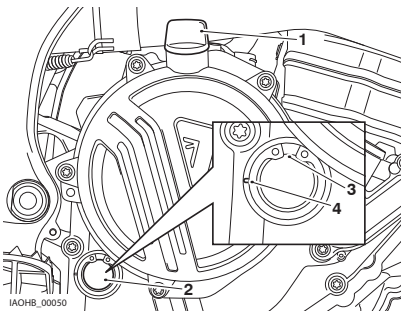
Make sure that no dirt or contamination enters the engine during an engine oil change or top off.

Contamination in the engine may lead to engine damage.

Cold Engine Oil Level Inspection

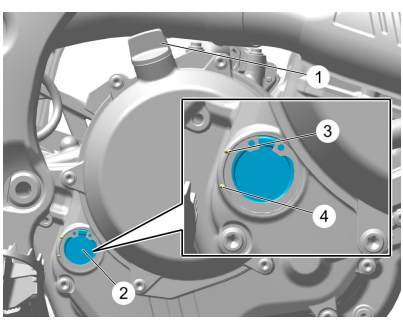
- With the motorcycle on the ground, level and upright, note the engine oil level in the sight glass.
- When correct, engine oil should be visible in the sight glass at a point midway between the upper (maximum) and lower (minimum) markings on the sight glass.
- If it is necessary to top off the engine oil level, remove the filler plug and add engine oil, a little at a time, until the level registered in the sight glass is correct.

TF250-C



1. **Filler plug**
2. **Sight glass**
3. **Maximum limit**
4. **Minimum limit**

TF450-C

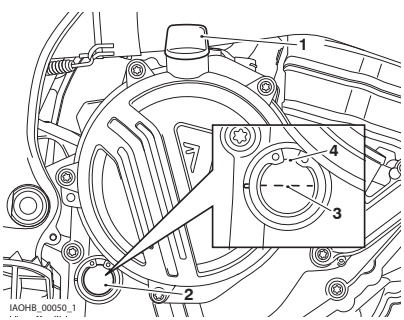


1. **Filler plug**
2. **Sight glass**
3. **Maximum limit**
4. **Minimum limit**

Warm Engine Oil Level Inspection

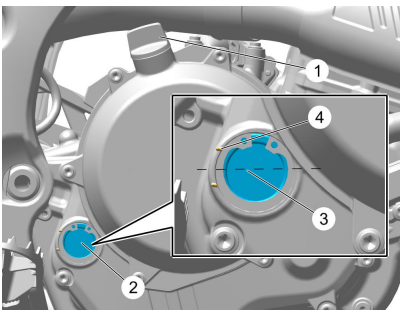
- Stop the engine, then wait for at least one minute to allow the oil to settle.
- With the motorcycle level and upright, note the engine oil level in the sight glass.
- When correct, engine oil should be visible between the middle of the sight glass and the maximum limit.
- If it is necessary to top off the engine oil level, remove the filler plug and add engine oil, a little at a time, until the level registered in the sight glass is correct.

TF250-C



1. **Filler plug**
2. **Sight glass**
3. **Middle of sight glass**
4. **Maximum limit**

TF450-C



1. **Filler plug**
2. **Sight glass**
3. **Middle of sight glass**
4. **Maximum limit**

Oil and Filter Change

⚠ WARNING

Make sure that the motorcycle is stabilized 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.

⚠ WARNING

Always wear suitable protective clothing and avoid skin contact with used engine oil.

Prolonged or repeated contact with engine oil can lead to skin dryness, irritation and dermatitis.

Used engine oil contains harmful contamination that can lead to skin cancer.

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

⚠ CAUTION

The engine oil may be hot.

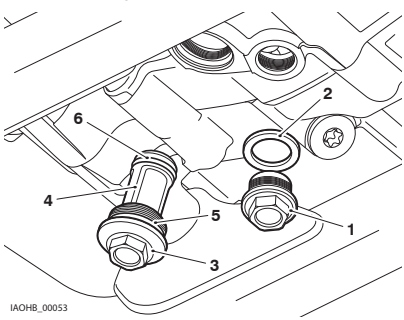
Avoid contact with the hot engine oil by wearing suitable protective clothing, gloves and eye protection.

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

The engine oil and engine oil filter must be replaced in accordance with scheduled maintenance requirements.

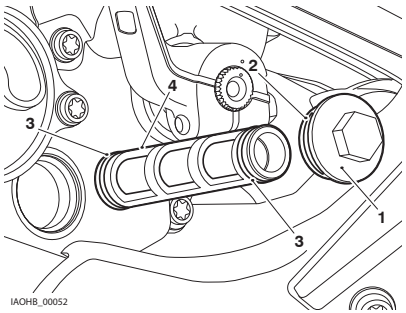
To change the engine oil and engine oil filter:

- Remove the skid plate, see page 191.
- Warm up the engine thoroughly, and then stop the engine and secure the motorcycle in an upright position on level ground.
- Place an oil drain pan beneath the engine.
- Remove the oil drain plug.
- Discard the sealing washer.
- Remove the oil strainer plug assembly located next to the oil drain plug.



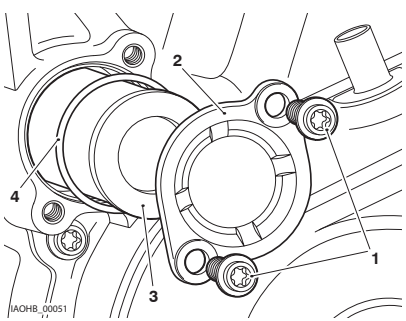
1. **Oil drain plug**
2. **Sealing washer**
3. **Oil strainer plug**
4. **Oil strainer**
5. **O-ring 0.7 x 0.07 in (17.17 x 1.78 mm)**
6. **O-ring 0.49 x 0.06 in (12.5 x 1.5 mm) (one of two shown)**

- Remove the oil strainer plug assembly located on the left hand side of the engine.



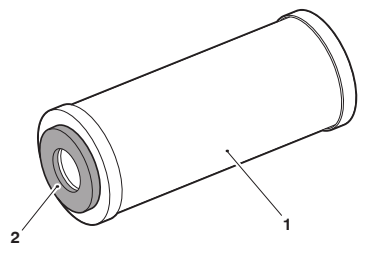
1. **Oil strainer plug**
2. **O-ring 0.7 x 0.07 in (17.17 x 1.78 mm)**
3. **O-ring 0.49 x 0.06 in (12.5 x 1.5 mm)**
4. **Oil strainer**

- Remove the two fasteners, oil filter cover and the O-ring.
- Remove the oil filter.



1. **Fasteners**
2. **Oil filter cover**
3. **Oil filter**
4. **O-ring**

- Apply a smear of clean engine oil to the sealing ring of the new oil filter. Install the oil filter to the engine.



1. **Oil filter**
2. **Sealing ring**

- Mount the O-ring to the oil filter cover and attach to the engine with two fasteners. Tighten the fasteners to 89 lbf in (10 Nm).
- After the oil has completely drained out, install a new sealing washer to the oil drain plug.
- Dispose of the oil and old filter in an environmentally friendly way. If in doubt for the disposal of the oil and filter, contact your local authority.
- Install and tighten the oil drain plug to 15 lbf ft (20 Nm).
- Thoroughly clean the two oil strainer plug assemblies and their sealing surfaces.

- Install new o-rings and install the two oil strainer plug assemblies and tighten to 11 lbf ft (15 Nm).
- Fill the engine with 10W/50 fully synthetic motorcycle engine oil that meets specification API SN (or higher) and JASO MA-2. Triumph Performance fully synthetic engine oil is recommended.
- 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.

- Stop the engine and check the oil level. Adjust if necessary see page 96.
- Reinstall the skid plate, see page 192.

Cooling System





To ensure efficient engine cooling, check the coolant level each day before riding the motorcycle, and top off the coolant if the level is low.

NOTICE

The motorcycle is equipped with D2053 coolant, a year-round, Organic Additive Technology (known as OAT) coolant when it leaves the factory. It is colored orange, and contains a 50% solution of monoethylene glycol based antifreeze.

D2053 coolant, as supplied by Triumph, provides freeze protection to -40°F (-40°C).

Corrosion Inhibitors

⚠ WARNING

D2053 OAT coolant contains corrosion inhibitors and antifreeze suitable for aluminum engines and radiators. Always use the coolant in accordance with the instructions of the manufacturer.

Coolant contains toxic chemicals that are harmful to the human body.

Contact with skin or eyes may cause severe irritation. Wear protective gloves, clothing and eye protection when handling coolant.

If coolant is inhaled, remove the person to fresh air and keep comfortable for breathing. In case of doubt or persistent symptoms, seek medical attention.

If coolant gets on your skin, flush with water immediately. Remove contaminated clothing.

If coolant gets in your eyes, flush with water for at least 15 minutes and SEEK MEDICAL ATTENTION IMMEDIATELY.

If coolant is swallowed, rinse the mouth with water and SEEK MEDICAL ATTENTION IMMEDIATELY.

KEEP COOLANT OUT OF THE REACH OF CHILDREN.

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

NOTICE

D2053 OAT coolant, as supplied by Triumph, is premixed and does not need to be diluted prior to filling or topping off the cooling system.

To protect the cooling system from corrosion, the use of corrosion inhibitor chemicals in the coolant is essential.

If coolant containing a corrosion inhibitor is not used, the cooling system will accumulate rust and scale in the water jacket and radiator. This will block the coolant passages, and considerably reduce the efficiency of the cooling system.

Coolants of different types must not be mixed. Mixing coolants of different types will reduce the performance of the coolant and reduce its life. When replacing coolant, it is recommended to thoroughly flush the cooling system with clean water.

Coolant Level Inspection

⚠ CAUTION

Do not remove the radiator pressure cap when the engine is hot.

When the engine is hot, the coolant inside the radiator will be hot and also under pressure.

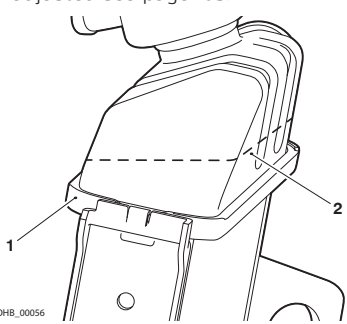
Contact with this hot, pressurized coolant may cause minor or moderate injury to exposed skin.

NOTICE

The coolant level should be checked when the engine is cold (at room or ambient temperature).

To inspect the coolant level:

- Allow the engine to cool.
- Position the motorcycle on level ground and in an upright position.
- Remove the radiator cap.
- Check the coolant level in the radiator. The coolant level must be 0.39 in (10 mm) above the radiator fins.
- If the coolant is below the minimum level, the coolant level must be adjusted see page 103.



1. **Right hand radiator**
2. **Coolant level (0.39 in (10 mm) above radiator fins)**

Coolant Level Adjustment

⚠ CAUTION

Do not remove the radiator pressure cap when the engine is hot.

When the engine is hot, the coolant inside the radiator will be hot and also under pressure.

Contact with this hot, pressurized coolant may cause minor to moderate injury to exposed skin.

NOTICE

If hard water is used in the cooling system, it will cause scale accumulation in the engine and radiator and considerably reduce the efficiency of the cooling system.

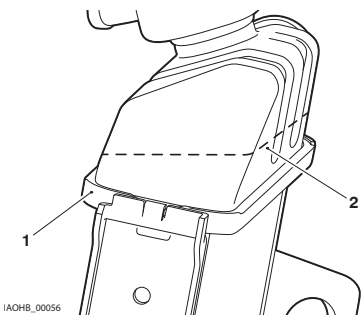
Reduced cooling system efficiency may cause the engine to overheat and suffer severe damage.

NOTICE

In an emergency, distilled water can be added to the cooling system. However, the coolant must then be drained and replenished with D2053 OAT coolant as soon as possible.

To adjust the coolant level:

- Allow the engine to cool.
- Position the motorcycle on level ground and in an upright position.
- Remove the radiator cap.
- Add coolant mixture (Triumph D2053 OAT coolant (premixed)) through the filler opening until the level reaches 0.39 in (10 mm) above the radiator fins.



1. **Right hand radiator**
2. **Coolant level (0.39 in (10 mm) above radiator fins)**

- Reinstall the coolant pressure cap.

Coolant Change

We recommend that the coolant is changed in accordance with scheduled maintenance requirements.

Radiator and Hoses

NOTICE

Using high pressure water sprays, such as from a car wash facility or household pressure washer, can damage the radiator fins, cause leaks and impair the radiator's efficiency.

Do not obstruct or deflect airflow through the radiator by installing unauthorized accessories, either in front or behind the radiator.

Interference with the radiator airflow can cause overheating, potentially resulting in engine damage.

Check the radiator hoses for cracks or deterioration, and tension clips for tightness in accordance with scheduled maintenance requirements. Any defective items must be replaced by a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

Check the radiator grille and fins for obstructions by insects, leaves or mud. Clean off any obstructions with a stream of low pressure water.

Coolant Replacement - Drainage

⚠ WARNING

Make sure that the motorcycle is stabilized 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.

⚠ WARNING

D2053 OAT coolant contains corrosion inhibitors and antifreeze suitable for aluminum engines and radiators. Always use the coolant in accordance with the instructions of the manufacturer.

Coolant contains toxic chemicals that are harmful to the human body.

Contact with skin or eyes may cause severe irritation. Wear protective gloves, clothing and eye protection when handling coolant.

If coolant is inhaled, remove the person to fresh air and keep comfortable for breathing. In case of doubt or persistent symptoms, seek medical attention.

If coolant gets on your skin, flush with water immediately. Remove contaminated clothing.

If coolant gets in your eyes, flush with water for at least 15 minutes and SEEK MEDICAL ATTENTION IMMEDIATELY.

⚠ WARNING Continued

If coolant is swallowed, rinse the mouth with water and SEEK MEDICAL ATTENTION IMMEDIATELY.

KEEP COOLANT OUT OF THE REACH OF CHILDREN.

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

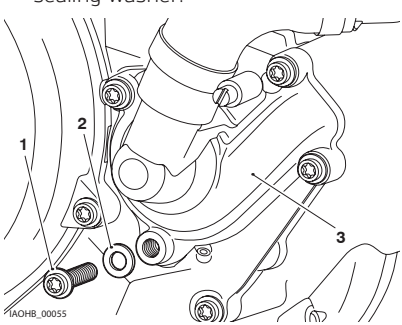
⚠ CAUTION

Do not remove the radiator pressure cap when the engine is hot.

When the engine is hot, the coolant inside the radiator will be hot and also under pressure.

Contact with this hot, pressurized coolant may cause minor or moderate injury to exposed skin.

- Support the motorcycle in an upright position.
- Place a suitable container underneath the water pump cover.
- Remove the fastener and discard the sealing washer.



1. **Fastener (TF250-C shown)**
2. **Sealing washer**
3. **Water pump cover**

- Remove the coolant pressure cap and allow the coolant to completely drain from the water pump.
- Reinstall the fastener with a new sealing washer and tighten to 89 lbf in (89 lbf in (10 Nm)).

Coolant Replacement - Filling

⚠ WARNING

Make sure that the motorcycle is stabilized 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.

⚠ WARNING

Do not remove the coolant pressure cap when the engine is hot. When the engine is hot, the coolant inside the radiator is hot and also under pressure. Contact with hot coolant will cause scalds and skin damage.

⚠ WARNING

D2053 OAT coolant contains corrosion inhibitors and antifreeze suitable for aluminum engines and radiators. Always use the coolant in accordance with the instructions of the manufacturer.

Coolant contains toxic chemicals that are harmful to the human body.

⚠ WARNING Continued

Contact with skin or eyes may cause severe irritation. Wear protective gloves, clothing and eye protection when handling coolant.

If coolant is inhaled, remove the person to fresh air and keep comfortable for breathing. In case of doubt or persistent symptoms, seek medical attention.

If coolant gets on your skin, flush with water immediately. Remove contaminated clothing.

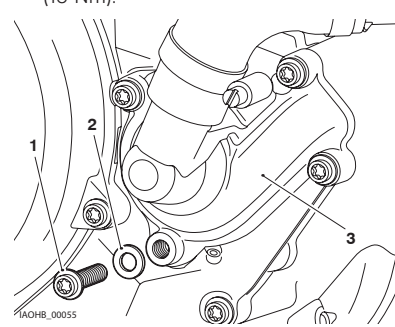
If coolant gets in your eyes, flush with water for at least 15 minutes and SEEK MEDICAL ATTENTION IMMEDIATELY.

If coolant is swallowed, rinse the mouth with water and SEEK MEDICAL ATTENTION IMMEDIATELY.

KEEP COOLANT OUT OF THE REACH OF CHILDREN.

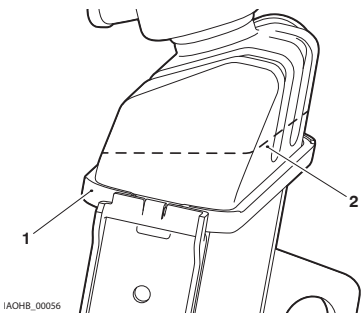
Failure to follow the advice above could result in serious injury or death.

- Make sure that the coolant drain fastener is tightened to 89 lbf in (10 Nm).



1. **Fastener (TF250-C shown)**
2. **Sealing washer**
3. **Water pump cover**

- Support the motorcycle in an upright position.
- Add coolant mixture (Triumph D2053 OAT coolant (premixed)) through the filler opening until the level reaches 0.39 in (10 mm) above the radiator fins.



1. **Right hand radiator**
2. **Coolant level (0.39 in (10 mm) above radiator fins)**

- Reinstall the coolant pressure cap.
- Start the engine and allow to idle until warm.
- Check the coolant level and adjust if necessary.

Fuel

Throttle Cables - Routing

WARNING

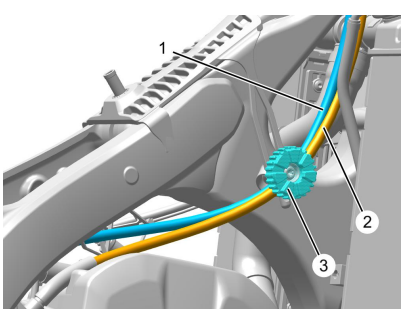
Make sure that the motorcycle is stabilized and adequately supported.

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.

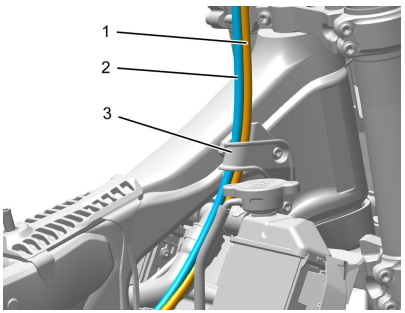
Failure to follow the advice above could result in serious injury or death.

- Remove the battery see page 197.
- Remove the fuel tank see page 125.
- The throttle cables should run side by side under the fuel tank's right hand mounting with the closing throttle cable positioned next to the frame.



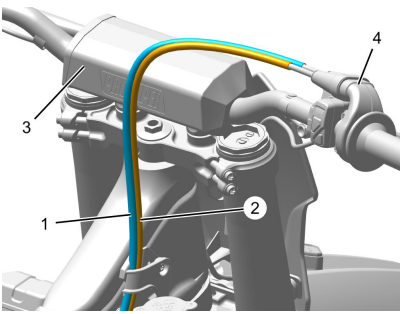
1. **Closing throttle cable**
2. **Opening throttle cable**
3. **Grommet**

- The throttle cables should run side by side through the right hand harness guide with the opening cable in front of the closing cable.



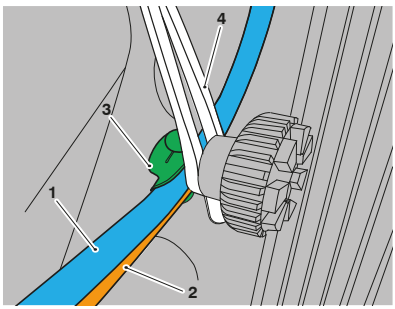
1. **Opening throttle cable**
2. **Closing throttle cable**
3. **Harness guide**

- To remove any cable slack between the handlebar pad and the throttle body, lightly pull up the cables.
- The throttle cables should run side by side to the throttle cable housing.
- Both cables will be touching the handlebar pad.
- Make sure that the throttle cable housing is orientated as shown in the illustration below.



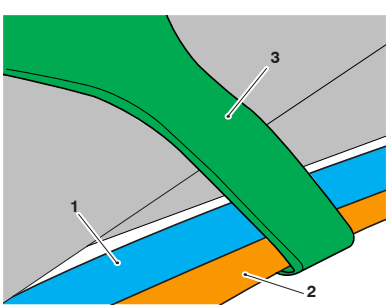
1. **Closing throttle cable**
2. **Opening throttle cable**
3. **Handlebar pad**
4. **Throttle cable housing**

- The throttle cables are secured underneath the fuel tank bobbin with a rubber band that sits behind the fuel tank rubber pad.



1. **Closing throttle cable**
2. **Opening throttle cable**
3. **Rubber band**
4. **Fuel tank rubber pad**

- The straps at the rear of the fuel tank rubber pad secure the throttle cables to the frame.



1. **Closing throttle cable**
2. **Opening throttle cable**
3. **Fuel tank rubber pad**

Throttle Twist Grip Free Play - Inspection

⚠ WARNING

The throttle grip controls the throttle valve in the throttle body. If the throttle cables are incorrectly adjusted, either too tight or too loose, the throttle may be difficult to control and performance will be affected.

Always be alert for changes in the 'feel' of the throttle system. Changes can be due to wear in the mechanism, which could lead to a sticking throttle.

Check the throttle grip free play in accordance with the scheduled maintenance requirements and, if necessary, make adjustments.

Inspections and repairs must be completed by a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

An incorrectly adjusted, sticking or stuck throttle may lead to loss of motorcycle control which could result in serious injury or death.

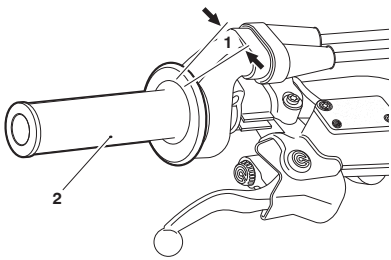
⚠ WARNING

Use of the motorcycle with a sticking or damaged throttle control will interfere with the throttle function. The throttle may be difficult to control and performance will be affected.

To avoid continued use of a sticking or damaged throttle control, the throttle system must be inspected and adjusted by a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

Failure to follow the advice above may lead to loss of motorcycle control, which could result in serious injury or death.

- Move the handlebars to the straight ahead position.
- Check that the throttle opens smoothly, without undue force and that it closes quickly under its own return spring force without sticking and without manual intervention.
- Check that there is 0.08 - 0.12 in (2 - 3 mm) throttle twist grip free play when lightly turning the twist grip back and forth.



IAOHB_00049

1. **0.08 - 0.12 in (2 - 3 mm)**
2. **Throttle twist grip**

- If any changes are detected, the throttle system must be inspected by a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.
- However, in an emergency, throttle cable adjustments may be made see page 111.
- With the engine at idle, move the handlebars to left and right full lock while checking that the engine speed does not change.
- If the engine speed changes, check and, if necessary, adjust the following:
- Throttle cables routing see page 107.
- Throttle cables adjustments see page 111.

Throttle Cables - Adjustment

⚠ WARNING

Make sure that the motorcycle is stabilized 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.

⚠ WARNING

The throttle grip controls the throttle valve in the throttle body. If the throttle cables are incorrectly adjusted, either too tight or too loose, the throttle may be difficult to control and performance will be affected.

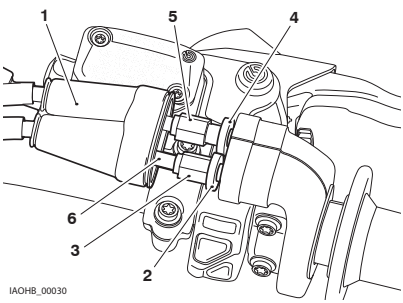
Always be alert for changes in the 'feel' of the throttle system. Changes can be due to wear in the mechanism, which could lead to a sticking throttle.

Check the throttle grip free play in accordance with the scheduled maintenance requirements and, if necessary, make adjustments.

Inspections and repairs must be completed by a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

An incorrectly adjusted, sticking or stuck throttle may lead to loss of motorcycle control which could result in serious injury or death.

