



HONDA

4 cylinder

Goldwing

Instruction manual with visual guide for the Gen 5
Goldwing GL1000 & GL1100

Please read this important information BEFORE installation:

This ignition kit replaces all original Honda ignition parts.

On the GL1100 you can remove or simply disconnect any Honda ignition or spark boxes that were used.

DO NOT use any Honda resistors that were originally used.

It is important to have smooth and strong voltage for proper operation and for this reason we recommend checking for proper voltage at the supply lead for the coils before installing.

We recommend NGK style resistor sparkplug caps and resistor spark plugs one heat range cooler than standard (one number higher).

DO NOT attempt to use sparkplug wires other than the provided leads or damage to your ignition could occur.

Set spark plug ground electrode gap at 0.028-0.032"



Your kit includes::

- (1) Ignition module with GL backing plate and hardware.
- (2) Top spacer gasket.
- (3) Encoder wheel with spacer kit. GL1000 cams require two spacers, customers with GL1100 require one spacer with bushing and M6 screw.
- (4) VS4 or two MC2 coils and wires.
- (5) Four (4) sparkplug leads. These can be shortened before you install your sparkplug caps.

We DO NOT recommend using the common butt connectors that simply flatten onto the leads. If you choose not to solder your connectors, use only Japanese style Type B connectors with appropriate covers to avoid future electrical issues or damage to the ignition module.

It is not necessary to install a separate fuse for the coils but if you do, a 5 amp rating or higher would be required.

Basic installation involves:

- Remove points, timing advancer parts, and old coils. GL1100 requires camshaft to be removed and drilled/tapped for M6 screw or swap in GL1000 cams.
- Install new coils in suitable location.
- Securely connect the ignition wiring (leaving the coil connector disconnected until after timing is set).
- Set #1 cylinder to TDC and calibrate timing using the encoder wheel.

This job should be considered difficult and we recommend you have experience with electrical before attempting the installation by yourself. Seek help if you are unsure of how to install kit.

Step 1.

Remove stock ignition parts

Locate the points housing at the rear of the left engine cylinder on GL1000 models.

The GL1100 has a chrome cover and rubber plug over the end of the cam.

Remove the factory center bolt to remove timing advancer lobe, weights and springs.

Now remove the two screws holding the stock points housing to your engine.



Step 2.

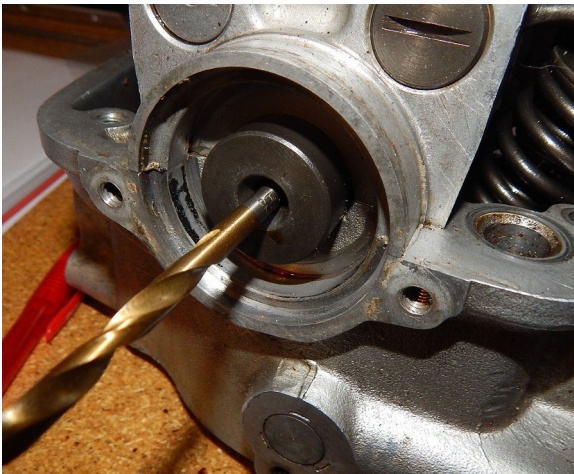
Preparation for the new ignition kit.

GL1000—no preparation needed

GL1100—drill and tap camshaft for M6x1.0 bolt

GL1100 will need to install a cam seal at the back of the cylinder head. We recommend removing camshaft to perform drilling operations. This is an excellent time to install the seal into the head.

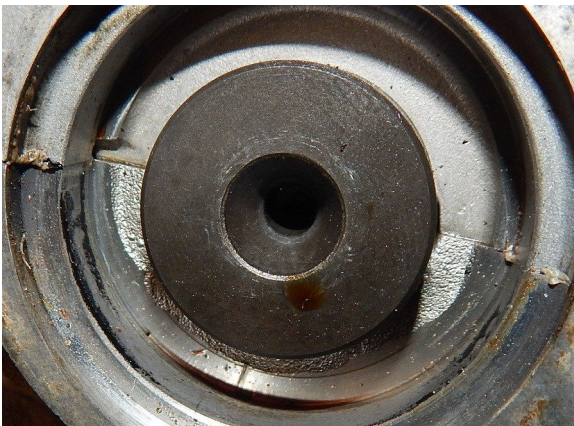
Once this procedure is performed, the remainder of the installation is virtually identical among all Goldwing models.



