

# Testing the Minuteman 957761 Battery Chargers

Includes the 957761-1, 957761-2, 957761-3 and 957761G-4



10/27/2016

# Testing the 957761 chargers

- Start up charger with batteries cooled and discharged if possible.
- Listen for the charger's cooling fan to start within a couple of minutes of starting the charger.
- Test charger output current. Current should start to gradually increase to 10 to 11 amps.
- Listen to battery charger's fan. The fan should go to high speed when output current is around 10 to 11 amps.

# Testing the 957761 chargers Cont.

## Battery voltage during charge

1. The battery voltage should start to increase during the charging cycle.
2. Wet batteries must reach 28.8 volts total battery voltage, before the 80% charge LED (yellow) lights up and 34.4 volts for it reaches a 100% charge (Green LED).
3. Maintenance free batteries must reach 28.8 volts total battery voltage, before the 80% charge LED (yellow) lights up. The green LED will light up after reaching 28.8 volts and output current drops to .5 amps.

# Testing the 957761 chargers Cont.

## Charger Output Current During Charge

- The charger's output current should climb to 10 to 11 amps when starting a new charge after a couple of minutes. The batteries should be cooled and discharged for best test results.
- The current (amperage) will start to decrease when battery voltage reaches close to 28.8 volts

# Battery Charger Timers

The charger will continue to charge at maximum output until 28.8 volts is reached at the batteries or the charger's timer has expired.

- Setting 1 Wet 115 AH Group 27, 12 hour timer to reach 28.8 volts
- Setting 2 Wet 140 AH Group 31, 15 hour timer to reach 28.8 volts
- Setting 3 Gel/AGM 130-140 AH\* Group 31, 14 hour timer to reach 28.8 volts.
- Setting 4 Gel/AGM 100 AH\* Group 27, 11 hour timer to reach 28.8 volts.
- \* Non OEM batteries

# Programming the Battery Charger

(957760 & 957761 only)

## Instructions

1. Remove the rear metal panel on the machine.
2. Remove the 957761 charger completely from the machine.
3. Locate the rubber plug on the bottom right side of the charger.
4. Remove the rubber plug.
5. Locate the selector switch.
6. Use a small flat tip screw driver to turn the red indicator to the desired setting. See the chart below.
7. Replace the rubber plug and install charger into the machine.

Switch Position	Battery Type
1	All Wet Flooded Lead Acid 95 to 115 AH (Group 27)
1	AGM Maintenance Free Part # 956100 (95 AH) (OEM only)
2	All Wet Flooded Lead Acid 130 to 140 AH (Group 31)
2	AGM Maintenance Free Part # 956135 (135 AH) (OEM only)
3	GEL/AGM (NON OEM) 135 amp hr
4	GEL/AGM (NON OEM) 95 to 100 AH and Trojan AGM 102 (AH) hr. Minuteman Part # 956157

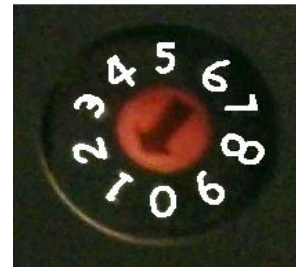
Note: These are the only settings available. For non OEM batteries, please contact supplier for the charging requirements. Select from the list above. The remaining settings do not have any additional functions.



Bottom view with plug



Bottom with plug removed



Selector Switch close up

# Battery Charger Fault Codes

(957760 & 957761 only)

The battery charging indicator is located on the rear panel on the machine. See picture.