- Turn the handlebars to the straight ahead position.
- Slide the rubber sleeve off the cable adjusters.
- Loosen the lock nuts on the opening and closing cable adjusters.
- Turn the both cable adjusters as far as possible into the cable housing.
- Turn the opening and closing cable adjusters out of the cable housing until there is 0.08 - 0.12 in (2 - 3 mm) free play at the twist grip.
- Tighten the opening and closing cable lock nut.



1. **Rubber sleeve**
2. **Opening cable lock nut**
3. **Opening cable adjuster**
4. **Closing cable lock nut**
5. **Closing cable fasteners**
6. **Throttle cable**

⚠ WARNING

Make sure that all the adjuster lock nuts of both throttle cables are tightened.

A loose lock nut could result in a sticking throttle.

An incorrectly adjusted, sticking or stuck throttle can lead to loss of motorcycle control which could result in serious injury, or death

- Slide the rubber sleeve to cover the cable adjuster.
- Check that the throttle opens smoothly, without undue force and that it closes quickly under its own return spring force without sticking and without manual intervention.
- Start the engine.
- With the engine at idle, move the handlebars to left and right full lock while checking that the engine speed does not change.
- If the engine speed changes, check and, if necessary, adjust the throttle cables routing see page 107 and throttle cables free play see page 109.

Engine Idle Speed Adjustment

⚠ DANGER

Never start the engine or run the engine in a confined area.

Always operate the motorcycle in the open air or in an area with adequate ventilation.

Exhaust fumes are poisonous and will cause loss of consciousness and death within a short period of time.

⚠ WARNING

Make sure that the motorcycle is stabilized 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.

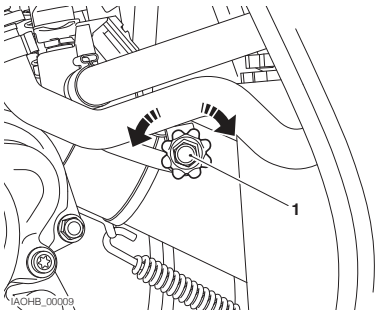
A correctly supported motorcycle will help prevent it from falling.

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

Before adjusting the engine idle speed, check, clean and, if necessary, adjust the following:

- air filter see page 116
- throttle twist grip free play see page 109.
- Start the engine and warm up the engine.
- Make sure that the cold start lever is not pulled out.
- Install a suitable digital tachometer.
- The engine idle speed is to be set in between the range specified in the table below.

- Turn the idle screw clockwise to increase or counterclockwise to decrease the idle speed.



1. **Engine idle screw**

Model	Engine Idle Speed
TF250-C	2250 - 2350 rpm
TF450-C	2100 - 2200 rpm

Air Filter Cover Panel - Removal

⚠ WARNING

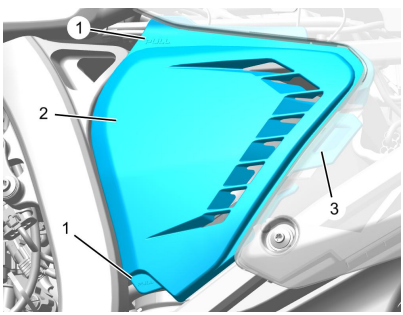
Make sure that the motorcycle is stabilized and adequately supported.

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

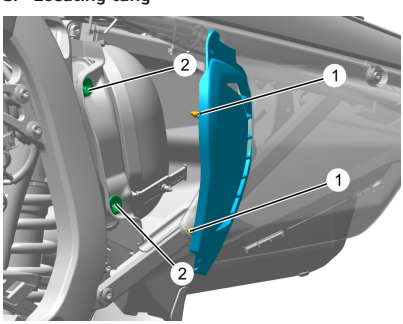
A correctly supported motorcycle will help prevent it from falling.

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

- Pull the left hand upper and lower edges of the air filter cover panel to release the two spigots.
- Maneuver the air filter cover panel forward to detach its locating tang from the airbox cover.
- Remove the air filter cover panel.



1. **Pull areas**
2. **Airbox cover panel**
3. **Locating tang**



1. **Spigots**
2. **Rubber grommets**

Air Filter Cover Panel - Installation

⚠ WARNING

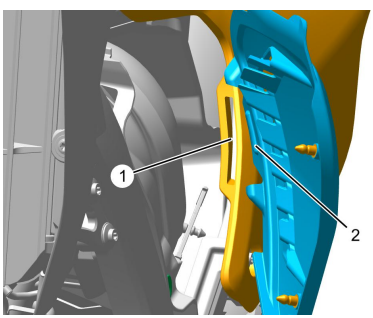
Make sure that the motorcycle is stabilized and adequately supported.

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.

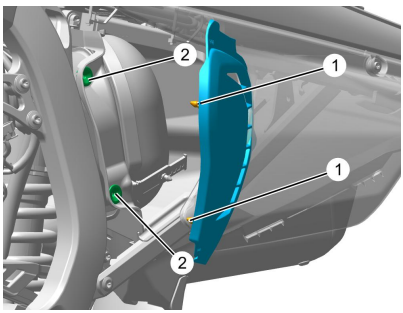
Failure to follow the advice above could result in serious injury or death.

- Align the air filter cover panel to the airbox cover locating slot.



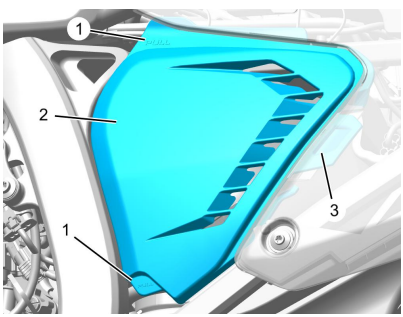
1. **Locating slot**
2. **Locating tang**

- Slide the air filter cover panel rearwards while placing the locating tang into the airbox locating slot. Make sure that the upper and lower edges slide in behind the airbox cover.
- Position the spigots to the grommets



1. **Spigots**
2. **Rubber grommets**

- Press firmly to secure the panel.
- Grasp the air filter cover panel and make sure that it is fully retained.



1. **Pull areas**
2. **Airbox cover panel**
3. **Locating tang**

Air Filter - Removal

⚠ WARNING

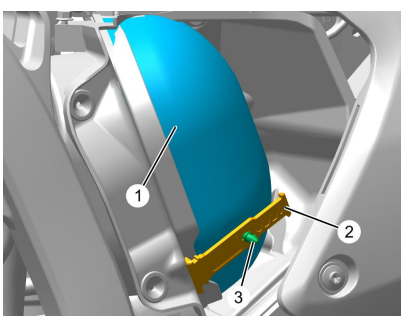
Make sure that the motorcycle is stabilized and adequately supported.

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.

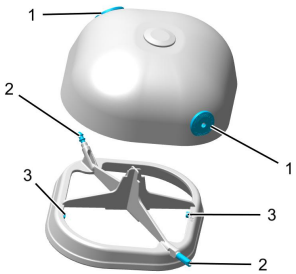
Failure to follow the advice above could result in serious injury or death.

- Remove the air filter cover see page 113.
- Detach the retaining strap from its spigot.
- Remove the air filter assembly.



1. **Air filter**
2. **Retaining strap**
3. **Spigot**

- Detach the air filter from the retaining lugs.
- Detach the grommets from the retaining spigots and remove the air filter.



1. **Grommets**
2. **Spigots**
3. **Retaining lugs**

Air Filter - Cleaning

⚠ WARNING

Make sure that the motorcycle is stabilized 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

Do not use gasoline to clean the air filter.

Using gasoline to clean the air filter will damage the air filter.

- Remove the air filter cover see page 113.
- Remove the air filter see page 115.

NOTICE

When riding in dusty conditions, clean the air filter more regularly than listed in the Scheduled Maintenance Table.

When riding in rain or muddy conditions, clean the air filter after the ride.

- Soak the air filter in a proprietary foam air filter cleaner.

NOTICE

When cleaning the air filter, do not twist or blow the filter dry.

The air filter may get damaged if twisted or blown dry.

- Squeeze the air filter to remove the dirt particles.
- Wash the air filter in warm soapy water to remove the filter cleaner. Then rinse in clear water.
- Squeeze the air filter to remove the excess water (do not twist the air filter) then allow the filter to dry.
- Clean the interior of the airbox.

NOTICE

Make sure that the air filter is completely dry before applying the air filter oil.

The air filter should be wet with the filter oil, but not dripping.

- When the air filter is dry, soak the filter in quality air filter oil.
- When saturated, squeeze out the excess oil until there is an even coating of oil on the filter.
- Allow the filter to stand in an open space for 12 hours. This is to allow the oil thinning agent to evaporate.
- Install the air filter see page 117.
- Install the air filter cover see page 114

Air Filter - Installation

⚠ WARNING

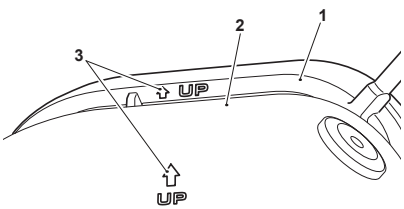
Make sure that the motorcycle is stabilized and adequately supported.

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.

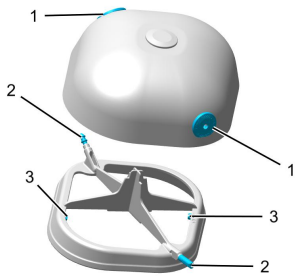
- Install the air filter to the filter cage. Make sure that the arrow on the air filter is in the same orientation as the arrow marking on the filter cage.



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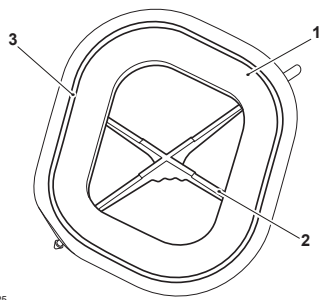
1. **Filter cage**
2. **Air Filter**
3. **Arrow markings**

- Attach the grommets to their retaining spigots.
- Attach the air filter to the retaining lugs.



1. **Grommets**
2. **Spigots**
3. **Retaining lugs**

- Apply grease to the sealing area of the air filter, as shown below.

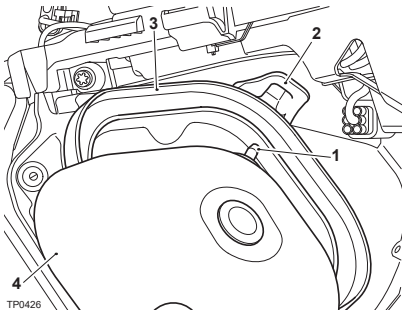


TP0425

1. **Air filter**
2. **Filter cage**
3. **Greased area**

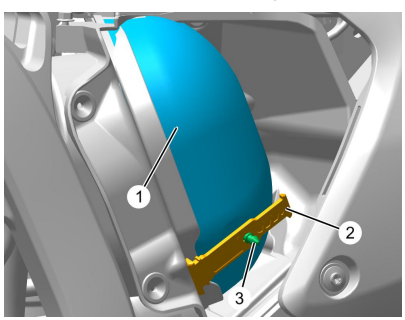
- Position the air filter to the airbox with the arrow on the air filter pointing upwards.

- Install the air filter to the airbox. Make sure that the spigot fits into the spigot housing.



1. **Spigot**
2. **Spigot housing**
3. **Airbox**
4. **Air filter**

- Secure the air filter with its retaining strap secured to the spigot.



1. **Air filter**
2. **Retaining strap**
3. **Spigot**

- Install the air filter cover see page 114

Spark Plug - Removal



WARNING

Make sure that the motorcycle is stabilized 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

If the engine has recently been running, the engine components may be hot to the touch.

To avoid skin damage, always allow the hot parts to cool before touching the engine.

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

TF250-C

- Remove the battery see page 197.
- Remove the fuel tank see page 125.

NOTICE

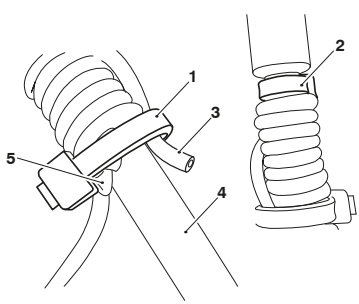
The hour meter wire is secured to the spark plug lead using two cable ties. One cable tie secures the first coil and the excess wire. The other cable tie immobilizes the coiled wire to prevent it from sliding along the spark plug lead. Note the position and routing of the hour meter wire for installation.

The white tape is part of the first coil.

Make sure that the excess wire is no more than 0.2 in (5 mm).

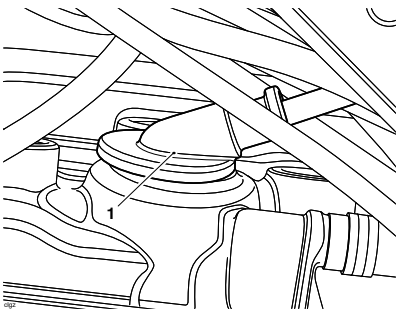
Failure to make sure that the hour meter is routed and positioned correctly may result in the hour meter to function incorrectly.

- Note the routing and position of the hour meter wire for installation.



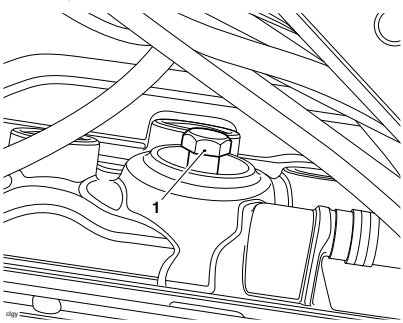
1. **Cable tie**
2. **Cable tie (spark plug end)**
3. **Excess wire**
4. **Spark plug lead**
5. **White tape**

- Disconnect the spark plug cap from the spark plug.



1. **Spark plug cap**

- If required, unscrew the spark plug cap from the spark plug lead.
- Install the spark plug tool, from the tool kit, onto the spark plug.
- Undo the spark plug and remove, the spark plug will remain in the spark plug tool.



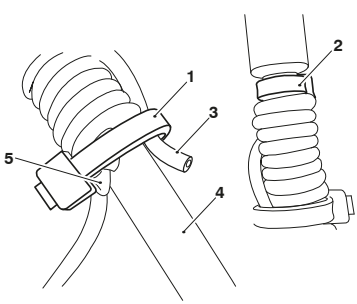
1. **Spark plug tool**

TF450-C

- Remove the battery see page 197.
- Remove the fuel tank see page 125.

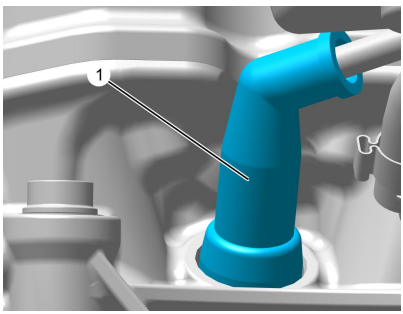
NOTICE
The hour meter wire is secured to the spark plug lead using two cable ties. One cable tie secures the first coil and the excess wire. The other cable tie immobilizes the coiled wire to prevent it from sliding along the spark plug lead. Note the position and routing of the hour meter wire for installation.
The white tape is part of the first coil.
Make sure that the excess wire is no more than 0.2 in (5 mm).
Failure to make sure that the hour meter is routed and positioned correctly may result in the hour meter to function incorrectly.

- Note the routing and position of the hour meter wire for installation.



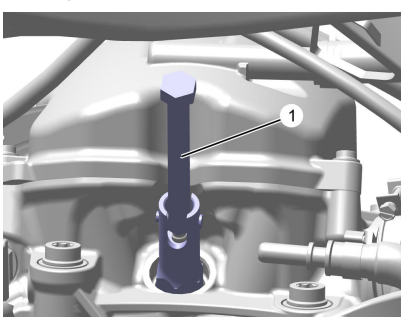
1. **Cable tie**
2. **Cable tie (spark plug end)**
3. **Excess wire**
4. **Spark plug lead**
5. **White tape**

- Disconnect the spark plug cap from the spark plug.



1. **Spark plug cap**

- If required, unscrew the spark plug cap from the spark plug lead.
- Install the spark plug tool, from the tool kit, onto the spark plug.
- Undo the spark plug and remove, the spark plug will remain in the spark plug tool.



1. **Spark plug tool**

Spark Plug - Installation

⚠ WARNING

Make sure that the motorcycle is stabilized 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 hour meter wire is secured to the spark plug lead using two cable ties. One cable tie secures the first coil and the excess wire. The other cable tie immobilizes the coiled wire to prevent it from sliding along the spark plug lead. Note the position and routing of the hour meter wire for installation.

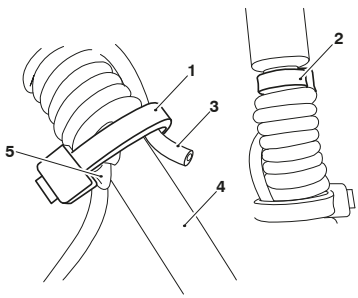
The white tape is part of the first coil.

Make sure that the excess wire is no more than 0.2 in (5 mm).

Failure to make sure that the hour meter is routed and positioned correctly may result in the hour meter to function incorrectly.

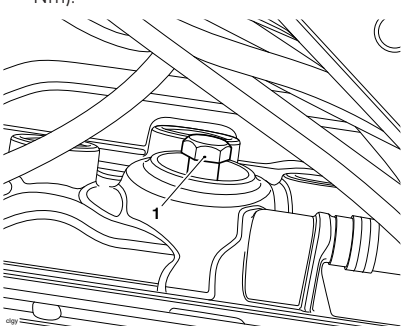
TF250-C

- If required, screw the spark plug on to the spark plug lead.
- Make sure that the hour meter wire is installed on the spark plug lead, as noted during removal.



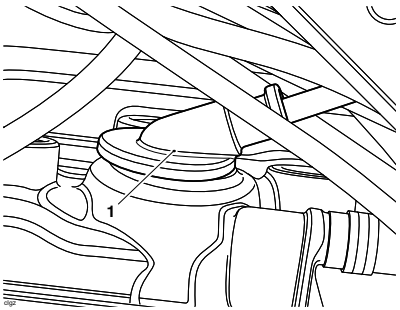
1. **Cable tie**
2. **Cable tie (spark plug end)**
3. **Excess wire**
4. **Spark plug lead**
5. **White tape**

- Install the spark plug and, using the spark plug tool, tighten to 11 lbf ft (15 Nm).



1. **Spark plug tool**

- Connect the spark plug cap to the spark plug.

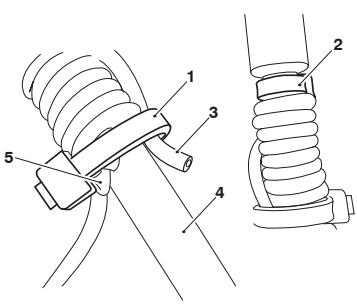


1. **Spark plug cap**

- Install the fuel tank, see page 126
- Install the battery, see page 201

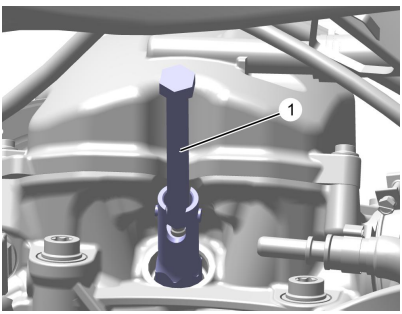
TF450-C

- If required, screw the spark plug on to the spark plug lead.
- Make sure that the hour meter wire is installed on the spark plug lead as noted during removal.



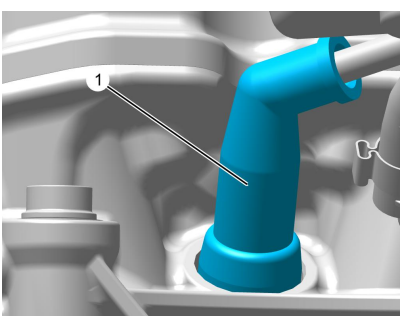
1. **Cable tie**
2. **Cable tie (spark plug end)**
3. **Excess wire**
4. **Spark plug lead**
5. **White tape**

- Install the spark plug and, using the spark plug tool, tighten to 11 lbf ft (15 Nm).



1. **Spark plug tool**

- Connect the spark plug cap to the spark plug.



1. **Spark plug cap**

- Install the fuel tank, see page 126
- Install the battery, see page 201

Exhaust Muffler Wadding - Replace



WARNING

Make sure that the motorcycle is stabilized 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

If the engine has recently been running, the exhaust components may be hot to the touch.

To avoid skin damage, always allow the hot parts to cool before touching the exhaust system.

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

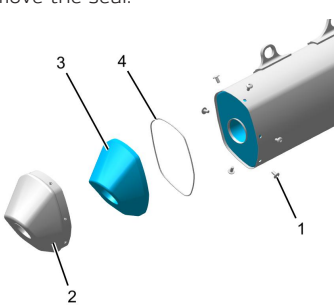
NOTICE

Never neglect the exhaust silence wadding maintenance. Replace the wadding in accordance with the scheduled maintenance requirements.

Over time the fibers in the exhaust muffler wadding deteriorates. The exhaust noise increases and the characteristics of the engine performance will change.

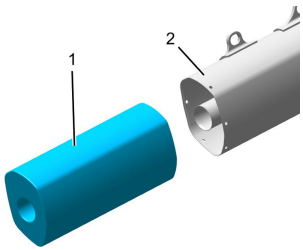
Scheduled maintenance must be carried out by a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

- Remove the exhaust muffler, see Exhaust Muffler - Removal in the Service Manual.
- Loosen the six fasteners and remove the end cap.
- Remove the exhaust wadding from the end cap.
- Remove the seal.



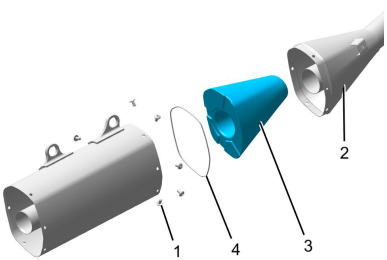
1. **Fasteners**
2. **End cap**
3. **Wadding**
4. **Seal**

- Remove the exhaust wadding from the muffler.



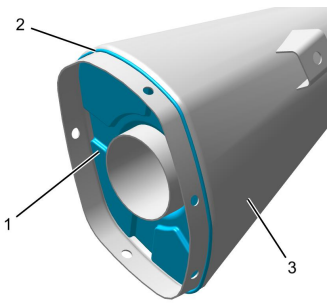
1. **Wadding**
2. **Muffler**

- Remove the six fasteners and remove the transition piece from the muffler.
- Remove the exhaust wadding from the transition piece.
- Remove the seal.



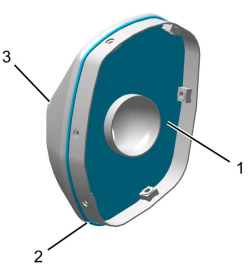
1. **Fasteners**
2. **Transition piece**
3. **Wadding**
4. **Seal**

- Clean the interior of the muffler, transition piece and the end cap.
- Check the condition of the seals, replace if necessary.
- Install new wadding into the transition piece.
- Install new wadding into the muffler.
- Install new wadding into the end cap.
- Install the seal to the transition piece as shown in the illustration below.



1. **Wadding**
2. **Seal**
3. **Transition piece**

- Mount the transition piece to the muffler and tighten the fasteners to 62 lbf in (7 Nm).
- Install the seal to the end cap as shown in the illustration below.



1. **Wadding**
2. **Seal**
3. **End cap**

- Install the end cap to the muffler and tighten the fasteners to 62 lbf in (7 Nm).
- Install the muffler, see Exhaust Muffler - Installation in the Service Manual.

Fuel Tank - Removal

⚠ WARNING

Observe the warning advice given in the General Information section on the Fuel Handling Precautions see page page 29.

Before disconnecting any fuel lines, make sure that the engine and exhaust system has cooled down.

A fire could result from spilled fuel or fuel not handled or stored correctly.

Failure to follow the advice above may result in a fire that may cause serious injury or death.

⚠ WARNING

Always drain fuel from the fuel tank using approved, professional standard fuel handling equipment.

A fire may result from use of non-approved fuel handling equipment.

Failure to follow the advice above may result in a fire that may cause serious injury or death.

⚠ WARNING

Make sure that the motorcycle is stabilized and adequately supported.