This is a picture of the GL1200 cam.

Hole diameter is between .196-.199”

You will need to drill and tap appropriate size hole to secure the spacer and timing encoder disc. The GL1100 engine does not have a pilot hole and should be modified by a qualified machinist.



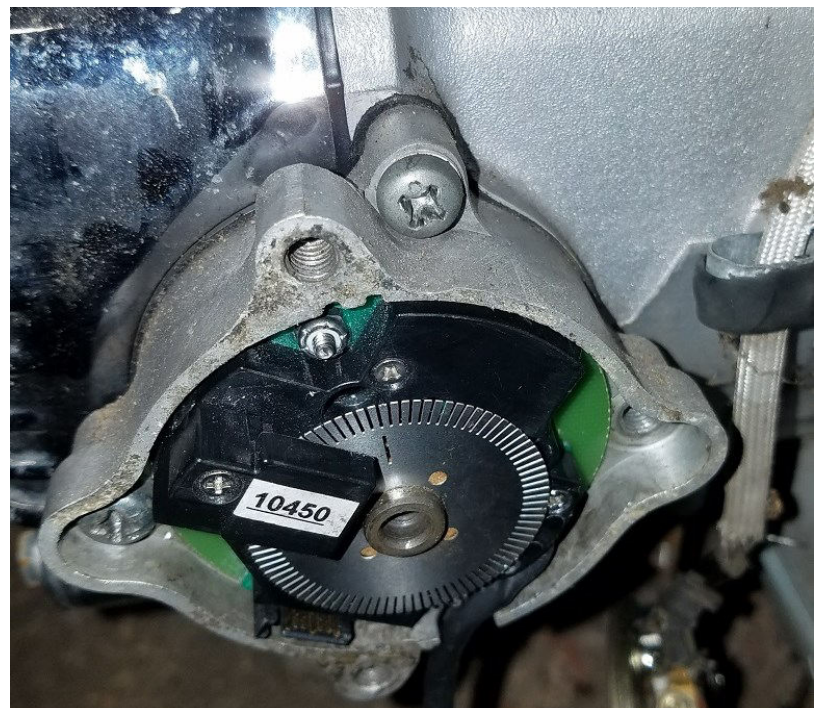
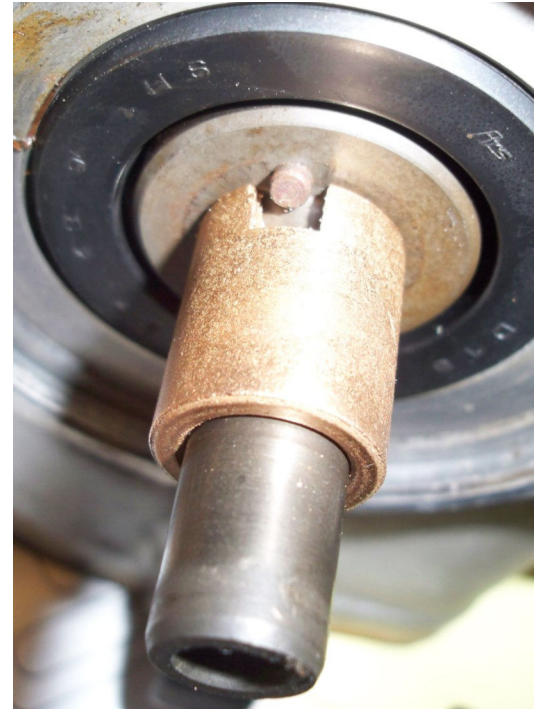
Step 3.

