

PQ8 Item 250FI instruction – Harley-Davidson Milwaukee 8 based models

2025-06-26, Rev PA1

Applications

Harley-Davidson Road Glide - Standard, Special, CVO, CVO ST, 2017-2023
Harley-Davidson Street Glide - Standard, Special, CVO, CVO ST, 2017-2023
Harley-Davidson Electra Glide - Standard, Special, CVO, CVO ST, 2017-2023
Harley-Davidson Road King - Standard, Special, Custom, Classic, CVO, 2017-2023
Harley-Davidson Softtail with long shift rods*



Product description

PQ8 Quickshifter system specially developed for Harley-Davidson Milwaukee-Eight engine bike models, such as Street Glide, Road Glide, Electra Glide, Road King and Softtail. The quick shift is done by interrupt the fuel injectors and features adjustable kill time, shift force, smooth and compus shift function.

Cordona use strain gauge sensor technology which gives a consistent and distinct shift performance. The GP SG M8 switch is based on same technology platform we have used in Moto3 World Championship together with KTM Factory Moto3 and Honda Factory bikes. The new M8 size sensor is a larger variant of our M6 sensor. We used both sensors in WSSP and SBK world championship as well as for many street and sport applications.

The Cordona PQ8 Quickshifter is maybe the most robust 'stand-alone' system at the market. It has been used in Moto2 Word Championship bikes, for racing bikes, street bikes and in many categories for years. It can be used with all variants of strain gauge sensors, like rod linkage, toe PEG or sensors integrated in shift levers.

The PQ8 Item 250FI includes:

PQ8 ECU – Updated PQ8 ECU Version 1.20 with pre-set settings for Harley-Davidson Milwaukee 8 equipped models.

GP SG M8 Switch – Special developed digital GP SG switch with M8 size strain gauge sensor.

PQ8 250FI loom – loom connecting PQ8 ECU, bike ground, injectors and GP SG switch module.



M8 rod assembly kit

- 180mm aluminium rod with left and right M8 threads
- 2x M8 high quality Tescubal rod ends with left threads
- 2x M8 A4 marine stainless steel left nut
- 2x M8 A4 marine stainless steel right nut
- 1x M8 stainless steel right stud
- 8x cable ties
- 1x small cable tie and silicone tube
- Velcro tapes
- QR code for this manual
- Cordona stickers

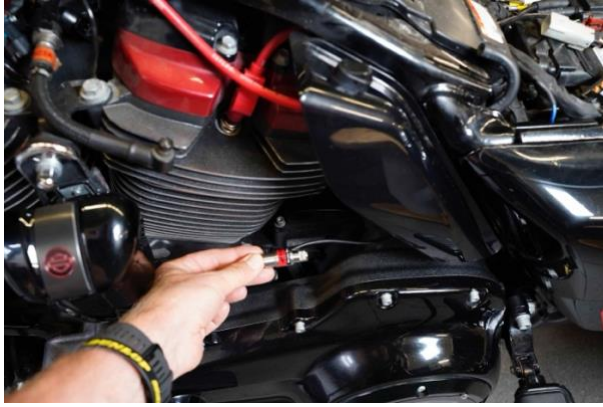
Tools needed

- Wrenches 10mm,13mm and 7/16
- Ratchet with 7/16 socket
- Nipper for cable ties
- Measuring tape
- Thread-locking fluid, Loctite 243 or similar

Prepare the bike for the quickshifter installation

- ### Installation of GP SG M8 switch and shift linkage.

3



3.



Gear shift linkage, recommended assembly.

Assembly the rear end of linkage 'loosely', rod end, sensor and stud screw. Mount it to rear gearbox lever according to picture 4. Assembly the front part of linkage 'loosely', picture 5.



4.



5.

Mount the aluminium rod on the threads on the rod end side and the pin screw, so that it just hangs on one thread.

Turn the rod anti clockwise and assembly it to the stud screw at sensor side, picture 6.

Adjust the hight of the shift peg with adjusting the rod anti clockwise to shorten the length of linkage. Ensure you have enough threads and use minimum 10mm at each rod end, stud screw and sensor threads before securing each part of the linkage.