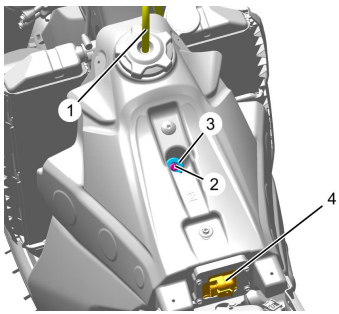
Do not support the motorcycle on any ancillary component, the exhaust system or any other non-structural parts of the motorcycle frame.

A correctly supported motorcycle will help prevent it from falling.

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

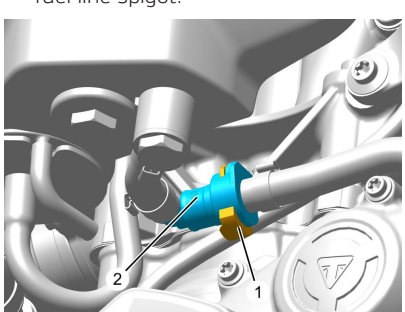
- Remove the seat see page 38.
- Remove the side panels see page 128.
- Remove the battery see page 197.
- Disconnect the fuel pump electrical connection.
- Remove the fuel tank overflow hose from the fuel filler cap.

- Remove the fastener and spacer from the center of the fuel tank.



1. **Fuel tank overflow hose**
2. **Fastener**
3. **Spacer**
4. **Fuel pump electrical connection**

- Press in the locking device on the fuel hose connector.
- Without pulling on the fuel hose, slide the fuel hose connector off the fuel line spigot.



1. **Locking device**
2. **Fuel hose connector**

- Remove the fuel tank.

Fuel Tank - Installation

⚠ WARNING

Observe the warning advice given in the General Information section on the Fuel Handling Precautions see page page 29.

Before disconnecting any fuel lines, make sure that the engine and exhaust system has cooled down.

A fire could result from spilled fuel or fuel not handled or stored correctly.

Failure to follow the advice above may result in a fire that may cause serious injury or death.

⚠ WARNING

Always drain fuel from the fuel tank using approved, professional standard fuel handling equipment.

A fire may result from use of non-approved fuel handling equipment.

Failure to follow the advice above may result in a fire that may cause serious injury or death.

⚠ WARNING

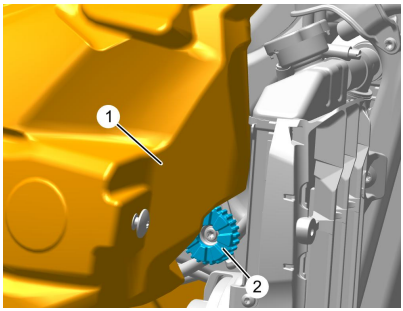
Make sure that the motorcycle is stabilized and adequately supported.

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.

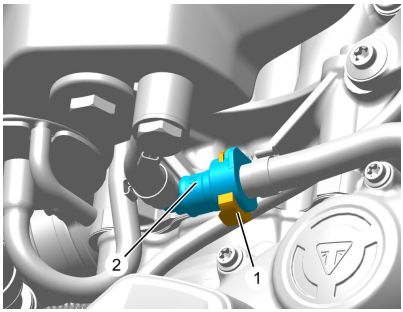
Failure to follow the advice above could result in serious injury or death.

- Align the fuel tank to the frame. Make sure that the front of the fuel tank locates on the castellated grommets.



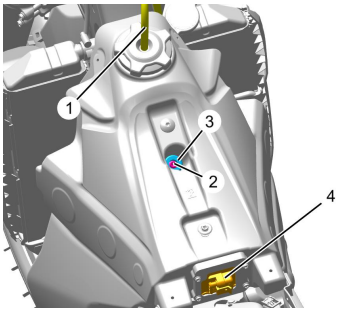
1. **Fuel tank**
2. **Castellated grommet**

- Connect the fuel hose connector to its spigot on the fuel line. Make sure that the locking device securely holds the connector on its spigot.



1. **Locking device**
2. **Fuel hose connector**

- Install the spacer and fastener to the center of the fuel tank. Tighten the fastener to 89 lbf in (10 Nm).
- Reinsert the fuel filler cap breather hose into the upper yoke.
- Reconnect the fuel pump electrical connection.



1. **Fuel tank overflow hose**
2. **Fastener**
3. **Spacer**
4. **Fuel pump electrical connection**

- Install the battery see page 201.
- Install the side panels see page 129.
- Install the seat see page 39.

Side Panels - Removal

⚠ WARNING

Make sure that the motorcycle is stabilized 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.

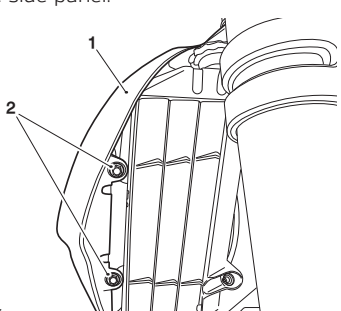
A correctly supported motorcycle will help prevent it from falling.

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

NOTICE

Follow the same procedure for both left and right hand sides.

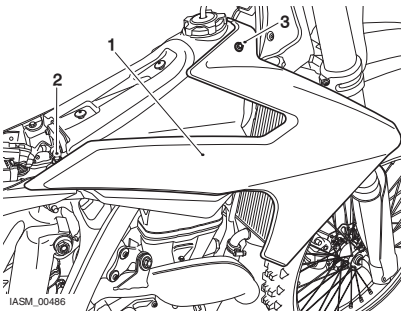
- Remove the seat see page 38.
- Remove the front two fasteners from the side panel.



IASM_00487

1. **Side panel**
2. **Front fasteners**

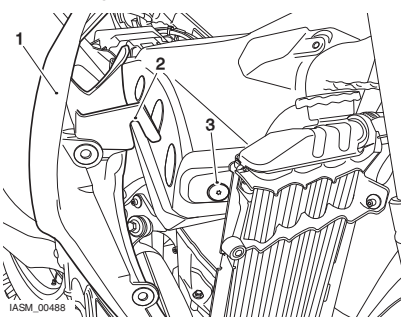
- Remove the upper fastener and the rear fastener from the side panel.



IASM_00486

1. **Side panel**
2. **Rear fastener**
3. **Upper fastener**

- Lift the side panel upwards to release from the fuel tank front locating fastener.



IASM_00488

1. **Side panel**
2. **Front locating slot**
3. **Front locating fastener**

Side Panels - Installation

⚠ WARNING

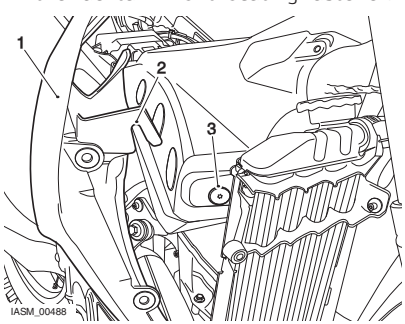
Make sure that the motorcycle is stabilized and adequately supported.

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.

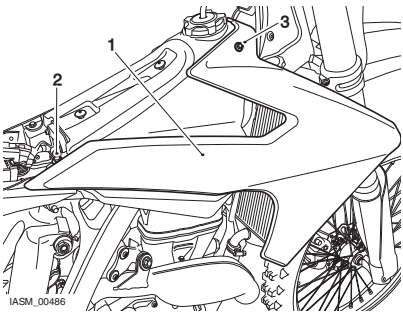
Failure to follow the advice above could result in serious injury or death.

- Locate the slot in the side panel with the fuel tank front locating fastener.



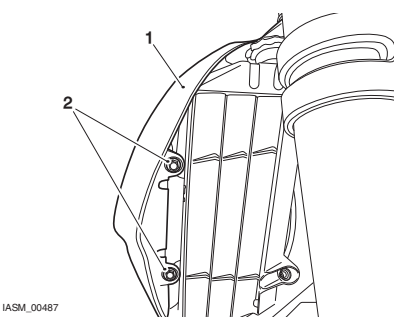
1. **Side panel**
2. **Front locating slot**
3. **Front locating fastener**

- Align the side panel with the other fastener holes.
- Install the side panel upper fastener and tighten to 27 lbf in (3 Nm).
- Install the side panel rear fastener and tighten to 27 lbf in (3 Nm).



1. **Side panel**
2. **Rear fastener**
3. **Upper fastener**

- Install the two side panel front fasteners and tighten to 89 lbf in (10 Nm).



1. **Side panel**
2. **Front fasteners**

- Install the seat see page 39.

Clutch

The motorcycle is equipped with a hydraulically operated clutch that does not require adjustment.

Clutch Inspection

- Check and, if necessary, adjust the clutch fluid level in the master cylinder reservoir.
- Check for correct operation of the clutch.
- Check for fluid leaks from the clutch hydraulic hose and its unions.
- Check the inner and outer drum for damage or wear. Replace if necessary.
- Check the steel plates and friction plates for damage, discoloration or wear. Replace if necessary.

Clutch Fluid Level Inspection and Adjustment

⚠ WARNING

Make sure that the motorcycle is stabilized 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.

⚠ WARNING

If there has been an appreciable drop in the level of the fluid in the clutch fluid reservoir, consult a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center for advice before riding.

Riding with depleted clutch fluid levels, or with a clutch fluid leak is dangerous and may lead to loss of motorcycle control which could result in serious injury or death.

In accordance with the scheduled maintenance chart, inspect the clutch fluid level in the master cylinder reservoir.

Clutch Fluid Level Inspection

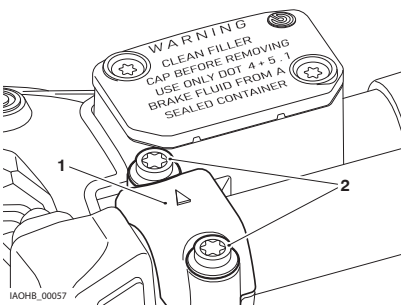
To inspect the clutch fluid level:

- Clean the area around the reservoir cap and its fasteners.
- Turn the handlebars to bring the fluid reservoir to a level position.

NOTICE

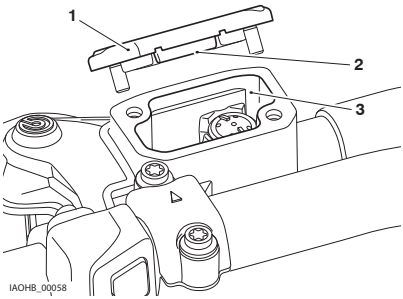
Note the position of the clutch master cylinder for installation.

- If required, loosen the clamp fasteners and move the fluid reservoir to a level position.



1. **Clamp**
2. **Fasteners**

- Loosen the reservoir cap fasteners and remove the reservoir cap and diaphragm seal.
- Check the fluid level of the reservoir. Fluid should be up to the upper level line when the reservoir is held horizontal.

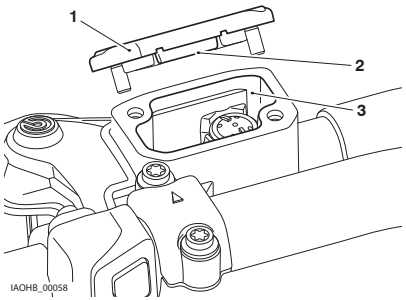


1. **Reservoir cap**
2. **Diaphragm seal**
3. **Upper level line**

Clutch Fluid Level Adjustment

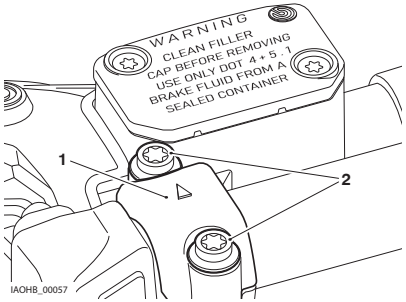
To adjust the clutch fluid level:

- Fill the reservoir to the upper level line using new DOT 4 clutch fluid from a sealed container.
- Reinstall the reservoir cap making sure that the diaphragm seal is correctly positioned between the plastic plate and the reservoir body. Tighten the fasteners to 9 lbf in (1 Nm).



1. **Reservoir cap**
2. **Diaphragm seal**
3. **Upper level line**

- Position the master cylinder as noted for removal and tighten the fastener to 89 lbf in (10 Nm).



1. **Clamp**
2. **Fasteners**

Clutch Fluid Replace

⚠ WARNING

Make sure that the motorcycle is stabilized 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.

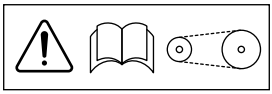
A correctly supported motorcycle will help prevent it from falling.

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

Clutch and brake fluid must be changed every two calendar years, regardless of the mileage the motorcycle has covered in that time.

To replace the clutch fluid see Clutch Fluid Replace in the Service Manual.

Drive Chain



DANGER

A loose or worn chain, or a chain that breaks or jumps off the sprockets could catch on the engine sprocket or lock the rear wheel.

A chain that snags on the engine sprocket or locks the rear wheel will injure the rider.

Failure to follow the advice above will lead to loss of motorcycle control, which will result in serious injury or death.

For safety and to prevent excessive wear the drive chain must be checked, adjusted and lubricated in accordance with the scheduled maintenance requirements. Checking, adjustment and lubrication must be carried out after every race.

If the chain is badly worn or incorrectly adjusted (either too loose or too tight) the chain could jump off the sprockets or break. Therefore, we recommend to always replace worn or damaged chains using genuine Triumph parts supplied by an authorized Triumph motocross and enduro center.

Drive Chain Lubrication

NOTICE

Do not use a pressure washer to clean the drive chain as this may cause damage to the drive chain components.

Lubrication is necessary after every race or any time that the chain appears dry.

To lubricate the drive chain:

- If the drive chain is especially dirty, clean first and then apply lubricant.
- Use the special drive chain lubricant as recommended in the Specifications section.
- Apply lubricant to the sides of the rollers then allow the motorcycle to stand unused for at least eight hours (overnight is ideal). This will allow the lubricant to penetrate to the drive chain.
- Before riding, wipe off any excess lubricant.

Drive Chain Free Movement - Inspection



WARNING

Make sure that the motorcycle is stabilized 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.

To inspect the drive chain free movement:

- Place the motorcycle on a suitable stand with the rear wheel off the ground and the rear suspension fully unloaded.

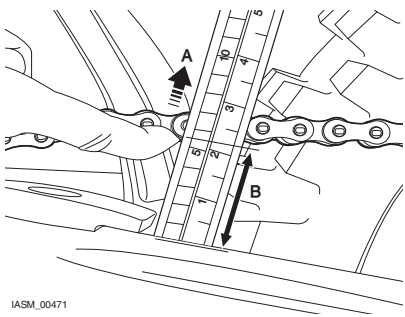
CAUTION

When rotating the rear wheel to find the drive chain tightest position, keep fingers away from the drive chain and sprocket.

Fingers may get trapped between the drive chain and sprocket.

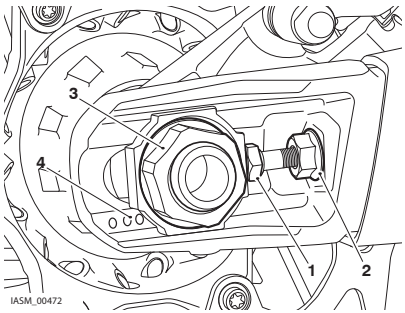
Failure to follow the advice above could result in minor to moderate injury.

- Rotate the rear wheel to find the position where the chain is tightest.
- Apply a force 'A' upwards directly above the end of the chain rubbing strip until the chain is taut.
- Measure the distance 'B' between the swinging arm surface and lower edge of the chain at the force application point.
- The measurement in between the swinging arm and the force application point should be 2.17 - 2.28 in (2.17 - 2.28 in (55 - 58 mm)).



1. **Drive chain movement measurement position**

Drive Chain Free Movement - Adjustment



1. **Adjuster bolt**
2. **Adjuster bolt lock nut**
3. **Rear wheel spindle nut**
4. **Adjuster markings**

If the drive chain free movement is incorrect, adjustment must be made as follows:

- Place the motorcycle on a suitable stand with the rear wheel off the ground and the rear suspension fully unloaded.
- Loosen the wheel spindle nut.
- Loosen the lock nuts on both the left hand and right hand chain adjuster bolts.
- Move both adjusters by an equal amount using the adjuster markings as a guideline.
- Turn the adjuster bolts clockwise to increase drive chain free movement and counterclockwise to reduce drive chain free movement.
- When the correct amount of drive chain free movement has been set, push the wheel into firm contact with the adjusters.
- Make sure that the same adjuster marking is aligned with the spindle adjuster on both sides of the swinging arm.

WARNING

When the drive chain adjustment is complete, make sure that the wheel spindle and the adjuster lock nuts are tightened to the correct torque.

Operation of the motorcycle with a loose wheel spindle and/or loose adjuster lock nuts may result in a change to the handling characteristics and control of the motorcycle.

Failure to follow the advice above may lead to loss of motorcycle control, which could result in serious injury or death.

- Tighten both adjuster lock nuts to 18 lbf ft (25 Nm) and the rear wheel spindle nut to 89 lbf ft (120 Nm).
- Repeat the drive chain adjustment check. Readjust if necessary.

WARNING

It is dangerous to operate the motorcycle with defective brakes.

Have the brakes inspected and, if required, replaced by a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

Failure to take remedial action may reduce braking efficiency leading to loss of motorcycle control which could result in serious injury or death.

- Check the rear brake effectiveness. Rectify if necessary.

Final Drive Chain and Sprocket Wear Inspection

⚠ WARNING

Replacement drive chains must be installed by a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

We recommend to always replace worn or damaged chains using genuine Triumph parts.

Incorrectly installed drive chains may result in a broken drive chain or may cause the drive chain to jump off the sprockets leading to loss of motorcycle control which could result in serious injury or death.

NOTICE

If the sprockets are found to be worn, always replace the sprockets and drive chain together.

Replacing worn sprockets without also replacing the drive chain will lead to premature wear of the new sprockets.

Drive Chain Damage Inspection

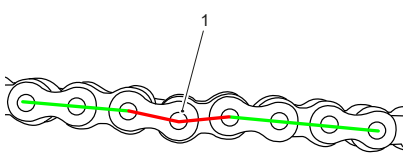
⚠ WARNING

If the drive chain is found to have damaged rollers, loose pins or stiff links, the drive chain must be replaced.

Do not attempt to loosen any stiff links. The stiff link may have damaged or worn components.

Riding with drive chain stiff links, or loosened stiff links, may result in a broken drive chain or may cause the drive chain to jump off the sprockets, leading to loss of motorcycle control which could result in serious injury or death.

- Rotate the rear wheel and inspect the drive chain for damaged rollers, loose pins and stiff links.



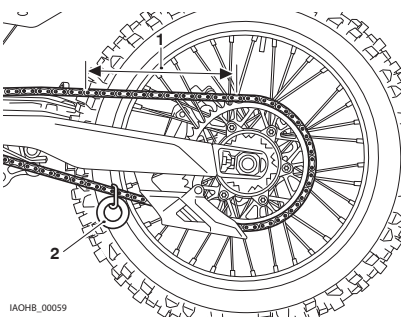
1. **Stiff link**

- If the drive chain has any damaged rollers, loose pins or stiff links, the drive chain must be replaced.

Drive Chain Wear Inspection

To inspect the drive chain and sprocket wear:

- Place the motorcycle on a suitable stand with the rear wheel off the ground and the rear suspension fully unloaded.
- Stretch the chain taut by hanging a 20 - 40 lb (10 - 20 kg) weight on the chain.
- Measure the length of 20 links on the straight part of the chain from pin center of the 1st pin to the pin center of the 21st pin. Since the chain may wear unevenly, take measurements in several places.



1. **Measure across 20 links**
2. **Weight**

- If the length exceeds 12.6 in (320 mm), the drive chain must be replaced.

Sprockets Wear Inspection

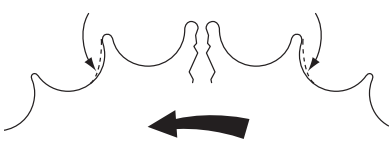
NOTICE

The illustration shows wear on sprockets mounted on the left hand side of the motorcycle.

For sprockets mounted on the right hand side of the motorcycle, the wear is on the opposite side of the tooth.

- Rotate the rear wheel and inspect the sprockets for unevenly or excessively worn or damaged teeth.

Worn Tooth (Engine Sprocket) Worn Tooth (Rear Sprocket)



(Sprocket wear exaggerated for illustrative purposes)

ccol

- If there is any irregularity, have the drive chain and the sprockets replaced by a competent person with the specialist knowledge and technical understanding of motorcycles, such as an authorized Triumph motocross and Enduro center.

Brakes

Rear brake pedal free play and adjustment

Riding the motorcycle without free play for the rear brake pedal may overheat the brake, reducing braking effectiveness leading to loss of motorcycle control and an accident.

If the rear brake pedal position has been adjusted, the rear brake pedal free play must be checked and, if necessary, adjusted see page 78.

Breaking-in New Brake Pads and Discs

⚠ WARNING

Brake pads must always be replaced as a wheel set. At the front, where two calipers are installed on the same wheel, replace all the brake pads in both calipers.

After replacement brake pads have been installed, ride with extreme caution until the new pads have 'broken in'.

Replacing individual pads will reduce braking efficiency and may lead to loss of motorcycle control, which could result in serious injury or death.

New brake discs and pads require a period of careful breaking-in that will optimize the performance and longevity of the discs and pads.

During the breaking-in period, avoid extreme braking, ride with caution and allow for greater braking distances.

Disc Brake Fluid

⚠ WARNING

Brake fluid is hygroscopic, which means it will absorb moisture from the air.

Any absorbed moisture will greatly reduce the boiling point of the brake fluid, causing a reduction in braking efficiency.

Because of this, always replace brake fluid in accordance with scheduled maintenance requirements.

Always use new brake fluid from a sealed container, and never use fluid from an unsealed container or from one that has been previously opened.

Do not mix different brands or grades of brake fluid.

Check for fluid leakage around brake installed, seals and joints and also check the brake hoses for splits, deterioration and damage.

Always rectify any faults before riding.

Failure to follow the advice above may lead to loss of motorcycle control, which could result in serious injury or death.

Inspect the level of brake fluid in both reservoirs and change the brake fluid in accordance with scheduled maintenance requirements. Use Triumph Performance DOT 4 brake fluid as recommended in the Specification section. The brake fluid must also be changed if it becomes, or is suspected of having become contaminated with moisture or any other contaminants.

Front Brake Fluid Level Inspection and Adjustment

⚠ WARNING

Make sure that the motorcycle is stabilized 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.

⚠ WARNING

If there has been an appreciable drop in the level of the fluid in either fluid reservoir the brake system must be inspected.

Contact a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

Riding with depleted brake fluid levels, or with a brake fluid leak is dangerous and will cause reduced brake performance, leading to loss of motorcycle control which could result in serious injury or death.

Brake Fluid Level Inspection

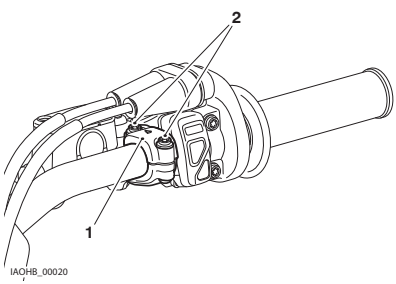
To inspect the front brake fluid level:

- Clean the area around the reservoir cap and its fasteners.
- Turn the handlebars to bring the fluid reservoir to a level position.

NOTICE

Note the position of the brake master cylinder for installation.

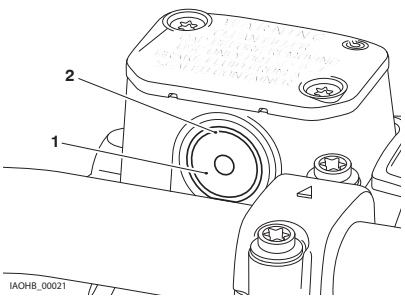
- If required, loosen the clamp fasteners and move the fluid reservoir to a level position.



1. **Front master cylinder clamp**
2. **Fasteners**

- Check the level of brake fluid visible in the sight glass at the rear of the reservoir unit (reservoir held horizontal).

- If the brake fluid is below the upper level mark fill the reservoir to the upper level mark using new DOT 4 brake fluid from a sealed container. Triumph Performance DOT 4 brake fluid is recommended, see Brake Fluid Level Adjustment.



