

RECALL 21V692 REMEDY INSTRUCTIONS



Make(s): NOVA CLASS B
Model(s): NAB20RB & NAB20RBM
Model Year(s): 2021 - 2022

Concern:
An AGM Battery was installed on the interior of the vehicle, not inside a battery box or vented to the exterior.

Repair Code: RC-093-01-00-004109
Allotted Time: 2.50 HRS.
Inspection Code: N/A
Allotted Time: N/A
Photo(s) Required: YES
Prior Authorization Required: YES
Part(s) Kit Number: F100290642
Part(s) Return: NO

Disconnect the vehicles' battery Positive and Negative, disconnect any House battery(s) Positive and Negative, if equipped with a generator ensure it is off and lastly, ensure the vehicle is disconnected from shore power. Block any tires/wheels to prevent the vehicle from rolling. Failure to do so may result in electrocution, fire or other personal injury, property damage and/or death.

INTRODUCTION

This installation guide is intended to aid a certified technician in installing two Battle Born Lithium Batteries in place of the 8D AGM battery installed currently underneath the driver's side twin bed.

The installation will require:

- (2) Battle Born 100ah LiFePO4 size Group 27 batteries
- (2) Group 27 plastic battery tray with strap
- Positive Red battery cable 18"
- Negative Black battery cable 18"
- Precision Circuits Li-BIM225

Fastener kit:

- (2) 3/8" x 1 1/4" bolts with (2) nylon lock nuts and (4) washers
- (20) #8 – 9 x 1 1/4" round washer head screws

Tools:

- Crimping tool
- Wire strippers
- Screw gun, Square bit
- 3/8", 1/2", 9/16", 3/4" socket wrench

STEP 1: REMOVE 8D AGM BATTERY. THE 8D AGM BATTERY IS LOCATED UNDERNEATH THE DRIVER'S SIDE TWIN BED;

- REMOVE BED BOARD;
- REMOVE BATTERY SECUREMENT STRAP BOLTS – 1/2" WRENCH AND SOCKET WRENCH;
- REMOVE BATTERY AND INVERTER CABLES FROM THE BATTERY POST – 9/16" SOCKET WRENCH;
 - TAPE ENDS OF CABLES TO PREVENT UNINTENTIONAL CONTACT AND ARCING.
- USE A HAMMER TO KNOCK LOOSE THE 1 1/2" SLAT/STICK DIRECTLY ABOVE THE BATTERY. THIS WILL ALLOW THE BATTERY TO BE PULLED OUT OF THE TWIN BED BASE;



- (Optional) remove storage box next to battery to give more space for battery removal. Unscrew at storage box cleats;
- If the Xantrex XC inverter/charger is mounted on a platform over-top the battery, dismantle both the platform and the inverter. Set aside to give space for battery removal.

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- E. ***HEAVY LIFTING*** LIFTING PARTNER RECOMMENDED. USE BATTERY HANDLES AND PROPER LIFTING TECHNIQUE TO REMOVE THE 8D AGM BATTERY FROM THE VEHICLE;
- F. UNBOLT AND REMOVE THE AGM BATTERY TRAY. LOCK NUTS ARE UNDERNEATH THE VAN. -3/4" WRENCH AND SOCKET WRENCH;
- G. SEAL THE TWO 1/2" BOLT HOLES WITH SILICONE.

ISOLATION MANAGER

STEP 2: REMOVE BIM160 AND INSTALL Li-BIM225

- A. LOCATE THE PRECISION CIRCUITS BIM160 BATTERY ISOLATION MANAGER.
 - a. IDENTIFY AND LABEL CHASSIS AND COACH BATTERY CABLES. THE BIM160 HAS THE CONTACTOR POSTS LABELED BATT-A AND BATT-B AND THE COACH OR CHASSIS BATTERY CAN BE ON EITHER. THE CHASSIS BATTERY CABLE WILL ROUTE DIRECTLY UNDER THE FLOOR AND WILL NOT BE CONNECTED TO ANY OF THE COACH DEVICES;
- B. DISCONNECT CHASSIS BATTERY AND VERIFY THE CABLE AT BIM160 HAS NO POWER;
- C. REMOVE THE BATTERY CABLE LUGS FROM THE BATT-A AND BATT-B POSTS USING A 1/2" SOCKET WRENCH;
- D. REMOVE WIRES FROM THE IGN, GND AND SIG POSTS USING A 3/8" SOCKET WRENCH;
- E. DISMOUNT THE BIM160 AND MOUNT THE LI-BIM225 SO THAT THE CHASSIS AND COACH BATTERY CABLES CAN REACH THE LI-BIM225 LABELED POSTS;
- F. INSTALL BATTERY CABLES ON THE CORRECT LABELED POSTS. INSTALL IGN., GND. AND SIG WIRES TO THEIR RESPECTIVE POSTS.
 - a. TORQUE THE BATTERY CABLE POSTS TO 50 IN. LBS.
 - b. TORQUE THE IGN., GND. AND SIG POSTS TO 20 IN. LBS.
- G. CONNECT CHASSIS BATTERY;

