



Accessory Fitting Instructions

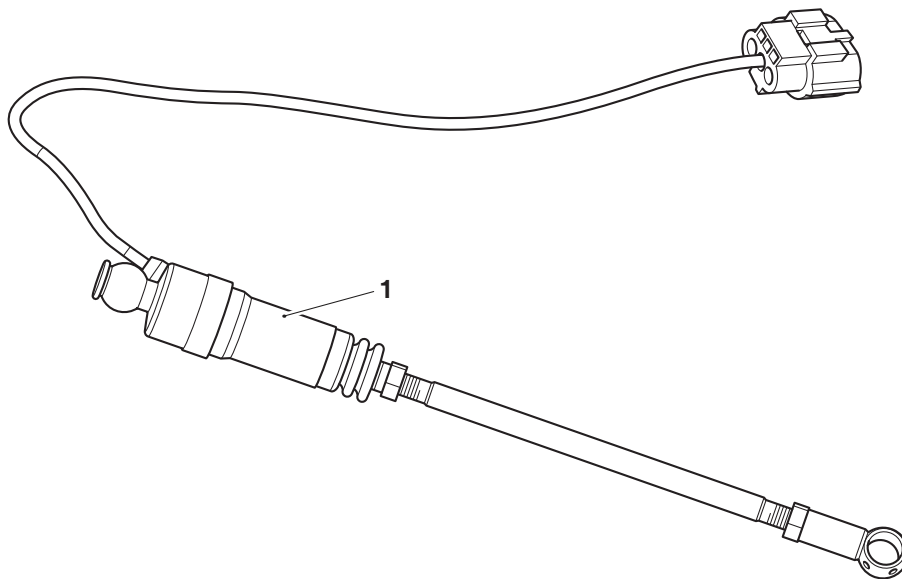
Triumph Shift Assist (TSA) Kit	
Kit Number	Models Affected
A9770206	Tiger Sport from VIN AU7774

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

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

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

Parts Supplied:



1. TSA sensor	1 off		
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Warning

Fit only genuine Triumph accessories to those models approved by Triumph as listed in the associated Triumph fitting instructions. The accessory kits covered in this instruction are designed for use on specific models of Triumph motorcycle. The accessory kits and the models applicable are listed at the start of the instruction. They should never be fitted to any other Triumph model or to any other manufacturer's motorcycle. Fitting an accessory kit to a Triumph model not listed, or to any other manufacturer's motorcycle will affect the performance, stability and handling of the motorcycle. This may affect the rider's ability to control the motorcycle and could result in an accident causing severe injuries or death.

Warning

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

Warning

Make sure the motorcycle is supported. A correctly supported motorcycle will prevent it from falling. An unstable motorcycle may fall, causing injury to the operator or damage to the motorcycle.

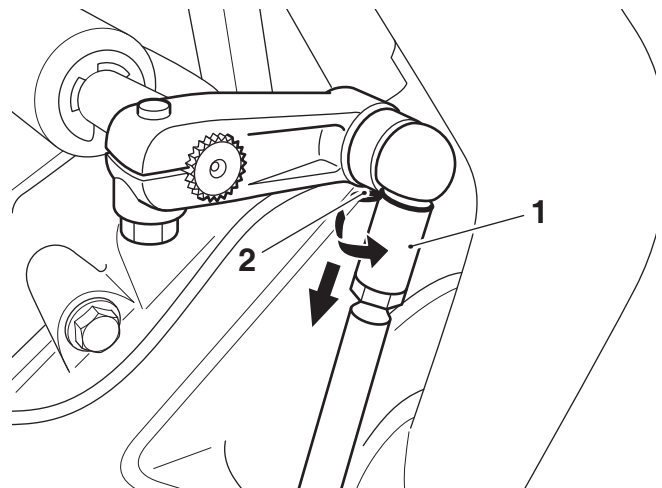
Warning

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

Note:

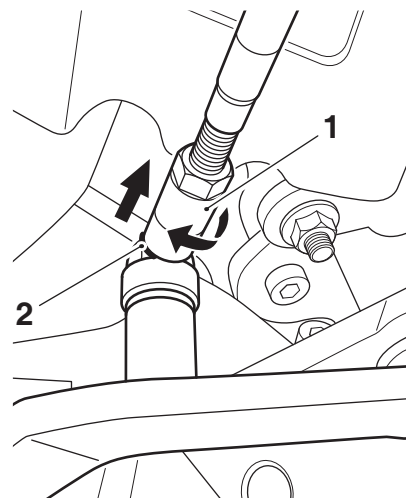
- Triumph offers a broad range of approved genuine accessories for your motorcycle. We cannot therefore cover all possible equipment variations in these instructions. For removal and installation of Triumph Genuine Accessories, always refer to the instructions supplied with the respective accessory kit.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

- Remove the seat, as described in the Service Manual.
- Disconnect the battery as described in the Service Manual.
- Remove the wire clips retaining the original gear selector rod upper and lower ball joints, as shown. Retain the wire clips for reuse.



UPPER

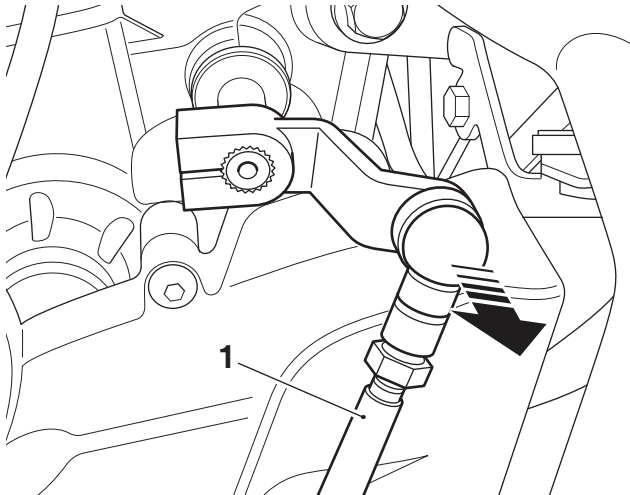
- Ball joint
- Wire clip



LOWER

- Wire clip
- Ball joint

- Remove the original gear selector rod from the motorcycle.



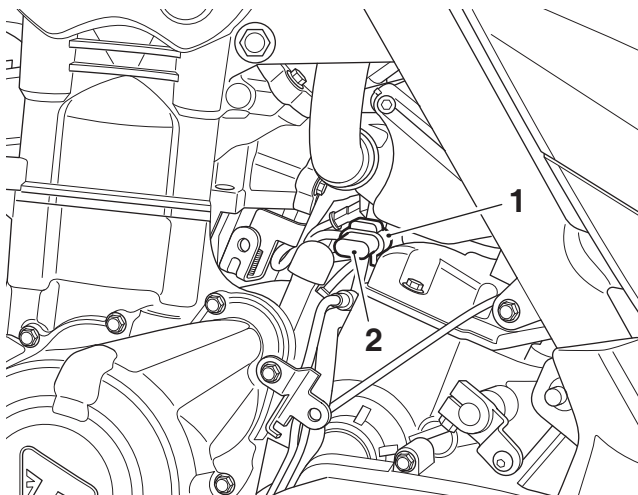
1. Gear selector rod (upper ball joint shown)

- Remove the expansion tank, as described in the Service Manual.

! Caution

Care must be taken to prevent damage when using any tools to assist the removal of a blanking plug from a main harness connector. Any damage to a main harness connector may prevent correct connection of any subharness, or may cause electrical malfunctions.

- Locate the TSA main harness connector on the left hand side of the motorcycle. Remove the blanking plug from the connector. Retain the blanking plug for reuse if the motorcycle is to be returned to its original condition.

