SkelStart

INSTALLATION GUIDE AND USER MANUAL

Skeleton Technologies
SkelStart™ Engine Module
24V / CCA 1200

Keep this user manual in your vehicle.

SKELETON TECHNOLOGIES

www.skeletontech.com

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SkelStart discharge

Prior to storing or packing the SkelStart™, please discharge as follows:

1. If the voltage between the SkelStart™ "S+" terminal and the "–" terminal of the batteries is above 2V

a) Switch OFF the SkelStart™ by holding down the button for 5 seconds.

b) Disconnect all the cables from the SkelStart™.

c) Connect a 24V load, such as a headlight (or two 12V headlights connected in series) or a 24V blower motor, across the "S+" and "B–" terminals. Leave them connected until the light goes out or until the blower motor stops running. This will discharge the voltage stored in the SkelStart™.

d) Verify that the voltage is 2V or less.

e) DO NOT use a cable, bare wire or low-/no-resistance conductor to discharge the SkelStart™!

2. Using a voltmeter, measure the voltage between the "S+" and "B–" terminals. If the voltage is less than 2V, the SkelStart™ is now considered safe for handling and shipping.

Switching the SkelStart ON/OFF

The SkelStart includes a green light-emitting diode that displays the status of the unit when the button is pressed. Holding the button for 5 seconds will turn the device ON or OFF.

NOTE: **This will only affect the charging circuit; it will not discharge the device or make it safe to handle if fully charged.**

A short press of the button will indicate the state ofthe device; a single short flash will indicate that the device is ON. In the OFF state, there is no response. A blinking LED shows that the SkelStart is charging.

NOTE: if there is dust on the button, it should be removed prior pressing the button.

Taking care of your SkelStart™

The terminals should be periodically checked for oxidation or for loose connections and should be cleaned or tightened as necessary. Prior to removal or system maintenance, ensure that the module has been discharged. No other maintenance is necessary.

Avoid installing in locations with potentially high temperatures. High emperatures have a negative impact on lifetime.

Disposal

For your SkelStart™, do not:

+ incinerate
+ crush
+ recycle with batteries
+ dispose of in trash

Dispose in accordance with the local regulations for electronic waste.

Jump Starting

If a jump start is required, do not connect the jump start cables directly to the SkelStart. Connect the jump start cable to the batteries or to a junction box.

Guidelines for handling after extended period of parking

If the vehicle does not crank the following procedure should be followed:
+ Make sure that the batteries are in charged to specified limit
+ Make sure that SkelStart is turned on and ready to use. This can be done by pressing the button. After which the LED will be lit for 5 sec.
+ If led does not light up this means that the device is not ON. To turn on the device press the button for 5 sec. If there is a need for the device to charge the led will remain blinking.
+ If the led stops blinking this means that the device is ready to use. This can be validated by pressing the button and led will be lit for 5 sec.

Removing the SkelStart from the system temporarily

If there is a need to restore current flow directly from the batteries to the starter, remove the cable from SkelStart B+ terminal (battery + to SkelStart cable). Then remove the cable from SkelStart S+ terminal (starter to SkelStart cable). After removing cables from terminals connect these two cables together with a strong electrical connection. This restores current flow from batteries to starter, leaving the SkelStart out of the system.

NOTE: **before this procedure disconnect cables from batteries and make sure you don't touch S+ terminal with a metal/conductive element connected with ground.**

WARNING

HIGH CURRENT HAZARD!
Power terminals pose an arcing hazard when the SkelStart is being charged. Make sure to always discharge the SkelStart before removing it from the system or handling it.

Do not operate/charge above 30V continuous/32V momentary
Do not operate the SkelStart above the specified temperature range (+65ºC / +149ºF)
Make sure to protect the terminals from accidental shorting.
If a jump start is required, use an external jump post if possible, or jump across any battery positive (+) and battery negative (-) terminal.

WARNING

DO NOT CONNECT IN REVERSE POLARITY!
Do not connect the terminals in reverse (+ to - and/or - to +).Arcing will occur if the SkelStart is charged, creating a electric shock and/or burn hazard. The SkelStart will be permanently damaged.

WARNING

DO NOT CONNECT THE CABLES FROM THE BATTERY TO THE STARTER+ TERMINAL OF THE ESM. IT WILL CAUSE THE BATTERY TO SHORT CIRCUITAND CAUSE ARCING.

WARNING

WARNING - THIS IS NOT A BATTERY - DO NOT JUMP START ON THE ESM!
Do not connect battery or jump start cable across the STARTER + "S+" and BATTERY - "B-" terminals. Chance of damage to the battery.

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