

# **Packing list for: TRIUMPH Sprint ST1050 non ABS – MCS 4560 kit**

## **Pack in small kit carton (MCS 002)**

<b>Qty</b>	<b>Part Number</b>	<b>Description</b>
1	MCS 4562	Vacuum actuator assembly (large poly bag)
1	MCSU 400C	Computer configured for Sprint ST1050 (medium parts bag)
1	MCS 4565	Cable Interface Unit (CIU) assembly (medium poly bag)
1 OR	MCS 4564 Hi MCS 4564 Lo	Control Switch assembly (medium poly bag) Control Switch assembly (medium poly bag)
1	Parts bag	(See below for contents)
1	MCS 4563	Wiring loom

Information, Set up and Operation Manual  
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Installation Manual for ST1050  
Trouble shooting guide

## **Parts bag contents (medium poly bag)**

1	Sum MT6187-1171	1 way tab housing (speed sensor connection)
4		M4 x 12 pan head screw (computer mounting)
4		4mm flat washer (computer mounting)
4		5mm x 19mm flat washer (computer mounting)
4		M4 Nylok nuts (computer mounting)
1		M6 x 12 bolt (actuator mounting)
1		6mm flat washer (actuator mounting)
1	MCS 4567	Vacuum hose assembly
1	MCS 100	Brake load resistor
1	MCSCC 100	Carburettor cable (oiled)
1 bottle		Throttle cable oil
15		100mm cable ties
10		150mm cable ties
10		200mm cable ties
15cm	HST3	3mm heat shrink tube
15cm	HST6	6mm heat shrink tube

# MotorCycle Cruise - Triumph Sprint ST1050

# *Motor* **C***Cycle* *Cruise*

## **Motorcycle Electronic Cruise Control Installation Manual © (Sections 6 & 7)**

**Refer to the Information Setup & Operation Manual for  
Sections 1~5 & 8~12**

**For Triumph Sprint ST1050**

**11 December 2012**

**MotorCycle Cruise Controls**

**MotorCycle Setup Pty. Ltd.  
A.B.N. 94 798 167 654  
6 Kingston Street  
Mount Waverley, Victoria, 3149  
AUSTRALIA**

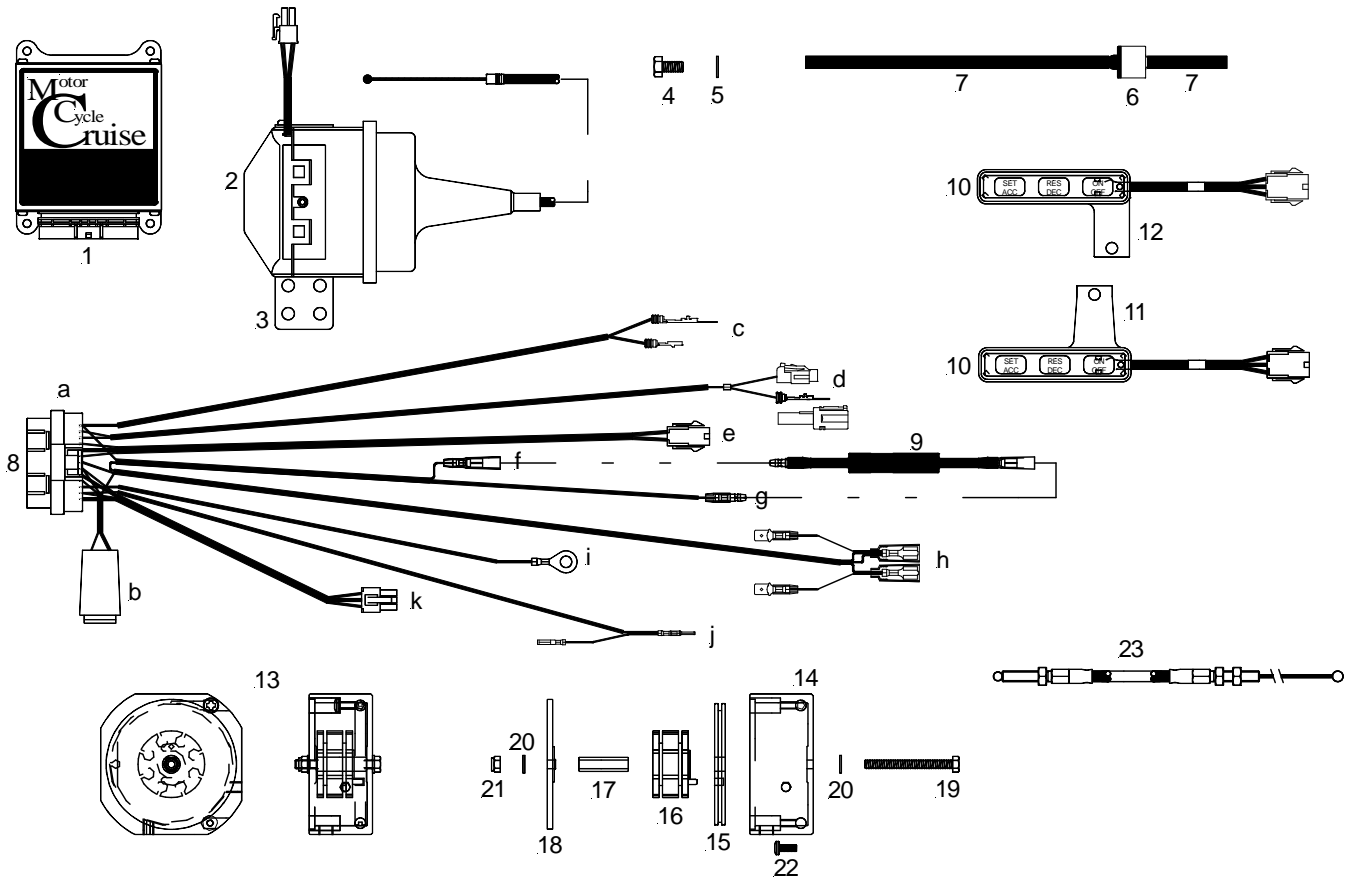
**Triumph Sprint ST1050 2005-2007****Parts list for MCS 4560 kit**

<b>Item</b>	<b>Qty</b>	<b>Part Number</b>	<b>Description</b>
1	1	MCSU 400C	Computer
	4		M4 x 12 pan head screw
	4		4mm flat washer
	4		5 x 19 large flat washers
	4		M4 Nylok nuts
		<u>MCS 4562</u>	<u>Vacuum actuator assembly</u>
2	1	MCS 574	Vacuum actuator
3	1	MCS 020B	Actuator bracket
	3		6 gauge x 3/8 pan head self tap screw
4	1		M6 x 12 bolt
5	1		6mm flat washer
		<u>MCS 4567</u>	<u>Vacuum hose assembly</u>
6	1	MCS 032	Vacuum stop valve
7			4mm Vacuum hose
8	1	MCS 4563	Wiring loom
a			Computer plug (26 pin)
b			Fuse holder (3 amp fuse)
c			Tach sensor (yellow wire)
d			Speed sensor (co-axial wire)
e			Actuator plug (4 pin)
f			Brake resistor power (grey wires)
g			Brake resistor ground (black wire)
h			Power & brake sensor (orange and grey wires)
i			Ground connector (black wire)
j			Neutral sensor (blue wire)
k			Control switch plug (6 pin)
9	1	MCS 100	Brake load resistor
		<u>MCS 4564 Lo or Hi</u>	<u>Switch assembly</u>
10	1	MCS 820	Control Switch
11	1	MCS 830A	Switch bracket (Lo), OR
12	1	MCS 830B	Switch bracket (Hi)
	4		4 gauge x 1/2" stainless steel pan head self tap screw
	1		100mm cable tie
		<u>MCS 4565</u>	<u>Cable Interface Unit (CIU) assembly</u>
14	1	MCS 4565A	CIU housing
15	1	MCS 003F	Actuator spool
16	1	MCS 4566	Dual spool
17	1	MCS 003H	Bush
18	1	MCS 003K	End Cap
19	1		M5 x 45 bolt (pivot bolt)
20	2		5mm plated flat washer
21	1		M5 Nylok nut

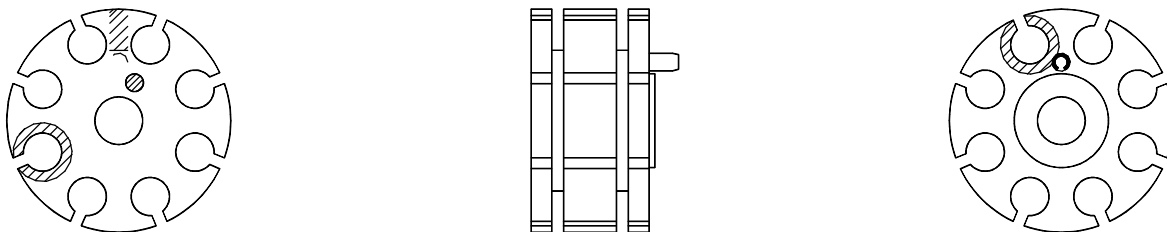
MotorCycle Cruise - Triumph Sprint ST1050

22	1		M4 x 10 pan head screw (actuator cable retainer)
23	1	MCCSC 100	Carburettor cable
	15		100mm cable ties
	10		150mm cable ties
	10		200mm cable ties
	15cm	HST3	Heat shrink tube
	15m	HST6	Heat shrink tube
	1 bottle		Throttle cable oil (Singer industrial sewing machine oil)

Information, Set up and Operation Manual  
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**Dual spool hole marking**



## **Electronic Cruise Control Installation Manual ©**

# **REFER TO THE INFORMATION, SET UP AND OPERATION MANUAL FOR INFORMATION ABOUT THE CRUISE CONTROL, SETTING UP, CALIBRATING AND USING THE CRUISE CONTROL**

The cruise control computer used has been purpose built for motorcycle applications. Testing has resulted in programming to deliver safe, reliable operation on a variety of motorcycles, from 250cc up. It is essential that you install the cruise control in accordance with the advice in the installation instructions precisely so that electrical interference does not cause the unit to behave erratically or be rendered inoperative.

We strongly recommend against fitting off-the-shelf motor car cruise controls to any motorcycle!

**WARNING: - This cruise will function properly only if your vehicle has resistor type (radio suppression) ignition wires (spark plug leads). The cruise control may not function properly if aftermarket SOLID CORE spark plug wires are installed. Please read Section 11, Safety Issues & Features before fitting & using the cruise control.**

If, after reading these instructions, you feel you are not competent to install this kit, we strongly urge you to seek the assistance of your local dealer.

**NOTE: - It is recommended that on most motorcycles the fuel tank is less than 1/4 full before attempting to fit the cruise control. The fuel tank must be lifted for most installation and can be very heavy when full of fuel.**

**NOTE: - If the bike is fitted with a flasher device or LED brake light globe on the brake light system this may cause interference with the cruise control brake detection. If the cruise control will not work try disconnecting the flasher device or replacing the LED globe with a conventional globe. Contact us for ways to enable both your brake light flasher or LED brake light and the cruise control.**

## **CONTENTS**

Chapters 1 to 5 and 8 to 11 are contained in the separate Information, Set up and Operation manual.