1. **Sight glass**
2. **Upper level mark**

Brake Fluid Level Adjustment

To adjust the brake fluid level:

⚠ WARNING

Ensure absolute cleanliness when adding brake fluid to the brake fluid reservoir.

Do not allow moisture or debris to enter the cylinder as this will adversely affect the brake fluid properties.

Do not use brake fluid from a container which has been opened for any period of time. Always use brake fluid from a sealed container.

Always check for fluid leakage around hydraulic fittings and for damage to hoses.

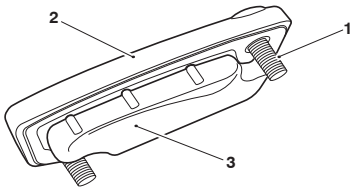
Failure to follow the advice above may lead to loss of motorcycle control, which could result in serious injury or death.

NOTICE

To prevent paint damage, do not spill brake fluid onto any area of the bodywork.

Spilled brake fluid will damage paintwork.

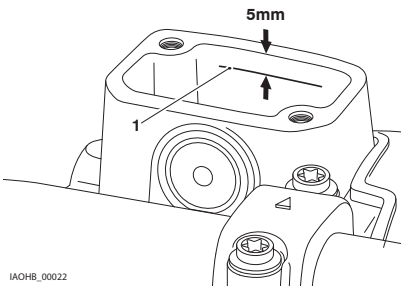
- Clean the area around the reservoir cap and its fasteners.
- Loosen the reservoir cap fasteners and remove the reservoir cap and diaphragm seal.



IASM_00349_1

1. **Fasteners**
2. **Reservoir cap**
3. **Diaphragm seal**

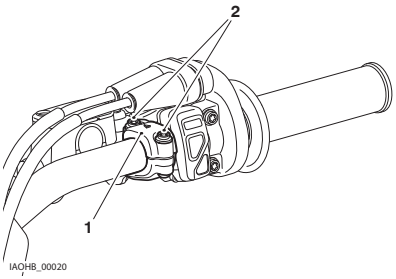
- Fill the reservoir to the upper level line (0.2 in (5 mm) below the upper edge of the reservoir) with new DOT 4 brake fluid from a sealed container. Triumph Performance DOT 4 brake fluid is recommended.



IAOHB_00022

1. **Upper level line**

- Reinstall the reservoir cap making sure that the diaphragm seal is correctly positioned between the reservoir cap and the reservoir body. Tighten the fasteners to 9 lbf in (1 Nm).
- Position the master cylinder as noted for removal and tighten the fasteners to 89 lbf in (10 Nm).



IAOHB_00020

1. **Front master cylinder clamp**
2. **Fasteners**

Rear Brake Fluid Inspection and Adjustment

⚠ WARNING

Make sure that the motorcycle is stabilized 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.

⚠ WARNING

If there has been an appreciable drop in the level of the fluid in either fluid reservoir the brake system must be inspected.

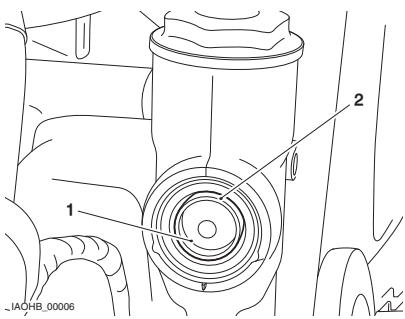
Contact a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

Riding with depleted brake fluid levels, or with a brake fluid leak is dangerous and will cause reduced brake performance, leading to loss of motorcycle control which could result in serious injury or death.

Brake Fluid Level Inspection

To inspect the rear brake fluid level:

- Place the motorcycle on a level surface and hold it in an upright position.
- Check the level of brake fluid visible in the sight glass at the rear of the master cylinder.
- If the brake fluid is below the top of the sight glass, fill the reservoir to the top of the sight glass using new DOT 4 brake fluid from a sealed container. Triumph Performance DOT 4 brake fluid is recommended, see Brake Fluid Level Adjustment.



1. **Sight glass**
2. **Top of the sight glass**

Brake Fluid Level Adjustment

To adjust the brake fluid level:

⚠ WARNING

Ensure absolute cleanliness when adding brake fluid to the brake fluid reservoir.

Do not allow moisture or debris to enter the cylinder as this will adversely affect the brake fluid properties.

Do not use brake fluid from a container which has been opened for any period of time. Always use brake fluid from a sealed container.

Always check for fluid leakage around hydraulic fittings and for damage to hoses.

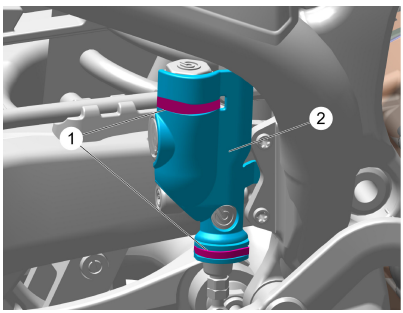
Failure to follow the advice above may lead to loss of motorcycle control, which could result in serious injury or death.

NOTICE

To prevent paint damage, do not spill brake fluid onto any area of the bodywork.

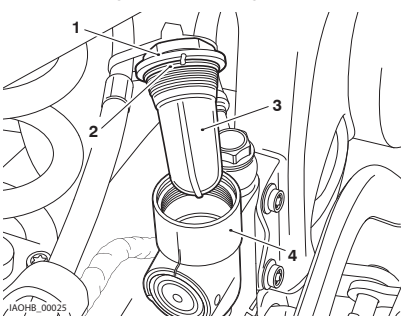
Spilled brake fluid will damage paintwork.

- Remove the two cable ties and remove the rear master cylinder cover.



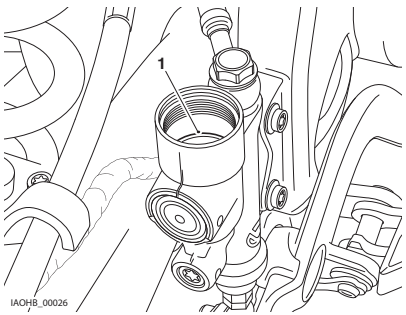
1. **Cable ties**
2. **Cover**

- Clean the area around the rear master cylinder cap.
- Remove the master cylinder cap with its O-ring and diaphragm seal.



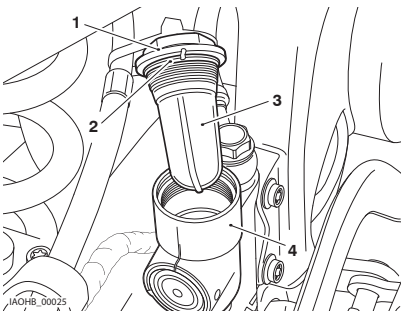
1. **Cap**
2. **O-ring**
3. **Diaphragm seal**
4. **Master cylinder**

- Fill the master cylinder to the upper level line with new DOT 4 brake fluid from a sealed container. Triumph Performance DOT 4 brake fluid is recommended.



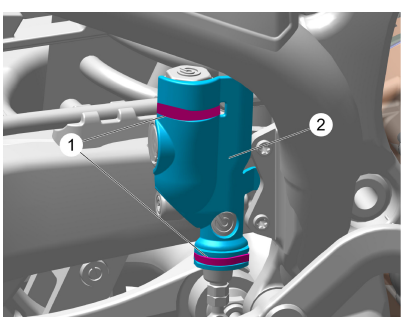
1. **Upper level line**

- Reinstall the master cylinder cap making sure that the O-ring and the diaphragm seal are correctly installed to the cap as shown in the illustration below. Tighten the cap to 13 lbf ft (17 Nm).



1. **Cap**
2. **O-ring**
3. **Diaphragm seal**
4. **Master cylinder**

- Reinstall the rear master cylinder cover and secure with two new cable ties.



1. **Cable ties**
2. **Cover**

Brake Pad Wear Compensation

⚠ WARNING

If the brake lever or pedal feels soft when it is applied, or if the lever/pedal travel becomes excessive, there may be air in the brake lines and hoses or the brakes may be defective.

The fault must be checked and rectified by a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

Riding with defective brakes may lead to a dangerous riding condition, leading to loss of motorcycle control which could result in serious injury or death.

Disc and brake pad wear is automatically compensated for and has no effect on the brake lever or pedal action. There are no parts that require adjustment on the front and rear brakes.

Front Brake Pad Wear Inspection

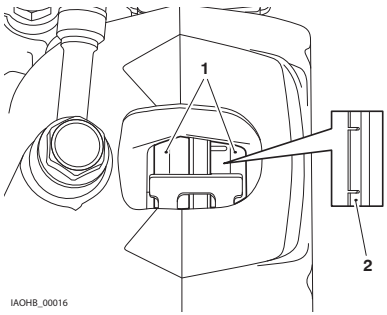
⚠ WARNING

If installing new proprietary brand brake pads, check that the brake backing plate of the brake pad is the specified thickness shown in the table.

Installing brake pads with the brake backing plate less than the specified thickness may result in brake failure due to the possible loss of the brake pad as it wears.

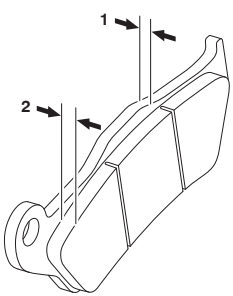
Failure to follow the advice above may lead to loss of motorcycle control, which could result in serious injury or death.

Brake pads must be inspected in accordance with scheduled requirements and replaced if worn to, or less than the minimum service thickness.



IAOHB_00016

1. **Carrier plate**
2. **Brake pad**



IAOHB_00015

1. **Carrier plate**
2. **Brake pad lining**

Brake pads for this model supplied by Triumph will have the carrier plate at the recommended thickness. We recommend that the brake pads are changed by a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and Enduro center.

If the carrier plate and brake pad lining thickness is less than that specified in the table, replace all the brake pads on the wheel.

Front Brake Pad Thickness Table

Carrier Plate and Brake Pad Minimum Thickness	0.15 in (3.70 mm)

Rear Brake Pad Wear Inspection

⚠ WARNING

If installing new proprietary brand brake pads, check that the brake backing plate of the brake pad is the specified thickness shown in the table.

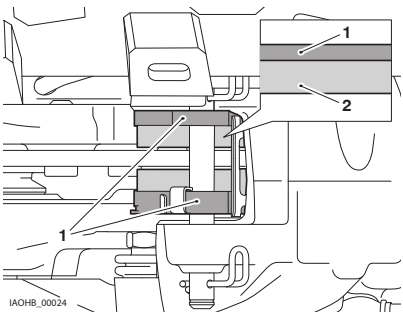
Installing brake pads with the brake backing plate less than the specified thickness may result in brake failure due to the possible loss of the brake pad as it wears.

Failure to follow the advice above may lead to loss of motorcycle control, which could result in serious injury or death.

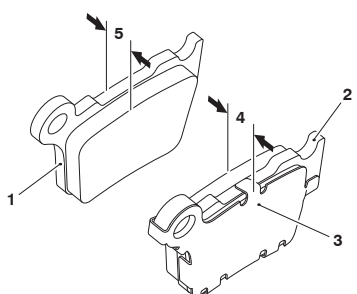
NOTICE

Note that the outer brake pad is equipped with an insulator and shim.

Brake pads must be inspected in accordance with scheduled requirements and replaced if worn to, or less than the minimum service thickness.



1. **Carrier plate**
2. **Brake pad**



1. **Inner brake pad**
2. **Outer brake pad**
3. **Insulator and shim**
4. **Outer brake pad measurement**
5. **Inner brake pad measurement**

Brake pads for this model supplied by Triumph will have the carrier plate at the recommended thickness. We recommend that the brake pads are changed by a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and Enduro center.

If the carrier plate and brake pad lining thickness is less than that specified in the table, replace all the brake pads on the wheel.

Rear Brake Pad Thickness Table

Carrier Plate and Brake Pad Minimum Thickness	Inner brake pad 0.18 in (4.50 mm)
	Outer brake pad 0.25 in (6.40 mm)

Front Brake Pads - Removal



⚠ WARNING

Make sure that the motorcycle is stabilized 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.

⚠ WARNING

Brake pads for this model supplied by Triumph are specifically designed for use with the brake calipers mounted on your motorcycle.

The use of proprietary brands of brake pads is not recommended as these may have a reduced carrier plate thickness when compared with the Triumph genuine parts.

Brake pads with an incorrect carrier plate thickness can potentially become dislodged from the caliper body as they wear, leading to loss of motorcycle control which could result in serious injury or death.

⚠ CAUTION

Never place fingers or hands inside a brake caliper opening when removing brake components.

Failure to follow the advice above could result in minor to moderate injury.

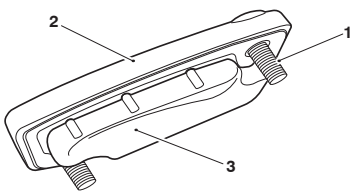
NOTICE

Never lever directly against the disc, caliper or the pad lining material as this will damage these components. Always use a levering tool made from a soft material which will not cause damage to the load bearing surfaces.

Brake fluid will be displaced as the caliper pistons are compressed. To prevent body damage, make sure that the displaced fluid does not come into contact with any part of the bodywork.

- Turn the handlebars to bring the fluid reservoir to a level position.

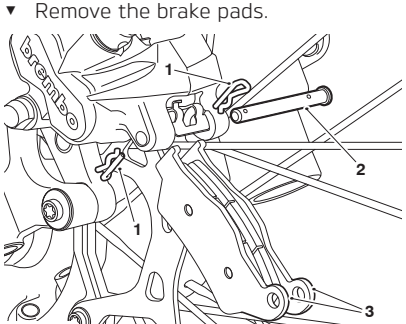
- Clean the area around the reservoir cap and its fasteners.
- Loosen the reservoir cap fasteners and remove the reservoir cap and diaphragm seal.



IASM_00349_1

1. **Fasteners**
2. **Reservoir cap**
3. **Diaphragm seal**

- Push the brake pads into the caliper to retract the brake pistons. Make sure that no brake fluid flows from the reservoir.
- Remove the two R-clips
- Remove the brake pad retaining pin from the brake caliper.
- Remove the brake pads.



IAOHB_00061

1. **R-clips**
2. **Retaining pin**
3. **Front brake pads**

Front Brake Pads - Installation



WARNING

Make sure that the motorcycle is stabilized 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.

WARNING

Brake pads for this model supplied by Triumph are specifically designed for use with the brake calipers mounted on your motorcycle.

The use of proprietary brands of brake pads is not recommended as these may have a reduced carrier plate thickness when compared with the Triumph genuine parts.

Brake pads with an incorrect carrier plate thickness can potentially become dislodged from the caliper body as they wear, leading to loss of motorcycle control which could result in serious injury or death.

⚠ CAUTION

Never place fingers or hands inside a brake caliper opening when removing brake components.

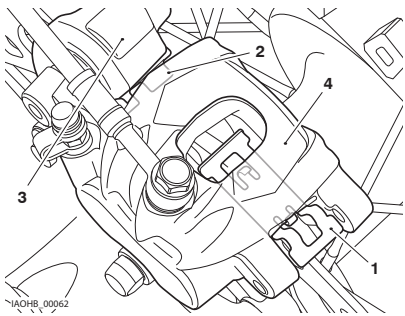
Failure to follow the advice above could result in minor to moderate injury.

NOTICE

Never lever directly against the disc, caliper or the pad lining material as this will damage these components. Always use a levering tool made from a soft material which will not cause damage to the load bearing surfaces.

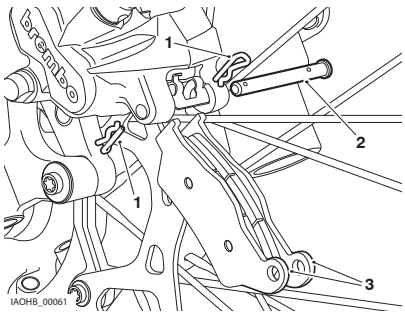
Brake fluid will be displaced as the caliper pistons are compressed. To prevent body damage, make sure that the displaced fluid does not come into contact with any part of the bodywork.

- Make sure that the brake caliper is clean and free of debris.
- Make sure that the anti-rattle spring is secured to the brake caliper as shown in the illustration below.
- Make sure that the sliding plate is secured to the anchor plate as shown in the illustration below.



1. **Anti-rattle spring**
2. **Sliding plate**
3. **Anchor plate**
4. **Brake caliper**

- Install the new brake pads and insert the retaining pin.
- Secure with the two R-clips in the orientation shown in the illustration below.



1. **R-clips**
2. **Retaining pin**
3. **Front brake pads**

- Pump the brake lever to correctly position the caliper pistons.
- Check and, if necessary, adjust the brake fluid level see page 139.
- Reinstall the reservoir cap making sure that the diaphragm seal is correctly positioned between the reservoir cap and the reservoir body. Tighten the fasteners to 9 lbf in (1 Nm).
- Check for correct brake operation. Rectify as necessary.

Rear Brake Pads - Removal



WARNING

Make sure that the motorcycle is stabilized 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.

WARNING

Brake pads for this model supplied by Triumph are specifically designed for use with the brake calipers mounted on your motorcycle.

The use of proprietary brands of brake pads is not recommended as these may have a reduced carrier plate thickness when compared with the Triumph genuine parts.

Brake pads with an incorrect carrier plate thickness can potentially become dislodged from the caliper body as they wear, leading to loss of motorcycle control which could result in serious injury or death.

⚠ CAUTION

Never place fingers or hands inside a brake caliper opening when removing brake components.

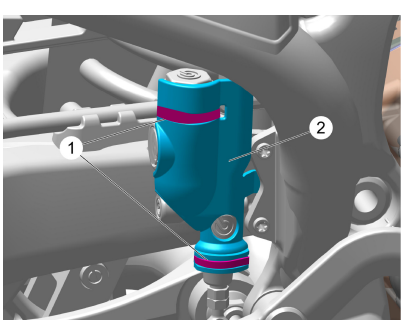
Failure to follow the advice above could result in minor to moderate injury.

NOTICE

Never lever directly against the disc, caliper or the pad lining material as this will damage these components. Always use a levering tool made from a soft material which will not cause damage to the load bearing surfaces.

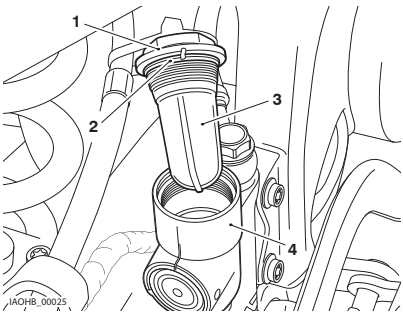
Brake fluid will be displaced as the caliper pistons are compressed. To prevent body damage, make sure that the displaced fluid does not come into contact with any part of the bodywork.

- Remove the two cable ties and remove the rear master cylinder cover.



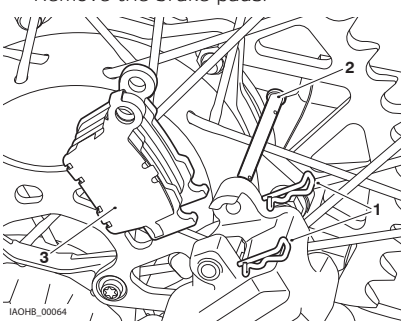
1. **Cable ties**
2. **Cover**

- Clean the area around the rear master cylinder cap.
- Remove the master cylinder cap with its O-ring and diaphragm seal.



1. **Cap**
2. **O-ring**
3. **Diaphragm seal**
4. **Master cylinder**

- Push the brake pads into the caliper to retract the brake pistons. Make sure that no brake fluid flows from the reservoir.
- Remove the two R-clips.
- Remove the pad retaining pin from the brake caliper.
- Remove the brake pads.



1. **R-clips**
2. **Retaining pin**
3. **Rear brake pads**

Rear Brake Pads - Installation



⚠ WARNING

Make sure that the motorcycle is stabilized 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.

⚠ WARNING

Brake pads for this model supplied by Triumph are specifically designed for use with the brake calipers mounted on your motorcycle.

The use of proprietary brands of brake pads is not recommended as these may have a reduced carrier plate thickness when compared with the Triumph genuine parts.

Brake pads with an incorrect carrier plate thickness can potentially become dislodged from the caliper body as they wear, leading to loss of motorcycle control which could result in serious injury or death.

⚠ CAUTION

Never place fingers or hands inside a brake caliper opening when removing brake components.

Failure to follow the advice above could result in minor to moderate injury.

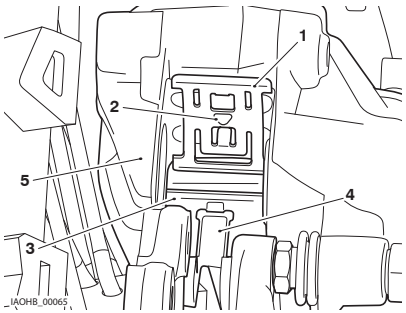
NOTICE

Never lever directly against the disc, caliper or the pad lining material as this will damage these components. Always use a levering tool made from a soft material which will not cause damage to the load bearing surfaces.

Brake fluid will be displaced as the caliper pistons are compressed. To prevent body damage, make sure that the displaced fluid does not come into contact with any part of the bodywork.

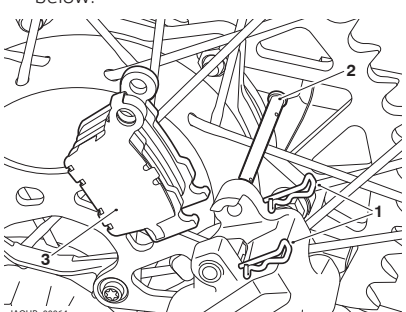
- Make sure the brake caliper is clean and free of debris.
- Make sure the anti-rattle spring is secured to the brake caliper with its arrow mark pointing forwards as shown in the illustration below.

- Make sure the sliding plate is secured to the anchor plate as shown in the illustration below.



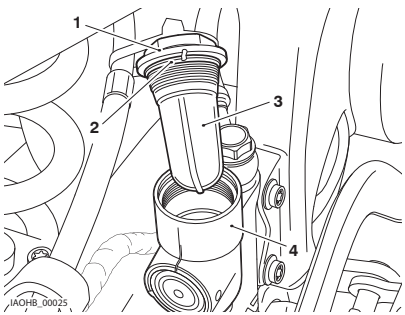
1. **Anti-rattle spring**
2. **Arrow mark**
3. **Sliding plate**
4. **Anchor plate**
5. **Brake caliper**

- Install the new brake pads and insert the retaining pin.
- Secure with the two R-clips in the orientation shown in the illustration below.



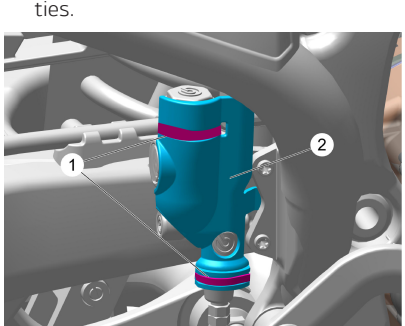
1. **R-clips**
2. **Retaining pin**
3. **Rear brake pads**

- Pump the brake pedal to correctly position the caliper pistons.
- Check and, if necessary, adjust the brake fluid level see page 142.
- Reinstall the master cylinder cap making sure that the O-ring and the diaphragm seal are correctly installed to the cap as shown in the illustration below. Tighten the cap to 13 lbf ft (17 Nm).



1. **Cap**
2. **O-ring**
3. **Diaphragm seal**
4. **Master cylinder**

- Reinstall the rear master cylinder cover and secure with two new cable ties.



1. **Cable ties**
2. **Cover**

- Check for correct brake operation. Rectify as necessary.

Front Brake Disc - Wear

⚠ WARNING

Make sure that the motorcycle is stabilized and adequately supported.

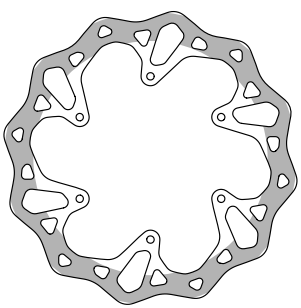
Do not support the motorcycle on any ancillary component, the exhaust system or any other non-structural parts of the motorcycle frame.

A correctly supported motorcycle will help prevent it from falling.

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

Wear

- Check the brake disc for cracks and damage. Replace the disc if cracked or damaged.
- Check the brake disc thickness at multiple points in the shaded area shown in the illustration below.



