

# Shoprider Mobility Products - Troubleshooting

These are the most frequently encountered problems that our technical staff encounter.

Please check here for guidance before calling for service.

- [No power, scooter won't move with key switched on.](#)
- [Scooter has reduced power, limited speed and range.](#)
- [Scooter has no power or reduced power in forward or reverse.](#)
- [Erratic throttle control, scooter hesitates in forward or reverse, dead spots in throttle control travel.](#)
- [Horn sounds weakly when throttle applied.](#)
- [Scooter suddenly stops while in motion and brakes engage instantly.](#)
- [Circuit breaker trips frequently.](#)
- [Control box hum, brakes disengage \(click\) when key switched on up.](#)
- [Scooter moves slowly without touching throttle control.](#)
- [Flashing red, yellow and/ or green LED lights.](#)
- [Reduced braking power, slow to engage, slipping on incline.](#)
- [Brake won't disengage or engage randomly.](#)
- [Motor runs but scooter does not move.](#)
- [Excessive noise from transaxle area.](#)
- [Scooter stops but lights and horn work.](#)
- [Scooter pulls to one side.](#)
- [Excessive play in steering, squealing from tires when moving on floors.](#)
- [Batteries not charging or not holding charge.](#)
- [Motor overheating](#)

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**No power, scooter won't move with key switched on.**

## **Possible Cause:**

- Circuit breaker on main control box is tripped
- Fuse blown (check fuse in main control box assembly).
- Incorrect polarity at battery terminals
- Dead batteries.
- Charging cable is still connected to charging receptacle
- One of the cable connections at the main control box is loose.
- Control connection cable disconnected
- Broken key switch
- Throttle stuck fully open
- Throttle control potentiometer broken.
- Speed potentiometer broken

### **Solution:**

- **Check above possible causes first. If these check OK, the problem is likely to in the control connection cable or upper control box Verify that the upper control box is getting 24V. (Blue wire on red connector.)**
- **If the upper control box is not getting 24V, replace control connection cable**
- **If the upper control box is getting 24V, check key switch operation and verify wiring in the upper control box. Trace voltage from keyswitch on to find where the problem occurs. (Replace upper control box if necessary.)**

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**Scooter has reduced power, limited speed and range.**

### **Possible Cause:**

- One or both batteries need replacement.
- Insufficient charging time, batteries are not fully charged.
- Fault with charger, batteries not receiving a proper charge
- Cable connectors not making proper contact.
- Corrosion or bad connection at battery terminals.
- Battery charger circuit breaker tripped .

### **Solution:**

- **Perform a battery load test**
- **Check all wire connections from batteries to control box.**
- **Check battery charger output.**
- **Check battery charger for short circuit or reverse polarity.**
- **Check battery charger AC Circuit Breaker and fuse.**

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**Scooter has no power or reduced power in forward or reverse.**

### **Possible Cause:**

- Cable connection may be lose.
- Throttle control lever has slipped on potentiometer shaft and is not achieving full rotation.
- Throttle or speed potentiometer is broken.
- Throttle control lever is not centered on potentiometer shaft.
- Acceleration trim pot on control box circuit board is adjusted to low.
- Motor not receiving proper voltage, or motor not working

### **Solution:**

- **Reset cable connection, tighten nuts on battery terminals.**

- **Test throttle and speed potentiometers**
- **Examine Throttle control lever for looseness on potentiometer shaft.**
- **Verify that brake completely disengages when Throttle control lever is pressed.**
- **Verify motor voltage from the main control box assembly. (Should range from 0V to 24V as you engage throttle control to full throttle.**
- **If motor voltage is OK, check motor to ensure it is drawing around 4 A unloaded. (If motor is drawing too much current, replace motor.)**

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**Erratic throttle control, scooter hesitates in forward or reverse, dead spots in throttle control travel.**

**Possible Cause:**

- Faulty throttle control potentiometer.
- Loose cable connection to motor.
- Loose battery terminal connection.
- Worn carbon brushes or springs in motor

**Solution:**

- **Test throttle control potentiometer or try with a different upper control box assembly.**
- **Check cable connections to motor and batteries.**
- **Test with new motor installed.**

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**Horn sounds weakly when throttle applied.**

**Possible Cause:**

- Low battery voltage.
- Fault at upper control box circuit board
- Moisture in the upper control box.

**Solution:**

- **Load test batteries and check battery connections.**
- **Test with new upper control box assembly. If this resolves problem change circuit board**

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**Scooter suddenly stops while in motion and brakes engage instantly.**

**Possible Cause:**

- Lost contact at key switch.
- Fuse blown at main control box assembly.
- Lost connection in wire harness.
- Circuit breaker tripped on control box.
- Fuse blown in upper control box assembly.
- Relay not working or lost connection to relay.

**Solution:**

- **Check all wire harness connections.**
- **Check fuses and circuit breakers.**
- **Try replacing with new control console.**
- **Check connections on relay. Replace relay if necessary.**

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**Circuit breaker trips frequently.**

**Possible Cause:**

- Overload caused by excessive demand on motors.
- Heavy load on a steep incline .
- Brakes seized or no disengaging causing motor to strain and overheat.
- Low tire pressure or seized wheel bearings

**Solution:**

- **Find out what type of terrain and load scooter is subject to. May require more powerful model.**
- **Check that the batteries capacity matches demand from motors.**
- **Make certain brakes disengage when scooter moves.**
- **Check that motor is not drawing too much current (should be approx. 4 amps unloaded.)**
- **If no fault found elsewhere replace circuit breaker.**

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**Control box hum, brakes disengage (click) when key switched on up. Scooter moves slowly without touching throttle control.**

**Possible Cause:**

- Throttle has not returned to neutral position.
- May be stuck partial open.
- Return spring worn or broken
- Potentiometer not centered at neutral.