6. PREPARING THE BIKE FOR CRUISE CONTROL INSTALLATION
7. INSTALLATION

This manual contains several **cautions**, **warnings** and **notes**, which are prominently displayed. The convention used is:

A **warning** applies whenever injury could result from ignoring the warning;

A **caution** applies whenever damage to the bike or cruise control could result from ignoring the caution; and

A **note** applies where other aspects should be considered before any action to do with installation is undertaken.

#### **EXAMPLES:**

**WARNING:** - Always ensure the bike is properly supported on the side or centre stand and cannot accidentally fall off either stand.

**CAUTION:** - Before drilling any holes, make sure there are no components that may be damaged on the other side of the surface being drilled. Double check for any wiring harness that might be easily damaged by a drill bit.

**NOTE:** - Lay the wiring harness in place and connect the components before cable tying the harness in place.

#### **PARTS LIST**

Check that all components depicted on the last pages of this manual are included in the cruise control kit.

Please phone (03) 9808 2804 within Australia, international (61 3) 9808 2804, fax (61 3) 9808 2445 or e-mail [sales@mccruise.com](mailto:sales@mccruise.com) for advice, if any parts are missing;

### **6. PREPARING THE BIKE FOR CRUISE CONTROL INSTALLATION**

The following directions may be used to prepare the bike for cruise installation:

Undo the two hex bolts and remove the seat



## MotorCycle Cruise - Triumph Sprint ST1050

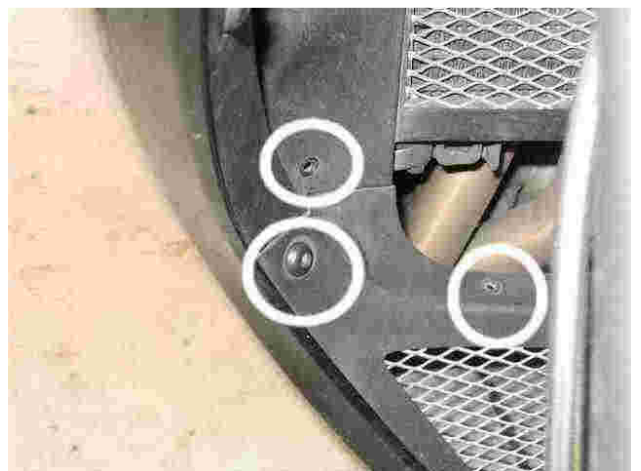
Disconnect the negative side of the battery



This panel must be removed to remove the side fairings



Remove the bolts holding this panel in place and remove the panel



Remove the circled bolts on the underside of the bike



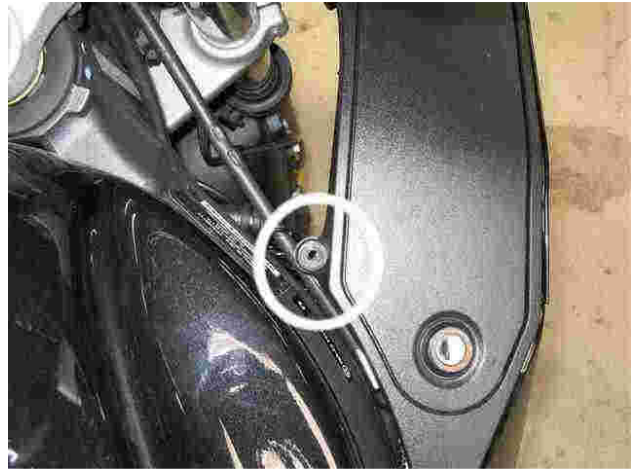


## MotorCycle Cruise - Triumph Sprint ST1050

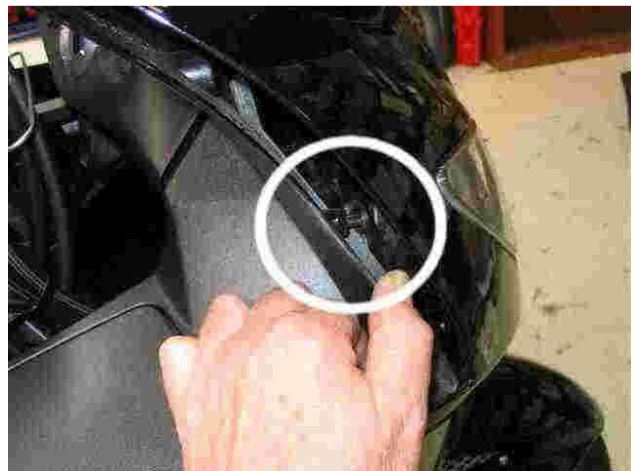
Remove the two bolts circled and pull the panel out backwards. Repeat for the RHS.



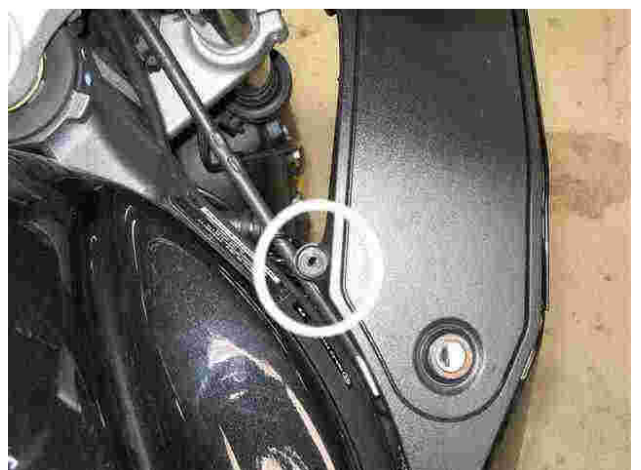
Remove this bolt on both left and RHS panels



Ease the panels backwards to release the rubber grommets

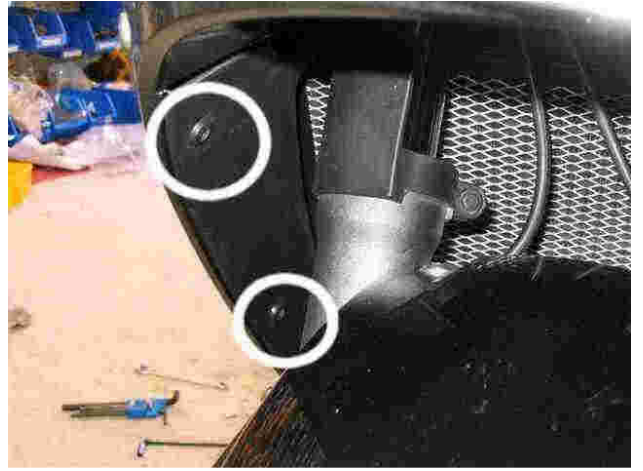


Remove this bolt on both RHS & LHS fairings



## MotorCycle Cruise - Triumph Sprint ST1050

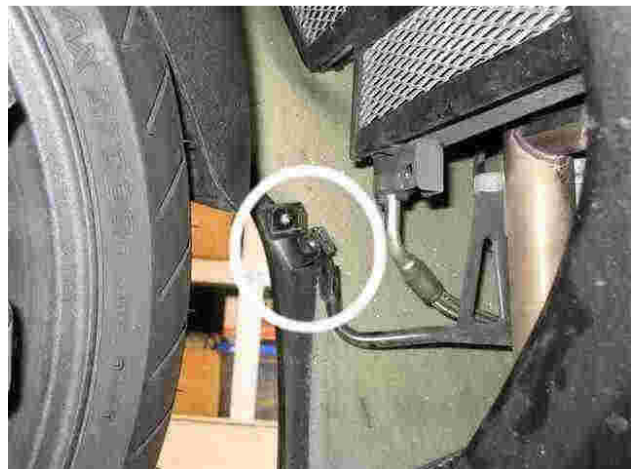
Remove the circled bolts



Remove the circled bolt on both LHS & RHS



Remove this bolt on LHS & RHS fairings



Remove the three circled bolts on LHS & RHS – undo the rearmost bolt LAST. At this point the fairings should come off the bike.

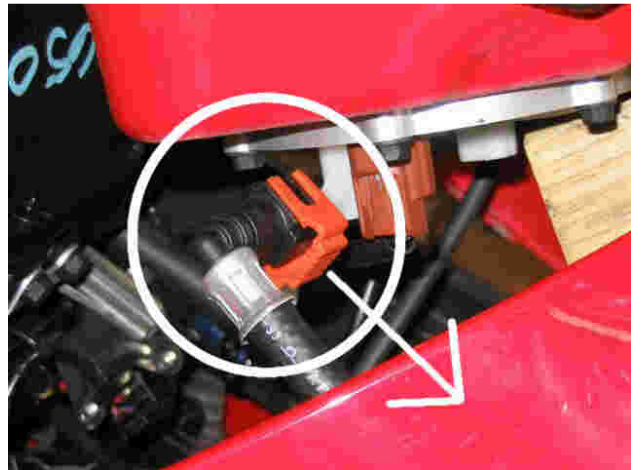


## MotorCycle Cruise - Triumph Sprint ST1050

Prop the fuel tank so you can access the fuel hose and connections



Slide the fuel hose lock sideways (about 5mm [1/8"]) so that you can squeeze the release buttons



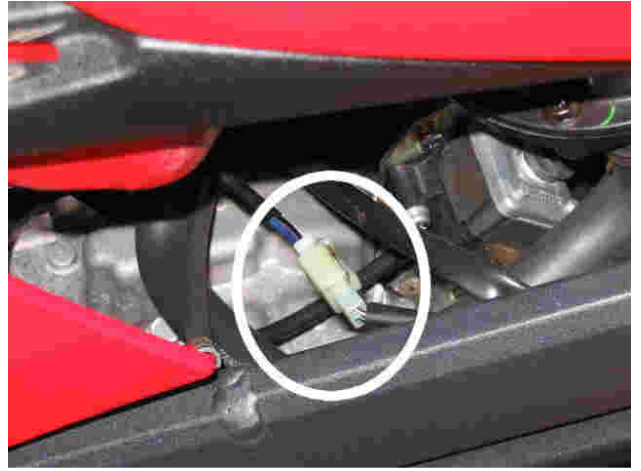
Depress the two release buttons in and pull the fuel hose off the barb



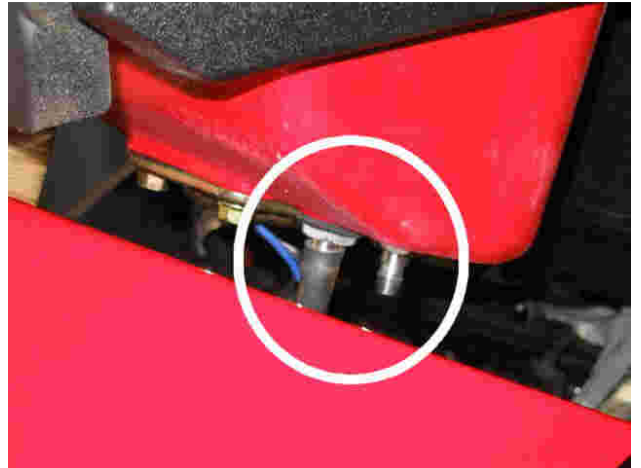
Disconnect the fuel pump power plug



Disconnect the fuel gauge sender



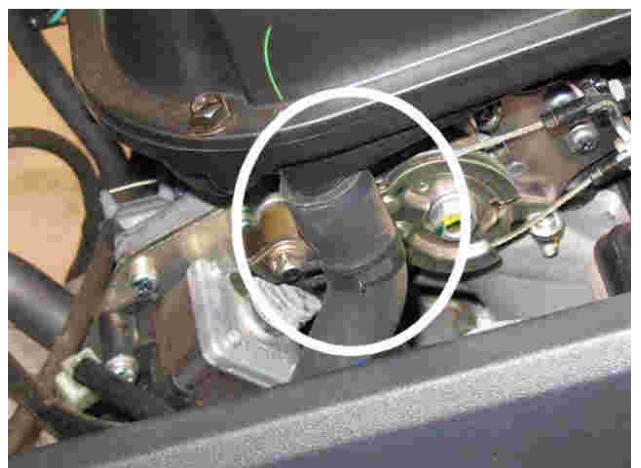
Disconnect the fuel overflow and breather hoses