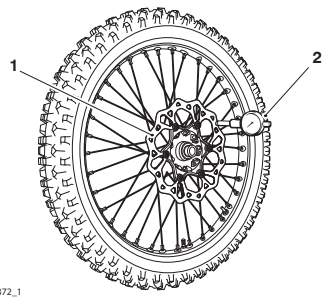
1. **Measurement area**

- Replace any brake disc if it is worn beyond the service limit or exceeds the disc run-out limit. For brake disc removal see page 157, for brake disc installation see page 157.

Front Brake Disc Thickness	
Standard	0.12 in (3.00 mm)
Service Limit	0.11 in (2.70 mm)

Front Brake Disc Run-out	
Service Limit	0.002 in (0.05 mm)

Measure disc run-out using an accurate dial gage mounted on a surface plate.



IASM_00372_1

1. **Disc**
2. **Dial gage**

Rear Brake Disc - Wear

⚠ WARNING

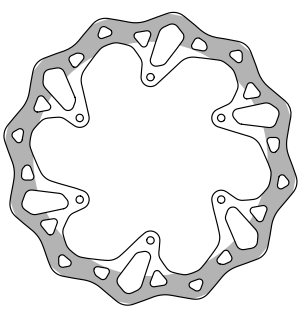
Make sure that the motorcycle is stabilized and adequately supported.

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.

- Check the brake disc for cracks and damage. Replace the disc if cracked or damaged.
- Check the brake disc thickness at multiple points in the shaded area shown in the illustration below.



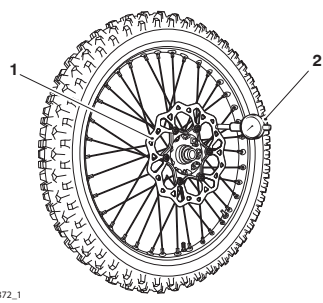
1. **Measurement area**

- Replace any brake disc worn beyond the service limit or that exceeds the disc run-out limit.

Rear Brake Disc Thickness	
Standard	0.157 in (4.0 mm)
Service Limit	0.14 in (3.6 mm)

Rear Brake Disc Run-out	
Service Limit	0.002 in (0.05 mm)

Measure brake disc run-out using an accurate dial gage mounted on a surface plate.



IASM_00372_1

1. **Disc**
2. **Dial gage**

Front Brake Disc - Removal

⚠ WARNING

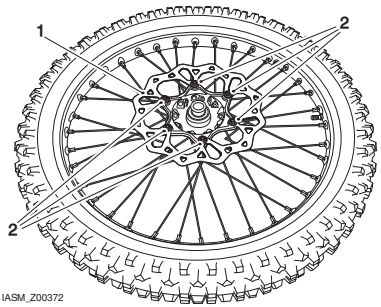
Make sure that the motorcycle is stabilized and adequately supported.

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.

- Remove the front wheel see, page 172.
- Support the wheel on blocks to avoid damage to the wheel center.



IASM_Z00372

1. **Front brake disc**
2. **Fasteners**

- Remove the six fasteners and remove the brake disc.

Front Brake Disc - Installation

⚠ WARNING

Make sure that the motorcycle is stabilized and adequately supported.

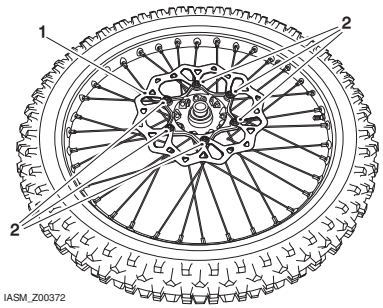
Do not support the motorcycle on any ancillary component, the exhaust system or any other non-structural parts of the motorcycle frame.

A correctly supported motorcycle will help prevent it from falling.

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

- Clean the threads of the fasteners and make sure old thread lock is removed from the wheel hub.
- Apply ThreeBond 1324, or an equivalent locking agent, to the threads of the brake disc fasteners.
- Install the brake disc to the front wheel.

- Install fasteners and tighten to 9 lbf ft (9 lbf ft (12 Nm)).



1. **Front brake disc**
2. **Fasteners**

- Install the front wheel see, page 173
- Check for correct brake operation. Rectify as necessary.

⚠ WARNING

It is dangerous to operate the motorcycle with defective brakes.

The fault must be checked and rectified by a competent person with the specialist knowledge and technical understanding of motorcycles, such as an authorized Triumph motocross and enduro center.

Failure to follow the advice above may lead to loss of motorcycle control, which could result in serious injury or death.

Rear Brake Disc - Removal

⚠ WARNING

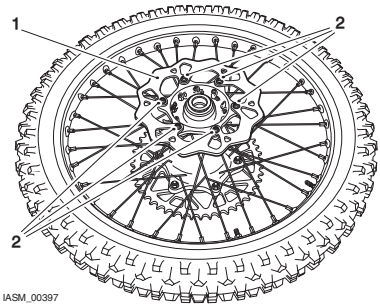
Make sure that the motorcycle is stabilized and adequately supported.

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.

- Remove the rear wheel, see page 174.
- Support the wheel on blocks to avoid damage to the wheel center.



1. **Rear brake disc**
2. **Fasteners**

- Remove and the six fasteners and remove the brake disc.

Rear Brake Disc - Installation

⚠ WARNING

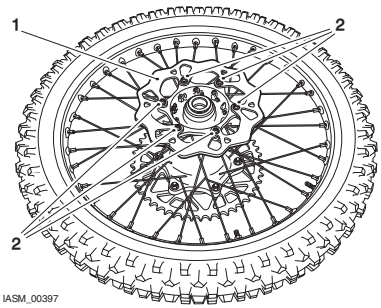
Make sure that the motorcycle is stabilized and adequately supported.

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.

- Clean the threads of the fasteners and make sure old thread lock is removed from the wheel hub.
- Apply ThreeBond 1324, or an equivalent locking agent, to the threads of the brake disc fasteners.
- Locate the brake disc to the rear wheel.
- Install new fasteners and tighten to 9 lbf ft (9 lbf ft (12 Nm)).



IASM_00397

1. **Rear brake disc**
2. **Fasteners**

- Reinstall the rear wheel, see page 176.
- Check for correct brake operation. Rectify as necessary.

⚠ WARNING

It is dangerous to operate the motorcycle with defective brakes.

The fault must be checked and rectified by a competent person with the specialist knowledge and technical understanding of motorcycles, such as an authorized Triumph motocross and enduro center.

Failure to follow the advice above may lead to loss of motorcycle control, which could result in serious injury or death.

Steering

⚠ WARNING

To prevent risk of injury from the motorcycle falling during the inspection, make sure that the motorcycle is stabilized and secured on a suitable support.

When inspecting steering and wheel bearings, do not exert extreme force against each wheel or rock each wheel vigorously, as this may cause the motorcycle to become unstable and fall from its support.

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

Steering Head Bearings - Check

⚠ WARNING

Make sure that the motorcycle is stabilized 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.

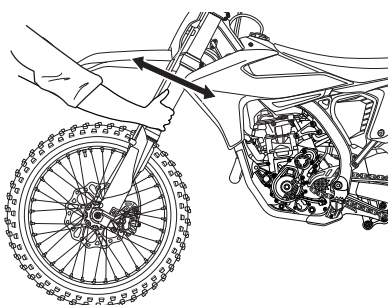
Failure to follow the advice above could result in serious injury or death.

⚠ WARNING

Never neglect steering (steering head) bearings maintenance. Check the steering head bearings in accordance with scheduled maintenance requirements and make adjustments or replace as necessary.

Scheduled maintenance must be carried out by a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

Riding the motorcycle with incorrectly adjusted or defective steering bearings is dangerous leading to loss of motorcycle control which could result in serious injury or death.



Inspecting the Steering for Free Play

To inspect the steering:

- Position the motorcycle on level ground, in an upright position.
- Place the motorcycle on a suitable stand with the front wheel off the ground and secure the motorcycle.
- Standing at the front of the motorcycle, hold the lower end of the front forks outer tube and try to move them forward and backward.

NOTICE

For the removal, disassembly, assembly, installation and adjustment of any steering components, we recommend to contact a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

- If any free play can be detected in the steering (steering head) bearings have the faults rectified before riding, See Steering Bearings - Adjust in the Service Manual.

Front Fork Inspection

⚠ WARNING

Never neglect front fork maintenance. Check the front forks in accordance with scheduled maintenance requirements and make adjustments or replace as necessary.

Scheduled maintenance must be carried out by a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

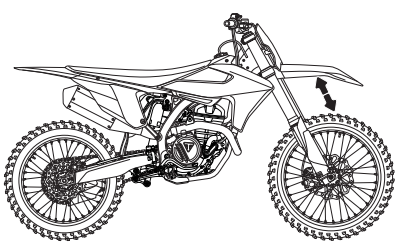
Riding with defective or damaged suspension components is dangerous and may lead to loss of motorcycle control which could result in serious injury or death.

⚠ CAUTION

All suspension units contain pressurized oil.

Do not attempt to dismantle any part of the suspension units. Inspections and repairs must be completed by a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

Accidental release of pressurized oil or springs could cause minor to moderate injury.



Inspecting the Front Fork

To inspect the forks:

- Position the motorcycle on level ground.
- While holding the handlebars and applying the front brake, pump the forks up and down several times.
- Check for roughness or excessive stiffness.
- Examine each fork for any sign of damage, scratching of the slider surface, or for oil leaks.

If a problem is detected or any doubt exists, the forks must be inspected by a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and Enduro center.

Wheel Bearings and Seals Inspection

⚠ WARNING

Make sure that the motorcycle is stabilized 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.

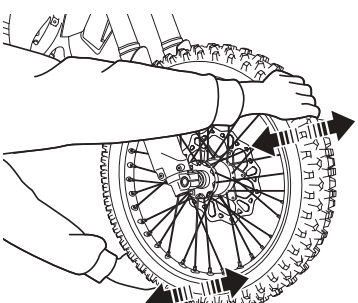
⚠ WARNING

Never neglect wheel bearings maintenance. Check the wheel bearings in accordance with scheduled maintenance requirements and make adjustments or replace as necessary.

Scheduled maintenance must be carried out by a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

Riding the motorcycle with worn or damaged wheel bearings is dangerous leading to loss of motorcycle control which could result in serious injury or death.

The wheel bearings must be inspected at the intervals specified in the scheduled maintenance chart.



Inspecting the Wheel Bearings

To inspect the wheel bearings:

- Position the motorcycle on level ground, in an upright position.
- Place the motorcycle on a suitable stand with the front wheel off the ground and secure the motorcycle.
- Standing at the side of the motorcycle, gently rock the top of the front wheel from side to side.

NOTICE

If the wheel bearings in the wheel allow play in the wheel hub, are noisy, or if the wheel does not turn smoothly, the wheel bearings must be inspected by a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

- If any free play can be detected, the wheel bearings must be replaced, see Front Wheel Bearings - Removal and Front Wheel Bearings - Installation or Rear Wheel Bearings - Removal and Rear Wheel Bearings - Installation in the Service Manual.
- Reposition the suitable stand and repeat the procedure for the rear wheel.
- Check the wheel bearing seals for damage or wear and replace if necessary, see Front Wheel Bearings - Removal and Front Wheel Bearings - Installation or Rear Wheel Bearings - Removal and Rear Wheel Bearings - Installation in the Service Manual.
- Remove the suitable stand and allow the motorcycle to rest on the side stand.

Steering Head Bearings - Adjust

⚠ WARNING

Make sure that the motorcycle is stabilized 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

For the removal, disassembly, assembly, installation and adjustment of any steering components, we recommend to contact a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

- For the adjustment of the steering head bearings, see Steering Bearings - Adjust in the Service Manual.

Steering Head Bearings - Lubricate

⚠ WARNING

Make sure that the motorcycle is stabilized 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

For the removal, disassembly, assembly, installation and adjustment of any steering components, we recommend to contact a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

- For the lubrication of the steering head bearings, see Steering Bearings - Lubricate in the Service Manual.

Front Suspension

⚠ WARNING

Make sure that the correct balance between front and rear suspension adjustment is maintained.

If the rear suspension is adjusted the front suspension must also be adjusted.

Suspension imbalance may affect the handling and stability, leading to loss of motorcycle control which could result in serious injury or death.

⚠ WARNING

Make sure that the adjusters are set to the same setting on both front suspension units.

If the front suspension is adjusted make sure both front suspension units are adjusted to the same settings.

Settings that vary from left to right may affect handling and stability, leading to loss of motorcycle control which could result in serious injury or death.

For setting up the front and rear suspension, refer to the Chassis Setup see page 60.

Front Fork Oil Seal - Clean

⚠ WARNING

Make sure that the motorcycle is stabilized 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

A suitable fork oil seal cleaner has two cleaning hooks. The one with the OIL SEAL text is for the oil seal, the other cleaning hook is for the dust seal.

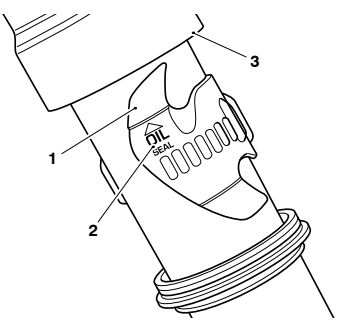
When cleaning the oil seal it is possible that a small amount of fork oil may seep out.

Note

T3880216 - Fork Seal Cleaner, 1.77-2.17 in (45-55 mm) forks has two cleaning hooks. The one with the OIL SEAL text is for the oil seal, the other cleaning hook is for the dust seal.

When cleaning the oil seal with service tool T3880216 it is possible that a small amount of fork oil may seep out.

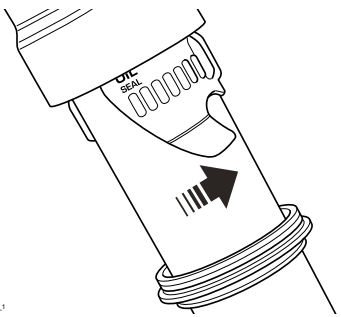
- Place the motorcycle on a suitable stand with the front wheel off the ground.
- Remove the front fork protector, see page 185
- Clean the area around the dust seal then carefully detach the dust seal from the fork outer tube.
- Wipe away any visible dirt or water from the oil seal.
- Clean fork oil seal cleaner.
- Install the oil seal cleaner to the fork inner tube. Make sure that the cleaning hook, with the text OIL SEAL below it, is pointing towards the oil seal.



ckpd

1. **Cleaning hook**
2. **OIL SEAL text**
3. **Oil seal location**

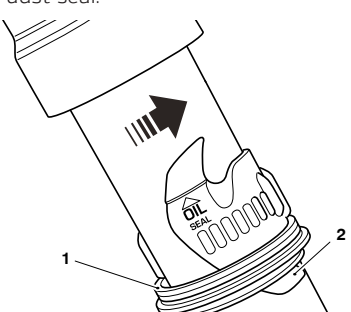
- Slide the cleaning hook carefully under the seal lip. Rotate oil seal cleaner 360° in the direction shown then remove the cleaning hook from the oil seal.



ckpd_1

Direction of Rotation

- Slide the oil seal cleaner down to use the other cleaning hook to clean the dust seal. Rotate the oil seal cleaner 360° in the direction shown then remove the cleaning hook from the dust seal.



ckpd_1

1. **Dust seal**
2. **Cleaning hook**

- Use the wider end of the oil seal cleaner, with hand pressure only, to press the dust seal into position in the outer tube.
- Install the front fork protectors see page 186

Front Fork - Removal and Installation

⚠ WARNING

Make sure that the motorcycle is stabilized 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

For the removal and installation of any suspension component, contact a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

For the removal of the front forks, see Front Fork - Removal in the Service Manual.

For the installation of the front forks, see Front Fork - Installation in the Service Manual.

Front Fork - Air Bleeding

⚠ WARNING

Make sure that the motorcycle is stabilized and adequately supported.

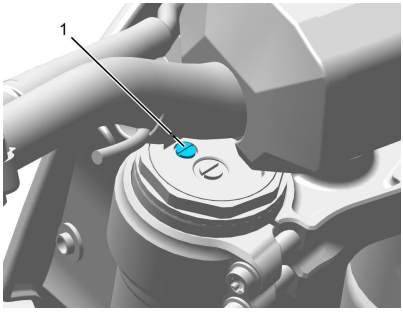
Do not support the motorcycle on any ancillary component, the exhaust system or any other non-structural parts of the motorcycle frame.

A correctly supported motorcycle will help prevent it from falling.

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

If the front fork movement feels stiff during running, release the front fork internal air pressure using the air bleed valve.

- Raise and support the motorcycle so the front wheel is off the ground.
- Remove the air bleed screw to release the internal air pressure from the front fork.
- Check the condition of the O-ring and replace if necessary.
- Reinstall the air bleed screw and tighten to 11.5 lbf in (11.5 lbf in (1.3 Nm))



1. **Front fork air bleed screw**

- Repeat the operation for the other front fork leg.

Lower Yoke and Steering Head Bearings - Removal and Installation

⚠ WARNING

Make sure that the motorcycle is stabilized 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

For the removal, disassembly, assembly and installation of any suspension or steering components, contact a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

For the removal of the lower yoke and steering head bearings, see Lower Yoke and Steering Head Bearings - Removal in the Service Manual.

For the installation of the lower yoke and steering head bearings, see Lower Yoke and Steering Head Bearings - Installation in the Service Manual.

Rear Suspension

⚠ WARNING

Make sure that the correct balance between front and rear suspension adjustment is maintained.

If the rear suspension is adjusted the front suspension must also be adjusted.

Suspension imbalance may affect the handling and stability, leading to loss of motorcycle control which could result in serious injury or death.

For setting up the front and rear suspension, refer to the Chassis Setup see page 60.

Rear Suspension Unit - Removal and Installation

⚠ WARNING

Make sure that the motorcycle is stabilized 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

For the removal and installation of any suspension component, contact a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

For the removal of the rear suspension unit, see Rear Suspension Unit - Removal in the Service Manual.

For the installation of the rear suspension unit, see Rear Suspension Unit - Installation in the Service Manual.

Drive Chain Rubbing Strips Inspection

⚠ WARNING

Make sure that the motorcycle is stabilized 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.

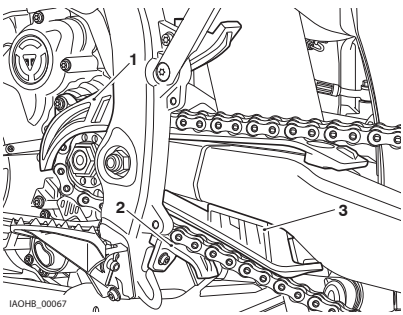
A correctly supported motorcycle will help prevent it from falling.

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

The drive chain rubbing strips must be inspected in accordance with scheduled requirements and replaced if worn, cracked or damaged.

There are three components for the chain guard rubbing strip:

- Drive chain upper slider.
- Drive chain lower slider.
- Drive chain rubbing strip.



1. **Drive chain upper slider**
2. **Drive chain lower slider**
3. **Drive chain rubbing strip**

For the removal of the drive chain upper and lower sliders see page 170.

NOTICE

For the removal and installation of the drive chain rubbing strip, the swinging arm must be removed.

Contact a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and Enduro center to inspect the rubbing strip and, if required, install a new one.

- To replace the drive chain rubbing strip, see Drive Chain Rubbing Strip - Removal and Drive Chain Rubbing Strip - Installation in the Service Manual.

Drive Chain Upper and Lower Sliders - Removal

⚠ WARNING

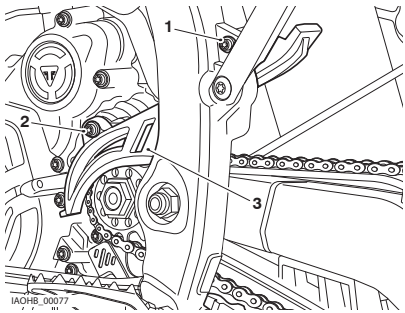
Make sure that the motorcycle is stabilized and adequately supported.

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.

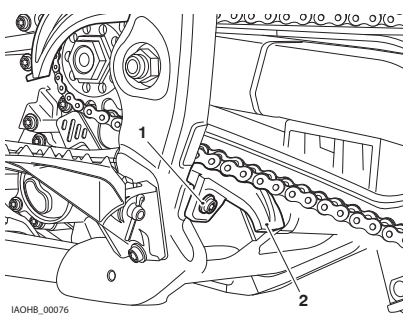
Failure to follow the advice above could result in serious injury or death.

- Place the motorcycle on a suitable stand and secure the motorcycle.
- Remove the fasteners securing the upper slider to the frame and to the engine. Discard the frame fastener.
- Remove the upper slider.



1. **Fastener to engine**
2. **Fastener to frame**
3. **Upper slider**

- Loosen the fastener and remove the lower slider. Discard the fastener.



1. **Fastener**
2. **Lower slider**

Drive Chain Upper and Lower Sliders - Installation

⚠ WARNING

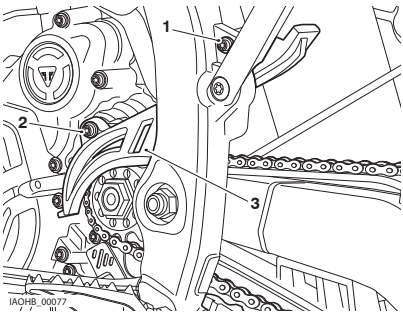
Make sure that the motorcycle is stabilized and adequately supported.

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.

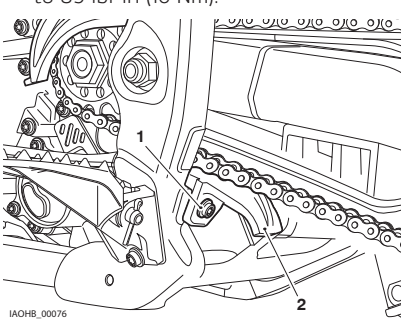
Failure to follow the advice above could result in serious injury or death.

- Place the motorcycle on a suitable stand and secure the motorcycle.
- Position the upper slider to the frame. Install the fastener securing the upper slider to the engine.
- Install a new fastener securing the upper slider guard to the frame and tighten to 18 lbf ft (25 Nm).
- Tighten the upper slider to engine fastener to 89 lbf in (10 Nm).



1. **Fastener to engine**
2. **Fastener to frame**
3. **Upper slider**

- Position the lower slider to the frame.
- Install and tighten the new fastener to 89 lbf in (10 Nm).



1. **Fastener**
2. **Lower slider**

Wheels

Front Wheel - Removal

⚠ WARNING

Make sure that the motorcycle is stabilized 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.

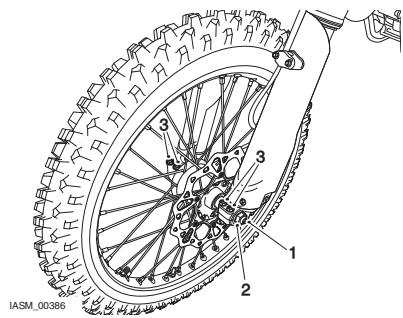
Failure to follow the advice above could result in serious injury or death.

NOTICE

Never lever directly against the disc, caliper or the pad lining material as this will damage these components. Always use a levering tool made from a soft material which will not cause damage to the load bearing surfaces.

Brake fluid will be displaced as the caliper pistons are compressed. To prevent body damage, make sure that the displaced fluid does not come into contact with any part of the bodywork.

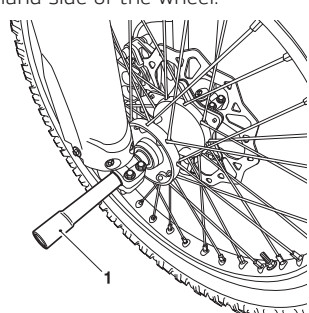
- Raise the motorcycle using a suitable lift stand.
- Push the brake pads into the caliper to retract the brake pistons.
- Remove the wheel spindle nut.
- Loosen the four wheel spindle clamp bolts.



IASM_00386

1. **Front wheel spindle**
2. **Front wheel spindle nut**
3. **Front wheel spindle clamp bolts**

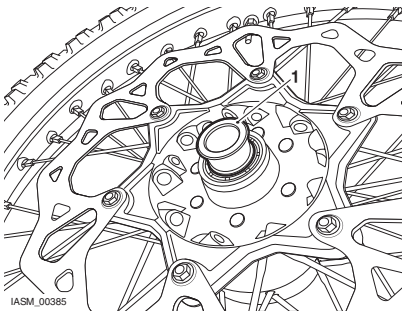
- While supporting the front wheel, remove the wheel spindle from the right hand side of the wheel.



