

Pingel[®] Electric Speed Shifter[®] Kit for 2005 Kawasaki ZX10R Designed for Street Use #77100 Installation Instructions

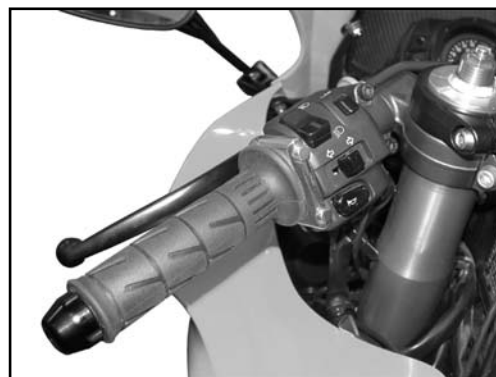
***Read all instructions thoroughly, look at photos and all components before attempting installation.
This product is not designed or intended to be used as an assistive device for any particular disability.***

All the components of this All Electric Speed Shifter 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 voltmeter), 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 Shifter 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.

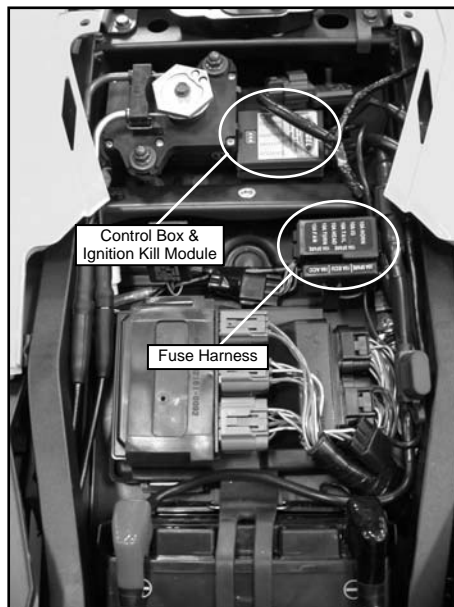
INSTALLATION OF DUAL BUTTON HANDLEBAR CONTROL:

Remove bar end cap on left hand grip. Remove grip; WD-40[™] sprayed inside the grip will aid in the ease of removal. Loosen clutch master cylinder perch and slide toward the fork 7/16" if possible. If it is not possible to move 7/16", move as far as you can, allowing clearance for the dual button control. Retighten clutch master cylinder perch. Next 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 re-drill the hole closer to the fork on the handlebar. Drill the hole the same diameter as the original hole.



Reassemble turn signal switch housing to the newly drilled location. Install the dual button handlebar control bracket onto the handlebar as close to the switch housing as possible, making sure to tuck the wires neatly into the grooved channel of the dual button handlebar control bracket. Now apply a small amount of grip glue (this should be available at any motorcycle retailer) to the inside of the grip and slide back onto handlebar. Reassemble bar end cap onto the handlebar.

Route wires from the dual button control neatly along handlebar and down under the fuel tank following the clutch line or inside the handlebar to under the fuel tank. Make sure to secure wires along its routing with wire ties provided. Loosening and lifting the fuel tank will aid in wire routing. The final location of this wire assembly will be under the cover between the front and rear saddle.



INSTALLATION OF CONTROL MODULE AND WIRE HARNESS:

Mounting location of the control module is under the cover between the front and rear saddle. Note: the control module is supplied with Velcro to secure it, see photo at right. (Note: In photo the Electronic Engine Kill Module is mounted on top of the control box) The handlebar connector has 4 pins and should be connected to the appropriate receptacle on 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 the brown with white stripe wire on the ignition block of the fuse harness located under the front saddle. Cut the small red wire to proper length and use blue quick tab connector provided to make this connection. The large red and black battery wires can also be cut to proper length, and then solder on the ring terminals provided. Now 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 front saddle on top of the control module. See 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 bracket. Swing the foot peg bracket towards the outside of the motorcycle.

Use two 8mm x 65mm socket head cap screws with step bushings supplied (see figure 1) on the two bolts and put them through the stock foot peg bracket, through the shift cylinder support bracket, and through the 1" long aluminum spacers and tighten this assembly back onto the motorcycle using the original mounting location of the foot peg bracket, see figure 2. Next remove the bolt which holds the shift lever on, see figure 3. Remove shift lever from bracket and loosen jam nut on shift linkage rod. Unscrew shift lever from shifter linkage rod.