Remove the bolt and the resonance chamber

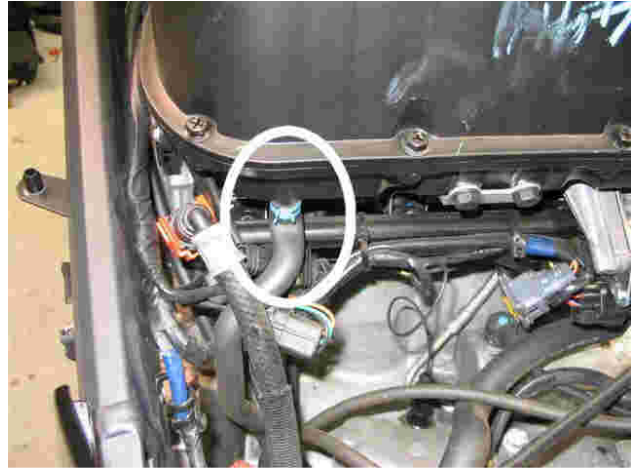


Disconnect the breather hose at right rear of the airbox .....





.....and the smaller one at left rear of the airbox



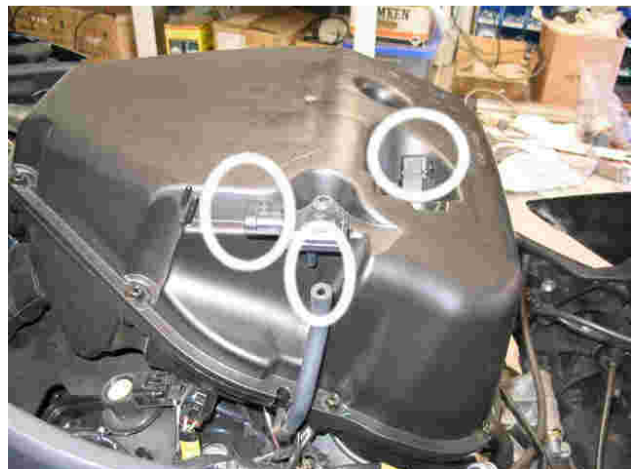
Remove the two bolts at rear of the airbox



Disconnect the two connectors from the airbox and the MAP sensor vacuum line.

Undo and remove the bolt at the front of the air filter housing if it has one.

Remove the airbox – pull up at the back and lift it off the throttle bodies.



The under tank area with the air box removed.



## 7. INSTALLATION

### Installing the actuator

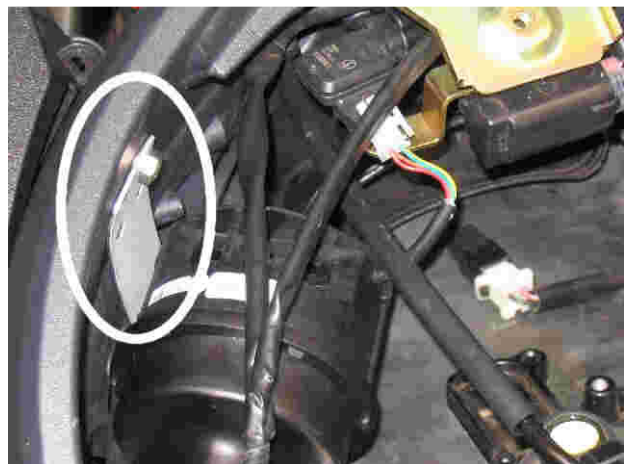
Identify the thread in the frame where the actuator will mount – it has a bolt in it in the photo



Bolt the actuator to the frame as shown



Mount the actuator as shown using the bolt supplied.



**Preparing to Install the Cable Interface Unit**

Locate the inline cable adjuster on the opening throttle cable at the head stem and back it off all the way to give maximum freeplay

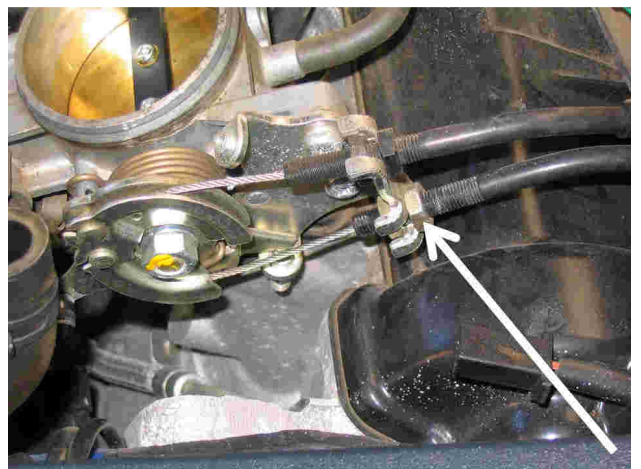


Disconnect the opening throttle cable from the throttle spindle – the lower cable

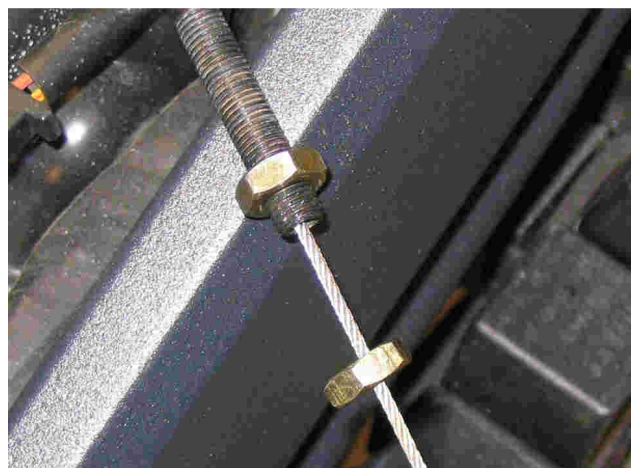


The pull cable is the lower cable of the pair on the throttle bodies.

Loosen the lock nuts on the cable and disconnect the cable from the throttle bodies.



Screw both the lock nuts off the end of the adjuster and back on again to ensure the threads are in good condition. Use a drop of oil if necessary to ease the threads.



Screw the first nut all the way up the threads and tighten gently against the unthreaded part of the adjuster.

Screw the second nut up against the first but do not tighten it.



**Lubricating the throttle cable and throttle twist grip.**

**NOTE: - This is essential maintenance to ensure smooth operation and performance of the cruise control and throttle grip. While the twist grip is disassembled, take the opportunity to lubricate the twist grip and cables.**

Disassemble the twist grip cable housing and disconnect the cables from the twist grip.

Remove the twist grip from the handlebar and clean the inside of the twist grip and the handlebar.

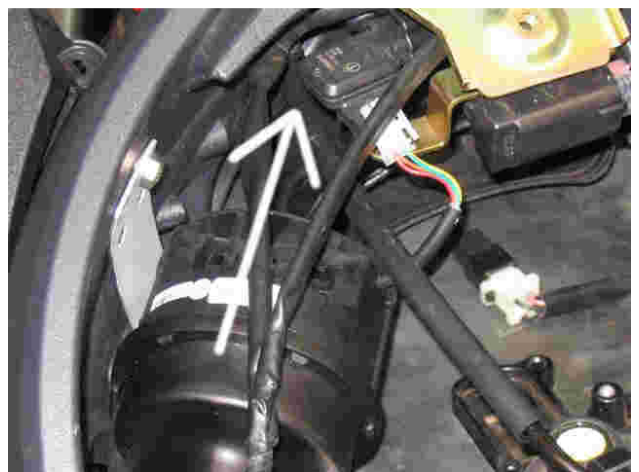
Apply a THIN film of engine oil to lubricate the throttle grip barrel where it contacts the handle bar.

Run several drops of the supplied light oil down each throttle cable. Sewing machine oil or 'household handy oil' is ideal – **DO NOT USE ENGINE OIL. It is too heavy!** If suitable oil is not available, lubricating the cable with a dewatering fluid such as CRC 5-56 or WD-40 is NOT an acceptable alternative. We have customers who have tried dewatering fluid, and it does NOT work well.

Re-assemble the twist grip/cable/switch block assembly.

**NOTE: - Failure to lubricate the cables and twist grip WILL result in an unacceptably heavy throttle action and it WILL severely impact on the performance of the cruise control. This maintenance MUST be done while fitting the cruise control**

Withdraw the original throttle opening cable from the head stem and re-route it on the LHS of the head stem as shown by the arrow



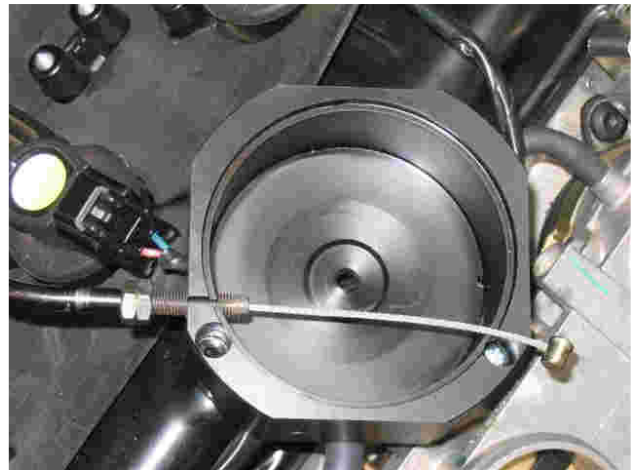


Route the cable across the top of the motor to the right as shown.

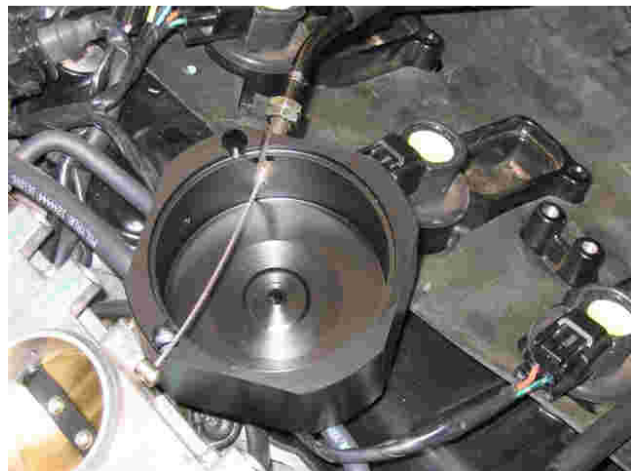


### **Installing the Cable Interface Unit (CIU)**

Screw the cable interface unit onto the bike's original throttle cable in the slotted hole to the depth shown in the photo – be careful not to cross thread it.