INSTALL BATTLE BORN LITHIUM BATTERIES

STEP 3: LOOK AT AREA AND ENSURE IT IS CLEAR OF ANY OBSTRUCTIONS;

- A. SET PLASTIC BATTERY TRAYS IN THE SPACE WHERE THE 8D AGM BATTERY USED TO BE.
 - a. CIRCUIT BREAKERS DISCONNECT DEVICES, AND/OR BATTERY ISOLATION DEVICES MAY NEED MOVED TO CREATE SPACE FOR NEW BATTERY TRAYS;
- B. SET BATTLE BORN LITHIUM BATTERIES IN THE BATTERY TRAYS, SECURE WITH STRAP. ONCE BATTERY FITMENT IS COMPLETE, SECURE THE BATTERY TRAYS TO THE FLOOR WITH #8 X 1 1/4" SCREWS;
- C. INSTALL PARALLEL BATTERY JUMPERS ON POSITIVE AND NEGATIVE POSTS WITH 3/8" X 1 1/4" BOLT AND NYLON LOCK NUT (LOOSELY);
 - a. THE BATTLE BORN BATTERIES COME WITH A 5/16" X 1 1/4" BOLT. USE THE 3/8" HARDWARE FROM THE PARTS KIT INSTEAD;
 - b. POSITIVE PARALLEL BATTERY JUMPER - FROM POSITIVE POST BATTERY#1 TO POSITIVE POST BATTERY#2. NEGATIVE PARALLEL BATTERY JUMPER - FROM NEGATIVE POST BATTERY#1 TO NEGATIVE POST BATTERY#2;
 - c. SEE *FIGURE 1* FOR PROPER HARDWARE ORDER;

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FIGURE 1

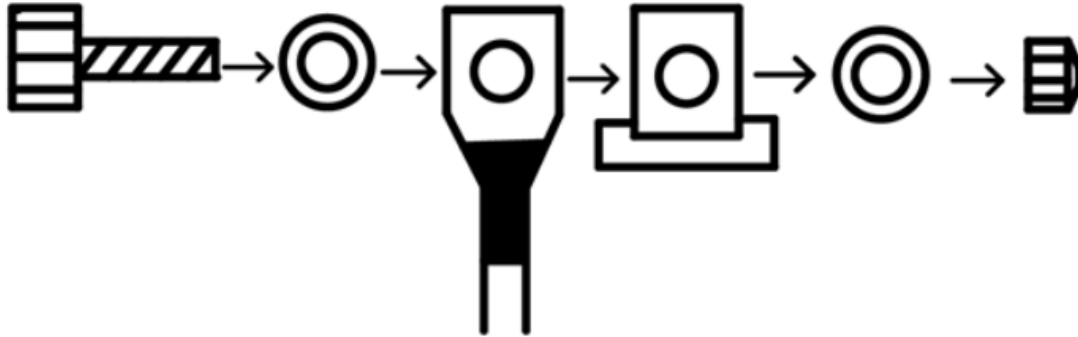


FIGURE 1: PROPER ORDER OF HARDWARE TO CONNECT CABLES. WHEN GOING FROM LEFT TO RIGHT IN THE DIAGRAM THE CORRECT ORDER IS: BOLT, WASHER, LUG, TERMINAL, WASHER, AND NUT. IF MULTIPLE LUGS ARE USED, THEY SHOULD BE ON THE SAME SIDE OF THE TERMINAL.