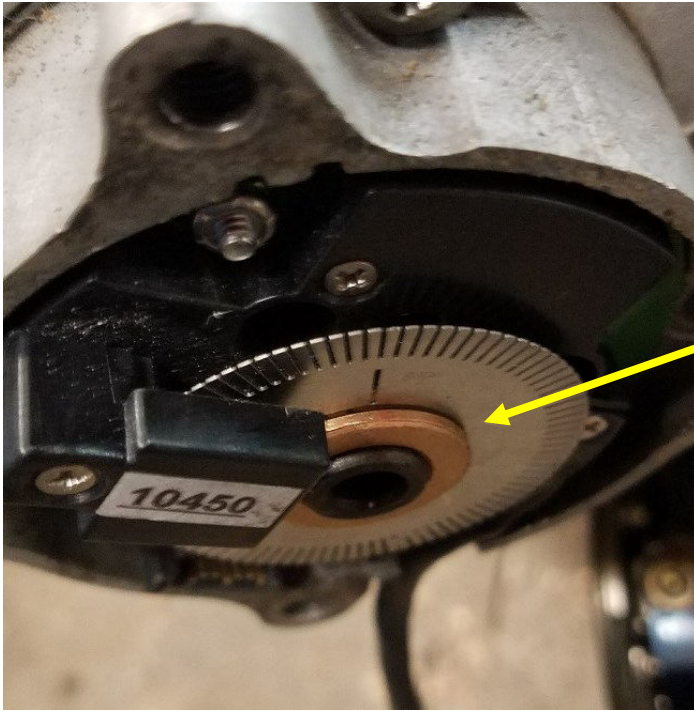
Install ignition.

NOTE: The long aluminum spacer has a notch in one end, place this against the camshaft and rotate it so the spacer engages the timing pin. You can feel it drop down into place.

Install the timing disc at the same time as the ignition module. You cannot install the disc once the ignition is installed. Verify the disc will not contact the ignition decal or reader. A shim washer is provided in case you need it.

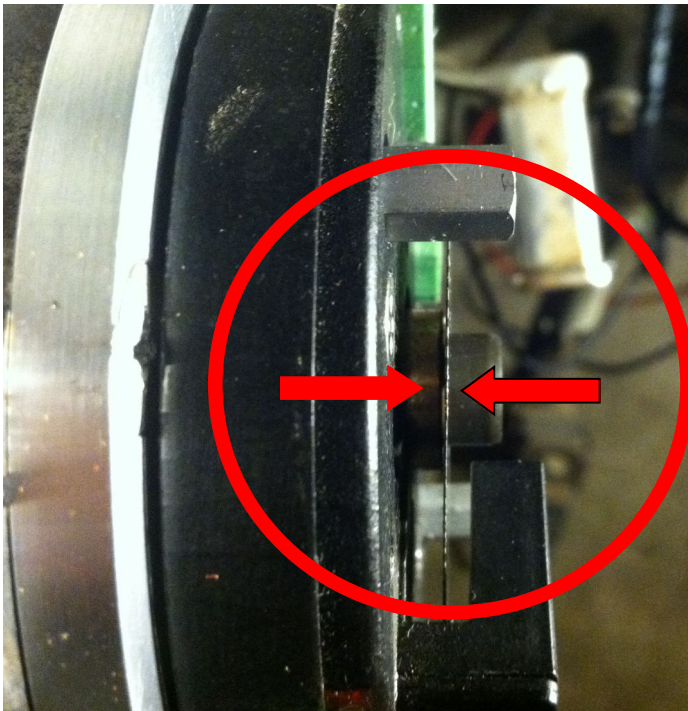
Now place the thin top spacer over the timing disc. Install the stock Honda bolt and washer back onto the camshaft. Do not tighten until timing is set. The GL1100 will use one spacer and bushing along with the 6mm screw supplied with your kit.





We will provide a spacer that clears the end of the cam post.

When you set timing, the stock Honda cam bolt will be tightened to secure the timing disc.



When done, there should be a gap above and below the disc.

Normally we prefer the disc be slightly closer to the base so there is no change of the optic reader being contacted.

Shim with a washer if needed.

Step 4.