Thread the throttle cable into the CIU so that it penetrates about 5mm inside the CIU



Route the actuator cable as shown by the dashed line

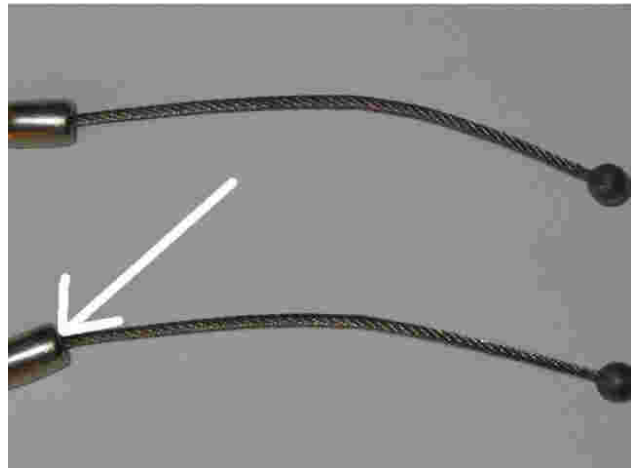


## MotorCycle Cruise - Triumph Sprint ST1050

**CAUTION:** - Take great care to check the actuator cable at this point. Make sure that the cable is totally free to move by pushing and pulling on the wire rope (the inner cable) to check that it moves freely in the cable casing (the outer).

The upper cable is straight and will work well. The lower cable has a kink and cause problems.

Check very carefully for any kinks in the cable, particularly at the point it enters the cable casing (arrowed). A kink here will make almost impossible for the cruise control to perform properly. Any kinks in the cable can easily be removed by gently reversing the bend by hand. Any 'catches' in the cable movement will effect cruise control performance.



Insert the actuator cable into the CIU – make sure it seats home



Carefully lock the screw to hold the outer cable in place, but do not pinch the inner cable.

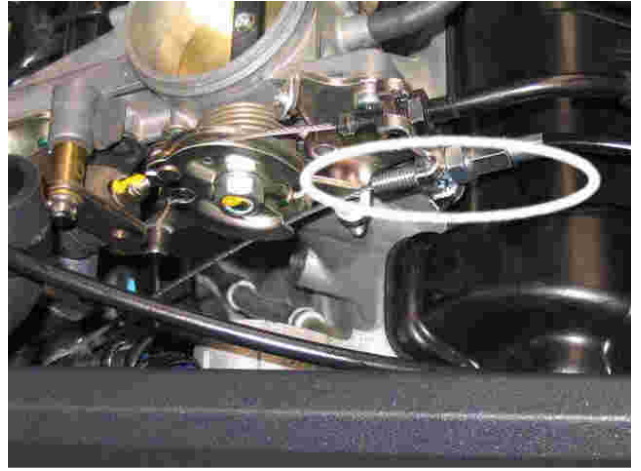
Pull the ball nipple in and out of the actuator cable to ensure it moves freely and does not bind.



Insert the ball nipple on the actuator cable in the spool and insert it into the CIU



Attach the new carburettor cable to the mounting bracket.  
Position the adjuster about half way along the thread



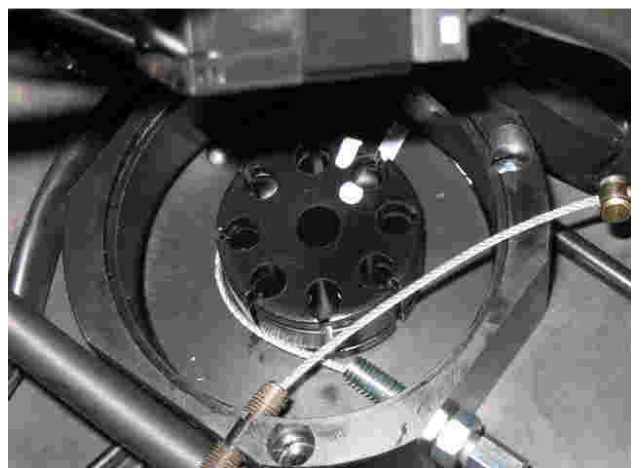
Screw the carburettor cable into the cable interface unit



Note the marked hole the ball nipple on the carburettor cable  
will go in on the underside of the dual spool. It has a dot  
corresponding to it on the top face of the dual spool.



Insert the ball nipple in the hole and install the dual spool in  
the CIU. The lines on the two spools should line up.



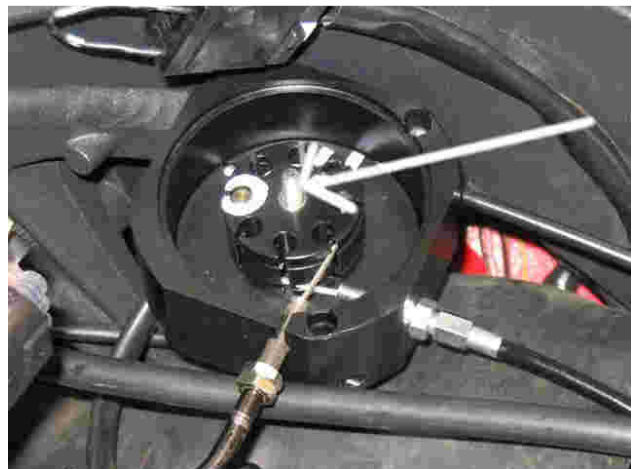
Insert the original throttle cable spool into the marked hole on top of the dual spool



Insert the bush through the centre of the spools



Install the through bolt from below



Install the CIU cap, install the washer and nyloc nut and tighten GENTLY



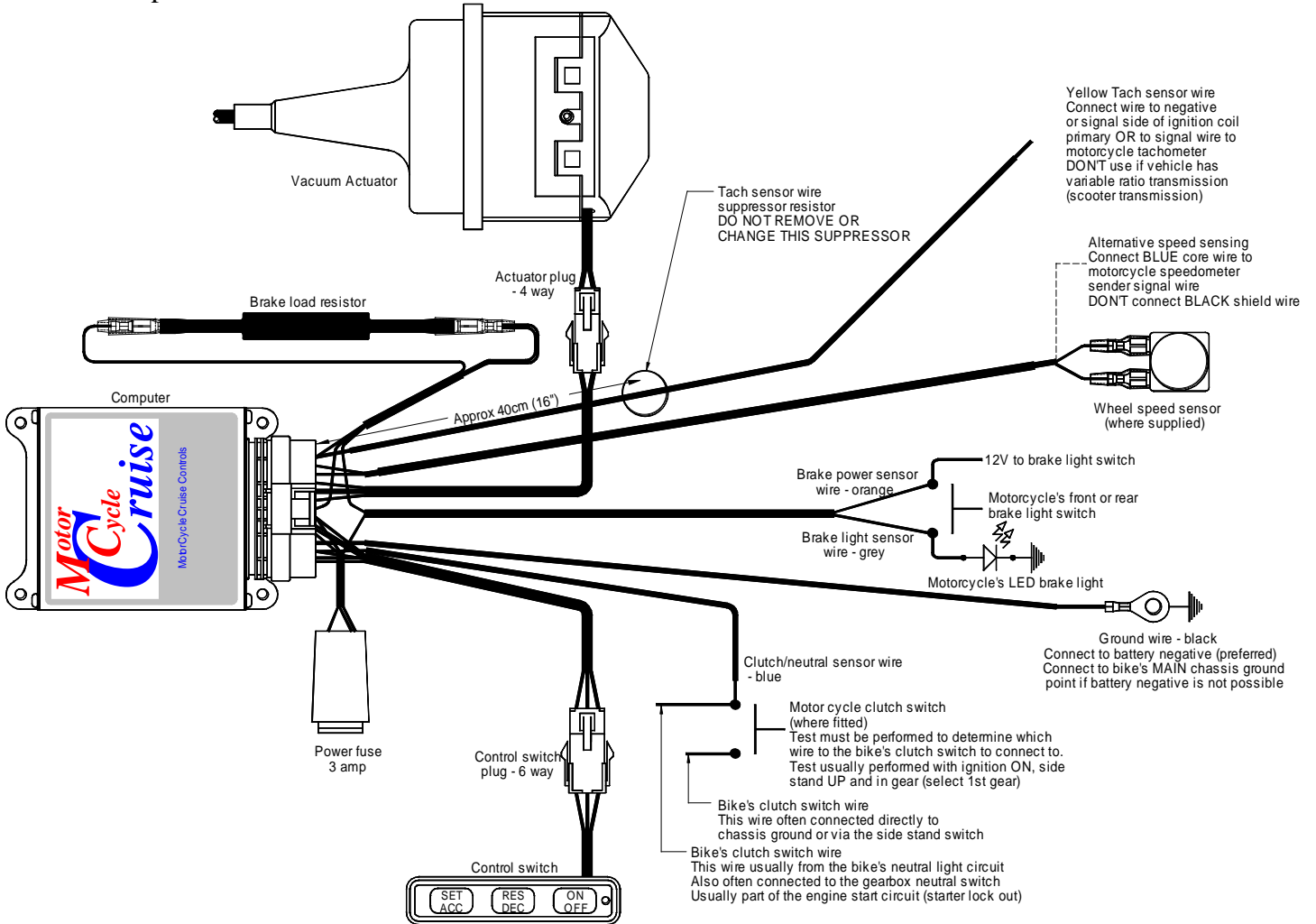
Check the position of the CIU and that the cables have smooth curves and no kinks



**Installing the wiring harness.**

- Locate the wiring harness in the kit.

The following diagram shows the basic connection required for the cruise control. This installation does not use the speed sensor shown on the diagram. The cruise control is connected to the bike's speedometer sender to detect road speed.



One connection on the cruise control requires a 'spliced' connection to the bike's wiring.

Engine speed (tach) sensing for the cruise control is sourced from a splice in one of the ignition coil wires.

A short 'pigtail' wire with a connector on the end is provided in the kit to facilitate this connection.

The computer plug on the cruise wiring harness will sit behind the radiator initially on the RHS of the bike.

The harness branches feed from here.



Clutch switch connection.

The clutch sensor wire will be connected to the bike's wiring are the main connector block from the bike's left handlebar switch assembly.

The connector block is for the handlebar switch assembly located behind the front left of the fairing.



Follow the wires down from the left handlebar switch back until your find the black multi-way plug.

The view of the connector from above left.



