

Pingel® Electric Speed Shifter Kit for 2003 - 2004 GSX-R1000

Designed for Street Use

#77202 Installation Instructions

Read all instructions thoroughly, look at photos and all components before attempting installation. This product is not designed or intended to be used as an assistive device for any particular disability.

All the components of this Electric Speed Shift Kit have been assembled and tested as a unit before leaving our factory and have been found to be in working order at the time of shipping. Installation of this kit requires detailed knowledge of the motorcycle model, its electronics and mechanics. It is assumed that the installer has access to the proper tools and a working knowledge of them, test equipment (such as a volt meter), and factory service manuals. The following instructions must be read in their entirety and any questions should be answered prior to attempting installation. Incorrect installation will result in damage to Electric speed Shift components. If after reading the instructions you do not feel comfortable installing the kit, please find a qualified technician to do the installation. Installation time is 2-3 hours.

Disconnect negative battery cable before attempting any work on motorcycle.

INSTALLATION OF DUAL BUTTON HANDLEBAR CONTROL:

Loosen the clutch master cylinder perch and slide it toward the forks 7/16". Retighten the clutch master cylinder perch. Take a measurement from the newly positioned clutch master cylinder perch to the turn signal switch housing. Record this dimension. Disassemble the turn signal switch housing. Looking at the inside of the turn signal housing you will notice a raised portion in the housing that fits into a hole in the handlebar. Using the dimension recorded earlier, you will now redrill the hole closer to the fork on the handlebar. Drill the new hole the same diameter as the original hole.



Reassemble turn signal switch housing moved to the newly drilled location. Install the dual button handlebar control on to the handlebar as shown in photo and tighten screws located on the backside of the control assembly.

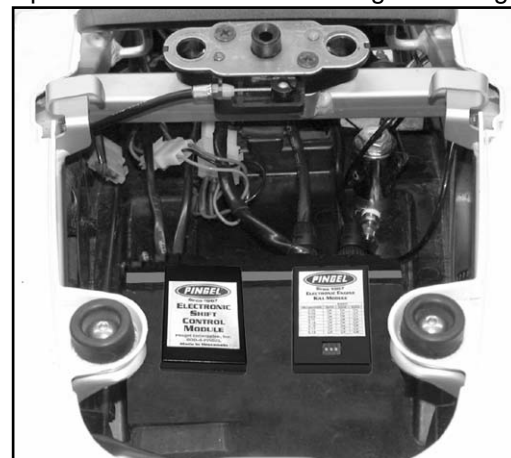
This handlebar control bracket is set up to route the wires externally, but may also have its wires routed internally through the handlebars. This is accomplished by feeding the black cable up through the hole on the center of the bracket and then through a hole in the handlebars.

Route the wires from the dual button control neatly along the handlebar and down under the fuel tank following the clutch hydraulic line. Be sure to secure the wires along the route with the provided wire ties. Loosening and lifting the fuel tank will aid in wire routing. The final location of this wire assembly will be under the rear seat.

INSTALLATION OF CONTROL MODULE AND WIRE HARNESS:

The mounting location of the control module is under the rear seat. The control module is supplied with Velcro to install on the bottom of the box to secure it. The wire assembly previously run from the handlebar control will now be connected to the control module. The handlebar connector has 4 pins and should be connected to the appropriate receptacle from the control module.

The large 4-pin connector coming from the control module should be connected to the large 4-pin connector from the fused wire harness. The small 3-pin connector on the fused harness is used for the electronic engine kill module. There are 3 loose wires coming from the

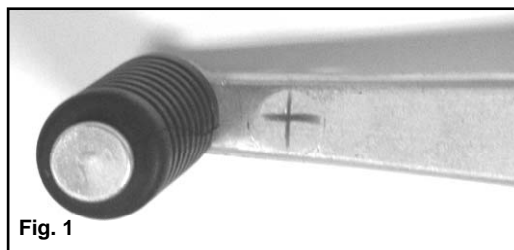


fused wire harness; the black (negative) and large red (positive) go directly to the battery, the small red is for switched 12v power. The small red lead can be connected to any 12v+ switched wire. Cut the small red wire to proper length and use the blue quick tab connector provided to make this connection (soldering is preferred). The large red and black battery wires can also be cut to proper length and then solder on the ring terminals provided. Attach the soldered on ring terminals to the battery posts, black to the negative and large red to the positive.

The electronic engine kill module is also mounted under the rear seat. See the instruction sheet included with the electronic engine kill module.

