



1301 39th Street NW, Suite 2 * Fargo, ND 58102 * Toll Free 866.764.0616 * Fax 701.446.0103 * www.gemcar.com

Algorithm Selection Instructions DELTA-Q

Pre-2005 Models 0606-00623

<p>1. Check / Change Charging Algorithms:</p>	<ul style="list-style-type: none"> ▪ The charger comes pre-loaded with 6 algorithms. ▪ Each time AC power is applied with the battery pack NOT connected, the charger enters an algorithm select/display mode for approximately 11 seconds. ▪ Algorithms <ul style="list-style-type: none"> #13 Trojan normal charge #14 Deka GEL Normal Charge Cycle (default) #15 Deka GEL Pack Recovery Cycle (PRC) #24 Reserved (unused) – 8 Volt GEL #25 Reserved (unused) – 8 Volt GEL PRC #32 EV31 <p>EX. In the case of algorithm #14, it will be displayed on the 80% LED by flashing out the one then four, repeating the sequence FLASH-short pause-FLASH-FLASH-FLASH-FLASH-longer pause-FLASH-short pause-FLASH-FLASH-FLASH-FLASH-long pause etc.</p>
<p>2. Turn the Master Disconnect Switch (MDS) to the 'OFF' position.</p>	<ul style="list-style-type: none"> ▪ Start with the AC power disconnected, (car should be unplugged). ▪ Start with the DC power disconnected.
<p>3. Turn the ignition key switch to the off position as well.</p>	<ul style="list-style-type: none"> ▪ Start with the DC power disconnected.
<p>4. Disconnect DC-DC Converter power.</p>	<ul style="list-style-type: none"> ▪ Locate the DC-DC Converter under the dash area, lower passenger side. (See also Service Manual – Section 5 ELECTRICAL, Part # 1010-0021) Disconnect the 72 VDC 2-pin White/Green power harness.

<p>5. Apply AC power.</p>	<ul style="list-style-type: none"> The charger will go through a short self-diagnostics test, (quick up-down of LED lights). After the LED test, the Algorithm # will display for 11 seconds.
<p>6. The charger in the car.</p> 	<ul style="list-style-type: none"> During this time, the current Algorithm # is indicated on the '80%' LED by the number of blinks separated by a pause. (Refer to Step 1) To change algorithms proceed to Step 7. (You only have a short time frame to initiate the selection before the charger goes in to fault mode. A fault will be indicated by a flashing red light. If a fault mode appears, unplug AC power to the car, wait 30 seconds for the charger to reset, and repeat Step 5.)
<p>7. Details of the charger unit.</p> 	<ul style="list-style-type: none"> Physical characteristics of the Delta-Q charger unit may change per each revision. The newest revised Delta-Q charger indicates Roman numerals or bars for numbers rather than digits on the amp output scale on the side of the charger unit.

8. Use the MDS to change the algorithm.	<ul style="list-style-type: none"> ▪ To change algorithms, turn the MDS to the ‘ON’ position during the 11 second display period for a period of time greater than 0.5 seconds and less than 2.0 seconds. Then turn the MDS ‘OFF’ – the charger will then enter the algorithm change mode. * HINT: ON, count to 1, OFF. ▪ With the charger in the change mode, turn the MDS ‘ON’ for a period of time greater than 3 seconds and less than 5 seconds, then turn the MDS ‘OFF’. The LED should jump to the next algorithm. * HINT: Count 100, 200, 300, 400... ▪ Repeat until desired Algorithm # is displayed. ▪ A 2-minute timeout is extended for every increment. ▪ Incrementing beyond the last algorithm moves back to the first algorithm.
9. Setting the algorithm.	<ul style="list-style-type: none"> ▪ After desired Algorithm # is displayed, turn the MDS ‘ON’ until the output relay is heard to click (about 11 seconds) – ▪ The algorithm is now in permanent memory.
10. Verifying algorithm selection.	<ul style="list-style-type: none"> ▪ It is highly recommended to verify a newly changed algorithm setting. ▪ First, if the AC power is connected to the vehicle, disconnect the power and wait approximately 30 seconds for the charger to time out, (a click may be heard). ▪ Next, turn the MDS ‘OFF’. Then connect the AC power. Watch the self test and then verify the flashing LED lights at the 80% LED on the face of the charger unit. * NOTE: You only have a short period of time to verify before the charger will fault out and flash an error code. You must act quickly. If the charger faults out, repeat from beginning of this step. ▪ If the algorithm selection is correct turn the MDS ‘ON’. Done. If the selection is incorrect, start from the beginning of Step 2.
11. Charge the vehicle.	<ul style="list-style-type: none"> ▪ It is recommended to leave the car plugged in to run a full charge cycle (8-10 hours).
12. Algorithm Selection complete.	<ul style="list-style-type: none"> ▪ Done.