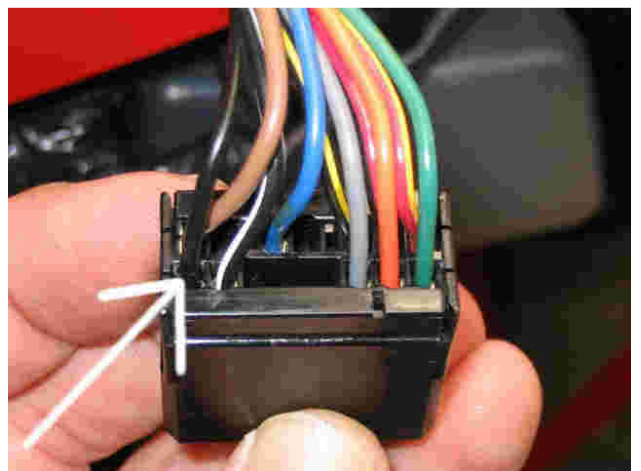
Disconnect the plug



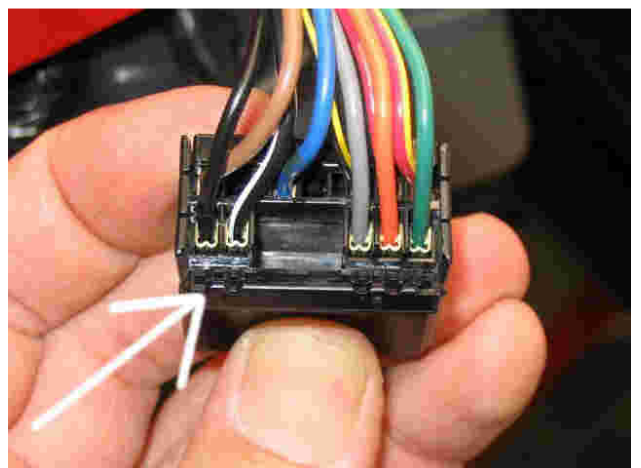
Draw the connector out of the fairing so you can work on it



The clutch switch wire we must connect to is the black wire arrowed in the photo. To enable a non-destructive connection to be made, we need to back this terminal out of the plug housing.

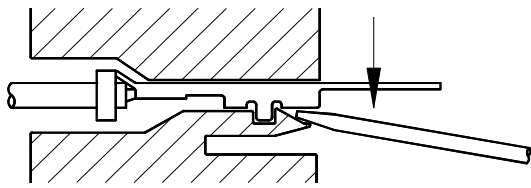


Open the terminal secondary retainer on the back of the housing. Gently ease the clips outwards so you can lift the retainer.

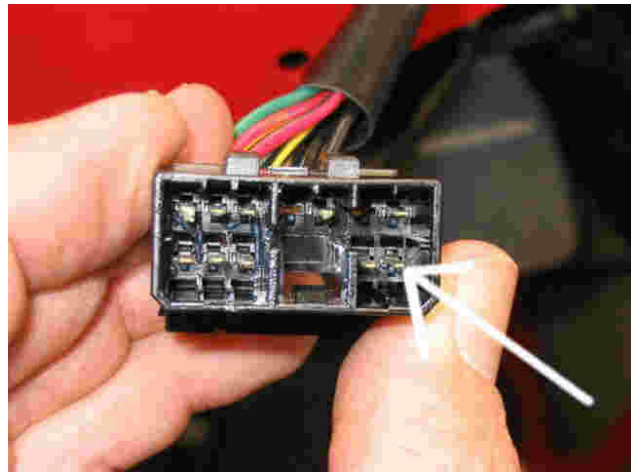


## MotorCycle Cruise - Triumph Sprint ST1050

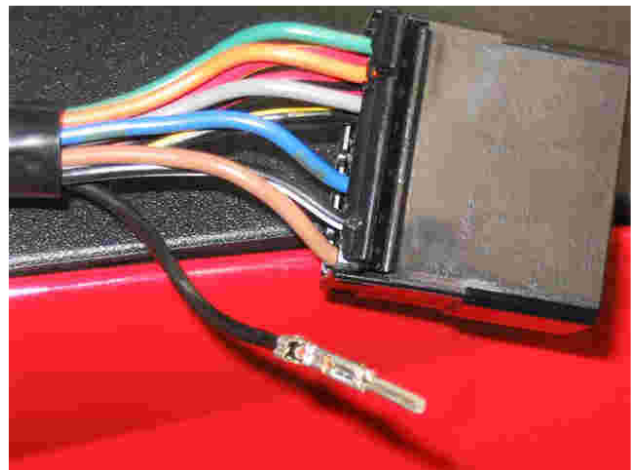
Use a small flat blade or jeweller's screwdriver to lift the locking latch and gently pull the wire and terminal out of the housing.



**NOTE: - These terminals can be quite tight at times. Before lifting the locking latch, gently push and pull the wire. You should be able to feel the terminal move slightly in the housing. Push the wire in, then insert the screwdriver and lift the latch, then pull the terminal out.**



The black wire and terminal removed from the housing.



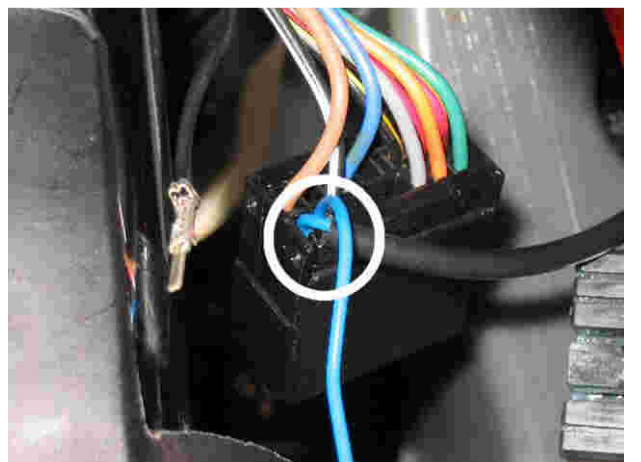
Identify the clutch sensor wire on the cruise control wiring harness. This is a single blue wire with bare male and female terminals.

Route this branch of the wiring harness around the front of the head stem from the area just behind the right side glove box to the left side of the bike so that it can attach to the clutch wire you just removed from the terminal block.

Route it to the bike's left handlebar connector. Take care with the routing to ensure that the routing will still be good after you have re-connected the bike's left handlebar switch block plug.

Insert the male terminal on the cruise control blue clutch sensor wire the empty hole in the bike's switch connector where the black clutch switch wire male terminal came from.

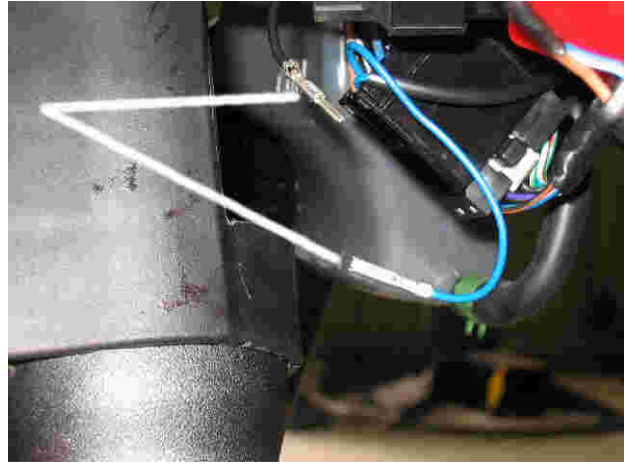
Close the secondary terminal retainer.



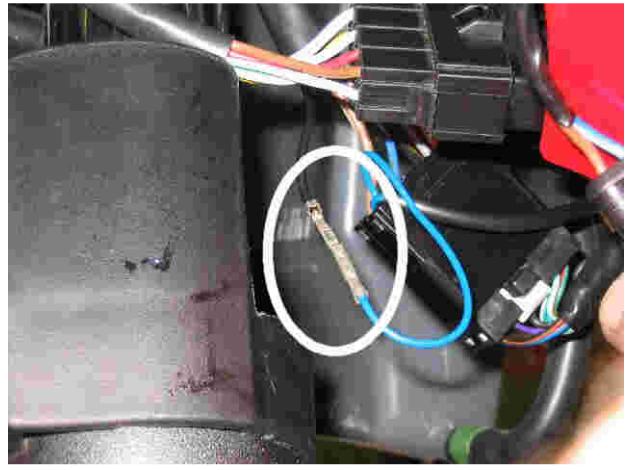


## MotorCycle Cruise - Triumph Sprint ST1050

Place the heat shrink supplied on the blue or black wire and then plug the two terminals together – black connecting to blue wire as shown.



Slide the male and female connectors together

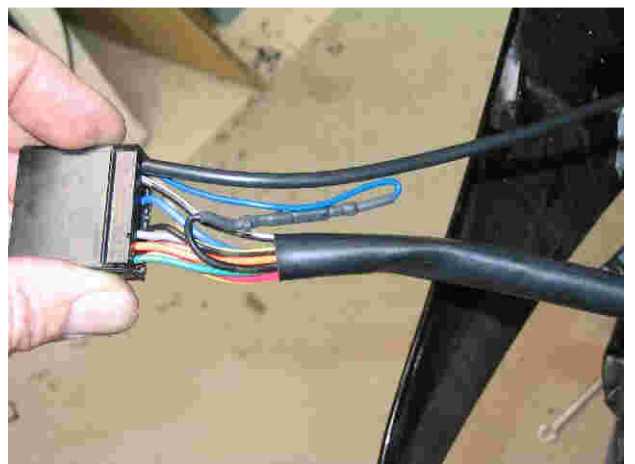


Move the heat shrink along the wires to cover the terminals and heat it gently to insulate and hold the terminals together.



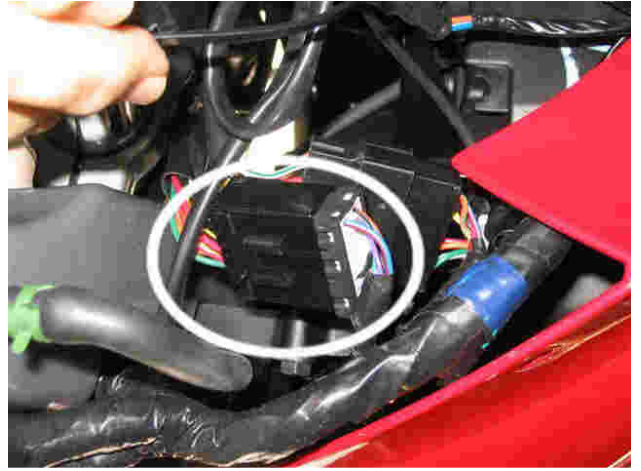
This is how the clutch switch connection should look when finished.

Tuck the terminals back into the plastic sleeve covering the wires.



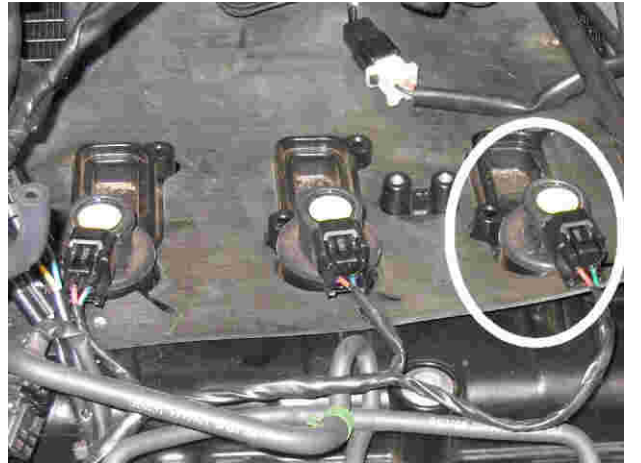
Reconnect the bike's left handlebar switch plug.

Carefully check the routing of the cruise control clutch sensor wire.



Tach sensor connection.