Apply Loctite before tightening all nuts in the linkage.



Use the small cable tie and silicone tube to route the sensor cable according to photo. Tighten the cable tie loosely to avoid long term wear at sensor cable. See pictures below.



Installation of PQ8 ECU, GP SG switch module and loom

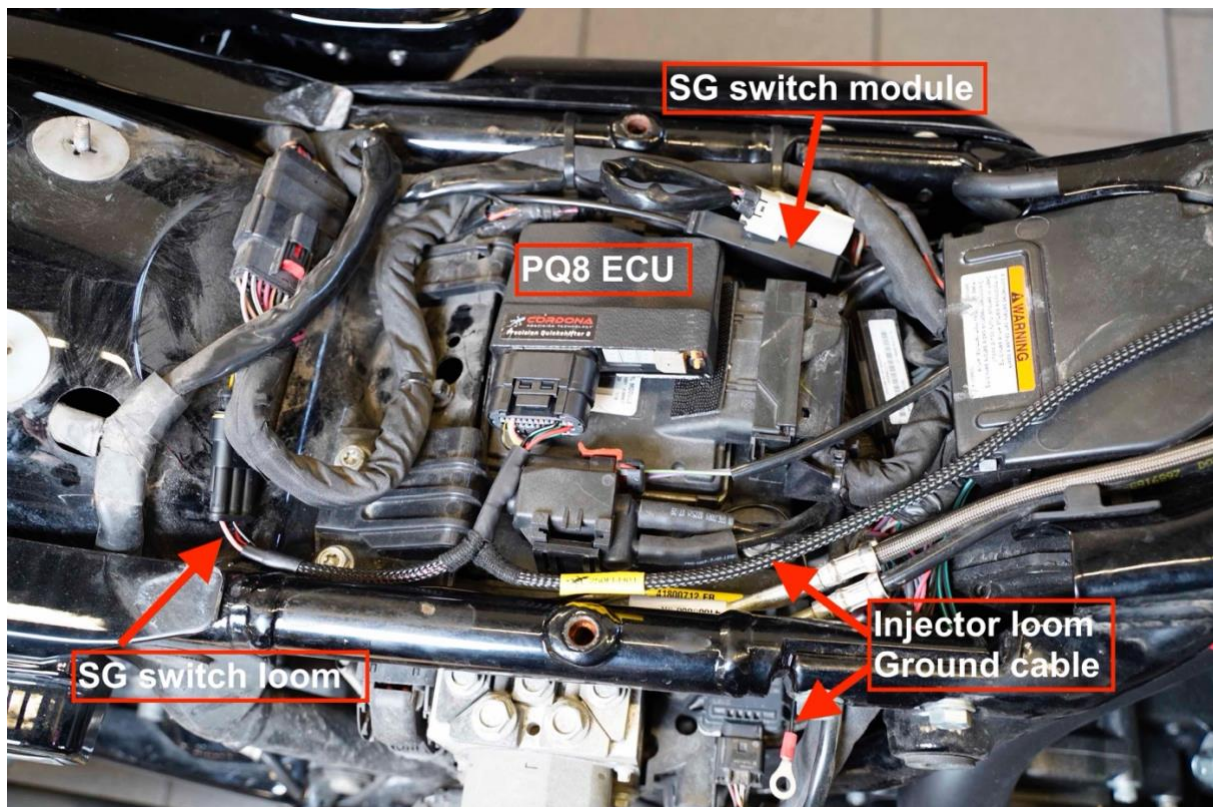
Mount the Velcro at bottom of PQ8 ECU and bike according to photo.