IASM_00387

1. **Front wheel spindle**

- Remove the front wheel.
- Remove the spacers from the front wheel.



1. **Front wheel spacer (one of two shown)**

Front Wheel - Installation

⚠ WARNING

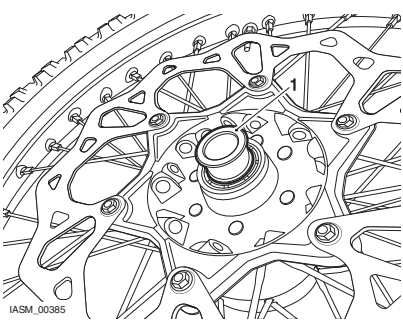
Make sure that the motorcycle is stabilized and adequately supported.

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.

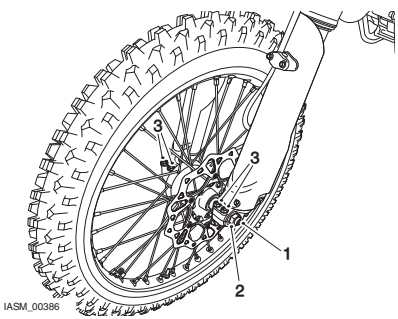
- Apply a thin layer of High Temperature grease to the surfaces of the wheel spacers that contact the bearing seals.
- Install the spacers into the front wheel.



1. **Front wheel spacer (one of two shown)**

- Position the front wheel to the front forks, make sure that the brake disc is positioned inside the brake caliper.

- Apply a thin layer of High Temperature grease to the external diameter of the front wheel spindle. Do not grease the underside of the wheel spindle that contacts the face of the wheel spacer.
- Insert the front wheel spindle.
- Install the front wheel spindle nut. While holding the wheel spindle, tighten the nut to 44 lbf ft (60 Nm).
- Lower the motorcycle to the ground and pump the front suspension to allow the left hand fork to 'float' to its natural position on the wheel spindle.
- Tighten the outer wheel spindle clamp bolts to 14 lbf ft (19 Nm).
- Tighten the inner wheel spindle clamp bolts to 14 lbf ft (19 Nm).
- Retighten the outer wheel spindle clamp bolts to 14 lbf ft (19 Nm).



IASM_00386

1. **Front wheel spindle**
2. **Front wheel spindle nut**
3. **Front wheel spindle clamp bolts**

- Thoroughly clean and degrease the brake discs.
- Check the operation of the front brake and rectify if necessary.

Rear Wheel - Removal

⚠ WARNING

Make sure that the motorcycle is stabilized 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.

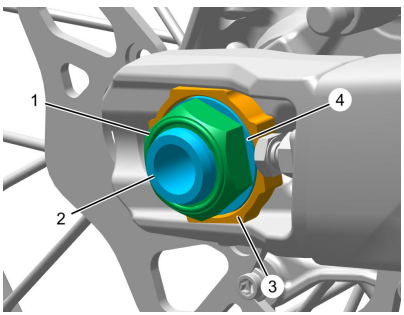
Failure to follow the advice above could result in serious injury or death.

NOTICE

Never lever directly against the disc, caliper or the pad lining material as this will damage these components. Always use a levering tool made from a soft material which will not cause damage to the load bearing surfaces.

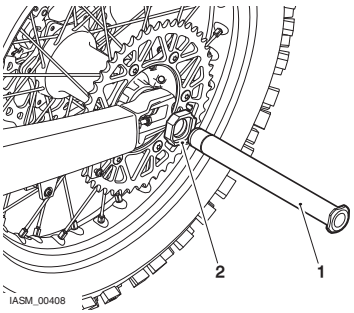
Brake fluid will be displaced as the caliper pistons are compressed. To prevent body damage, make sure that the displaced fluid does not come into contact with any part of the bodywork.

- Raise the motorcycle using a suitable lift stand.
- Push the brake pads into the caliper to retract the brake pistons.
- Remove the wheel spindle nut and washer.
- Remove the chain adjuster block.



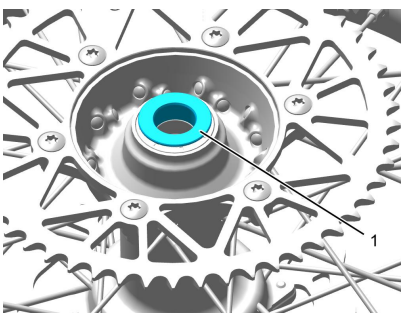
1. **Wheel spindle nut**
2. **Wheel spindle**
3. **Chain adjuster block**
4. **Washer**

- Push the wheel spindle through just enough to allow the rear wheel to be moved forward.
- Push the rear wheel as far forward as possible and remove the drive chain from the rear sprocket.
- Support the rear wheel and remove the wheel spindle and chain adjuster block from the swinging arm. Remove the rear wheel.



1. **Wheel spindle**
2. **Chain adjuster block**

- Remove the spacers from the rear wheel.



1. **Rear wheel spacer (one of two shown)**

Rear Wheel - Installation

⚠ WARNING

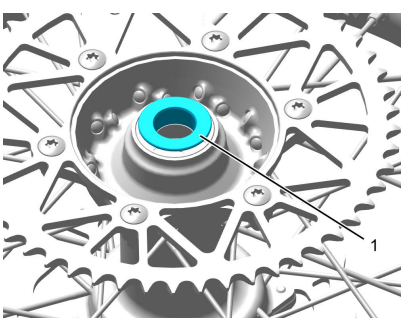
Make sure that the motorcycle is stabilized and adequately supported.

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.

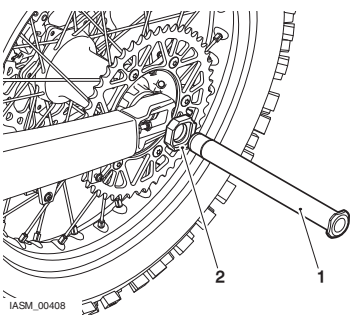
Failure to follow the advice above could result in serious injury or death.

- Apply a thin layer of High Temperature grease to the surfaces of the wheel spacers that contact the bearing seals.
- Install the spacers into the rear wheel.



1. **Rear wheel spacer (one of two shown)**

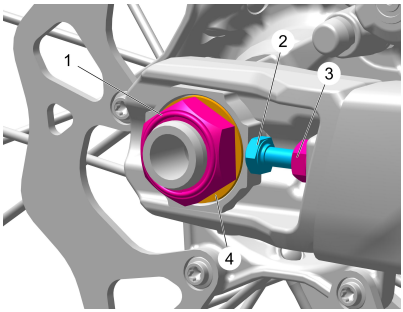
- Position the rear wheel to the swinging arm, make sure that the brake disc is positioned inside the brake caliper.
- Apply a thin layer of High Temperature grease to the external diameter of the rear wheel spindle. Do not grease the underside of the wheel spindle that contacts the face of the wheel spacer.
- Insert the chain adjuster block and rear wheel spindle.



1. **Wheel spindle**
2. **Chain adjuster block**

- Position the drive chain to the rear sprocket.

- Install the chain adjuster block, washer and wheel spindle nut. Do not tighten at this stage.
- Make sure that the chain adjuster blocks are correctly installed up to the adjuster screws.
- Check the drive chain free movement (see page 134) and, if required, adjust (see page 135).
- Tighten the rear wheel spindle to 89 lbf ft (120 Nm).



1. **Wheel spindle nut**
2. **Chain adjuster screw**
3. **Chain adjuster lock nut**
4. **Washer**

- Check the operation of the rear brake and rectify if necessary.

Wheel Spoke Check and Tightening

⚠ WARNING

Make sure that the motorcycle is stabilized 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.

⚠ WARNING

All wheel spoke nipples must be at the required torque.

The wheel axial and radial run-outs must be within the run-out tolerances.

If the torque figures and/or the run-out tolerances can not be achieved, the wheel must be rebuilt by a specialist wheel builder.

Incorrectly built wheels will affect traction, stability and control.

Operation with damaged or defective wheels is dangerous leading to loss of motorcycle control which could result in serious injury or death.

NOTICE

Follow the same procedure for the front and rear wheel.

Wheel Spoke Nipple Torques	
Front Wheel Spoke Nipple	53 lbf in (6 Nm)
Rear Wheel Spoke Nipple	53 lbf in (6 Nm)

Raise the motorcycle using a suitable lift stand so the wheel is off the ground.

Check the wheel spokes for damage or bent. If damaged or bent, replace the wheel spoke.

To check for loose wheel spoke nipples, briefly strike the each wheel spoke.

- A tight spoke will emit a clear ringing tone.
- A loose spoke will emit a flat sound.

Damaged or Bent Wheel Spokes.

Contact a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center to replace any damaged or bent wheel spokes.

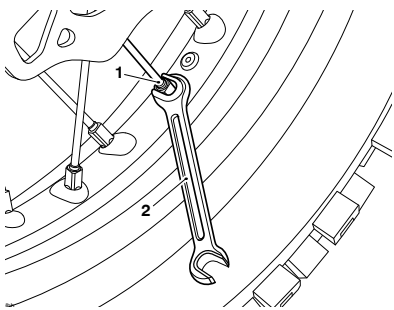
Tightening loose wheel spoke nipples

NOTICE

Make sure that the spoke nipples are tightened in stages.

When tightening the spoke nipple, do not tighten more than half a turn (180°) at a time.

- Using the wheel spoke wrench from the tool kit, and a suitable wheel spoke torque wrench, tighten the loose spoke nipple to 53 lbf in (6 Nm). If more than half a turn is required, stop at half a turn and adjust the next loose spoke nipple.
- Repeat the first step until all loose spoke nipples have been tightened.



1. **Wheel spoke nipple**
2. **Wheel spoke wrench**

- Briefly strike the each wheel spoke to check for loose wheel spokes.
- When the wheel spokes have been correctly tightened, check the wheel run out, see page 179.

Wheel Run-out

⚠ WARNING

Make sure that the motorcycle is stabilized 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.

⚠ WARNING

Check the wheel rims for dents or deformation.

Operation with damaged or defective wheels may affect the handling, stability or other aspect of the motorcycle operation.

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

NOTICE

This operation can be performed on either the front or rear wheel.

Wheel Run-Out Limit	
Front Wheel Rim Axial Run-Out	0.07 in (1.8 mm)
Front Wheel Rim Radial Run-Out	0.07 in (1.8 mm)
Rear Wheel Rim Axial Run-Out	0.07 in (1.8 mm)
Rear Wheel Rim Radial Run-Out	0.07 in (1.8 mm)

Front Wheel

- Remove the front wheel see page 172.
- Remove the tire.
- Install the wheel to a suitable wheel balance stand or wheel truing stand, or to the motorcycle but do not install the brake calipers.

⚠ WARNING

All wheel spoke nipples must be at the required torque.

The wheel axial and radial run-outs must be within the run-out tolerances.

If the torque figures and/or the run-out tolerances can not be achieved, the wheel must be rebuilt by a specialist wheel builder.

Incorrectly built wheels will affect traction, stability and control.

Operation with damaged or defective wheels is dangerous leading to loss of motorcycle control which could result in serious injury or death.

- Use a suitable dial test indicator gage to measure the front wheel rim axial and radial run-out in the areas shown.
- If the run-out is more than the provided specifications, the wheel must be rebuilt by a specialist wheel builder.



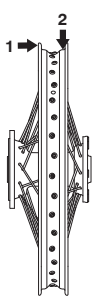
IASM_00383

1. **Front wheel rim axial run-out**
2. **Front wheel rim radial run-out**

- Reinstall the tire.
- Reinstall the front wheel see page 173.

Rear Wheel

- Remove the rear wheel see page 174
- Remove the tire.
- Install the wheel to a suitable wheel balance stand or wheel truing stand, or to the motorcycle but do not install the brake caliper.
- Use a suitable dial test indicator gage to measure the rear wheel rim axial and radial run-out in the areas shown.
- If the run-out is more than the provided specifications, the wheel must be rebuilt by a specialist wheel builder.



IASM_00406

1. **Rear wheel rim radial run-out**
2. **Rear wheel rim axial run-out**

- Reinstall the tire.
- Reinstall the rear wheel see page 176

Tires



Tire Inflation Pressures

⚠ WARNING

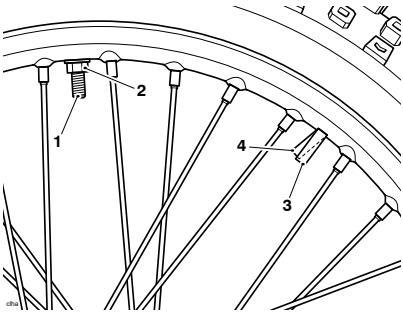
Incorrect tire inflation will cause abnormal tread wear and instability problems.

Under inflation may result in the tire slipping on, or coming off the rim. Overinflation will cause instability and accelerated tread wear.

Both conditions are dangerous as they may result in loss of motorcycle control which could in serious injury or death.

- Correct inflation pressure will provide maximum stability, rider comfort and tire life. Always check tire pressures before riding when the tires are cold. Check tire pressures daily and adjust if necessary, see page 217 for details of the correct inflation pressures.

If the tire inflation valve is off set, the tire is slipping and could slip off the wheel rim.



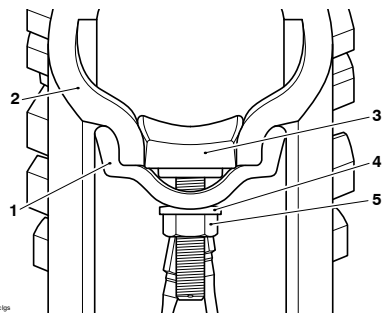
1. **Tire bead stopper**
2. **Retaining nut**
3. **Tire inflation valve correct location**
4. **Tire inflation valve moved**

NOTICE

For the removal and installation of the tire, contact a competent person with the specialist knowledge and technical understanding of closed-course competition motorcycles, such as an authorized Triumph motocross and enduro center.

If the tire has slipped carryout the following:

- Loosen the tire rim lock
- Remove the tire.
- Remove and discard the inner tube.
- Install a new inner tube.
- Mount the tire.
- Position the rim lock as shown in the illustration and tighten its fastener to 9 lbf ft (9 lbf ft (12 Nm)).



1. **Wheel rim**
2. **Tire**
3. **Tire rim lock**
4. **Washer**
5. **Retaining nut**

Tire Replacement

All Triumph motorcycles are carefully and extensively tested in a range of riding conditions to make sure that the most effective tire combinations are approved for use on each model.

⚠ WARNING

Inner tubes must only be used on motorcycles equipped with spoked wheels and with tires marked 'TUBE TYPE'.

Some brands of approved tires marked 'TUBELESS' may be suitable for use with an inner tube. Where this is the case, the tire wall will be marked with text permitting the installation of an inner tube.

Use of an inner tube with a tire marked 'TUBELESS', and NOT marked as suitable for use with an inner tube, or use of an inner tube on an alloy wheel marked 'SUITABLE FOR TUBELESS TYRES' will cause deflation of the tire leading to loss of motorcycle control which could result in serious injury or death.

⚠ WARNING

If a tire or inner tube sustains a puncture, the tire and inner tube must be replaced.

Operation of the motorcycle with a punctured or repaired tire or inner tube may adversely affect the motorcycle stability.

Failure to follow the advice above may lead to loss of motorcycle control, which could result in serious injury or death.

⚠ WARNING

Do not use the motorcycle with incorrectly seated tires or inner tubes, or incorrectly adjusted tire pressures.

Incorrectly seated tires or inner tubes, or incorrectly adjusted tire pressures may affect the handling, stability or other aspect of the motorcycle operation.

Failure to follow the advice above may lead to loss of motorcycle control, which could result in serious injury or death.

⚠ WARNING

The tires mounted to this Motocross motorcycle are for off road use only.

The tires on this Motocross motorcycle are not designed, suitable or intended for on road use.

Failure to follow the advice above may lead to loss of motorcycle control, which could result in serious injury or death.

Worn tires will have negative handling characteristics while riding, especially in wet conditions.

It is essential that approved tires and inner tubes are mounted in approved combinations when purchasing replacement items.

The use of non-approved tires and inner tubes, or approved tires and inner tubes in non-approved combinations, may lead to motorcycle instability, loss of control and an accident.

Initially, the new tires and inner tubes will not produce the same handling characteristics as the worn tires and inner tubes and the rider must allow adequate riding distance to become accustomed to the new handling characteristics.

24 hours after mounting, the tire pressures must be checked and adjusted, and the tires and inner tubes examined for correct seating. Rectification must be carried out as necessary.

Tires Condition



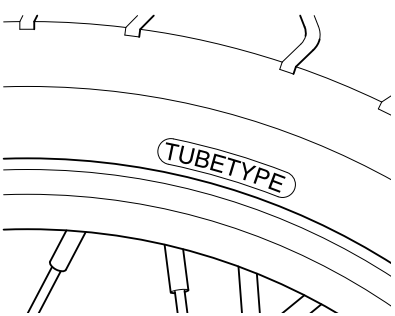
This motorcycle is equipped with spoked wheels which require a tire suitable for use with an inner tube.

⚠ WARNING

Always use tires with an inner tube in a spoked wheel.

Riding a motorcycle with spoked wheels without an inner tube equipped will cause deflation of the tire.

Failure to follow the advice above may lead to loss of motorcycle control, which could result in serious injury or death.



Typical Tire Marking

Checking the Tire Condition

- Tire pressure see page 181.
- Place the motorcycle on a suitable stand.
- Check the front and rear tires for cuts, slits and cracks that expose fabric or cord. If any are detected, replace the tire and inner tube.
- Check the front and rear tires for nails and other foreign objects embedded in the tire. If any are detected, repair/replace the tire.
- Check the front and rear tires unusual bumps or bulges in the side walls of the tire. If any are detected, replace the tire and inner tube.
- Check the age of the tire, if five years or older replace the tire and inner tube, see page 185.

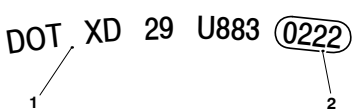
Tire Date of Manufacture

The manufacture date for the tire is contained in the DOT number on the tire.

The last four numbers in the DOT number is the manufacture date.

The first two digits indicate the week and the last two indicate the year of manufacture.

- In the example below, the tire was manufactured in the second week of 2022.



1. **DOT number**
2. **Manufacture date**

Frame

Front Fork Protector - Removal

⚠ WARNING

Make sure that the motorcycle is stabilized 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.

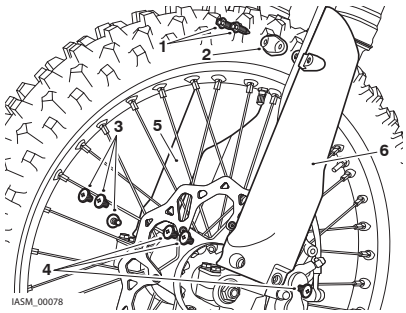
Failure to follow the advice above could result in serious injury or death.

NOTICE

Note the position of the brake hose to its clamp on the left hand fork protector for installation.

- Remove the two fasteners and release the front brake hose and speed sensor clamp on the left hand fork protector.

- Loosen the six shouldered fasteners and remove both front fork protectors.



1. **Fasteners**
2. **Clamp**
3. **Shouldered fasteners (right hand protector)**
4. **Shouldered fasteners (left hand protector)**
5. **Left hand protector**
6. **Right hand protector**

Front Fork Protector - Installation

⚠ WARNING

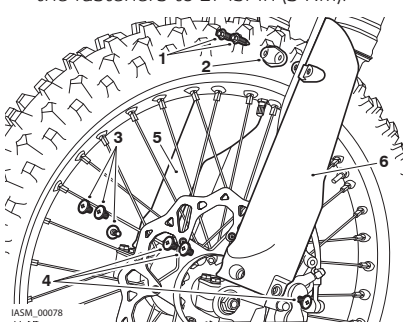
Make sure that the motorcycle is stabilized and adequately supported.

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.

- Position the protectors to the front forks.
- Install the shouldered fasteners and tighten to 89 lbf in (10 Nm).
- Position the front brake hose to the front left fork and install the front brake hose retaining clamp. Tighten the fasteners to 27 lbf in (3 Nm).



1. **Fasteners**
2. **Clamp**
3. **Shouldered fasteners (right hand protector)**
4. **Shouldered fasteners (left hand protector)**
5. **Left hand protector**
6. **Right hand protector**

Front Fender - Removal

⚠ WARNING

Make sure that the motorcycle is stabilized 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.

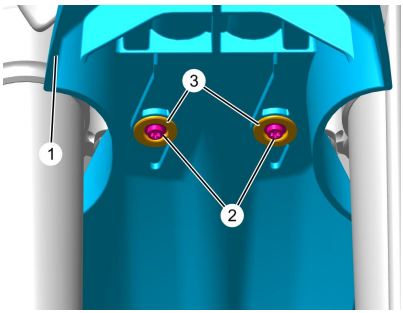
- Remove the front number board, see page 189.

NOTICE

The bolt threads for the front fender have a locking agent applied to them.

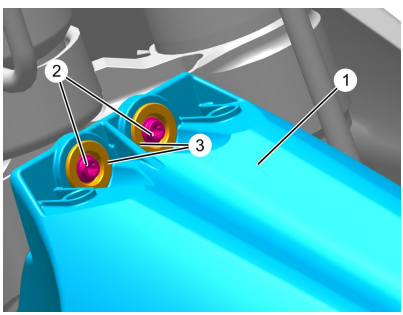
When the bolts have been removed, clean the threads and the threads in the nuts.

- Remove the two lower fasteners and the flanged sleeves.



1. **Front fender**
2. **Fasteners**
3. **Flanged sleeves**

- Supporting the fender, remove the two upper fasteners and the flanged sleeves.



1. **Front fender**
2. **Fasteners**
3. **Flanged sleeves**

- Remove the front fender.

Front Fender - Installation

⚠ WARNING

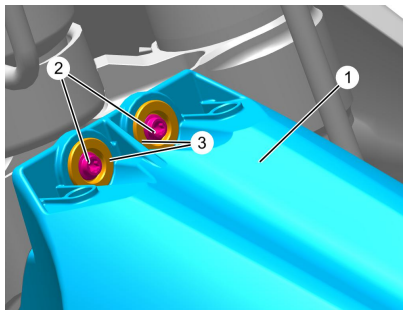
Make sure that the motorcycle is stabilized and adequately supported.

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

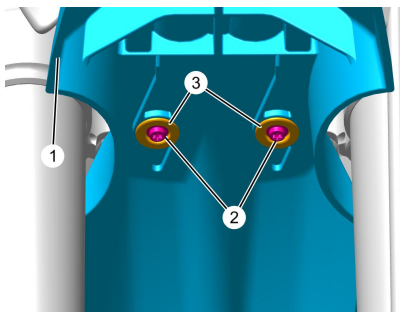
A correctly supported motorcycle will help prevent it from falling.

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

- Clean the threads of the bolts and make sure old thread lock is removed from the nuts.
- Apply ThreeBond 1324, or an equivalent locking agent, to the threads of the front fender bolts.
- Align the front fender to the lower yoke. Install four flanged sleeves and the four fasteners.
- Tighten the fasteners to 89 lbf in (10 Nm).



1. **Front fender**
2. **Fasteners**
3. **Flanged sleeves**



1. **Front fender**
2. **Fasteners**
3. **Flanged sleeves**

- Install the front number board, see page 190.

Front Number Board - Removal

⚠ WARNING

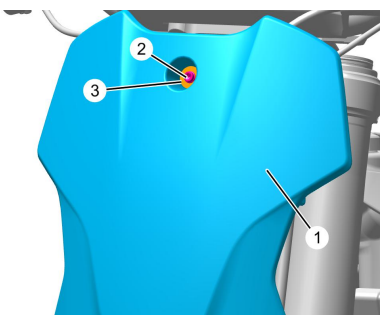
Make sure that the motorcycle is stabilized and adequately supported.

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.