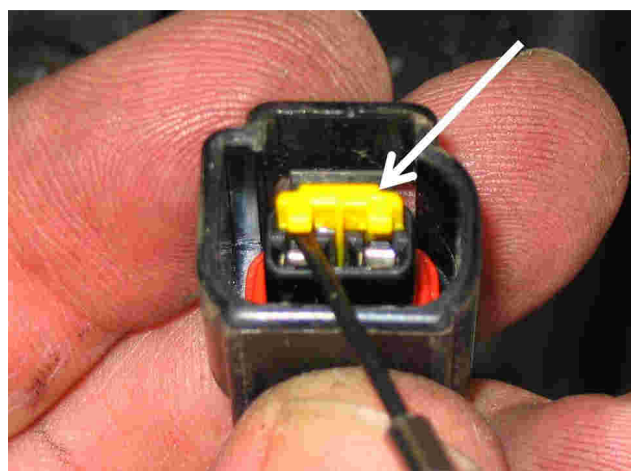
Disconnect the plug on the right side spark plug cap/ignition coil. Depress the latch to release the plug.



The spark plug connector has two wires. The cruise control tach sensor must be connected to the green/black wire.



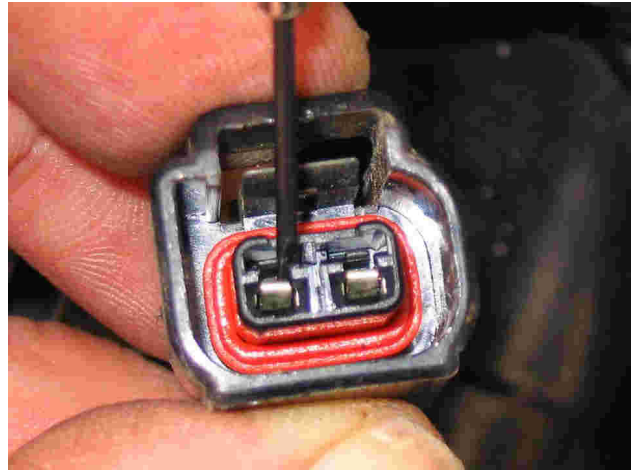
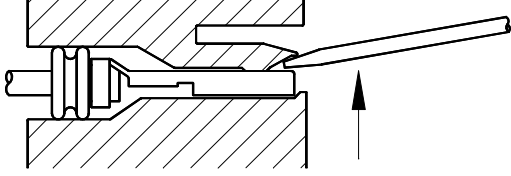
Use a small screwdriver to gently ease out the retainer.



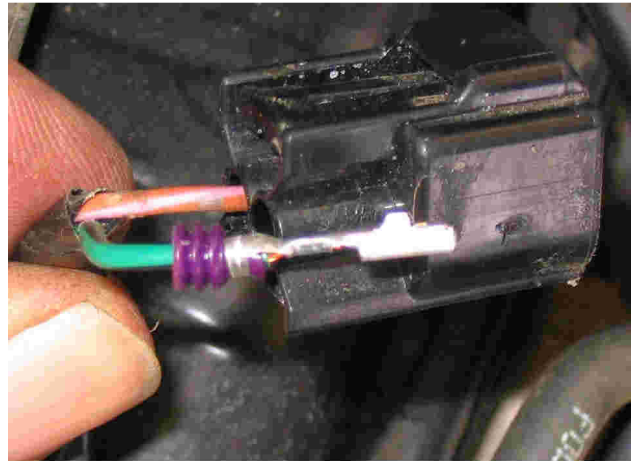
## MotorCycle Cruise - Triumph Sprint ST1050

Use a small jeweller's screwdriver or similar suitable instrument to push the terminal lock up on the green wire. GENTLY pull on the green wire to pull the terminal out of the back of the plug housing.

**NOTE: If the wire does not come out fairly easily, the lock has not been released. There will be some drag from the wire seal, but not much.**



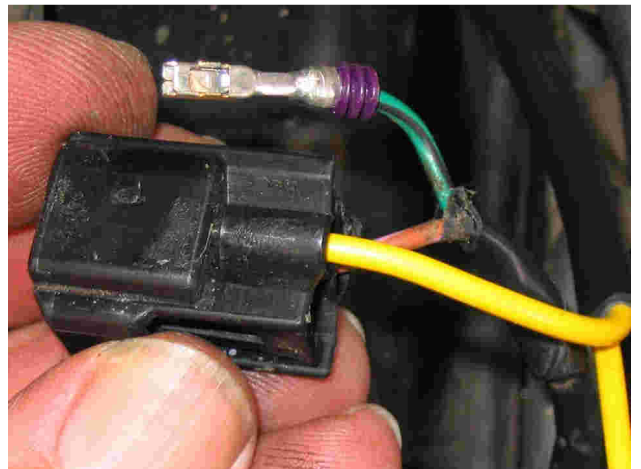
The green wire and terminal out of the housing.



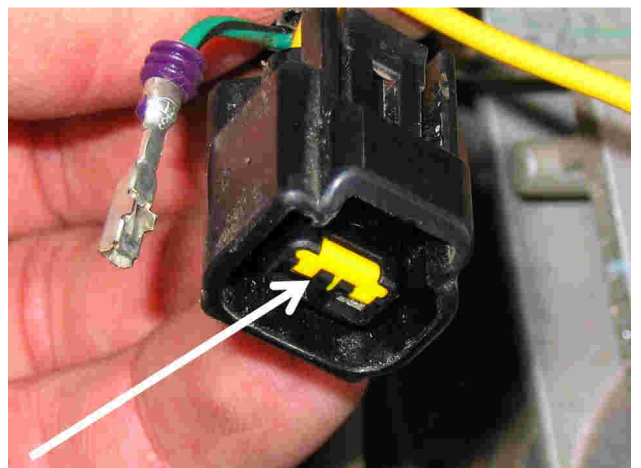
Identify the yellow tach sensor wire on the cruise control harness.

Route this wire to the ignition coil plug. Take care with the routing. Consider the routing of the wire when the ignition coil plug is reconnected.

Insert the female terminal on the cruise control yellow wire into the empty hole in the housing.



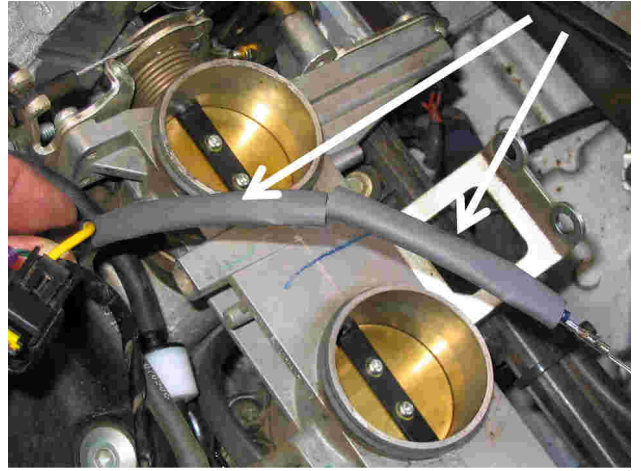
Replace the yellow terminal retainer in the housing.



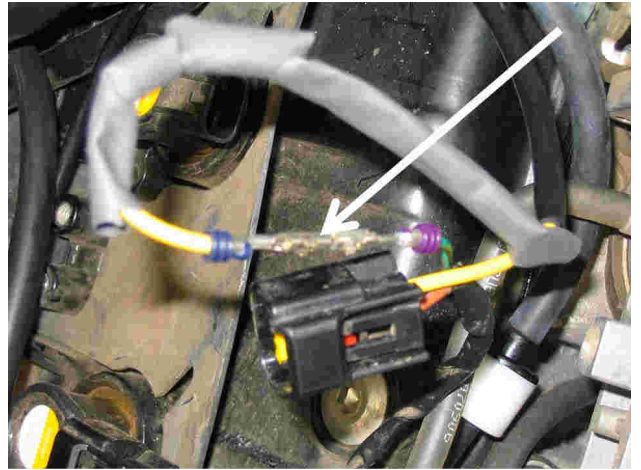


## MotorCycle Cruise - Triumph Sprint ST1050

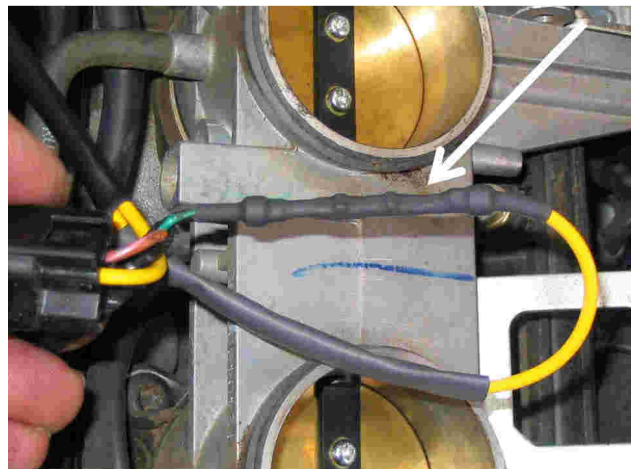
Slide two lengths of heat shrink tube (supplied in the parts bag) over the wire on the male terminal.



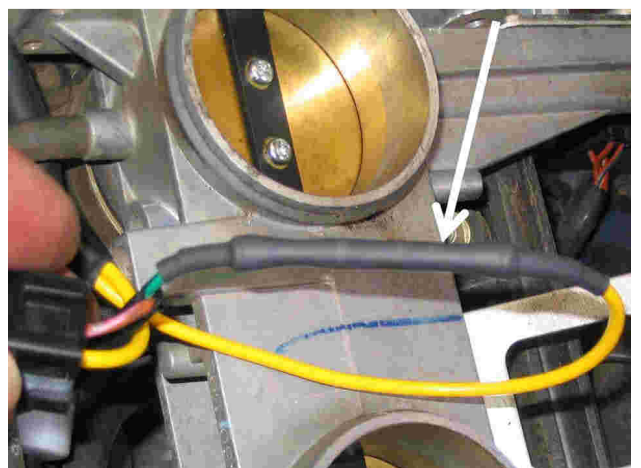
Connect the male terminal on the cruise control yellow wire to the female terminal on the bike's green wire.



Slide one length of the heat shrink over the terminals and use a heat gun to shrink the heat shrink tube.

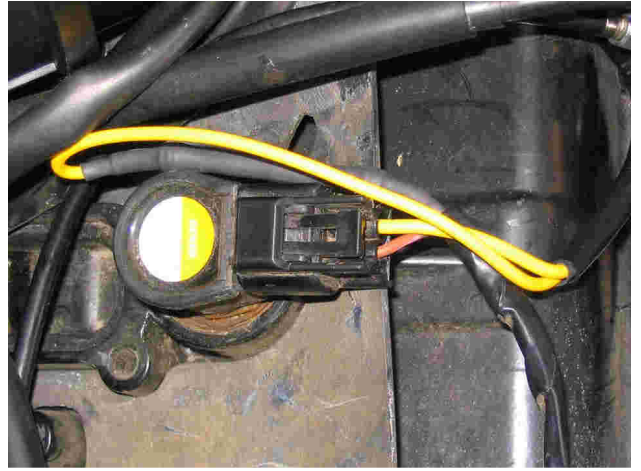


Slide the second length of the heat shrink over the terminals and use a heat gun to shrink the heat shrink tube.



Connect the plug to the ignition coil.

Position the terminals covered with heat shrink tube beside the ignition coil plug.



Position the terminals beside the ignition coil plug and cable tie in place (arrowed).



