ELECTRICAL: FUSES

If a fuse is replaced and then blows 10-days later, it is likely due to an overloaded circuit. If you replace a fuse and it blows immediately afterwards, stop what you are doing as there is likely a dead short somewhere.

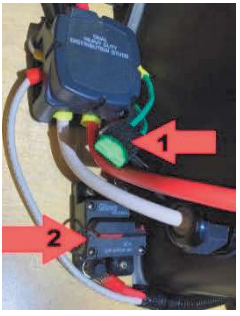
A glass cylinder with chrome caps on each end and a visible wire inside is called a glass fuse. Some devices briefly require a large amount of power when starting-up and then level off to a low current flow. Others have a steady & predicable current draw during all phases of its operation. For this reason, two fuse types apply here: slow blow and fast blow. A slow blow fuse has a thick wire that might resemble a thin metal guitar string and it can tolerate a high current for a short period before melting. A fast blow melts immediately when subjected to a high current. For what should now be obvious reasons, never substitute one fuse type for another.

We grouped the Hidden 13 by where to find them

UNDER THE BED

The bed consists of 3 separate mattresses because there are three compartments accessible by lifting three different hatches. The passenger side contains the battery shutoff switch and all those items accessible to the outside rear passenger storage hatch. Any future reference to the BATTERY compartment means this area. The driver's side compartment contains the ALDE system, the bypass valve and those drain valves accessible by the driver's side storage hatch. Any future references to ALDE compartment mean this area. Access the DC to AC inverter through the center one.

BATTERY COMPARTMENT



Victron Solar Controller

There are two fuses protecting the solar controller which is mounted in the ALDE COMPARTMENT but the fuses are located in the BATTERY & ALDE compartments. *Fuse #1* is a 30-amp ATO protecting the constant power circuit for the controller. See #7 and #8 as well.

ELECTRICAL: FUSES

Battery

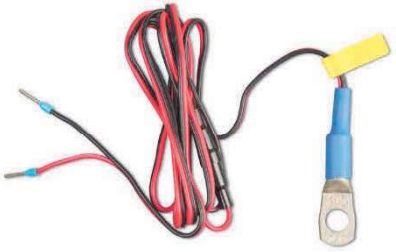
Fuse #2 technically isn't a fuse, but since it qualifies as a "hidden" breaker, it's included here. Instead of a simple inline fuse, this is a waterproof 40-amp marine breaker. One weakness to the design is that being located on the floor of a general storage area, it's possible to accidentally trip the breaker if something presses on the red button.

AIMS Inverter

The inverter is protected by two different fuses. *Fuse #3* is a 150-amp Stinger mounted under a clear rectangular plastic housing attached to the heavy gauge wiring on the forward bulkhead of this compartment Fuse marked #4 is physically part of the inverter and is a 15-amp KLKD under a black twist-off cap.

Victron BMV-712 Battery Monitor

When we added this item after taking delivery, it required a slight re-direction of the negative (white wire) cables and a few other tweaks to the electrical set-up. One of these was to install a combination temperature probe and power cable from the positive terminal block to the battery monitor. There is an in-line fuse holder with *Fuse #12*, a 100ma 250v GDC 20mm glass fuse. The GDC tells you it is a slow-blow.

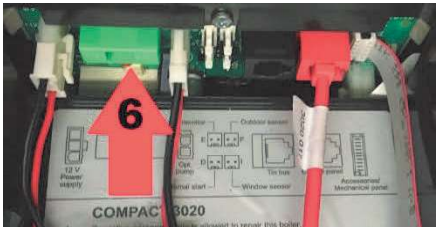


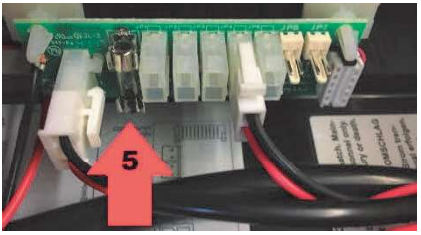
ELECTRICAL: FUSES

ALDE COMPARTMENT

ALDE 3020 COMPACT HEAT & HOT WATER

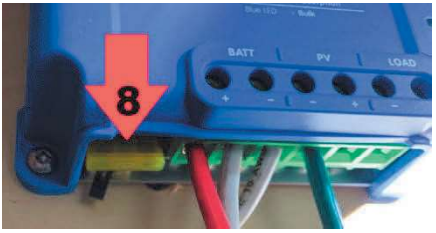
The ALDE system is protected by two glass *Fuses #5 & #6* directly on the unit in addition to the 20-amp circuit breaker on the electric panel. ALDE includes two spare fuses in a plastic bag directly on the unit and while the tool bag spare fuses contains spares, please use the ones on the unit first. The fuse is a 20 mm Slow Blow 3.15-amp glass fuse rated at 250V with a part number of T3.15AL250VP. To access them, you open the black access panel (right) marked PULL to see the following:





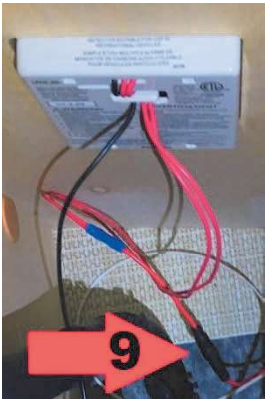
Victron Solar Controller

The solar charger is mounted on the rear bulkhead of this compartment and if the bright blue doesn't catch your eye, it also flashes blue periodically. There are three possible circuits marked BATT, PV and LOAD. BATT is protected by Fuse #1. *Fuse #7* is in-line and protects the PV (Photovoltaic) circuit with a 30-amp ATO. *Fuse #8* is hard to see because its physically mounted on the underside of the controller, but it is a 20-amp ATO.



ELECTRICAL: FUSES

WARDROBE CLOSET



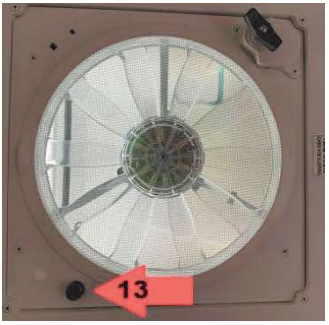
On the bottom of the wardrobe closet is an access hatch. Here you can see the rear of the Atwood LP and CO2 detector. There is an inline fuse holder containing *Fuse #9* which is a F1AL250VP glass fuse.

ENTERTAINMENT

The Jensen TV is a 12-volt DC device. *Fuse #10* is an inline Mini-ATC fuse holder with a 7.5-amp fuse.

Fuse #11 protects the 12-volt Jensen radio with 10-amp ATC fuse physically mounted to the rear of the radio. You need to remove the faceplate and remove the screws to take the radio out. No photo appears because frankly it's not worth the effort to take it out just to show what it would look like if you did.

FAN-TASTIC FAN



We upgraded the model #1400 fan with a #7350 that has an MDL 4-amp slow blow 30mm glass fuse under a black fuse holder on the face of the fan. This is in addition to the 7.5-amp ATC fuse in the converter panel.

REFRIGERATOR

According to Norcold Tech Support, the DC line is protected by a 15-amp fuse and the AC line by a 3-amp fuse. Neither can be replaced without taking the unit apart so if the NR751BB fails, it's a factory fix.

ELECTRICAL: FUSE KIT

A set of spare fuses & fuse tester can be found in the main toolbag located in the cargo area under the bed. If it gets lost, the box Mini Skater #MSN6164 clear plastic available on Amazon.

FUSE DIRECTORY			
FUSE #	LOCATION	Amps & Type	PROTECTS
1	Battery Hatch	30-amp ATO	Solar Controller BATT Circuit
2	Battery Hatch	40-amp Breaker	Battery
3	Battery Hatch	150-amp Stinger	Inverter wiriing
4	Battery Hatch	15-amp KLKD	AIMS Inverter
5 & 6	ALDE Hatch	T3.15 A 20 mm glass	Alde 3020 Furnace
7	ALDE Hatch	30-amp ATO	Solar Controller PV Circuit
8	ALDE Hatch	20-amp ATO	Solar Controller Device
9	Hatch in Closet	1-amp F1AL250VP 20mm glass	CO2 & Propane Detector
10	TV Wall Bracket	7.5-amp Mini-ATC	Jensen TV
11	Rear of Radio	10-amp ATC	Jensen Radio
12	Battery Hatch	100ma250v GDC 20mm glass	Victron BMV-712 monitor
13	Face of Main Fan	4-amp slow blow glass	Fan-Tastic #7350 fan

CONVERTER PANEL 12V Side		
CIRCUIT	Amps/Type	PROTECTS
1	7.5 / ATO	NuCamp Monitor
2	7.5 / ATO	Inside lights step light
3	7.5 / ATO	Ceiling Fan
4	7.5 / ATO	Alde / Cool CAT
5	7.5 / ATO	Water Pump / LP Detect
6	15 / ATO	Radio / TV
7	15 / ATO	USB 12v Outlets
8	20 / ATO	Refigerator

While the converter panel is covered more completely under its own topic heading, the fuses on the 12V DC side were duplicated here so all fuse information for the trailer can be found in one place.

You can cut out the graphic and it fits perfectly inside the top cover of the Mini Skater box.

T@B400 2019 - FUSE KIT	
Amps & Type	QTY
100ma GDC 20mm glass	1
1-amp F1AL250VP 20mm glass	2
T3.15 A 20 mm glass	4
4-amp MDL slow blow 30mm	1
7.5-amp Mini-ATC	5
10-amp ATO	1
15-amp KLKD	1
20-amp ATO	2
30-amp ATO	2