Red = charge 0% to 79% complete

Yellow = charge 80% complete

Green = fully charged 100%

## **Red LED single flash = battery fault**

1. Batteries not connected or voltage is too low
2. Batteries wires incorrectly
3. Poor connections to batteries

## **Red LED two flash = charger has timed out.**

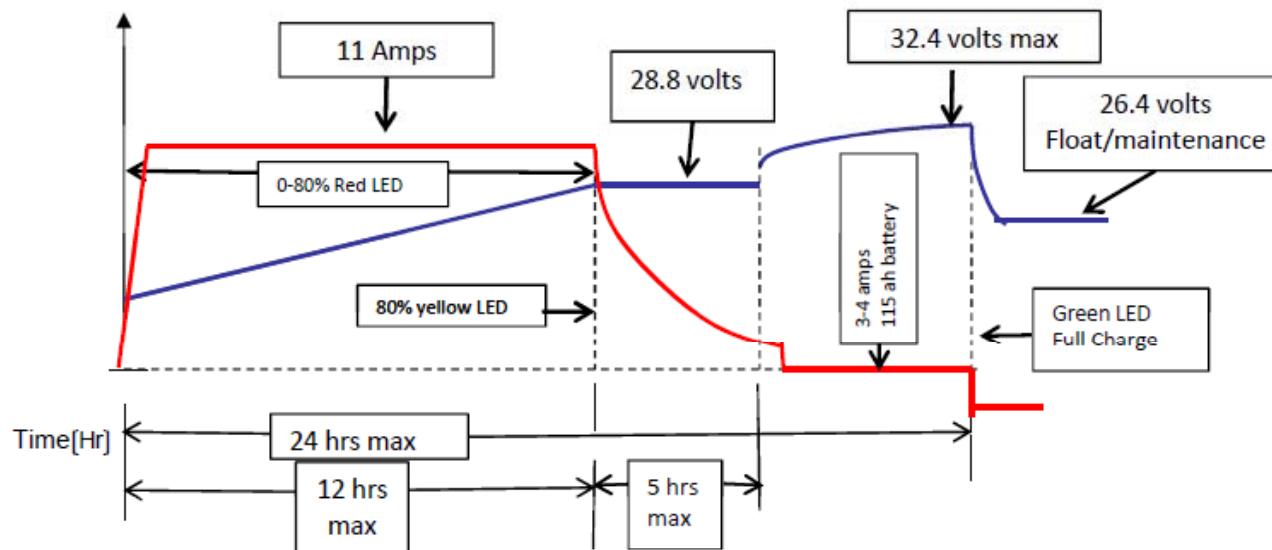
The timer has timed out. Timers are 11, 15, 20 or 24 hours. The charger settings determine which timers are used. See charger curve settings on the following pages.

Note: The two flash code may occur when batteries are new until they are conditioned. (cycling the batteries a few times by charging and discharging)