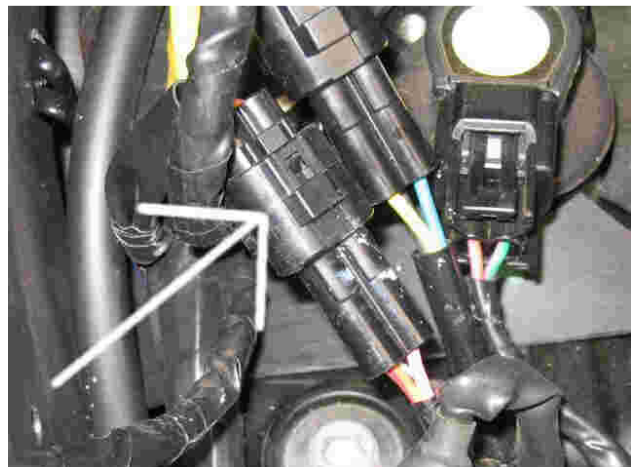
### Speed sensor connection.

Locate the bike's speedometer sender plug.

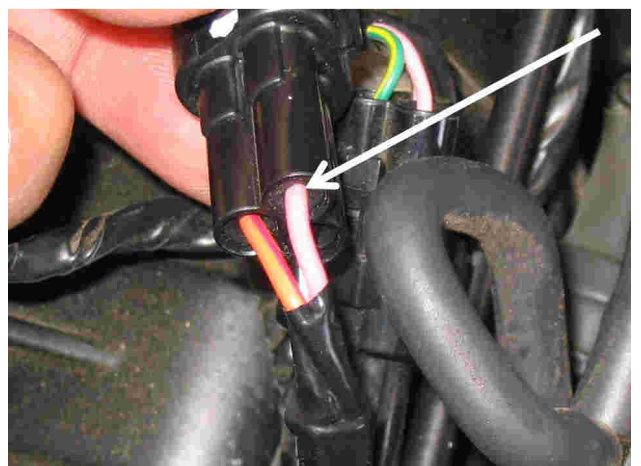
This is a black three way plug with one pink wire, one black/white wire and an orange wire.

This plug is located near the left side ignition coil/spark plug.

Disconnect this plug.



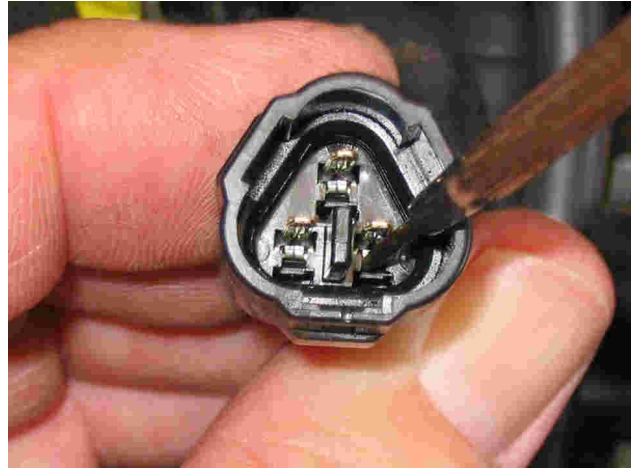
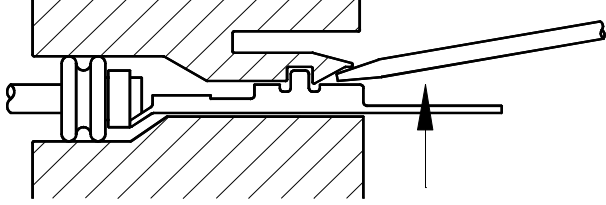
The signal wire is the pink wire. This will have to be backed out of the terminal housing.



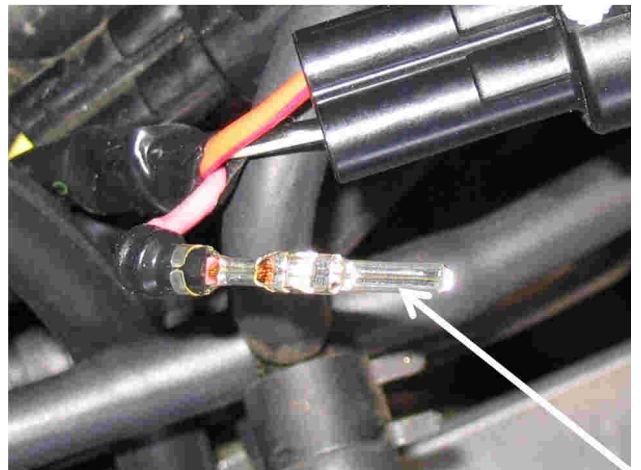
## MotorCycle Cruise - Triumph Sprint ST1050

Use a small flat blade or jeweller's screwdriver to lift the locking latch and gently pull the pink wire and terminal out of the housing.

**NOTE: If the wire does not come out fairly easily, the lock has not been released. There will be some drag from the wire seal, but not much.**



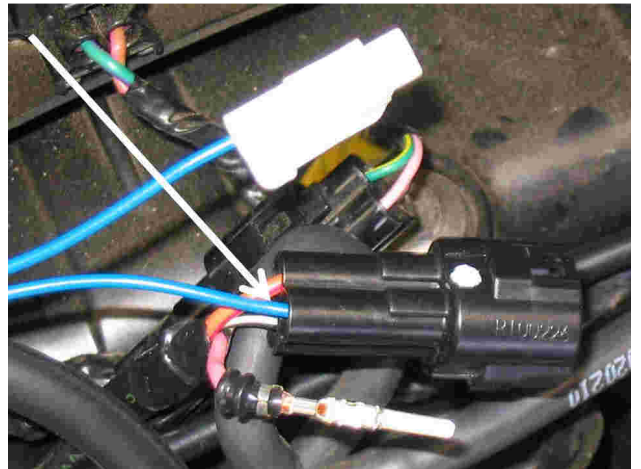
The terminal out of the housing.



Identify the speed sensor wire on the cruise control harness. This has two blue wires, one fitted with a terminal and seal, the other with a one way housing fitted.

Route this wire to the speed sensor plug. Take care with the routing. Consider the routing of the wire when the speed sensor plug is reconnected.

Push the cruise control's male terminal into the empty hole in the bike's speedometer sender plug



Reconnect the bike's speedometer sender plugs.



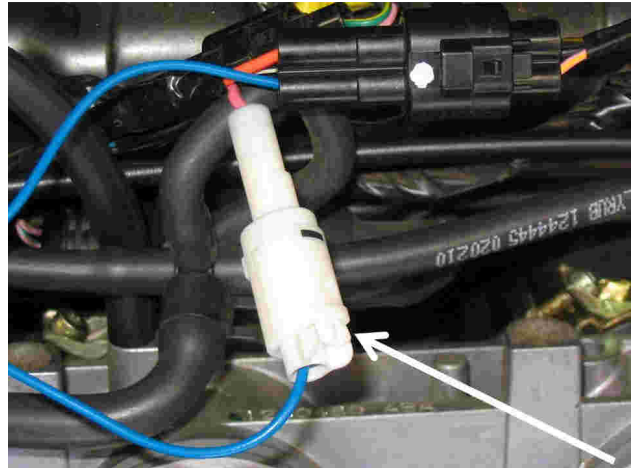


Fit the one way terminal housing from the parts bag to the bike's male terminal on the pink wire.



Connect the two one-way housings. This arrangement will take the speed signal to the cruise control and bridge the connection to the bike's speedometer.

Tuck the connectors out of the way. Fit a cable tie if desired.



### **Installing the control switch**

The switch installed above the bar



The switch installed below the bar

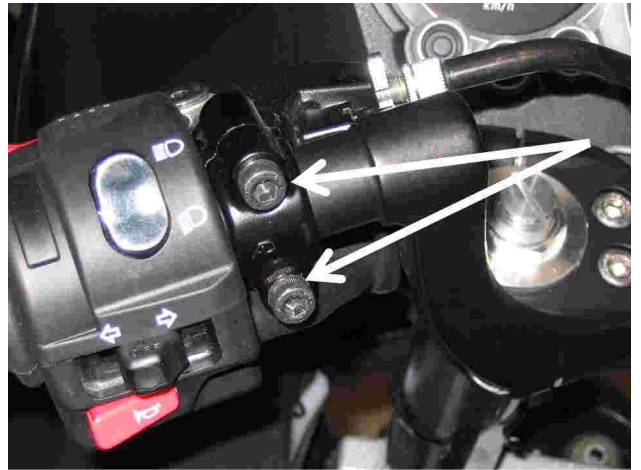


## MotorCycle Cruise - Triumph Sprint ST1050

Undo the two bolts mounting the clutch master cylinder to the handlebar.

Note the direction of the arrow on the clutch master cylinder clamp.

Remove the clamp and rest the master cylinder on a rag so it doesn't scratch the bike



**If you purchased an 'above handlebar' cruise switch, you need to file off about 1.5 to 2mm of metal from the INSIDE face of the top part of the clamp.**

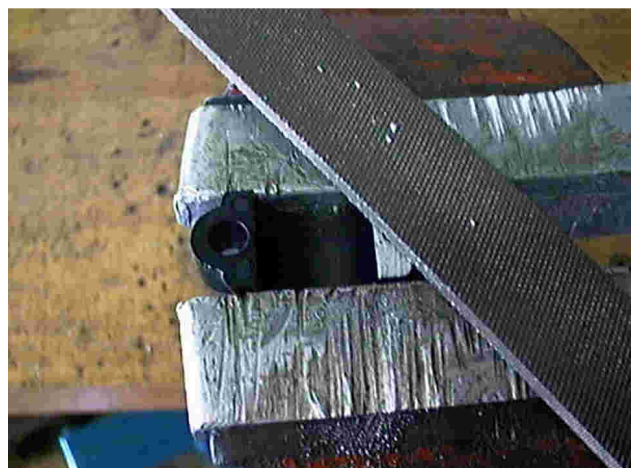


**If you purchased a 'below handlebar' cruise switch, you need to file off about 1.0 to 1.5 of metal from the INSIDE face of the lower part of the clamp.**



The recommended procedure for filing the clamp faces is to put the clamp in a vice with soft jaws such that only the amount of metal you wish to remove protrudes above the jaws. Make sure the face is filed smooth and parallel to the original face.

Do not file off more metal than is necessary to make the clamp tightens up on the bar with the insertion of the cruise control switch bracket between the faces. It may take several test fittings to get this right.



Install the switch and tighten the clamp bolt passing through the switch first. Then pinch-up the other bolt until the clutch lever and master cylinder are firmly mounted. Do not over-tighten however.



## MotorCycle Cruise - Triumph Sprint ST1050

The switch wire wiring harness runs forward from the switch with the other bike wires on the LHS into the fairing, then around inside the front of the fairing below the headlight and on the outside of the glove box

Route the switch wire along the left handlebar with the other wires, then to the left hand side with the clutch switch wire.