Place Pingel shift lever bracket over backside of the stock shift lever, as shown in figure 4. Take a #25 drill (9/64", if #25 is not available) and make 2 small point marks on back of shift lever by twisting drill bit with your fingers, as shown in figure 4.

Using the top back of a vise, center punch the two small points on the backside of the shift lever, as shown in figure 5. Use a 3/16" drill bit and drill the 2 points that were center punched.

Using the Torque-thread locker supplied, bolt Pingel shift lever bracket onto stock shift lever. Use the 10-24 x 1/2" button head socket cap screws for fastening the bracket to the foot peg, as shown in figure 3. Reattach shift linkage rod to shift lever, slide shift lever back onto foot peg bracket and tighten bolt. Do not tighten the jam nuts on the shift linkage rod because adjustment is necessary later.

Install electric shift cylinder onto shift cylinder support bracket using Pingel clamp and (2) 1/4-20 x 3/4" socket head cap screws. Just snug these bolts for now, as adjustment will be needed. The rod end on the shift cylinder should be able to go past the point of mounting in each direction sidewise. The point of mounting is that flat surface upon which the rod end bolts to the Pingel shift lever bracket allowing for the thin flat 1/4" washer also. It is imperative that there is no side pressure or tension on the electric shift cylinder shaft when it meets its flat surface upon the Pingel shift arm lever washer where it is bolted as this would take away valuable power from the electric shift cylinder resulting in binding and missed shifts. If the rod end does not line up correctly you can either add another thin 1/4" flat washer to the existing washer to move the rod end away from the shift arm lever, or remove the thin flat 1/4" washer to move the rod end closer to the shift arm lever. Now thread the 1/4-28 x 1" button head socket cap screw thru the rod end of the electric shift cylinder, through the 1/4" flat washer and into the Pingel shift lever bracket on the shift lever tightening the 1/4-28 locknut on the back, as shown in figure 3. Adjust the stock shift linkage rod so that the shift lever is 90° from the electric shift cylinder shaft, see figure 3. Tighten the jam nuts on the shift linkage rod to factory specifications.

Before adjusting the electric shift cylinder up and down, make sure the motorcycle transmission is in neutral. While holding onto the shift cylinder housing, loosen the two screws on the clamp. Now find the groove in the center of the cylinder shaft. Adjust the cylinder housing up or down so the groove in the shaft is right at the plastic bushing, located on the bottom of the cylinder housing, as shown in figure 6. Now with the shift cylinder in the correct position, tighten the two bolts of the Pingel clamp.

Route electric cable from electric shift cylinder to the control module located under the front saddle. Start by running under and on the backside of the frame. From this point run under the tank on the left side following the frame. Run up the left side of the battery, as shown in figure 7. Attach the cable to the appropriate connector on the control module. Secure all wires away from heat and moving parts with wire ties supplied.

Your Electric Speed Shifter 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 clutch lever pulled in push either button on the handlebar control and hold it for five