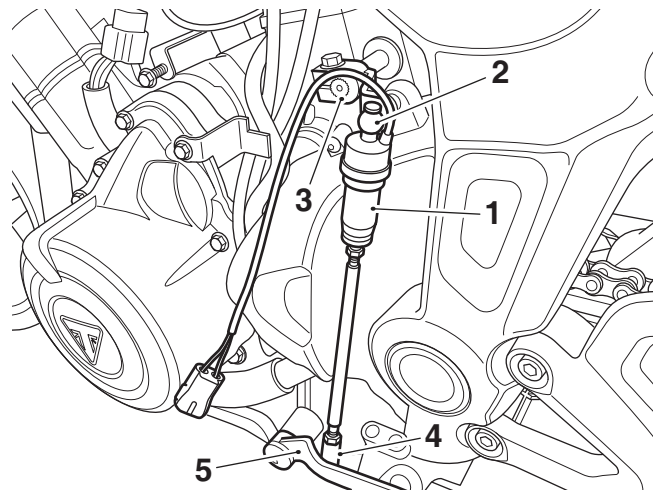


1. TSA main harness connector
2. Blanking plug

! Caution

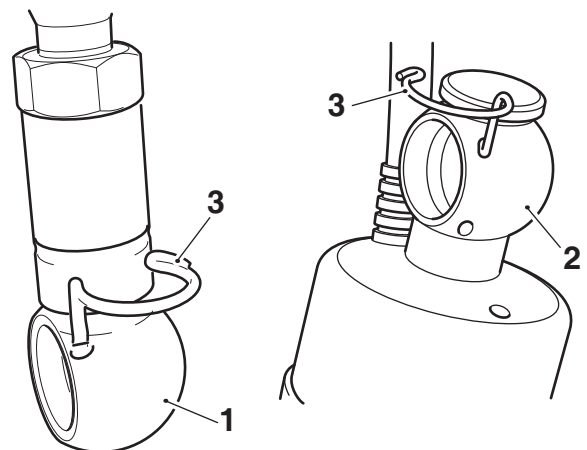
Make sure the ball joints are correctly located; failure to do so could result in the TSA assembly becoming detached from the motorcycle.

- Fit the TSA assembly upper and lower ball joints to gear change clamp and gear change pedal on the motorcycle in the orientation shown below. An audible click can be heard when the ball joints are fully assembled.



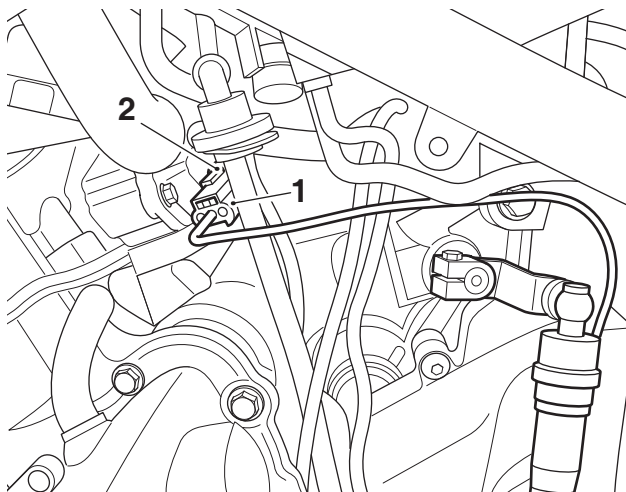
1. TSA assembly
2. Upper ball joint
3. Gear change clamp
4. Lower ball joint
5. Gear change pedal

- Refit the wire clips to retain the upper and lower ball joints, as described in the Service Manual. Make sure the wire clips locate correctly in the ball joints, before rotating the clips to lock in place.



1. Lower ball joint
2. Upper ball joint
3. Wire clips

- Connect the TSA harness connector to the main harness connector.



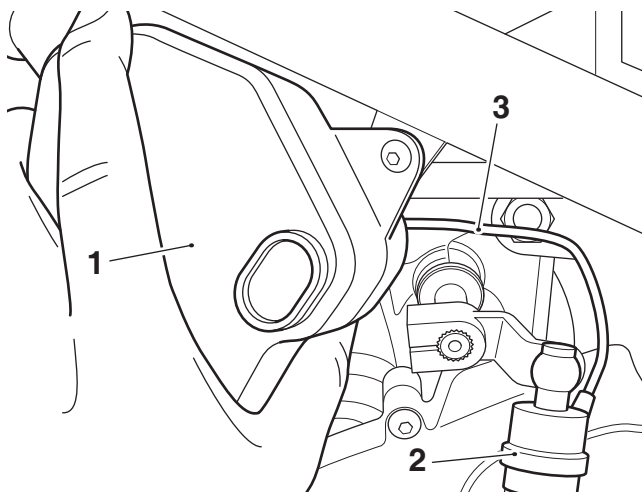
- TSA harness connector
- Main harness connector



Caution

A wiring harness which becomes trapped or kinked during installation, or general motorcycle operation, may result in wiring harness damage and electrical malfunctions.