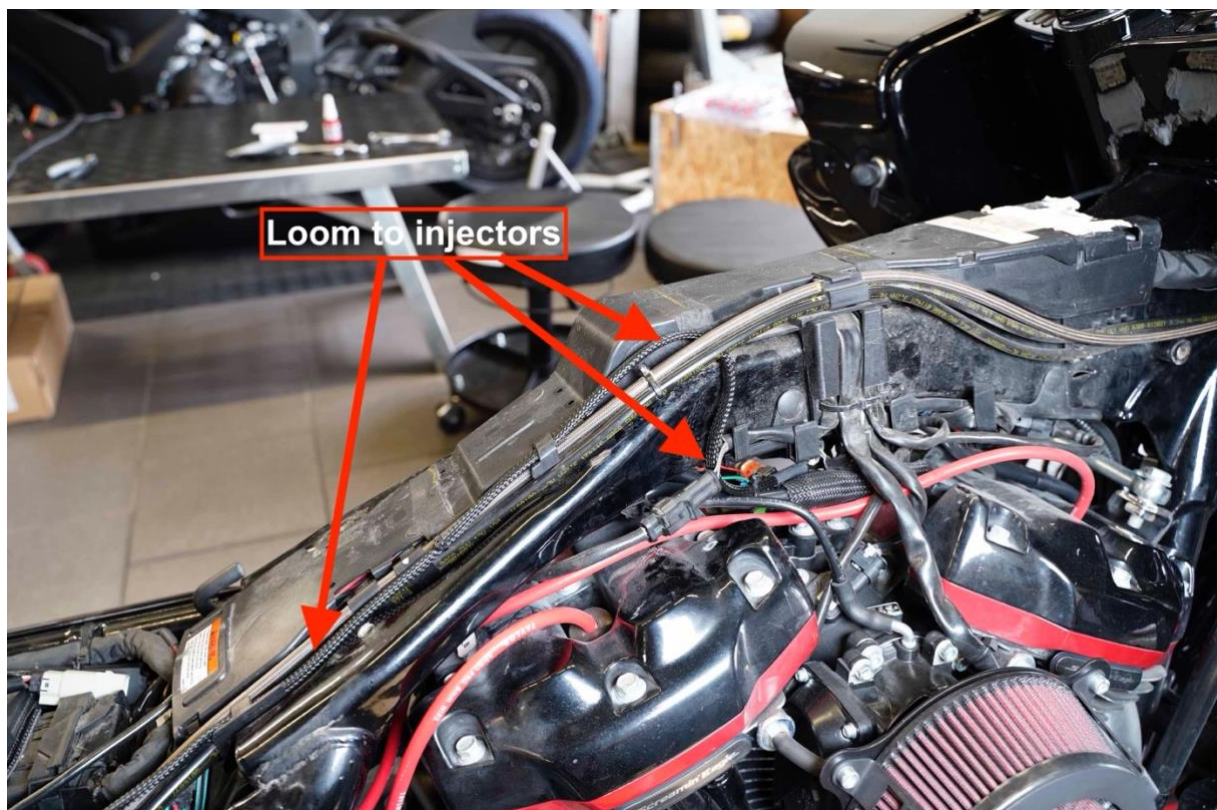
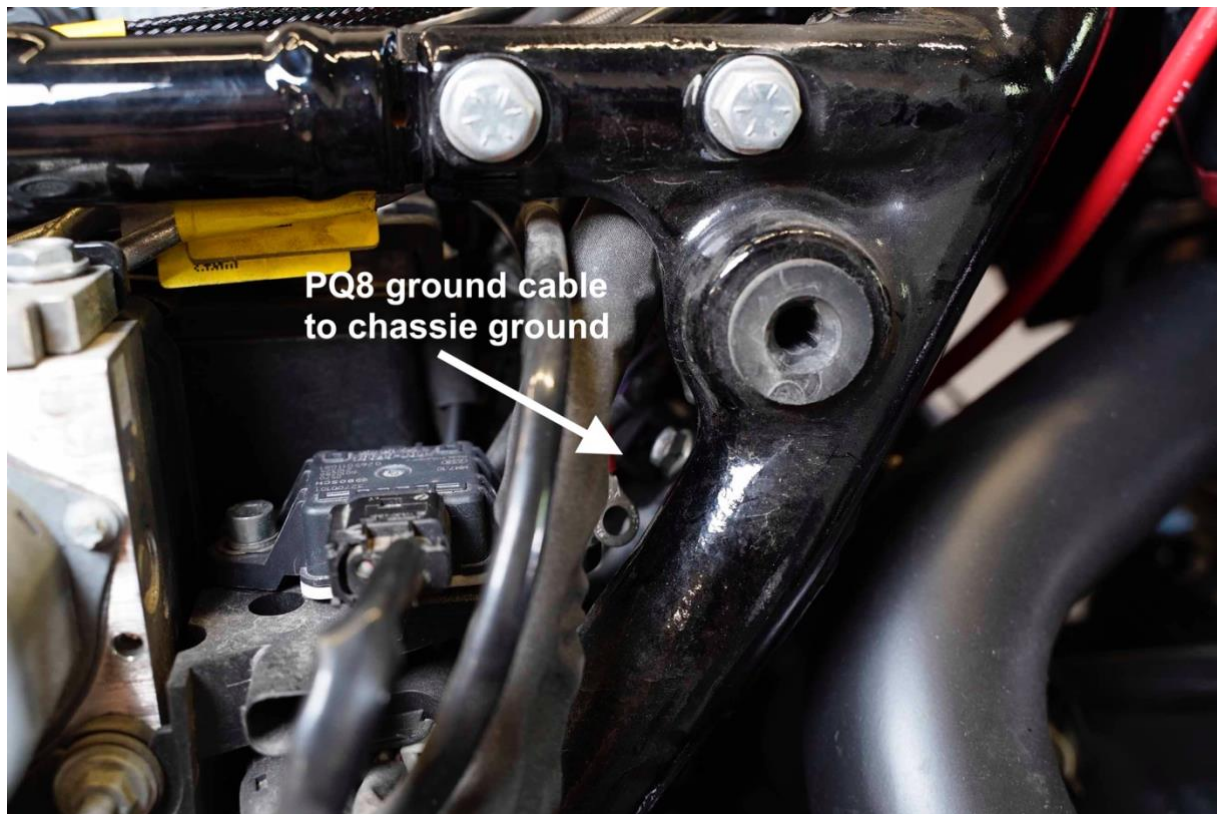
Connect the system together, PQ8 ECU to loom, GP SG Switch to loom.