INSTALLATION OF ELECTRIC SHIFT CYLINDER:

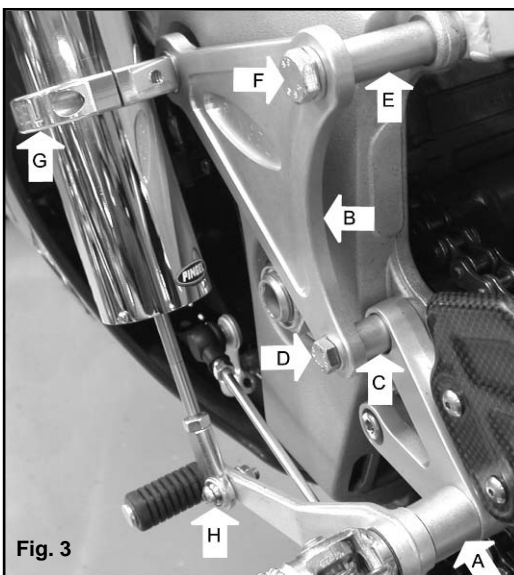
Remove the 2 bolts that hold on the left foot peg/shift lever bracket. Remove the bolt holding the foot peg/shift lever onto the bracket. Loosen the jam nut at the shift lever rod end and turn the shift lever off the rod. With the shift lever removed, mark a point 0.781 (25/32") from the center of the rubber shift peg and centered width wise on the shift lever, as shown in Figure 1. Use a center punch to mark this location and drill a 0.250 (1/4") hole. This is the point where the rod end of the shift cylinder will mount, as shown in Figure 2.



Reassemble the foot peg/shift lever using the supplied 10mm x 50mm hex head cap screw and the spacer with key slots and raised tabs on it (A) Figure 3. The raised tabs go into the key slots of the foot peg bracket. Install the foot peg into the key slots of the spacer. Be sure to use the supplied thread locker on this bolt.



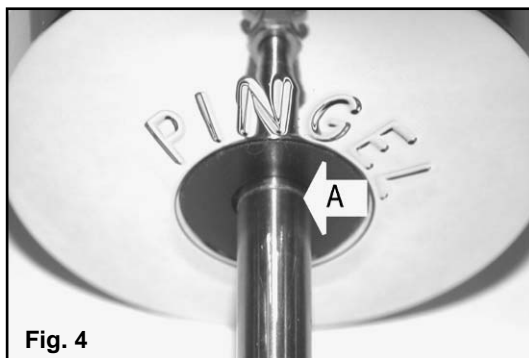
Remove the lower left subframe bolt, (F) in Figure 3. Reinstall the bracket that holds the foot peg/shift lever using the stock lower bolt and washer and the supplied 8mm x 45mm hex head cap screw with washer, (D) Figure 3, through the shift cylinder support bracket (B) Figure 3. Use the 0.854" support bracket spacer (C) Figure 3, between the two brackets as shown in Figure 3. This spacer has a step turned into one end which should face towards the motorcycle. Install the 10mm x 80mm hex head cap screw with washer (F) Figure 3, through the shift cylinder support bracket and into the 1.632" support bracket spacer, (E) Figure 3. This bolt replaces the lower left subframe bolt, as shown in Figure 3.



Install the shift cylinder onto the shift cylinder support bracket using the Pingel clamp, (G) Figure 3, and (2) 1/4-20 x 3/4" socket head cap screws. Just snug these bolts for now, as adjustment will be needed later. The rod end on the shift cylinder should be able to go past the point of mounting in each direction sidwise. The point of mounting is that flat surface upon which the rod end bolts to the shift lever bracket. Install the supplied 1/4-28 x 1" button head socket cap screw through the rod end of the shift cylinder and through the shift lever. Install the washer and locknut on the backside and tighten, as shown in (H) Figure 3.

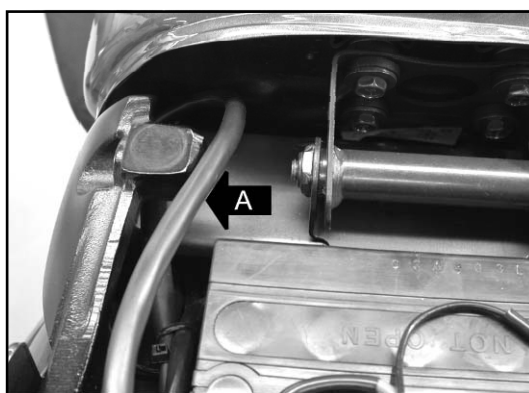
- A: Keyed spacer
- B: Shift cylinder support bracket
- C: 0.854 support bracket spacer
- D: 8mm X 45mm HHCS and washer
- E: 1.632 support bracket spacer
- F: 10mm X 80mm HHCS and washer
- G: Pingel shift cylinder clamp
- H: 1/4-28 X 1 BHSC, washer and nut

Before adjusting the shift cylinder up and down make certain the motorcycle transmission is in neutral. While holding the shift cylinder housing, loosen the two screws on the clamp. Find the groove in the center of the cylinder shaft. Adjust the cylinder housing up or down so the groove in the shaft is even with the plastic bushing located on the bottom of the cylinder housing, as shown in (A) Figure 4. With the shift cylinder in the correct position, tighten the two bolts of the Pingel clamp.