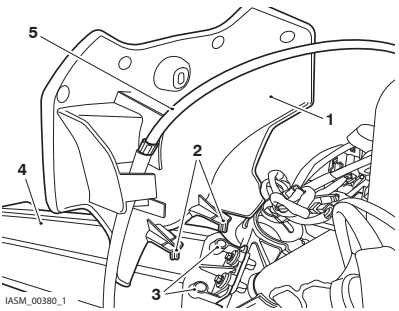
Failure to follow the advice above could result in serious injury or death.

- Remove the fastener and washer from the front of the number board.



1. **Front number board**
2. **Fastener**
3. **Washer**

- Raise the front number board upwards to remove, noting the position of the two locating spigots and the routing of the front brake hose.



1. **Front number board**
2. **Locating spigots**
3. **Locating holes**
4. **Front fender**
5. **Front brake hose**

Front Number Board - Installation

⚠ WARNING

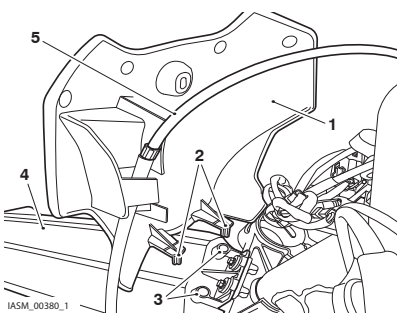
Make sure that the motorcycle is stabilized and adequately supported.

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.

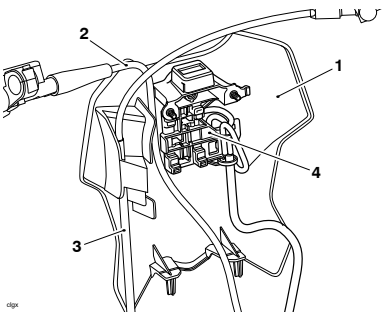
Failure to follow the advice above could result in serious injury or death.

- Insert the two spigots into the front fender locating holes as noted during removal.



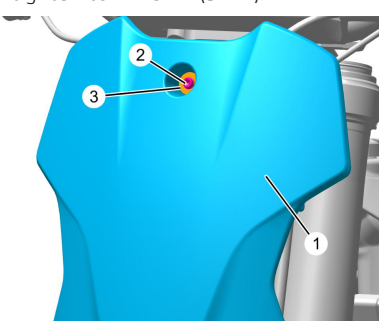
1. **Front number board**
2. **Locating spigots**
3. **Locating holes**
4. **Front fender**
5. **Front brake hose**

- Make sure that the front brake hose and clutch hose are routed behind the number board as shown in the illustration. Components removed for clarity.



1. **Front number board**
2. **Clutch hose**
3. **Front brake hose**
4. **Harness and connector bracket**

- Install the washer and fastener and tighten to 44 lbf in (5 Nm).



1. **Front number board**
2. **Fastener**
3. **Washer**

Skid Plate - Removal

⚠ WARNING

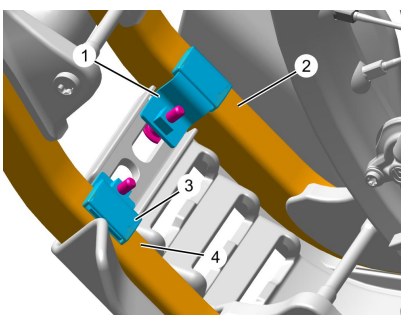
Make sure that the motorcycle is stabilized and adequately supported.

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.

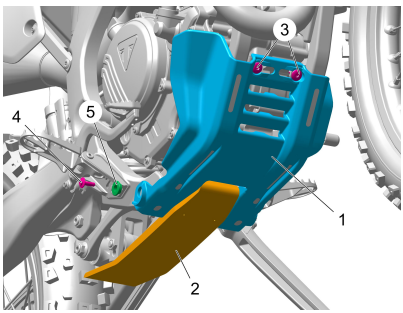
Failure to follow the advice above could result in serious injury or death.

- Loosen the front fasteners and allow the front brackets to slide inwards.



1. **Bracket, right side**
2. **Frame, right side**
3. **Bracket, left side**
4. **Frame, left side**

- Remove the rear fasteners and flanged sleeves from the skid plate linkage protector assembly.



1. **Skid plate**
2. **Linkage protector**
3. **Front fasteners**
4. **Rear fasteners (one of two)**
5. **Flanged sleeve (one of two)**

- Remove the skid plate and linkage protector assembly.

Skid Plate - Installation

⚠ WARNING

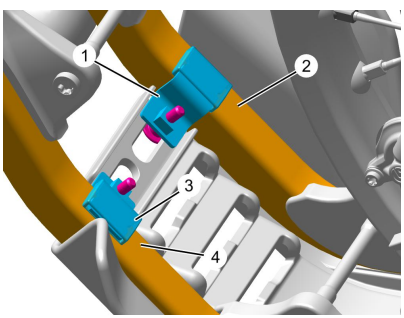
Make sure that the motorcycle is stabilized and adequately supported.

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.

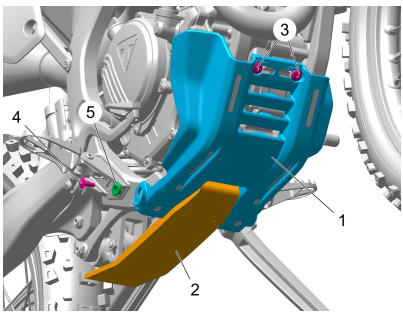
Failure to follow the advice above could result in serious injury or death.

- Align the skid plate to the frame slide the front brackets outwards until they are flush with the frame.



1. **Bracket, right side**
2. **Frame, right side**
3. **Bracket, left side**
4. **Frame, left side**

- Mount the rear fasteners and flanged sleeves to the skid plate.



1. **Skid plate**
2. **Linkage protector**
3. **Front fasteners**
4. **Rear fasteners (one of two)**
5. **Flanged sleeve (one of two)**

- Tighten the rear fasteners to 89 lbf in (10 Nm).
- Tighten the front fasteners to 53 lbf in (6 Nm).

Side Stand - Clean/Lubricate

⚠ WARNING

Make sure that the motorcycle is stabilized 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.

- Remove the side stand, see page 193.
- Fully clean all mating surfaces of the parts, then examine the condition and apply lubrication as described in page 194.
- Install the side stand, see page 194.

Side Stand - Removal

⚠ WARNING

Make sure that the motorcycle is stabilized 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.

- Raise and support the motorcycle.

⚠ CAUTION

The spring is under pressure and can cause injury if released suddenly.

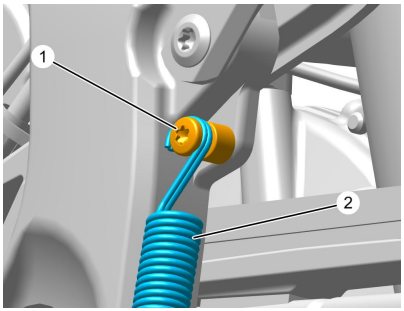
Always put on suitable eye protection and release the spring slowly.

Failure to follow the advice above could result in minor to moderate injury.

NOTICE

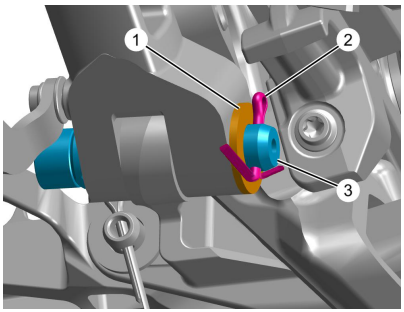
The side stand is held in the up position by spring tension.

- With the side stand in the up position, unhook the spring from the upper spring mount and remove it from the spring bracket.



1. **Upper spring mount**
2. **Spring**

- Remove and discard the split pin that attaches the pivot pin.
- Collect the washer. Remove the pivot pin and remove the side stand.



1. **Washer**
2. **Split pin**
3. **Pivot pin**

Side Stand - Installation

⚠ WARNING

Make sure that the motorcycle is stabilized and adequately supported.

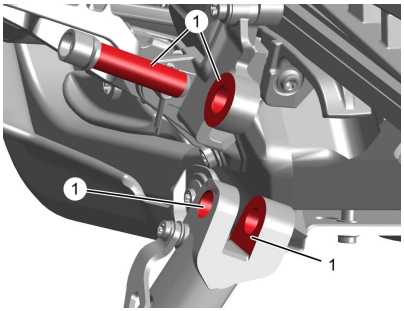
Do not support the motorcycle on any ancillary component, the exhaust system or any other non-structural parts of the motorcycle frame.

A correctly supported motorcycle will help prevent it from falling.

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

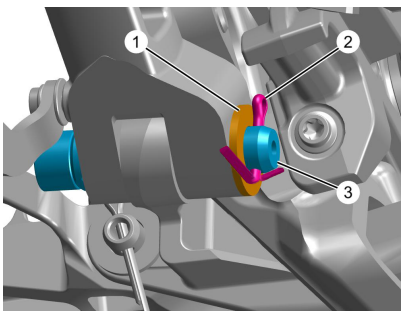
- Fully clean all grease and contamination from the friction and pivot surfaces of the side stand, side stand bracket and the pivot pin.
- Examine the parts for damage or excessive wear and replace as necessary.

- Apply a thin layer of general purpose grease (for example: Triumph Performance RG2 grease (NLGI 2)) to the friction and pivot surfaces of the side stand, side stand bracket and the pivot pin as shown below:



1. **Surfaces to apply grease**

- Align the side stand with the side stand bracket and install the pivot pin.
- Install the washer and a new split pin. Fold the ends of the split pin to secure it.



1. **Washer**
2. **Split pin**
3. **Pivot pin**

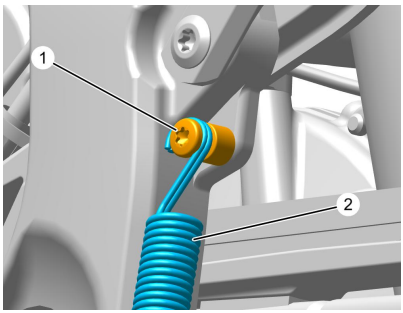
⚠ CAUTION

The spring is under pressure and can cause injury if released suddenly.

Always put on suitable eye protection and release the spring slowly.

Failure to follow the advice above could result in minor to moderate injury.

- With the side stand in the up position, attach the spring to the spring bracket and hook the spring onto the upper spring mount.



1. **Upper spring mount**
2. **Spring**

Battery

This motorcycle contains a $LiFePO_4$ lithium-ion battery.

⚠ WARNING

The lithium-ion battery contains harmful materials.

Always keep children and pets away from the lithium-ion battery at all times.

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

⚠ WARNING

The lithium-ion battery contains harmful materials.

Never attempt to open, disassemble, or pierce a lithium-ion battery.

Never strike, throw, or subject the battery to severe physical shock.

These actions may cause a lithium-ion battery to vent gas at a very high temperature.

A lithium-ion battery, which if opened, disassembled, or pierced, will vent high temperature gas until it has exhausted all of the internal components, causing irreparable damage to the motorcycle and could result in serious injury or death.

⚠ WARNING

Do not immerse the battery in water.

Do not use or store the battery near sources of fire or heat.

Exposure to water, heat or fire will cause irreparable damage to the battery.

Failure to follow the advice above could result in a serious environmental issue, serious injury or death.

⚠ WARNING

If the battery is in use or being recharged and it gives off an odor, generates heat, becomes deformed, discolored or appears abnormal in any way, immediately switch off the motorcycle or disconnect the battery charger and discontinue use.

If safe to do so move the motorcycle or battery outside to a safe location.

Continued use may result in irreparable damage to the battery, the motorcycle and could result in serious injury or death.

NOTICE

Lithium-ion batteries generally have increased starting performance when temperatures are above 59°F (15°C).

At low temperatures, multiple starting attempts may be needed in order to warm the lithium battery and increase starting power.

Press the start button for 5 seconds and then wait for 30 seconds. The pause is necessary so the battery can warm without damage.

Do not operate the starter continuously for more than five seconds as the starter motor will overheat and the battery will become discharged.

The malfunction indicator lamp will illuminate during this start up process.

After five unsuccessful starting attempts, do not try again. Check the motorcycle for faults.

Do not let the engine idle for long periods as this may lead to overheating which will cause damage to the engine.

Battery - Removal

⚠ WARNING

Make sure that the motorcycle is stabilized 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.

⚠ WARNING

The lithium-ion battery contains harmful materials.

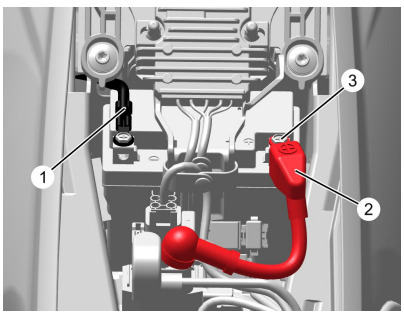
Never attempt to open, disassemble, or pierce a lithium-ion battery.

Never strike, throw, or subject the battery to severe physical shock.

These actions may cause a lithium-ion battery to vent gas at a very high temperature.

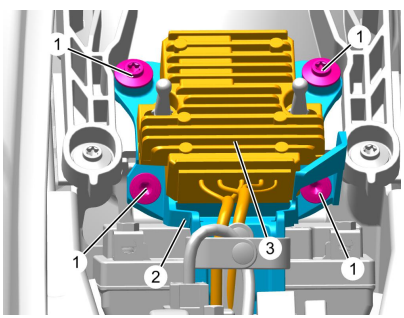
A lithium-ion battery, which if opened, disassembled, or pierced, will vent high temperature gas until it has exhausted all of the internal components, causing irreparable damage to the motorcycle and could result in serious injury or death.

- Remove the seat see page 38.
- Disconnect the negative (black) battery lead.
- Slide the positive (red) lead terminal protective cover to gain access to the fastener.
- Disconnect the battery positive (red) lead.



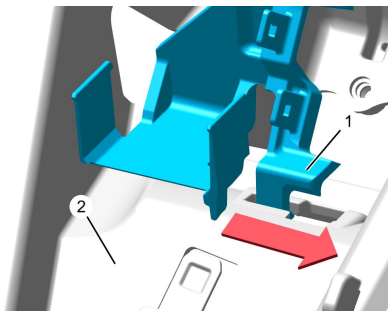
1. **Negative (black) battery lead**
2. **Protective cap (folded back to show fastener)**
3. **Positive (red) battery lead**

- Remove the four fasteners securing the battery strap molding to the battery tray.



1. **Fasteners**
2. **Battery strap molding**
3. **Regulator/rectifier**

- Lift the battery strap molding from the rear and tilt forwards.
- Slide the battery strap molding towards the left hand side of the motorcycle to release its front locating tang from the battery tray.



1. **Battery strap molding locating tang**
2. **Battery tray**

- Remove the battery.

Battery Charging

⚠ WARNING

Do not allow the voltage at rest to fall below 10 Volts. If the battery voltage falls below 10 Volts replace the battery. For disposal of the original battery it must be handed to a recycling agent who will make sure that the dangerous substances from which the battery is manufactured do not pollute the environment.

Before charging the battery, test the battery voltage to ensure it is above 10 Volts.

Charging the battery when it less than 10 Volts is dangerous and may cause the battery to over heat which could lead to venting gases and a fire.

Always check that the charging voltage is limited to the voltage shown in the Maximum Charge Rate table.

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

NOTICE

Only charge the battery using a Triumph recommended battery charger specifically designed for lithium batteries.

Always refer to the instructions supplied with the battery charger.

Do not use a lead-acid battery charger, as this may seriously damage or destroy the battery.

Do not use a battery charger that has an automatic 'de-sulfation' or 'conditioning' mode as this will seriously damage or destroy the battery.

For help with selecting a battery charger, checking the battery voltage or battery charging, contact your local authorized Triumph motocross and enduro center.

NOTICE

Over a period of time the battery will discharge if it remains unused.

If the battery is left in a discharged state for an extended period of time, it will become fully discharged which will damage the battery to an unrecoverable state.

Always check the battery voltage (10 Volts or higher) before charging.

For extended periods of storage (beyond two weeks) the battery should be removed from the motorcycle and kept charged and monitored using an approved battery charger. This prevents the battery from becoming fully discharged.

To charge the lithium-ion battery, do the following:

- Always remove the battery from the motorcycle before charging separately, see page 197.
- Test the battery voltage before connecting the charger. If below 10 Volts, replace the battery. If above 10 Volts, charge the battery.
- Follow the instructions supplied with the approved battery charger.
- Charge the battery with a lower current than the MAX Charging Current found on the charging label.
- If the battery becomes hot to the touch, stop charging and allow the battery to cool before resuming.

- After charging, leave the battery for 1 to 2 hours before checking the voltage. If the voltage is less than 12.4 Volts, additional charging is necessary.

The lithium-ion battery can be quickly charged as long as the charge voltage remains below 14.7 Volts. A recommended charging current within the range of 0.5 Amp – 2 Amp to a MAX of 10 Amp.

A battery charger will limit the voltage between 14.0 - 14.7 Volts when charging. The battery cannot be fully charged if the charging voltage is less than 14.0 Volts. The battery can be damaged if the charging voltage is above 14.7 Volts.

Maximum Charge Rate Table

Maximum Charge Rates	
Battery Label	**Charge Rate**
CCA (14°F (-10°C)): 165A	User Charging: max - 14.7 Volts
2.0Ah (10HR)	User Charging: max - 10 Amp Recommended 0.5 Amp - 2 Amp

Battery Maintenance

The lithium-ion battery is a sealed battery.

To help maintain the lithium-ion battery, do the following:

- Disconnect the battery cables, - negative (black lead) first, if the motorcycle is in storage or used infrequently.
- Use the recommended $LiFePO_4$ Lithium-Ion battery charger to maintain the battery.
- If the battery is left for a period of time, check the voltage. If it is lower than 12.9 Volts, recharge the battery as described on page 199.
- Clean the battery using a clean, dry cloth.
- Make sure the battery terminals are clean and securely fastened.
- Regularly check the battery terminals for any residue. Make sure they are clean and free from moisture as this will ensure that the transfer of energy from the battery is consistent.

Battery Storage

To store a lithium-ion battery correctly, do the following:

- Always store the battery at 14.4 Volts (approximately 100% state of charge).
- Always make sure that the charge state of the battery is monitored continuously if left for long periods of time, so it does not fully discharge.
- Always store the battery in a clean, dry and ventilated area.
- Always store the battery away from heat and fire.
- Never allow the battery to come into contact with any corrosive substance.

Battery Disposal

A lithium-ion battery, no matter how well maintained will reach a point where it needs to be replaced. If so, fully discharge the battery before disposing of the battery in the correct procedure.

⚠ WARNING

Lithium-ion batteries are regarded as Class 9 hazardous products.

- DO NOT incinerate a lithium-ion battery.

- DO NOT crush a lithium-ion battery.

- DO NOT break open a lithium-ion battery.

- DO NOT dispose of a lithium-ion battery in usual household waste.

- DO NOT bury a lithium-ion battery in the ground.

- DO NOT send a damaged lithium-ion battery by post or carrier.

Failure to follow the advice above could result in a serious environmental issue, serious injury or death.

⚠ WARNING

Lithium-ion batteries are regarded as Class 9 hazardous products and must be treated as such.

If a lithium-ion battery becomes damaged, including a bulging or broken casing and stripped out terminals, you MUST take it to a Hazardous Waste collection point.

Always check with your local authority if a lithium-ion battery can be put into the general waste collection as they are regarded as hazardous waste.

Failure to follow the advice above could result in a serious environmental issue, serious injury or death.

⚠ WARNING

The lithium-ion battery contains harmful materials.

Never attempt to open, disassemble, or pierce a lithium-ion battery.

Never strike, throw, or subject the battery to severe physical shock.

These actions may cause a lithium-ion battery to vent gas at a very high temperature.

A lithium-ion battery, which if opened, disassembled, or pierced, will vent high temperature gas until it has exhausted all of the internal components, causing irreparable damage to the motorcycle and could result in serious injury or death.

Battery - Installation

⚠ WARNING

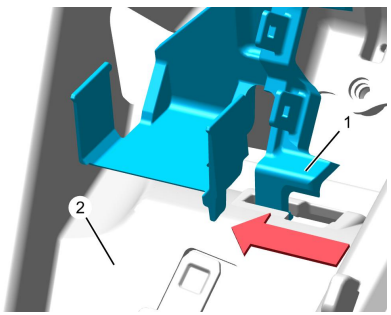
Make sure that the motorcycle is stabilized and adequately supported.

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.

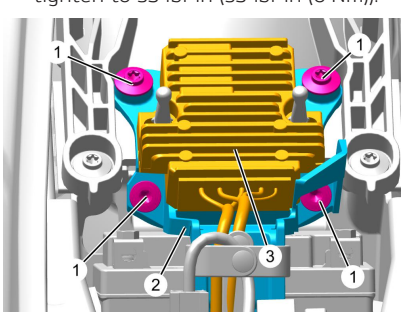
Failure to follow the advice above could result in serious injury or death.

- Install the battery into the battery tray.
- Align the battery strap molding front locating tang to the slot in the battery tray and slide right to secure.



1. **Battery strap molding locating tang**
2. **Battery tray**

- Tilt the battery strap molding backwards into position.
- Install the flanged fasteners and tighten to 53 lbf in (53 lbf in (6 Nm)).



1. **Fasteners**
2. **Battery strap molding**
3. **Regulator/rectifier**

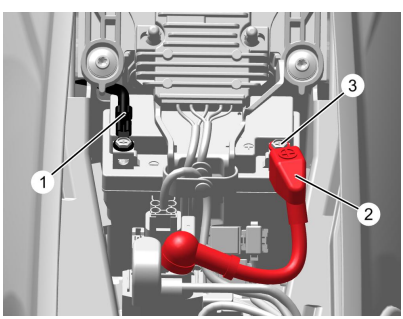
- Apply a light coat of grease to the battery terminals to prevent corrosion.
- Connect the battery, positive (red) lead first. Tighten the fastener to 40 lbf in (40 lbf in (4.5 Nm)).

NOTICE

Connecting the battery negative cable may cause a spark.

This is normal and to reduce the spark a firm robust connection should be made.

- Connect the negative (black) battery lead. Tighten the fastener to 40 lbf in (40 lbf in (4.5 Nm))



1. **Negative (black) battery lead**
2. **Protective cap (folded back to show fastener)**
3. **Positive (red) battery lead**

- Install the seat see page 39.

Fuse and Relay Identification

⚠ WARNING

Always replace blown fuses with new ones of the correct rating (as specified on the fuse box cover).

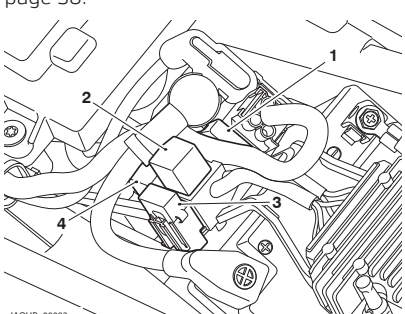
Never replace a blown fuse with a fuse of a different rating.

Use of an incorrect fuse could lead to an electrical problem, resulting in motorcycle damage and leading to loss of motorcycle control, which could result in serious injury or death.

NOTICE

A blown fuse is indicated when all of the systems protected by that fuse become inoperative. When checking for a blown fuse, use the tables to establish which fuse has blown.

The fuses and relays are located underneath the rider's seat. To allow access to the fuses and relays, the rider's seat must be removed see page 38.

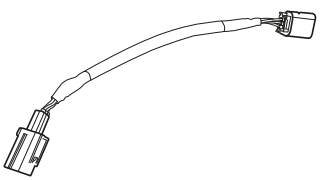


1. **Main fuse (10 Amp)**
2. **Starter relay**
3. **Fuse**
4. **Engine Management System relay**

Diagnostic Tool Connection

The diagnostic tool connector is located under the seat behind the fuel tank.

A new diagnostic Interface adapter (part number T3880543) has been released for use with the above models.



NOTICE

T3880543 - Diagnostic Interface Adapter is intended for use on the above Triumph Motocross motorcycle model(s) only.

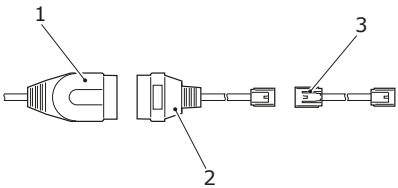
The above interface must not be used on any other Triumph motorcycle models.

Connecting the above adapter to Triumph motorcycles other than the Motocross model(s) listed above will cause DTCs to be stored, and may cause damage to electrical or electronic components.