- Throttle control getting stuck on plastic tiller cover.

**Solution:**

- **With an ohmmeter test throttle control potentiometer for neutral**
- **Examine return spring for excessive play.**
- **Check for any obstructions in throttle control lever path.**
- **Straighten upper control box if necessary.**

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**Flashing red, yellow and / or green LED lights.**

**Possible Cause:**

- Battery cable connectors not making proper contact.
- Fault in control connection cable.
- Fault in upper control box assembly.
- Lost connection at relay for charging interlock in control box.

**Solution:**

- **Tighten battery cable connections with wrench or pliers to ensure proper contact.**
- **Check control connection cable for shorted or open lines.**
- **Check upper control box assembly for any visible faults, loose wire, etc.**
- **Replace with another upper control box assembly if necessary.**

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**Reduced braking power, slow to engage, slipping on incline.**

**Possible Cause:**

- Brakes worn out.
- Weak spring brake.
- Deceleration trim pot on control box circuit board improperly adjusted.
- Throttle control pot not centered.

**Solution:**

- **Brake should engage 3 – 5 seconds after releasing throttle.**
- **Check wire connection to magnetic brake**
- **Replace electromagnetic brake if necessary**
- **Adjust the dec. trim pot on control box circuit board (only IPC or Curtis 1203 style).**
- **Listen for brake clicking on then off when key switched on**

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### **Brake won't disengage or engage randomly.**

#### **Possible Cause:**

- Faulty electromagnetic brake.
- Wires to brake disconnected.
- Fault in wiring or in control box.

#### **Solution:**

- **Test for voltage at wire harness to the brake by connecting a voltmeter and applying throttle. If no voltage present, problem is with control box.**
- **Test spring brake. Scooter should not be able to roll with power off.**
- **Listen for brake engaging when key turned on. (Brake should stay engaged until throttle is pushed, then disengage or click off.)**

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### **Motor runs but scooter does not move.**

#### **Possible Cause:**

- Free wheeling lever at transaxle is not engaged.
- Free wheel lever is slipping on shaft

#### **Solution:**

- **If there is difficulty engaging lever roll the scooter ahead a bit and try again. Sometimes gears are just slightly out of mesh with each other.**

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### **Excessive noise from transaxle area.**

#### **Possible Cause:**

- Gear lubricant not reaching parts of transaxle.
- Wheel axle bearings contaminated or worn out.
- Imperfect mounting surfaces between transaxle and motor face plate

#### **Solution:**

- **Pull motor and check grease level in the transaxle. It should be approximately ½ cup of oil or grease. Gear lubricant can gravitate and pool in low areas, missing some parts.**
- **Remove motor and rotate 180 degrees, then re-install.**
- **Inspect wheel axle bearings.**
- **Make sure that all nuts and clamps are secure.**

- **Make certain that the motor gasket is in place.**

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### **Scooter stops but lights and horn dont work**

#### **Possible Cause:**

- Charging relay in motor control box is not secure.
- Problem with the motor control printed circuit (PC) board

#### **Solution:**

- **Open motor control box and remove the electricians tape from the relay. Make sure all the connections are intact. Re-insulate and secure the relay so that it cannot move.**
- **Replace PC board.**

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### **Scooter pulls to one side.**

#### **Possible Cause:**

- Uneven tire pressure in from wheels.
- Excessive tire wears on one wheel.
- Front wheels out of alignment.
- Worn ball joints or excessive play in linkage.
- Wheel bearing worn out or contaminated

#### **Solution:**

- **Lift front end and secure handle bar. Grasp wheel and rock back and forth watching for loose joints.**

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### **Excessive play in steering, squealing fro tires when moving on floors.**

#### **Possible Cause:**

- Front wheel out of alignment.
- Worn ball joints or excessive play in linkage.

#### **Solution:**

- **Squealing is caused by wheels pointed in different directions. Raise front end and secure steering handle bar. Rock wheels back and forth watch for loose or worn steering linkage. Use a strait edge on tires to see if they**

are out of alignment.

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### **Batteries not charging or not holding charge.**

#### **Possible Cause:**

- Battery voltage too low.
- Faulty charging cable.
- Charger not working.
- Charging circuitry in main control box assembly not working

#### **Solution:**

- **Charge batteries with a 12V charger or replace if necessary.**
- **Ohm test the charging cable – replace if necessary.**
- **Test scooter with a different charger, if new charger works, replace charger.**
- **Check wiring in main control box assembly – replace in line relay if necessary**
- **If batteries, charger, and all wiring is good, replace controller PCB. (Note the model number for the PCB, for example 1208-2330.)**

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### **Motor overheating.**

#### **Possible Cause:**

- Brake sticking.
- No voltage to brake. (Brake not releasing.)
- Bad motor.

#### **Solution:**

- **Remove 3 screws holding brake to motor and check if the brake will move freely with your finger.**
- **If voltage to brake is not 24v when power is turned on an 0V when throttle is engaged, replace main controller circuit board.**
- **Replace motor if necessary.**