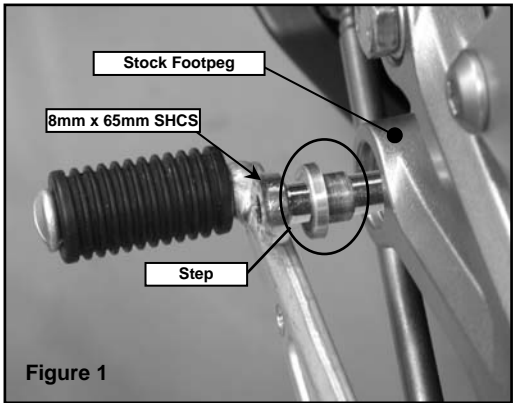


Figure 1

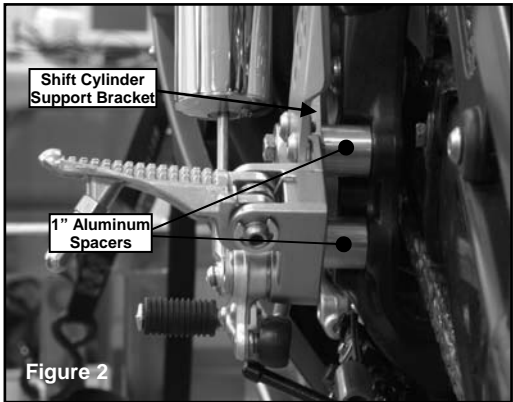


Figure 2

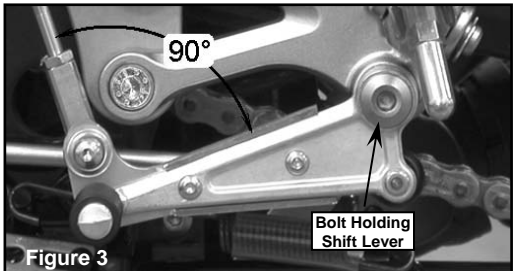


Figure 3

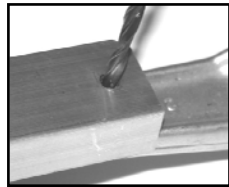


Figure 4



Figure 5

seconds; now release the clutch lever slowly (in case the motorcycle is accidentally in gear). The system is now turned on and will shift when 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 clutch and check shifter movement by pushing either button on the handlebar control.

Test ride motorcycle. If shifting up or down is not achieved, you can loosen the Pingel® clamp on the shift cylinder and adjust up or down 1/16" to 1/8" at one time. Retighten Pingel® clamp and retest ride motorcycle. This adjustment is fastidious and patience is required. When you get final adjustment 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.

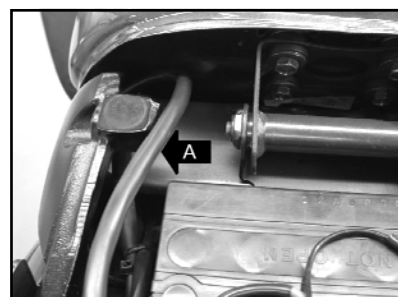
Note: in the wire harness we have installed one 40-amp fuse for constant power. A spare 40-amp fuse is also supplied.

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.



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

Figure 6



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

Figure 7

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

Installation of Electric Speed Shifter Kit still maintains OEM Shifting.

If you have any questions please call 608-339-7999

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 Shifter 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.

Thank you again for your purchase!

Items Included: 2005 Kawasaki ZX10R

- | | |
|--|---|
| 1 - ¼-28 x 1" BHSCS with locknut | 1 - 7/8" handlebar dual button control assembly |
| 2 - Step bushings | 1 - Control module |
| 1 - Shifter lever bracket | 1 - Electric shift cylinder |
| 2 - ¼" washers | 2 - Ring terminals |
| 2 - 1.00 o.d. x 5/16 i.d. x 1.00 long aluminum spacers | 5 - Blue quick tab connector |
| 2 - 10-24 x ½" BHSCS | 10 - Wire ties |
| 1 - Electric shift cylinder support bracket with cylinder clamp (threaded) | 1 - Tube torque-thread locker |
| 1 - Cylinder clamp (thru-holes) | 1 - 40-amp fuse |
| 2 - 8mm x 1.25mm x 65mm short head SCS | 1 - Electronic engine kill module |
| 1 - Fused wiring harness | 1 - Electronic engine kill module wire leads |

LIMITED WARRANTIES/LIABILITIES

Pingel Enterprise, Inc. assumes no responsibility or liability for damage or injury of any kind arising out of the use or misuse of any products. Pingel Enterprise, Inc.'s sole responsibilities with respect to products sold are to provide the following limited warranty:

Pingel Products: Pingel Enterprise, Inc. warrants to the original purchaser that the product shall be free from defects in parts and workmanship under normal use for 30 days from date of purchase. Pingel Enterprise, Inc.'s obligation under this warranty is limited to the repair or replacement of any part found to be defective when returned postpaid to the factory. The product must be returned with evidence of date and place of purchase, and detailed description of the problem. The warranty will not apply if the product has been installed incorrectly, repaired, or damaged by modification, misuse, negligence or accident. The repair or replacement of such part, as needed, is your sole and exclusive remedy. No refunds will be given. Pingel Enterprise, Inc. makes no other warranty, expressed or implied with respect to its products and specifically disclaims any implied warranties of merchantability or fitness of any product for a particular purpose and except as herewith stated assumes no liability with respect to the product.

Dispute Resolution: All disputes, claims or controversies of any kind that may arise between you and Pingel Enterprise, Inc. shall be brought in the state court located in Adams County, Wisconsin. You agree that the sole venue and jurisdiction for such disputes shall be the above named court and hereby submit to the jurisdiction of that court.

THANK YOU for purchasing a PINGEL ENTERPRISE, INC., product. View our entire product line at www.pingelonline.com