A: Center groove on cylinder shaft located at bottom of cylinder housing.

Route the electric cable from the shift cylinder to the control module located under the rear seat in the tail section trunk. Start by running under and on the backside of the frame then run under the tank on the left side following the frame. Run up the left side of the battery as shown in (A) Figure 5. Attach the cable by pushing the connector into the receptacle on the control module. Secure all wires away from heat and moving parts with the supplied wire ties.



A: Cable assembly coming from backside of frame, under the tank, along leftside of frame.

Your Electric Speed Shift kit installation should now be complete. Reconnect negative battery cable. In the interest of safety this is the recommended starting procedure: To arm the electric shifter, make sure the motorcycle is in neutral and pull in the clutch lever, then start the engine. With the clutch lever pulled in, push either button on the handlebar control and hold it for five seconds; release the clutch lever slowly (in case the motorcycle is accidentally in gear). The system is now turned on and will shift when either button is pressed. When the key is turned off, the power to the control module is disengaged so this procedure must be performed every time the motorcycle is turned back on. Pull in the clutch lever and check shifter movement by pushing either button on the handlebar control. Street riding may require the electronic kill module to be set to a longer kill time.

It will only be necessary to use the clutch when starting, stopping and finding neutral. Upshifting and downshifting will not require the use of the clutch. The operator can use the clutch manually without harm to any components, especially during downshifting to avoid "chirping" the rear tire.

Test ride motorcycle. If shifting up or down is not achieved, loosen the Pingel clamp on the shift cylinder and adjust it up or down 1/16" to 1/8" at one time. Retighten the Pingel clamp and test ride the motorcycle. This adjustment is fastidious and patience is required. When the final adjustment is made, remove each clamp bolt and apply thread locker to the end threads, but remove only one clamp bolt at a time so as not to lose your adjustment.

Be certain that all of the round connectors are properly coupled and tight. If the motorcycle is not shifting or the kill module is not working, check that these plugs are properly seated and that the internal connector pins are making good contact with their sockets (i.e. no pins are bent).

Note: in the wire harness we have installed one 40-amp fuse for constant power. A spare 40-amp fuse is also supplied.

Prolonged repeated operation of the shifter (actuating the shifter repeatedly in rapid succession beyond normal use) can discharge the motorcycle battery and damage the shift cylinder and/or the control module. The normal battery takes 30-60 minutes to recharge after starting the motorcycle so use the shifter sparingly in this time.

This unit is not waterproof. Do not subject it to pressure washing or extreme moisture.

Installation of Electric Speed Shift Kit still maintains OEM Shifting.
If you have any questions please call 608-339-7999

Items Included: 2003 - 2004 GSXR 1000

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|---|--|
| 1 - 0.631" o.d. x .404" i.d. x 1.418" long aluminum spacer | 1 - Control module |
| 1 - Aluminum keyed .700 long footpeg spacer | 1 - ¼-28 x 1" button head |
| 1 - 0.625" o.d. x .312" i.d. x .553" long stepped aluminum spacer | 1 - ¼" washer |
| 1 - Shift cylinder support bracket with cylinder clamp (threaded) | 1 - ¼-28 half-width locknut |
| 1 - Cylinder clamp (through-holes) | 1 - Shift cylinder |
| 1 - 8mm x 1.25mm x 45mm HHCS | 2 - Ring terminals |
| 1 - Fused wiring harness | 5 - Blue quick tab connector |
| 1 - 8mm washer | 10 - Wire ties |
| 1 - 10mm washer | 1 - Tube torque-thread locker |
| 1 - 7/8" handlebar dual button control assembly | 1 - 40-amp fuse |
| 1 - 10mm x 1.25mm x 80mm HHCS | 1 - Electronic engine kill module |
| 1 - 10mm x 1.25mm x50mm HHCS | 1 - Electronic engine kill module wire leads |

Thank you for purchasing a Pingel Enterprise, Inc. product.

Dear Valued Customer,

Pingel Enterprise, Inc. would like to take this opportunity to thank you for purchasing one of our Electric Speed Shift Kits.

We would also like to know what you think of the product and how your installation went. Your assistance can help us overcome any technical issues that other installers may experience. You can reach us toll free at 1-888-474-6435 or email us at info@pingelonline.com.

We are also requesting photos of your installation. Your photos may be selected for publication in the Pingel catalog or at www.pingelonline.com. Photos may be submitted by emailing them to info@pingelonline.com. When submitting a photo, please include the motorcycle model and year.

LIMITED WARRANTIES/LIABILITIES

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