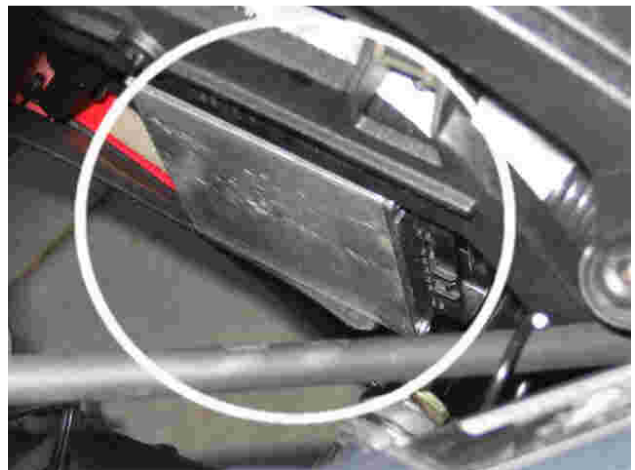
Next route the wire around the front inside of the fairing under the headlight until it runs inside the RHS glove box above the computer and back to finish above the radiator.

Attach it to the 6-way plug on the cruise control wiring harness.



### Installing the computer

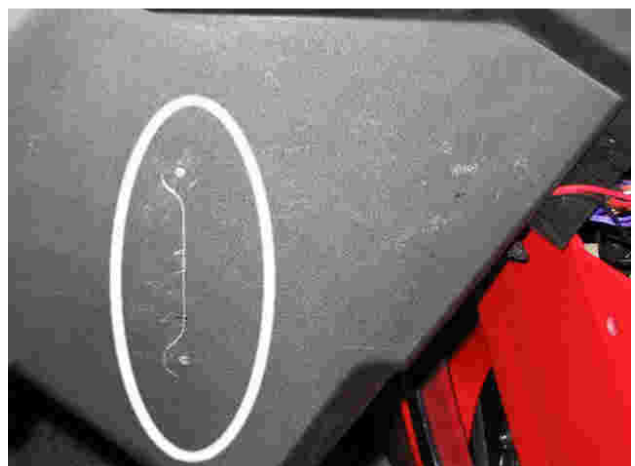
The computer bolts onto the inside of the 'glove box' and will look like this when finished.



Position the computer inside the glove box and mark at least two holes in the mount and outline at least part of the computer with a pencil.



Remove the glove box, reposition the computer using the marked holes and mark the third hole. Drill three 4mm holes



## MotorCycle Cruise - Triumph Sprint ST1050

Install the computer using the screws, washers and nuts supplied with the big washers inside the glove box



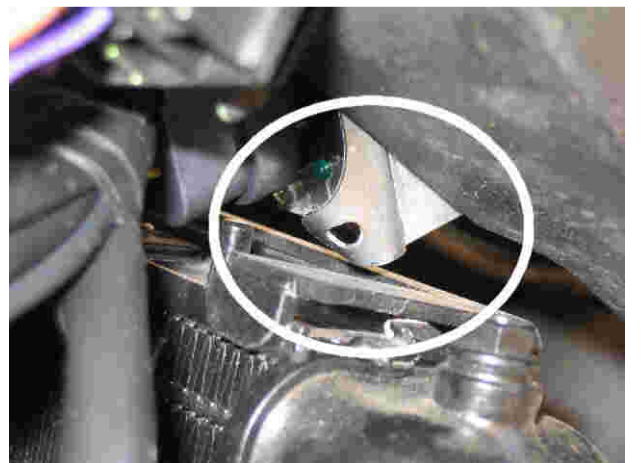
The computer in position



Bend the foot of the computer over to ensure it does not touch the radiator



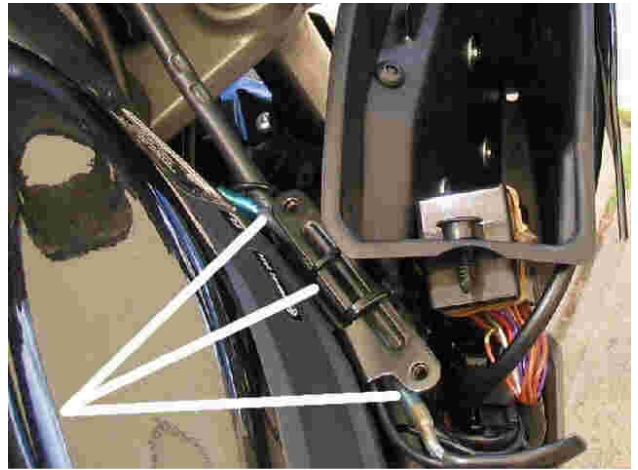
Bend the foot of the computer over to ensure it does not touch the radiator



**Installing the resistor to make the cruise work with LED brake lights.**

Cable tie the body of the resistor supplied under this frame mount bracket. Do not over-tighten as it is ceramic and could break. It needs to rest flat against the metal to act as a heat sink.

Plug the resistor into the cruise wiring harness. Make sure the wires will not interfere with the fairing mount bolts

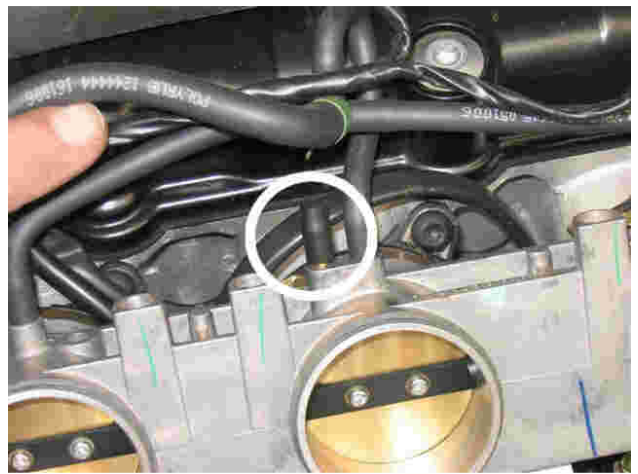


**Installing the vacuum hose**

Locate the unused vacuum port on the centre throttle body.



Remove the rubber cap



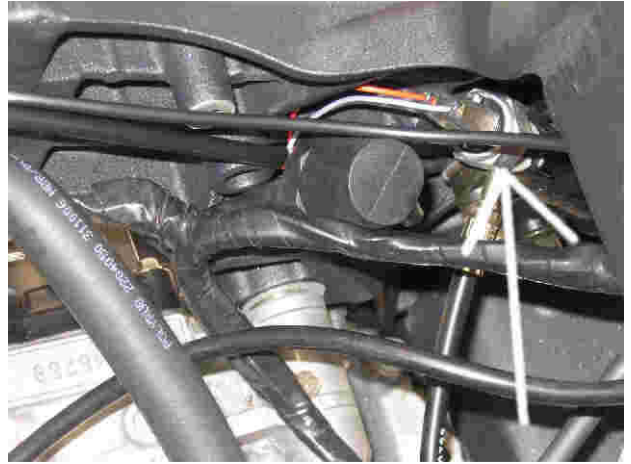
Locate the vacuum hose assembly in the kit and connect the short end to the throttle body vacuum port. Route the hose and connect the long end to the cruise control actuator.





**Connecting the cruise control power/brake harness.**

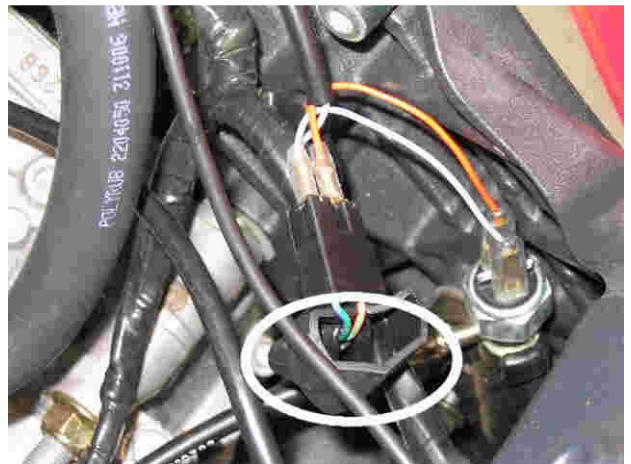
Feed the arm of the wiring harness having grey and orange wires with 6.3mm spade and receptacles from the computer connector inside the RHS frame rail then backwards to the existing brake connector to the rear brake switch located inside the frame on the RHS in the cavity behind the throttle bodies.



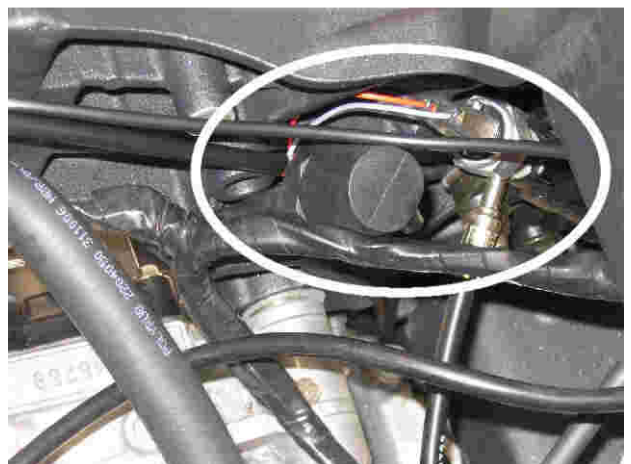
Disconnect the plug on the rear brake switch. Plug in the terminals on the brake patch. The orange cruise wire MUST connect to the orange/green wire on the bike's wiring harness



Cover the connection with the rubber boot and tidy the wires as best you can



The cruise power/brake connection completed.



**Re-assembling the bike**

## MotorCycle Cruise - Triumph Sprint ST1050

Use the cruise control instructions in the reverse order to assist you in replacing all components and fairing panels, etc on the bike.

Ensure all electrical connections, fuel hoses and breather hoses are reconnected to the fuel tank in particular.

Replace the resonance chamber.

Re-install the airbox with all connections – map sensor vacuum, two electrical connections on top and two breather hoses.

Connect the main earth and cruise earth (ground).

### **Finishing up**

Check the routing of the wires and cables and fit cable ties where necessary.

Check carefully for moving or stationary object that might damage any wires, cables or hoses.

Check that all wiring connections are complete and any cable and hose connections are secure.

### **Carburettor cable final adjustment**

**NOTE: - Firmly twist the throttle grip to full OPEN and full CLOSED positions several times. This will ensure that all the cables are seated fully in their adjusters and ‘pre-stretch’ the cables a little.**

Start the engine and allow it to reach an operating temperature where the fuel injection fast idle control is off. This usually only takes a couple of minutes running time.

Make sure that you have free play in the twist grip.

Screw the adjuster at the CIU end of the ‘carburettor’ cable out SLOWLY until the engine idle speed just starts to increase.

Screw the adjuster back in ½ to 1 turn. This will give 0.5~1.0mm of free play in the cable. This sets the free play between the throttles and the cruise control actuator.

Rev the engine a few times to check that it does return to idle properly each time the throttle is released.

GENTLY tighten the lock nut on the adjuster.

**CAUTION: - The adjuster is made of brass and WILL break if over tightened. This type of damage will NOT be covered by warranty.**

Re-check the free play at the twist grip. There must be some free play to prevent the throttle binding.

Check the throttle operation (engine off) in all handlebar positions to ensure that handlebar movement does not cause binding.

### **Your cruise control is now ready for testing!**

## **8. DIAGNOSTIC MODE OPERATION**

**Refer to Chapter 8, Diagnostic Mode Operation, in the Information, Set Up and Operation Manual.**

We suggest that you re-assemble the bike AFTER the diagnostic test is complete.