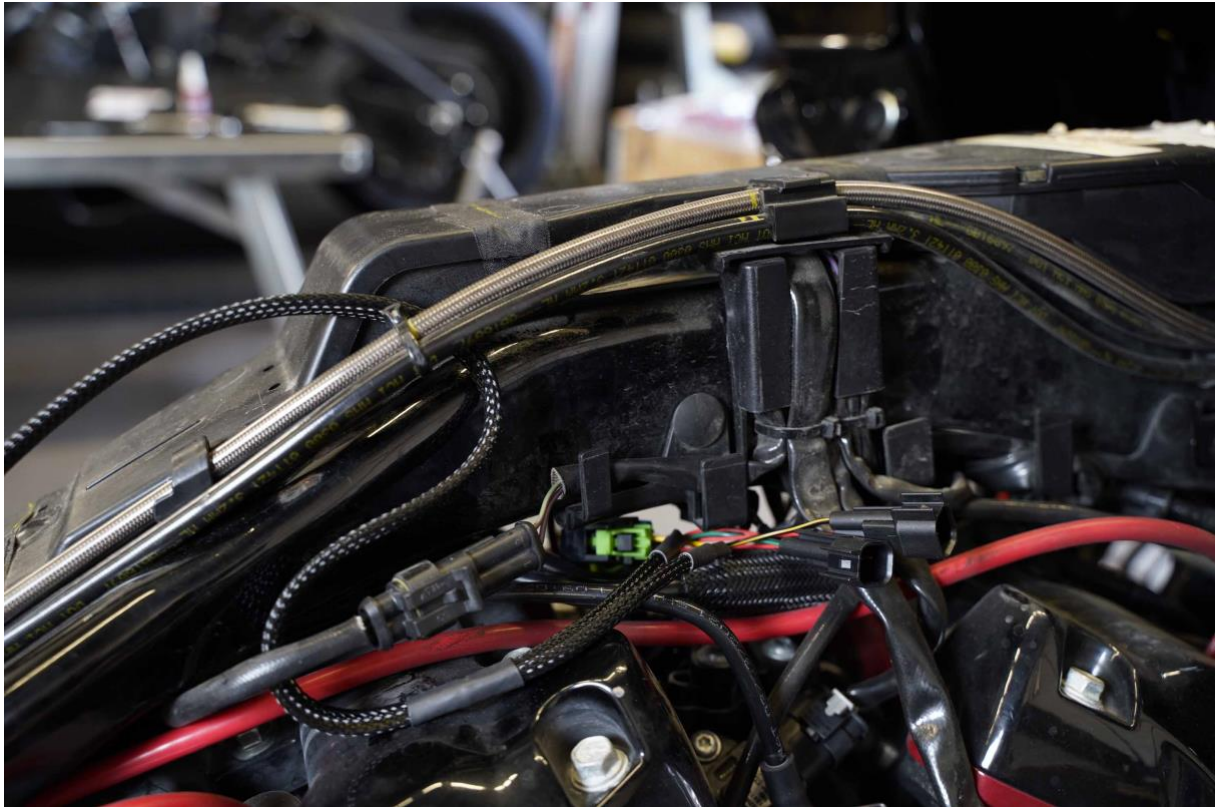
Installation of 250FI loom

Connect the system together, PQ8 ECU to loom, GP SG Switch to loom and route the loom parts loosely according to picture.