- D. INSTALL INVERTER/CHARGER CABLES(2/0 AWG) AND LOAD CABLES(1/0 AWG) ON THE LITHIUM BATTERY PACK SO THAT BOTH POSITIVE(RED) ARE ON THE POSITIVE POST OF BATTERY #1 AND BOTH NEGATIVE(BLACK) ARE ON NEGATIVE POST OF BATTERY #2.
 - a. SEE FIGURE 2 FOR PROPER CABLE CONFIGURATION.

FIGURE 2

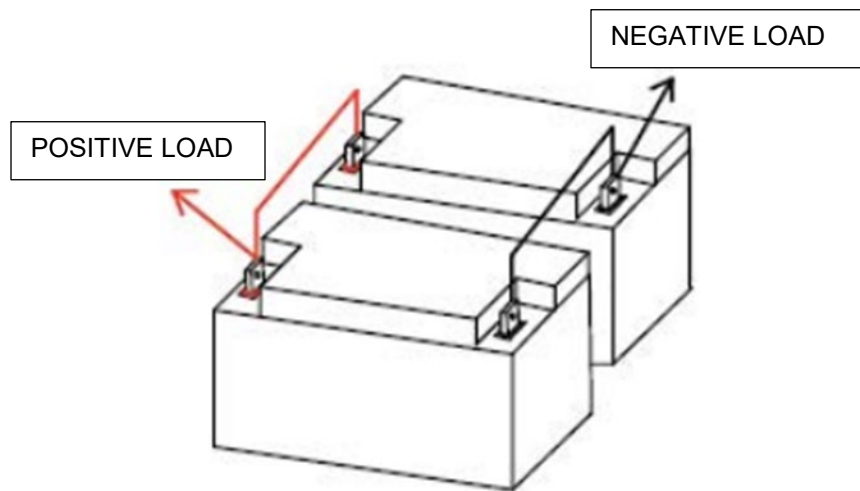


FIGURE 2: TWO 10012/10012H BATTERIES CONNECTED IN PARALLEL TO CREATE A 12V 200Ah BATTERY BANK

- E. FULLY TIGHTEN 3/8" X 1 1/4" BATTERY POST BOLTS AND LOCK NUTS TO 10 FT. LBS.;
- F. REINSTALL STORAGE BOX, INVERTER/CHARGER, AND PLATFORM IF APPLICABLE;
- G. REINSTALL 1 1/2" SLAT/STICK WITH SCREWS IN ORIGINAL LOCATION. REINSTALL BED BOARD.

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ADJUST CHARGE SETTINGS FOR LITHIUM BATTERIES

STEP 4: LITHIUM BATTERIES REQUIRE A DIFFERENT CHARGE PROFILE THAN AGM BATTERIES. XANTREX AND GOPOWER SETTINGS MUST BE CHANGED BEFORE CHARGING THE BATTLE BORN LITHIUM BATTERIES;

- A. GOPOWER SOLAR CONTROLLER CHARGE SETTING.
 - a. AT THE GOPOWER SOLAR CONTROLLER, PRESS BATTERY TYPE BUTTON AND HOLD FOR 3 SECONDS TO GO INTO BATTERY TYPE SELECTION MODE. PRESS BATTERY TYPE BUTTON UNTIL THE LIFEPO4 BATTERY TYPE IS ILLUMINATED ON THE BOTTOM OF THE SCREEN. PRESS VOLT/AMP BUTTON TO SELECT AND SAVE THE NEW BATTERY TYPE.
- B. XANTREX CHARGER SETTINGS.
 - a. AT THE XANTREX FREEDOM X CONTROLLER, PRESS AND HOLD THE 'OK' BUTTON UNTIL THE SETTING SCREEN IS SHOWN (CENTER SCREEN WILL REPEATEDLY FLASH "[00]");
 - b. ADJUST THE SETTINGS USING THE '^' AND 'OK' BUTTONS TO MATCH THE TABLE BELOW:

<u>Setting#</u>	<u>Pro 2000(Gen)</u>
01	OFF
02	11.0
03	300
04	13.1
05	25
06	d15
07	60
08	120
09	2.0
10	300
11	APL
12	90
13	NAt
14	bON
20	LFP
24	*80-100*
26	OFF
28	30

- c. FOR SETTING #24, THIS SHOULD BE LOCKED(NON-ADJUSTABLE) AT 80. IF IT IS ADJUSTABLE, IT CAN BE SET AT 100A WITH THE BATTLE BORN BATTERIES INSTALLED.

CLAIM REPAIR CODE