- Make sure any excess TSA harness is tucked into the space behind the coolant expansion tank.
- Refit the coolant expansion tank, as described in the Service Manual.



- Coolant expansion tank
- TSA assembly
- TSA wiring harness

- Re-connect the battery as described in the Service Manual.

Enabling the TSA

Note:

- Triumph Shift Assist must be enabled using the Triumph diagnostic software.**
- Connect the Triumph diagnostic tool and turn the ignition ON.
 - Make sure the engine stop switch is in the RUN position.
 - Navigate to ENGINE DIAGNOSTICS - Adjust.
 - Select 'Enable/Disable Triumph Shift Assist'.
 - Click Start, then click Enable.
 - Disconnect the Triumph diagnostic tool.
 - Refit the seat, as described in the Service Manual.
 - Enable the TSA via the instruments by navigating to the Motorcycle Setup menu, select TSA and select Enabled.
 - Start the engine and allow it to idle for several seconds to allow adaption of the shift force sensor.
 - Ride the motorcycle for 10 seconds in each gear to enable the gear position sensor to adapt. The adaption status can be checked using the Triumph Diagnostic Tool.

Adjusting the Gear Change Pedal Angle



Caution

When adjusting the gear pedal angle do not remove the TSA ball joints from either the transmission linkage or foot control. If the ball joints are removed from either the transmission linkage or foot control when adjusting the gear pedal angle the adjustment setting of the TSA assembly could be compromised which may result in a TSA malfunction.

Note:

- If it is necessary to adjust the gear pedal angle at any point after fitting the TSA, follow the steps below.**
 - The lock nut at the sensor is a left hand thread, the lock nut at the lower ball joint is a right hand thread.**
- Loosen both ball joint lock nuts on the TSA assembly.
 - Turn the TSA gear selector rod until the desired gear pedal angle is achieved.
 - Tighten the lock nuts to **6 Nm**.

Operational instructions:



Caution

In the event of a TSA system fault when riding, the TSA system will be disabled.

Use the clutch to change gears in the normal way otherwise damage to the engine or transmission may occur.

Contact a Triumph dealer as soon as possible to have the fault checked and rectified.



Caution

Changing gears must be completed with a quick and forceful pedal movement, making sure that the pedal moves through its full range of travel.

Always take care when changing gears. After a gear change, the pedal must be fully released before another gear change can be made.

Incorrect gear changes can cause damage to the engine and transmission.

Triumph Shift Assist (TSA) adjusts the engine torque to allow gears to engage, without closure of the throttle twist grip or operation of the clutch.

TSA is not an automatic system for changing gears. Gears must be selected and changed in the normal way using the gear pedal as described in the Changing Gears section in the Owner's Handbook.

TSA works for both up shifts and down shifts of gear. The clutch must be used for stopping and pulling away. The clutch must be used when selecting any gear from neutral, and also when selecting neutral from any other gear.

Triumph Shift Assist will not operate if:

- The clutch is applied.
- An up shift is attempted by mistake when in 6th gear.
- A down shift is attempted by mistake when in 1st gear.
- An up shift is attempted at very low engine speeds.
- A down shift is attempted at very high engine speeds.
- An up shift is attempted during overrun.
- The vehicle speed limiter is active.
- Cruise control is active.
- Traction control is operating.
- If the previous gear has not fully engaged.
- The throttle is changed during a shift.

If TSA does not operate, the clutch can be used to change gears in the normal way.

Triumph Shift Assist will need re-enabling via the instruments if:

- The battery is disconnected.
- The instruments software is updated.

To re-enable the TSA via the instruments, go to the Motorcycle Setup menu, select TSA and select Enabled.



Warning

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



Warning

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

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

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



Warning

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



Warning

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

High-speed operation in any other circumstances is dangerous and may result in loss of motorcycle control and an accident.