# Charging Curve Setting # 1

For group 27 wet or Minuteman OEM AGM batteries



957760 and 957761 Setting # 1

Charging curve for Minuteman 115 AH wet and 95 AH AGM batteries

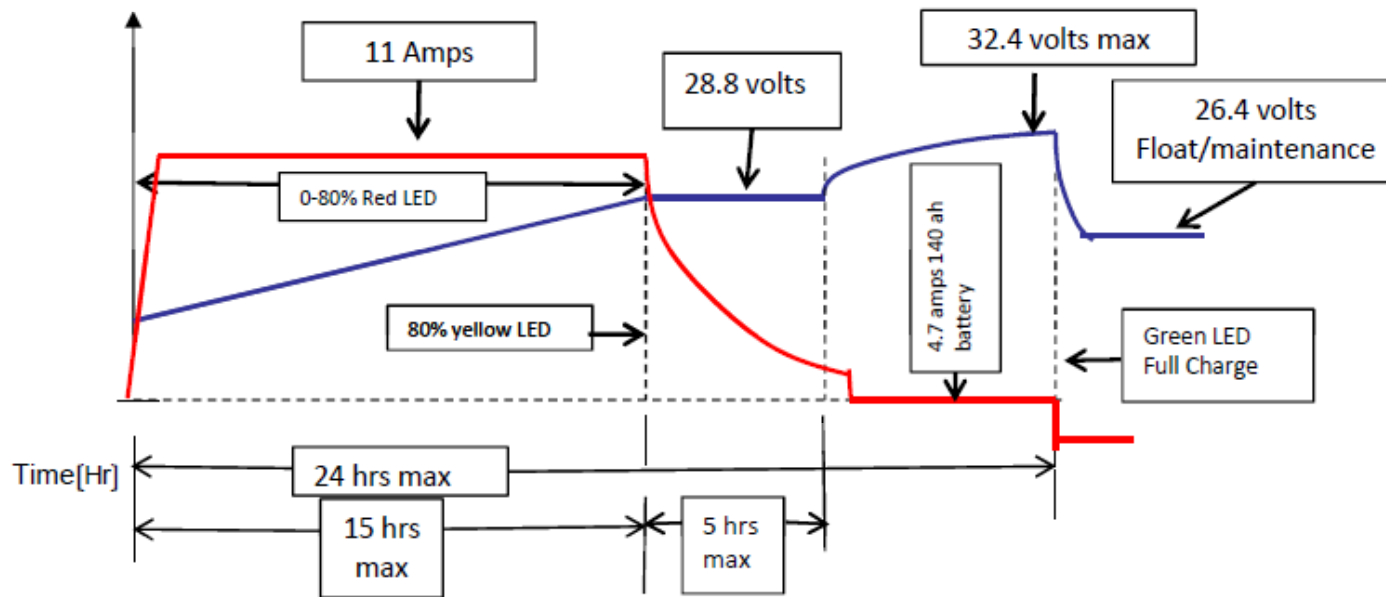
Blue = Voltage

Red = Amperage



# Charging Curve Setting # 2

For group 31 (130 to 140 amp hr) wet batteries



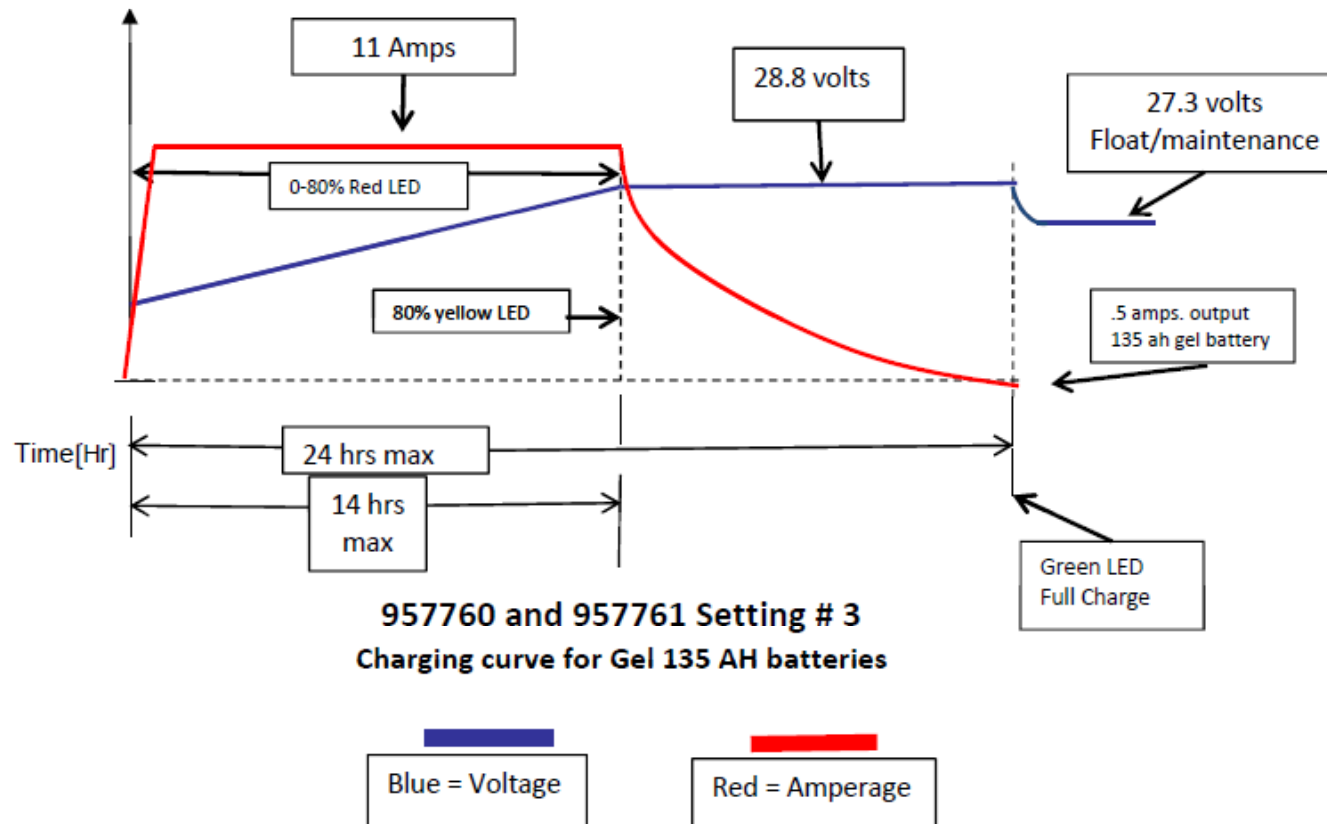
957760 and 957761 Setting # 2  
Charging curve for wet 140 AH batteries

Blue = Voltage

Red = Amperage

# Charging Curve Setting # 3

For group 31 (135 Amp hr) gel or non OEM Minuteman AGM batteries



# Charging Curve Setting # 4

For group 31 gel or non OEM Minuteman AGM batteries,  
except for the Minuteman 956157 Over Drive battery

