

# Start Here

- Decreased Shocker Performance
- Decreased usage time
- Overloading
- Low voltage noted

# Lead Acid Battery Diagnostics Flow Chart

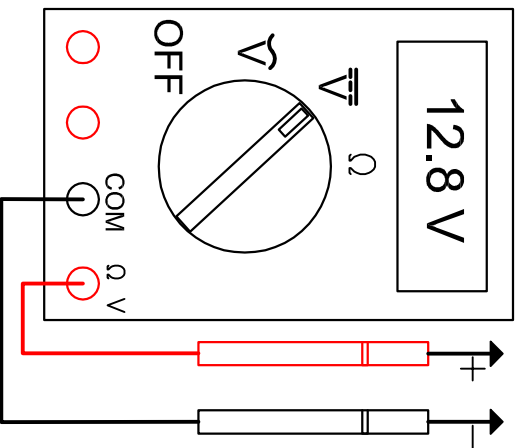
Investigate Battery/Health  
Check for blown fuse

- Rewire Battery
- Check Battery Fuse
- Check Charger Connectors

Replace Charger & Start Over

- Bad Battery
- Rebuild
- Spilt Cells
- Replace

## Digital Multimeter Configuration



Charge Battery Fully  
Using Functional Charger

### Observe Charger Stages (+-.2 V)

- Red = Charging (< 14.8 V)
- Green = Float Charge (= 13.6 V)

Voltmeter Reading	Charger Light	Time Elapsed	Chart Action
13.6 V Approximate	Green	> 1 Hour	Down
< 14 V	Red	> 4 Hour	Right
> 14 V	Green	> 1 Hour	Right
< 13.2 V	Green	NA	UP
< 13.2 V	Blinking	NA	Up

Remove from charge and wait at least 30 minutes

Check Terminal Voltage			
Voltmeter Reading	Battery Condition	Chart Action	
> 13 V	Good	Down	
12.7 V to 13 V	OK	Down	
< 12.6 V	Bad	Right	

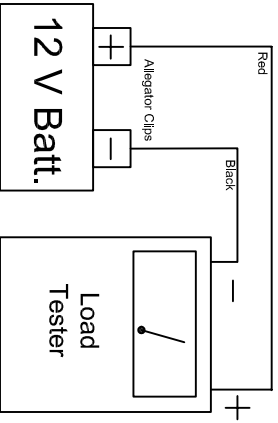
## Battery Load Testing

1. Connect to battery terminals - not the plug
2. Connect battery to load tester as shown
3. Observe voltage on load tester to confirm connection is proper. (13V +-2V)
4. Perform test per load meter spec
5. Read meter to acquire units in Amps.
6. Use table to right for action

Tester Reading	Battery Health	Chart Action
> 30 Amps	Good	Down
15 to 30 Amps	Aging but OK	Down
< 15 Amps	Replace	Right

### Fire Hazard and Safety

- \* Do not use load tester for at least 3 minutes following a test
- \* Do not touch back of unit box immediately following a test
- \* Place load tester away from combustible material to cool
- \* Do not store until confirmed that unit is cool



Recharge Using Charger

Reinstall battery in shocker and power on. Note voltage.

< 12.6 V ?

Yes  
Battery can't hold charge

Replace battery pack

No  
Remove battery from shocker and store all equipment

End Here