

## Chrono LPCA calibration procedure

### Applies to

Chrono bikes built on 1/21/2019 and after.

### Issue/Symptoms

The auto calibration process on bikes built before 1/21/2019 calibrates the torque reading to zero every time the pedals come to a full stop for 3-5 seconds. If the tension adjustment knob isn't dialed fully to the left (zero resistance) when the pedals are brought to a full stop, then there is a possibility for the auto-calibration system to be calibrated to a false reading with no awareness given to the user. This can create disparate wattage readings that vary between bikes and is noticeable. This is easily corrected by turning the resistance knob to zero resistance (fully left), spinning the pedals, and then stopping the pedals fully for 3-5 seconds, which triggers the auto-calibration process and calibrates the bike properly.

### Resolution

The LPCA has been updated to make the auto-calibration function transparent to the user. The bike now monitors the torque calibration in relation to a zero point monitored by the LPCA. Calibration is manually set at the factory during assembly and the bike now monitors and will calibrate itself with no input or monitoring needed by the user. However, **there are instances where a manual LPCA calibration will need to be performed in the field.** They are:

- In the event of an LPCA replacement.
- If the torque reading is 14 in/lbs or more (with the pedals stopped and zero resistance) in the Torque menu.

In either case, an LPCA calibration is required (see procedure below). The LPCA Calibration requires a Universal AC Adaptor and technicians will need to acquire an adaptor for this procedure.



**Note: The AC Adaptor should only be used to charge a battery that is low and is not intended to remain plugged in during operation.** Leaving the AC Adaptor plugged in will initiate a manual calibration every time the pedals stop, which recreates the original process.

### Parts required

QTY	Part Number	Description
1	PPP000000304638102	Assy, PCA & SW, Chrono LPCA
1 <sup>(1)</sup>	PPP000000012306104	Universal AC Power Adapter [90-264 VAC/18 vdc,3.33 A]
1 <sup>(1)</sup>	PPP000000040081072	Power Cord (125 VAC) for the Universal AC Power Adaptor (PPP000000012306104)

Note (1) Order as needed.

### Procedure

Review entire procedure before starting.

- 1 In the console menu (see [Chrono Console](#) for menu access and navigation) scroll to "LPCA SW" and confirm the LPCA software is version 303713-103 or later.
- 2 Plug the Universal AC Adaptor into the power port on the LPCA (on the underside of the chain cover).
- 3 Access the Torque test in the console menu.
- 4 Turn the resistance knob to zero resistance (fully counter clockwise).
- 5 Spin the pedals and bring them to a full stop. This will trigger the LPCA Calibration. Wait 3-5 seconds. The torque reading should be 0 in/lbs.
- 6 Unplug the AC Adaptor, verify operation, and return to service.
  - a At zero resistance (knob turned fully left) the Wattage reading should be below 40 watts at 60 RPM.
  - b At maximum resistance (knob turned fully right) the Wattage reading should be above 415 watts at 60 RPM.