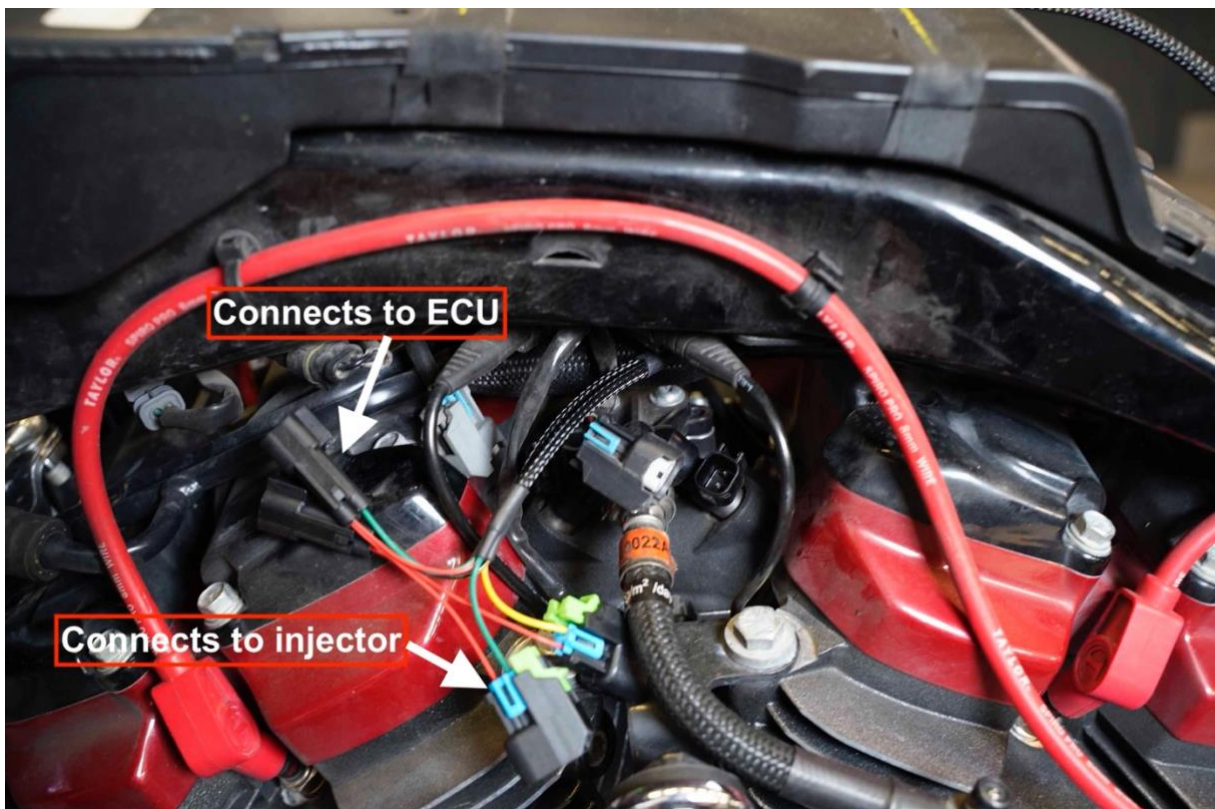




Route the loom with the two pairs of connectors according to the photos through between the cylinder heads from right side to left side of the bike.



Disconnect the connectors coming from bike ECU to the two injectors.



Connect the green and yellow pair of connectors in Cordona harness to the ECU respective Injector connectors.

The green respective yellow pairs can be connected either to front or rear injector. It does not matter.

Use the cable ties to make a proper cable installation with the cables loosely bundled together.

Note not to tightened too hard to prevent stress in cables. Avoid route the cables over sharp edges.



Quickhifter settings

The PQ8 Item 250FI M8 comes 'plug & play' pre-set with all settings from our Street Glide test bike. To adjust settings according to your preferences, follow the procedures below:

General procedure to change PQ8 ECU settings:

1. Toggle up or down with the two buttons, select the setting to be changed.
2. Press both buttons simultaneously for 1 second to be able to change the setting.
3. The LED display will flash.
4. Change values by toggle the buttons.
5. Save new value by simultaneously press both buttons for 1 second. Two 'beeps' will confirm the new setting is locked.

Display defaults PQ8 Item 250FI

At power up the PQ8 display shows FW version 1.20: **1.20**

If engine is running, engine rpm is shown.

If left for 4 sec showing 0.0

Lowest rpm for quick shift

Default factory Lowest rpm for quick shift 2000rpm, 'On2': **002**
Adjustable 0-9000 rpm in steps of 1000rpm, On0 to On9.

Shift light, max rpm for shift

Default factory max rpm for shift, 7000rpm; 'S7.0': **57.0**

Kill time, how long the ignition or fuel injection will be interrupted at max rpm, in milli sec (ms).

Default factory Kill time, 90ms, 't90': **t90**

4stroke, rpm reading.

Default factory rpm reading 'St4': **St4**
Can be adjusted between St1 to St4 to set correct rpm reading compared to the tachometer.

Autoshift, this function is not supported in this PQ8 Quickhifter kit.

Default factory Autoshift off, 'Aof': **AOF**
Adjustable Aon or Aof.

Rpm sense input.

Default factory rpm sense input 'In1': **1 1 1**
In 'In1' rpm through green wire pair. 'In2' rom through grey aux wire, looped in the harness.

General procedure change GP SG settings:

Change shift direction

Default factory shift direction, t1 '*compress sensor for an upshift*'.

Change setting:

Hold both buttons simultaneously and turn on ignition/power.

Release the buttons and the display flashes UP- UP- UP

UP-UP-UP.

Move shift lever in a simulated upshift from 2nd to 3rd gear and hold the shift lever for about 2-3 seconds until a small dot flash in right bottom corner in the LED display.

To confirm you have set the upshift direction correctly, check the small dot flash in the display when do a simulated upshift without engine running.

Change shift force

Default factory setting GP SG M8, 3kg 03

Change setting:

Press right button and you will see the shift force set.

Press right button and hold, press left button, and hold both buttons for three seconds.

The LED display starts to flash.

Change shift force up or down with the buttons.

Set the new setting pressing both buttons at the same time for 3 seconds.

Change shift loop settings

The factory default loop setting is 'commonly open' loop; t1

Change setting:

With this loop setting you will hear a short 'beep' when do shift, if the PQ8 system is powered up (ignition on at bike).

If you hear a constant 'beep', the loop setting is wrong, and set to 'commonly closed' loop; t2 Change the setting to t1