The new diagnostic interface must be used in conjunction with the following service tools:

- T3880057 - Triumph Diagnostic Interface

- T3880538 - Diagnostic Interface Cable.



1. **T3880057 - Triumph Diagnostic Interface**
2. **T3880538 - Diagnostic Interface Cable**
3. **T3880543 - Diagnostic Interface Adapter**

The new diagnostic interface must be used when:

- Downloading Calibrations to the Engine ECM on the above model(s).
- Connecting to Engine ECM diagnostics on the above motorcycles when the engine is not running.

NOTICE

The motorcycle's electrical system will turn on when T3880543 - Diagnostic Interface Adapter is connected to the motorcycle.

T3880414 - Lithium Battery Charger can be used to maintain battery charge while the diagnostic interface is connected to the motorcycle.

To avoid draining the motorcycle battery, always disconnect the diagnostic interface adapter from the motorcycle when your diagnostic session is complete.

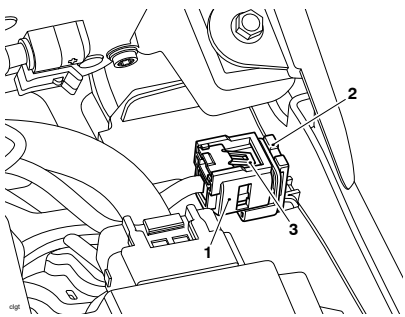
- To access the diagnostic tool connector remove the seat (see page 38).

NOTICE

The diagnostic connector is red in color and is connected to a blanking plug that is attached to the battery tray.

The blanking plug is to prevent contamination.

- Release the locking tab and detach the diagnostic connector from the blanking plug on the battery tray.



1. **Diagnostic connector**
2. **Blanking plug**
3. **Diagnostic connector locking tab**

- When the diagnostic session is completed, disconnect the diagnostic tool.
- Connect the diagnostic connector to the blanking plug.
- Install the seat, see page 39.

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CLEANING AND STORAGE

Cleaning

Frequent, regular cleaning is an essential part of the maintenance of your motorcycle. If regularly cleaned, the appearance will be preserved for many years.

Cleaning with cold water containing an automotive cleaner is essential at all times but particularly so after exposure to sea breezes, sea water, dusty or muddy roads.

Do not use household detergent, as the use of such products will lead to premature corrosion.

The owner is expected to observe this reasonable advice which will safeguard against corrosion and enhance the appearance of the motorcycle.

Preparation for Washing

Before washing, precautions must be taken to keep water off the following places.

Rear opening of the exhausts: Cover with a plastic bag secured with rubber bands.

Airbox air intake.

Clutch and brake levers, switch housings on the handlebar: Cover with plastic bags.

Remove any items of jewelry such as rings, watches, zips or belt buckles, which may scratch or otherwise damage painted or polished surfaces.

Use separate cleaning sponges or cleaning cloths for washing painted/ polished surfaces and chassis areas. Chassis areas (such as wheels and under fenders) will be exposed to more abrasive road grime and dust, which may then scratch painted or polished surfaces, if the same sponge or cleaning cloths are used.

Where to be Careful

NOTICE

Do not use high pressure spray washers or steam cleaners.

Use of high pressure spray washers and steam cleaners may damage seals, and cause water and steam to be forced into bearings and other components causing premature wear from corrosion and loss of lubrication.

NOTICE

Do not spray any water at all near the air intake duct.

The air intake duct is located under the rider's seat, under the fuel tank or near the steering head.

Any water sprayed in this area could enter the airbox and engine, causing damage to both items.

Do not get water near the following places:

- Air and any intake duct
- Any visible electrical components
- Brake cylinders and brake calipers
- Handlebar switch housings
- Steering head bearings
- Instruments (if equipped)
- Oil filler cap
- Rear bevel box breather (if equipped)
- Rear of headlights (if equipped)
- Seats
- Suspension seals and bearings
- Steering damper (if equipped)
- Under the fuel tank
- Wheel bearings.

Washing

To wash the motorcycle, do the following:

- Make sure that the motorcycle engine is cold.
- Prepare a mixture of clean, cold water and mild automotive cleaner or low alkaline soap.
- Do not use a highly alkaline soap as commonly found at commercial car washes because it will leave a residue on painted surfaces and may also cause water spotting.
- Wash the motorcycle with a sponge or soft cloth.
- Do not use abrasive scouring pads or steel wool. They will damage the finish.
- Rinse the motorcycle thoroughly with clean, cold water.

After Washing

⚠ WARNING

Never wax or lubricate the brake discs.

Always clean the brake disc with a proprietary brand of oil-free brake disc cleaner.

Waxed or lubricated brake discs may lead to loss of motorcycle control which could result in serious injury or death.

After washing the motorcycle, do the following:

- Remove the plastic bags and tape, and clear the air intakes.
- Lubricate the pivots, bolts and nuts.
- Test the brakes before motorcycle operation.
- Use a dry cloth or chamois leather to absorb water residue. Do not allow water to stand on the motorcycle as this will lead to corrosion.
- Start the engine and run it for 5 minutes. Make sure that there is adequate ventilation for the exhaust fumes.

Aluminum Items - not Lacquered or Painted

Items such as brake and clutch levers, wheels, main frame, rear subframe, swinging arm and throttle bodies on some models must be correctly cleaned to preserve their appearance. Please contact your dealer if you are unsure which components on your motorcycle are aluminum parts not protected by paint or lacquer, and for guidance on how to clean those items.

Use a proprietary brand of aluminum cleaner which does not contain abrasive or caustic elements.

Clean aluminum items regularly, in particular after use in inclement weather, where the components must be hand washed and dried each time the machine is used.

Warranty claims due to inadequate maintenance will not be allowed.

Chrome and Stainless Steel Care

All chrome and stainless steel parts of your motorcycle must be cleaned regularly to avoid a deterioration of its appearance.

Washing

Wash as previously described.

Drying

Dry the chrome and stainless steel parts as far as possible with a soft cloth or chamois leather.

Protecting

NOTICE

The use of products that contain silicone will cause discoloration of the chrome and stainless steel parts, and must not be used.

The use of abrasive cleaning products will damage the finish, and must not be used.

When the chrome and stainless steel is dry, apply a suitable proprietary chrome cleaner on to the surface, following the manufacturer's instructions.

It is recommended that regular protection be applied to the motorcycle as this will both protect and enhance its appearance.

Exhaust System Care

All parts of the exhaust system of your motorcycle must be cleaned regularly to avoid a deterioration of its appearance. These instructions can be applied to chrome, brushed stainless steel and carbon fiber components. Matt painted exhaust systems should be cleaned as above, noting the care instructions in the Matt Paintwork section previously.

The exhaust system must be cool before washing to prevent water spotting.

Washing

Wash as previously described.

Make sure that no soap or water enters the exhausts.

Drying

Dry the exhaust system as far as possible with a soft cloth or chamois leather. Do not run the engine to dry the system or spotting will occur.

Protecting

NOTICE

The use of products that contain silicone will cause discoloration of the chrome and stainless steel parts, and must not be used.

The use of abrasive cleaning products will damage the finish, and must not be used.

When the exhaust system is dry, apply a suitable proprietary motorcycle protection spray onto the surface, following the manufacturer's instructions.

It is recommended that regular protection be applied to the system as this will both protect and enhance the system's appearance.

Seat Care

NOTICE

Do not use chemicals or high pressure spray washers to clean the seat.

Using chemicals or high pressure spray washers may damage the seat cover.

To help maintain its appearance, clean the seat using a sponge or cleaning cloth with soap and water.

Storage

Preparation for Storage

To prepare the motorcycle for storage, do the following:

- Clean and dry the entire vehicle thoroughly.
- Fill the fuel tank with the correct grade of unleaded fuel and add a fuel stabilizer (if available), following the fuel stabilizer manufacturer's instructions.

⚠ WARNING

Gasoline is extremely flammable and can be explosive under certain conditions.

Turn the ignition switch off. Do not smoke.

Make sure the area is well ventilated and free from any source of flame or sparks; this includes any appliance with a pilot light.

Failure to follow the advice above could lead to a fire hazard which could result in serious injury, or death.

⚠ CAUTION

When cranking the engine with the spark plug removed, particles of oil and carbon will be forced out of the cylinder.

Alway wear eye protection when cranking the engine with the spark plug removed.

Failure to follow the advice above could result in minor to moderate injury.

- Remove the spark plug from, see page 118 and put several drops (0.17 fl oz (5 cc)) of engine oil into the cylinder. Cover the spark plug hole with a piece of cloth or rag. With the engine stop switch in the RUN position, push the starter button for 2 - 3 seconds to coat the cylinder walls with oil. Install the spark plug, see page 121, tightening to 11 lbf ft (11 lbf ft (15 Nm)).
- Change the engine oil and filter (see page 99).
- Check and if necessary correct the tire pressures (see the relevant Specification section).
- Set the motorcycle on a stand so that both wheels are raised off the ground. (If this cannot be done, put boards under the front and rear wheels to keep dampness away from the tires).

- Spray rust inhibiting oil on all unpainted metal surfaces to prevent rusting. Prevent oil from getting on rubber parts, brake discs or in the brake calipers. Consult your local dealer for recommendations on rust-inhibiting oil products.
- Lubricate and if necessary adjust the drive chain (see page 133).
- Make sure the cooling system is filled with a 50% mixture of coolant and distilled water solution. Triumph recommends using D2053 coolant, a solution that is pre-mixed and requires no dilution.
- Remove the battery (see page 197, and store it where it will not be exposed to direct sunlight, moisture, or freezing temperatures. During storage it should be given a slow charge (one Ampere or less) about once every two weeks (see page 199).
- Store the motorcycle in a cool, dry area, away from sunlight, and with a minimum daily temperature variation.
- Put a suitable porous cover over the motorcycle to keep dust and dirt from collecting on it. Avoid using plastic or similar non-breathable, coated materials that restrict air flow and allow heat and moisture to accumulate.

Preparation after Storage

To prepare the motorcycle to be ridden after storage, do the following:

- Install the battery (if removed) (see page 201).
- If the motorcycle has been stored for more than four months, change the engine oil (see page 99).
- Check all the points listed in the Daily Safety Checks section.
- Before starting the engine, remove the spark plug.
- Install the plug in side stand.
- With the motorcycle in neutral, push the starter button for 2 - 3 seconds several times.
- Reinstall the spark plug, tightening to 11 lbf ft (11 lbf ft (15 Nm)), and start the engine.
- Check and if necessary correct the tire pressures (see the relevant Specification section).
- Clean the entire vehicle thoroughly.
- Check the brakes for correct operation.
- Test ride the motorcycle at low speeds.

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Triumph Warranty Terms and Conditions - America and Canada only

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

This section of the Owner's Handbook includes details of the warranty and other useful information concerning your motorcycle.

Make sure that all your owner information is entered in the Triumph Motorcycle Service Handbook that is provided with the motorcycle.

Maintain maximum protection under warranty by making sure that your motorcycle is serviced in accordance with the recommendations of the scheduled maintenance chart in this Owner's Handbook.

If you should sell your motorcycle, make sure this Owner's Handbook or Quick Start Guide (where supplied with the motorcycle) together with all other relevant documents are passed to the new owner. Please advise the new owner that they can notify Triumph of the change of ownership by contacting their local Triumph dealer.

All new Triumph TF-C series motorcycles are covered by a 1 (one) month unlimited mileage warranty, commencing from the date of first warranty registration or the date of sale if the motorcycle remains unregistered.

Within the warranty period, TRIUMPH MOTORCYCLES AMERICA LIMITED warrant the new Triumph motorcycle detailed in the Motorcycle Service Handbook to be free from any defect in materials used in the manufacture, and/or workmanship at the time of its manufacture.

Any part found to be defective during this period will be repaired or replaced at the discretion of TRIUMPH MOTORCYCLES AMERICA LIMITED by an authorized Triumph dealer.

Any part replaced under the warranty will be covered for the remaining period of the warranty.

Any parts replaced under warranty must be returned to TRIUMPH MOTORCYCLES AMERICA LIMITED by the dealer/distributor and will become the property of Triumph Motorcycles America Ltd.

Triumph may, at its discretion make any repairs or replacement of defective parts falling outside the warranty, but such work shall not be deemed to be any admission of liability.

Triumph will bear labor charges for work carried out under the warranty.

The warranty may be transferred to subsequent owners for the balance of the remaining warranty period.

Conditions and Exclusions - America and Canada only

- The motorcycle must not have been used misused[1], inadequately or incorrectly serviced or maintained.
- The motorcycle must have been serviced as detailed in the manufacturers service maintenance schedule, at the intervals specified in the Owner's Handbook and the service log completed accordingly.

The warranty does not cover:

- Defects caused by incorrect adjustment, repair or modification not authorized by TRIUMPH MOTORCYCLES AMERICA LIMITED.
- Defects caused by the use of parts and accessories not authorized by TRIUMPH MOTORCYCLES AMERICA LIMITED.
- The cost of removal and replacement of parts and accessories, unless supplied as original equipment, or recommended by TRIUMPH MOTORCYCLES AMERICA LIMITED.

[1] Misuse includes any use not in accordance with the recommendations made in the 'how to ride the motorcycle' section of the Owner's Handbook and any use contrary to the warnings given in that same handbook. In addition, misuse will include, but not be limited to any use of the motorcycle which does not constitute normal use.

- The cost of transportation of the motorcycle to or from the authorized Triumph dealer, or expenses incurred while the motorcycle is unable to be ridden due to warranty repairs.
- Normal servicing and normal service items, such as spark plugs, oil and air filters are not covered by this warranty. Similarly, items which are expected to wear as part of their normal function such as tires, bulbs, chains, brake pads, pistons/piston rings, transmission gear dogs and clutch plates are also excluded, unless there is a manufacturing defect.
- Defects to the front fork oil seals as they are subject to wear and tear, including but not limited to damage caused by stone chips to the inner fork tubes.
- Seats, luggage, paint, chrome, polished aluminum items, or trim deterioration or fading caused by normal wear and tear, exposure, or lack of correct maintenance.
- Motorcycles used on a commercial basis.
- Defects which have not been reported to an authorized dealer within ten days of discovery of the defect.
- Motorcycles which have been inadequately lubricated, or for which the wrong fuel or lubricant has been used.
- Damages due to water submersion and/or foreign material ingestion.

Should a warranty claim become necessary, Triumph Motorcycles and its authorized dealers shall not be liable for loss of use, inconvenience, lost time, commercial losses or other incidental or consequential damages.

This warranty shall be governed by and construed in accordance with the laws of England and Wales, save that in the event of any material conflict or inconsistency between such application to this warranty of the laws of England and Wales and local statutory rights that would otherwise be applicable to Triumph customers (dealerships or consumers) purchasing Triumph products in another country, those local statutory rights shall take precedence.

The competent courts of England and Wales shall have primary authority to settle any questions, claims or disputes which may arise under or in connection with this warranty, save that to the extent that any such issue arising requires the consideration and interpretation of applicable local statutory rights applicable to a customer purchasing Triumph products in another country, the customer may seek to take proceedings in any competent court of that country.

Any statement, condition, representation, description, or warranty otherwise contained in any catalog, advertisement or other publication shall not be construed as enlarging, varying or overriding anything contained herein.

Triumph Motorcycles reserve the right to make alterations or improvements without notification to any model or motorcycle without obligation to do so to motorcycles already sold.

This warranty does not affect your statutory rights.

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TF250 C

Dimensions, Weights and Performance
A list of model specific dimensions, weights and performance figures is available from your authorized Triumph dealer, or on the Internet at www.triumph.co.uk.

Payload	TF250-C
Maximum payload (rider in full protective clothing)	203 lb (92 kg)

Engine	TF250-C
Engine configuration	1 Cylinder 4 Valve DOHC
Displacement	15.2 cu in (249.9 cc)
Bore x stroke	3.07 x 2.06 in (78 x 52.3 mm)
Compression ratio	14.4:1

Lubrication	TF250-C
Lubrication system	Pressure lubrication, with two trochoidal pumps
Viscosity	10W/50
Engine oil capacities:	
Oil capacity (dry fill)	0.26 gallon (1 liter)
Oil capacity (wet fill including oil filter)	0.95 litre
Oil capacity (wet fill excluding oil filter)	0.85 litre

Cooling System	TF250-C
Coolant type	Triumph D2053 OAT coolant (premixed)
Coolant ratio	50/50 (premixed as supplied by Triumph)
Cooling system capacity	0.25 gallons (0.95 litres)

Fuel System	TF250-C
Type	Electronic fuel injection
Injector type	Solenoid operated
Fuel pump type	Submerged electric
Fuel pressure (nominal)	50.8 lb/in² (3.5 bar)

Fuel	TF250-C
Type	95 RON unleaded
Fuel tank capacity (motorcycle upright)	2.11 gallons (8 liters)

Ignition	TF250-C
Ignition system	Digital electronic
Electronic rev limiter	14,000 rpm
Spark plug type	NGK LMAR9AI-8
Spark plug gap	0.031 in +0/-0.004 (0.8 mm +0/-0.1)

Transmission	TF250-C
Transmission type	5 Speed, Constant Mesh
Clutch type	Wet multiplate
Final drive chain	DID 520DMA4K SDH, 114 link non-O-ring
Gear ratios:	
Primary drive ratio	3.04:1 (73/24)
Final drive ratio	3.69:1 (48/13)
Gear ratios - 1st gear	2.46:1 (32/13)
Gear ratios - 2nd gear	2.00:1 (30/15)
Gear ratios - 3rd gear	1.46:1 (28/17)
Gear ratios - 4th gear	1.36:1 (26/19)
Gear ratios - 5th gear	1.19:1 (25/21)

SPECIFICATIONS

⚠ WARNING

Use the recommended tires ONLY in the combinations listed in the approved Tire Selector at www.triumph.co.uk.

Do not mix tires from different manufacturers or mix different specification tires from the same manufacturers.

Using/mixing tires may affect the handling, stability, braking and traction control (if equipped) functions of the motorcycle.

Failure to follow the advice above may lead to loss of motorcycle control, which could result in serious injury or death.

Approved Tires
A list of approved tires specific to these models is available from your authorized Triumph dealer, or on the Internet at www.triumph.co.uk.

Tires	TF250-C
Tire sizes:	
Front tire size	80/100 x 21
Rear tire size	80/100 x 21
Tire pressures (cold):	
Front tire pressure	14 lb/in² (0.97 bar)
Rear tire pressure	14 lb/in² (0.97 bar)

Electrical Equipment	TF250-C
Battery type	HJTZ5S-FP
Battery rating	12V 2.0Ah
Alternator rating	5 Amp at 2,000 rpm. 6 Amp at 8,000 rpm

Frame	TF250-C
Rake	27.4°
Trail	4.57 in (116 mm)

Torque Figures	TF250-C
Battery Terminals	40 lbf in (4.5 Nm)
Clutch Lever Nut	53 lbf in (6 Nm)
Oil Filter	89 lbf in (10 Nm)
Spark Plug	11 lbf ft (15 Nm)
Sump Plug	15 lbf ft (20 Nm)
Rear Wheel Spindle Nut	89 lbf ft (120 Nm)

Fluids and Lubricants	TF250-C
Bearings and pivots	Triumph Performance RG2 grease (NLGI 2)
Brake fluid	Triumph Performance DOT 4 brake and clutch fluid
Coolant	Triumph D2053 OAT coolant (premixed)
Drive chain	Triumph Performance chain lubricant
Engine oil	Triumph Performance fully synthetic engine oil is recommended.

TF450 C

Dimensions, Weights and Performance
A list of model specific dimensions, weights and performance figures is available from your authorized Triumph dealer, or on the Internet at www.triumph.co.uk.

Payload	TF450-C
Maximum payload (rider in full protective clothing)	203 lb (92 kg)

Engine	TF450-C
Engine configuration	1 Cylinder 4 Valve SOHC
Displacement	27.4 cu in (449.5 cc)
Bore x stroke	3.74 x 2.5 in (95 x 63.4 mm)
Compression ratio	13.1:1

Lubrication	TF450-C
Lubrication system	Pressure lubrication, with two trochoidal pumps
Engine oil capacities:	
Oil capacity (dry fill)	1.20 litre
Oil capacity (wet fill including oil filter)	1.15 litre
Oil capacity (wet fill excluding oil filter)	1.05 litre

Cooling System	TF450-C
Coolant type	Triumph D2053 OAT coolant (premixed)
Coolant ratio	50/50 (premixed as supplied by Triumph)
Cooling system capacity	0.25 gallons (0.95 litres)

Fuel System	TF450-C
Type	Electronic fuel injection
Injector type	Solenoid operated
Fuel pump type	Submerged electric
Fuel pressure (nominal)	50.8 lb/in² (3.5 bar)

Fuel	TF450-C
Type	95 RON unleaded
Fuel tank capacity (motorcycle upright)	2.11 gallons (8 liters)

Ignition	TF450-C
Ignition system	Digital electronic
Electronic rev limiter	11,400 rpm
Spark plug type	NGK LMAR9AI-8
Spark plug gap	0.031 in +0/-0.004 (0.8 mm +0/-0.1)

Transmission	TF450-C
Transmission type	5 Speed, Constant Mesh
Clutch type	Wet multiplate
Final drive chain	DID 520DMA4K SDH, 114 link non-O-ring
Gear ratios:	
Primary drive ratio	2.34:1 (75/32)
Final drive ratio	3.69:1 (48/13)
Gear ratios - 1st gear	2.14:1 (30/14)
Gear ratios - 2nd gear	1.72:1 (31/18)
Gear ratios - 3rd gear	1.45:1 (29/20)
Gear ratios - 4th gear	1.23:1 (27/22)
Gear ratios - 5th gear	1.04:1 (25/24)

SPECIFICATIONS

⚠ WARNING

Use the recommended tires ONLY in the combinations listed in the approved Tire Selector at www.triumph.co.uk.

Do not mix tires from different manufacturers or mix different specification tires from the same manufacturers.

Using/mixing tires may affect the handling, stability, braking and traction control (if equipped) functions of the motorcycle.

Failure to follow the advice above may lead to loss of motorcycle control, which could result in serious injury or death.

Approved Tires

A list of approved tires specific to these models is available from your authorized Triumph dealer, or on the Internet at www.triumph.co.uk.

Tires	TF450-C
Tire sizes:	
Front tire size	80/100 x 21
Rear tire size	120/90-18
Tire pressures (cold):	
Front tire pressure	14 lb/in² (0.97 bar)
Rear tire pressure	14 lb/in² (0.97 bar)

Electrical Equipment	TF450-C
Battery type	HJTZ5S-FP
Battery rating	12V 2.0Ah
Alternator rating	5 Amp at 2,000 rpm. 6 Amp at 8,000 rpm

Frame	TF450-C
Rake	27.4°
Trail	0.06 in (116 mm)

Torque Figures	TF450-C
Battery Terminals	40 lbf in (4.5 Nm)
Clutch Lever Nut	53 lbf in (6 Nm)
Oil Filter	89 lbf in (10 Nm)
Spark Plug	11 lbf ft (15 Nm)
Sump Plug	15 lbf ft (20 Nm)
Rear Wheel Spindle Nut	89 lbf ft (120 Nm)

Fluids and Lubricants	TF450-C
Bearings and pivots	Triumph Performance RG2 grease (NLGI 2)
Brake fluid	Triumph Performance DOT 4 brake and clutch fluid
Coolant	Triumph D2053 OAT coolant (premixed)
Drive chain	Triumph Performance chain lubricant
Engine oil	Triumph Performance fully synthetic engine oil is recommended.

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APPROVAL INFORMATION

This section contains approval information that is required to be included in this Owner's Handbook.

CE Marking

CE Marking Information (Europe Only)

TF250-C and TF450-C models can be used on private land, with the permission of the landowner or a designated motocross track.

Contact the emergency service in the country in case of any accidents.

Vibration of TF250-C and TF450-C models while riding on a pavemented smooth surface is below 2.5 m/s^2.

The average pressure noise level measured according to the ES 16029 - 2012 of TF250-C is 90 dB(A), the average power noise level is 99 dB(C).

The average pressure noise level measured according to the ES 16029 - 2012 of TF450-C is 89 dB(A), the average power noise level is 98 dB(C).

Use suitable ear protection to reduce the risk of prolonged exposure to loud noises.