Coil installation:

GL1000— We have not verified how our new VS4 coil fits. The older QT coil fit in the stock location, but the VS4 is larger with different mounting holes. Due to the tight fit next to the airbox intake, we offer the MC2 coils.

GL1100— We have verified the MC2 coils fit the stock coil mounts. You will need to fabricate a short rear mounting strap or zip tie the rear to the frame.

DO NOT connect power to coil until the timing has been set.

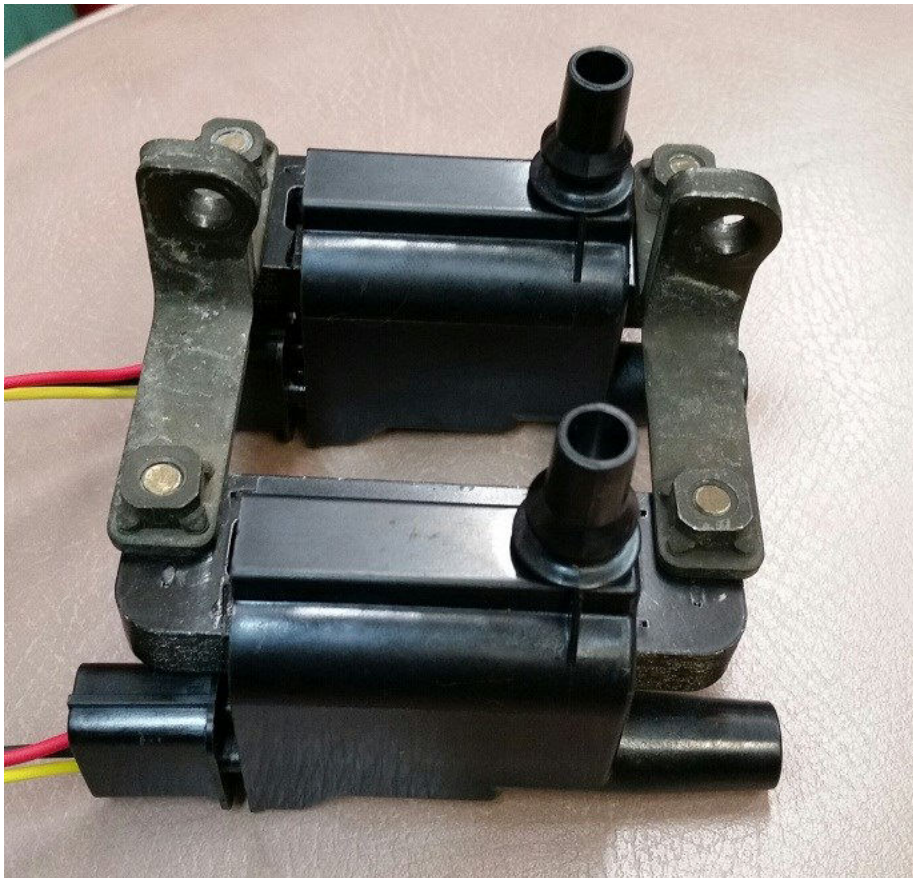
Do not allow the molded portion of the coil body to contact frame.



This is a photo showing the stock GL1000 mounting holes.

CAUTION should be used when installing.

If your coil don't fit this area then fabrication or relocation of coils is needed.

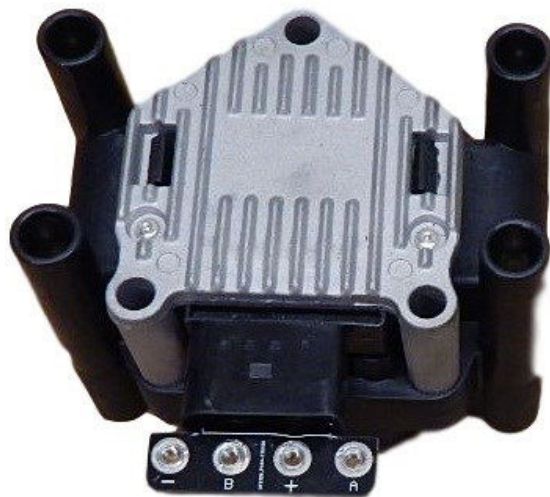


This shows how the MC2 coils fit the stock GL1100 with no additional hardware.

