

Motobecane Hints. By Dan Adams version 1.2

First read Freds guide <http://www.mopedarmy.com/resources/articles/print/10/> it is a good resource, and for most mopeds it answers the questions you probably have. Motobecanes are a little different, and Fred's guide on checking, and setting timing does not really apply to motobecanes, that is why I put this together

Before we begin

Starting a Moby

Hold the decompression lever and pedal (rolling or not) as soon as you see the speedo lights shine (or are certain it is turning over) let off the decompression lever and give it a bit of throttle.

Things you should get

- Carb Cleaner
- Multimeter
- Terminal strip
- Emery boards (or fine sand paper)
- A few spark plugs (Champion L86c, NGK B5hs) gap should be .4 -.5mm (keep one extra in the container under your seat always)
- Small plastic ruler with millimeter measurements
- Cam/clutch puller (needed to reset timing) Moby specific **PIC 1a**
http://mopedwarehouse.com/catalog/product_info.php/cPath/27/products_id/381,
- Or 2 arm puller like in picture

First you need good spark. Get a NEW spark plug (Champion L86c, NGK B5hs) attach it to the plug cap, clamp the plug cap to the engine **PIC 2**, and get in a dark place if possible. Now attempt to pedal start the moped while looking at the plug, you should see a nice blue spark. If you have spark, skip to Check the Timing, if not check the following.

Note- Some mopeds need a good brake light bulb to run, Not Mobies.

- 1- Disconnect the wires that connect to each other near the ignition coil. Keep the wire connected to the coil, but disconnect the other wire that is attached. This will disable the kill switch which is often faulty. I recommend leaving it disconnected for these reasons. -You will still be able to stop the engine using the decompression lever
-You take a very bad switch out of the circuit that can short out and cause problems
-You will never pedal around the block with the bike in the off position.
-The horn portion of the switch will still work

2-Clean your points, to do this you will need to pull off the flywheel cover, which can be very difficult. With any luck your flywheel nut has been completely stripped out. The flywheel cover is Reverse thread you will need a 3/8" ratchet, and probably a pipe to fit over it to get some good leverage **PIC 3**. You will need to keep the engine "locked" to be able to unscrew the flywheel cap. The motobecane workshop manual specifies a piston stop, but I have had good luck using a second ratchet with a *mm ratchet, holding the clutch nut, and stopped against the pedal **PIC 4** If you still can not get it off, trying heating up the nut with a butane torch before re attempting.

Open and close the points, does the point's connection look solid? **PIC 5** Do the point surfaces look clean? Spray some carb cleaner on an emery board and place it between the points. Let the points close, and pull it through. Do this a few times for each side, then pull a dry clean piece of paper through. Points gap should be .35mm at max, resize if necessary using flat head screwdriver. Replace flywheel cover, and try to start.

3-Remove spark plug cap from external coil and examine plug wire where it makes an electrical contact inside the coil, this connection is often bad. Is the wire corroded? Does there look like a chance the connection was not tight? Strip a half inch of the insulator off the spark plug wire, then cut the copper off so it extends _", push the copper out to the sides, and push a small screw

driver into the opening to create a small opening **PIC 6**. Now carefully attach the spark plug wire to the coil, make sure the connection you just cleaned up fits snugly on the coils.

4-Examine all wires, and terminations through out the moped, and inside the headlamp. Look for places the wire seems damaged or crimped, or the connections seem loose, or corroded paying close attention to the connecting block behind the engine.

I recommend replacing the connection block with a new terminal strip (radio shack) **PIC 7** cut off a 4 connection piece, cut and strip the wires, and make nice new connections using the terminal strip.

Checking the timing You do not need to have the flywheel cover off to check the timing, but it will help you understand how it works to see the movement happening.

Pull the black, and brown wires off the stator plate, disconnect the grey wire that is connecting the stator plate with the spark plug, and the kill switch, connect a multimeter to the grey wire you just disconnected, and the other end to the engine ground. Set the multimeter to continuity, and then turn the engine over by hand. With every rotation the multimeter should change from open to closed circuit, you should see the points opening and closing as well. **PIC 8**

With every rotation you make the piston goes up and down once. You want the Piston to be 1.5 - 2mm Before the top dead center of the cylinder (TDC=Top dead center) exactly when the points open. (cady, commuter, mobyX 1.5mm, 40 and, 50 series 2mm)

Remove the spark plug, and wedge the ruler in the engine heat sink near the spark plug hole, place, and hold an allen wrench so the long side is resting against the top of the cylinder. Now as you turn over the engine the allen wrench will go up and down with the cylinder, and the multimeter will be displaying the point's status. **PIC 9** You want the points to open (become an open circuit) right when the allen wrench is 1.5 - 2mm before TDC.

Setting the Timing for this you will need a cam puller (see **PICS 1a,1b**) remove the cam, and push it back onto the rod gently into the position you think is right. After doing this, re check the timing again to see if it is right (it will probably take a few attempts to get it right). Once you have it right, put a small piece off wood against the cam, and bang it firmly back on with a hammer, check the timing one more time before replacing the flywheel cover.