Make sure your coil doesn't rub anything sharp!

Re-install your air box to check for proper fit.

Shown below is our VS4 coil. It represents the newest technology and should fit single carb conversions using a flat mounting plate.



Step 5.

Connect wiring

Installing electrical components with a solid connection is critical. If you do not have the correct crimper we suggest you purchase one. We have them in stock at all times. Your ignition module will connect to the coil via a quick connector provided.

Due to improvements and changes, we refer you to the wiring instructions included in your kit, or see our website for accurate wiring diagrams.

Once the ignition is wired, you must set timing before connecting power to the coils.



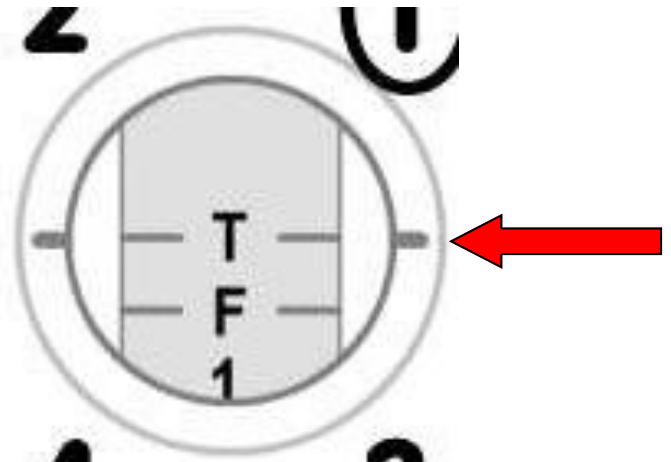
Set timing. The LED light is located next to the reader. When this slot passes under the reader, the LED light will come on and your timing will be set.

Before you set timing all you need to do is put your engines #1 cylinder at TDC (top dead center) using the factory inspection hole. It is located on the back of the engine above the shifter. Remove the cover, turn your engine over using the kick starter or put the cycle on center stand and put the bike in third or fourth gear. Have someone rotate the tire **slowly** until your timing marks indicate you have reached TDC. Goldwing models have two timing marks.

You need to use the marks for the front cylinders (#1 and #2).

Here is an illustration of how to put the #1 (left front) cylinder with the piston at TDC.

The **front cylinders** are adjusted from the "TF1" mark. If you read TF2, then rotate the engine 180 degrees until TF1 markings show up.



Now that you have timing set, all you need to do is rotate the encoder until the LED light comes on. Do this BEFORE you plug in power to the ignition coils. Once this is done, simply turn (by hand) the encoder disc the opposite direction of your engine rotation and when the small LED light turns red STOP and carefully lock down the bolt.



Step 6

Connect spark plug leads and connect power to coil.

Connect the spark plug wires so that the top plug wires go to the front cylinders. On the coil these are marked #1 and #4 but they actually run #1 and #2 on the Goldwing.

Goldwing 1000 =====>>> front-right #1, front-left #2, rear-right #3, rear-left #4.

Connect coil #2 and #3 to the rear cylinders (which are #3 and #4 in the Honda manual).

We recommend routing sparkplug leads so they never cross, and be sure you are satisfied with the routing before cutting wires to the correct length. You can use your stock plug caps or install a new set of NGK resistor caps.

Did you remember to ground the blue and brown leads to the frame?

You will probably notice your engine idle is higher. This is due to the increase in efficiency, and we suggest you lower it back down to around 1,000 rpm.

You will no longer need to leave the choke on as long, and this is to be expected with the C5 ignition.

Now grab your helmet and go for a ride!

We have put forth great effort to design and build a quality American made product. If you have suggestions or concerns please contact us.

This ignition was designed and built with much help from several GWRRA members and we appreciate their hard work to make this ignition a reality.

Happy & Safe Riding.

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