

Operations Manual

for

Camper Van



A 2003 Ford E350 Super Duty delivery van
converted to a camper by insnackium productions.



1.0) Introduction

Betty Belair was once upon a time a delivery van for a wine distributor. Over the course of several months in 2020-21, the delivery van was converted into a two person camper. This manual describes how to safely use the camper components added in 2020-21. Because the original intent of the camper was to get to/from overnight craft shows, the emphasis of the camper conversion was to provide a lot of storage space, so creature comforts were designed around this.

2023 Update: For this season, Betty got a re-design of the cabin space: including the addition of a full size mattress and full-time access to the fridge.

1.1) Orientation

All directions used in this manual are from the viewpoint of someone sitting in the driver's seat: front and rear, right and left are used accordingly. If some of the directions don't jive with the photos in the manual or what you are seeing, make sure of your orientation, especially if you're looking toward the rear of the camper.

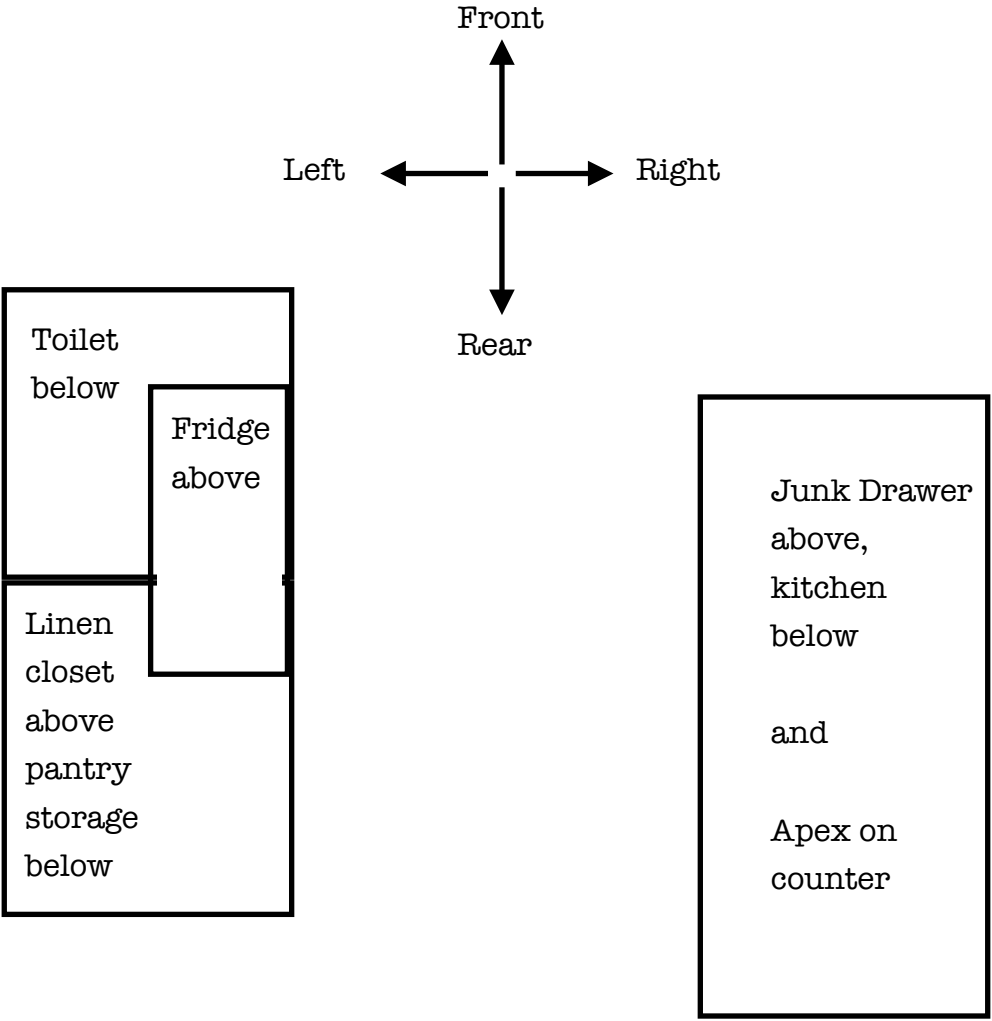
FYI: the word "cabin" refers to the "living area" of the camper (bed, kitchen, dining, bathroom, including the storage underneath). The term "storage" is used to describe the under-bed/-counter storage accessible through the rear doors.

For you visual folks, see Figure 1, next page.

1.2) Safety First

The purpose of this manual is to provide information about Betty Belair that you need to know in order to be safe while using the camper.

Please use the provided checklists to minimize any hassles while using Betty Belair.



(Not to Scale)

Figure 1. Camper Orientation

2.0) Before Starting

2.1) Chock(s) Away!

Remove the chock from in front of the rear right wheel. Store the chock on the floor of the cabin or in the back.

Parking with the front of the camper pointing downhill will be best for sleeping with your head to the rear, feet to the front. This is why the chock goes in front of the wheel.

2.2) Pull Outs, “Drawer”, & Storage

When driving Betty Belair, it is important for things to stay where you put them, to not move around when you make a turn, for example. This means that you have to make sure that all three pullouts and the over cab storage are secured before you drive off. This involves some slide locks, a hook & eye, and something that’s been used for a long time.

2.2.1) Junk “Drawer”

The junk drawer in any kitchen is the place to put all those things that’ll come in handy even if you never need them. Betty’s “drawer” is on the right side, at the foot of the bed.



Shown open: and a hold open device close up:



2.2.2) Kitchen Pull Out

The kitchen pull out is on the right side, under the junk drawer. It is held in place with a single slide bolt lock. The kitchen pull out is on omni wheels so it can move in any direction you push it. Also, with the cover closed, you can use the pull out as a seat.



The kitchen pull out has what you need to cook a meal or two, plus a couple of things you may find handy. Starting in the upper right corner of the photo to the right you'll find a fan that plugs into the Apex (which will also charge the fan's battery).

Moving clockwise, the next two items are propane canisters for the camp stove (behind passenger seat).

The round silver thing at 5 o'clock is the cook set (frying pan/lid, couple of pots, & handle).

Not easy to see to the left of the cook set is a bag of bags.

The green and orange items above the cook set are two mess kits (cup & utensils included).

And finally, the black thing on the left is a bag containing the cooking utensils shown in the bottom photo.



2.2.3) Toilet Pull Out

The toilet pullout is the right hand pull out below the refrigerator. It is held in place by a single slide bolt lock and shown open in the photo to the right.

NOTE: the toilet pull out DOES NOT have omni wheels so it may be a little more difficult to get where you want it, sometimes.



2.2.4) Pull Out #3

Pull Out #3 is to the rear of the toilet pull out and is also held in place by a single slide bolt lock. This pull out has omni wheels so you can put it where you want it. Also, it can be used for seating like the kitchen pull out, but only one at a time, please.



When you first open Pull Out #3, you'll find the linen closet, which has a spare set of sheets for the bed. Under the linen closet is where the cleaning supplies are located. This is also where you'll find paper towels, toilet paper, toilet tablets, and some bungee cords.



2.2.5) Over Cab Storage

The over cab storage (closed on left, open on right) is where you can store the window curtains, wind shield cover, and whatever else you may need to store in the cabin.



2.2.6) The Garage

There is a lot of space under the bed to (hopefully) store whatever gear your adventure requires. The two camp chairs shown are included.



2.3) Electrical

Check the voltage on the Apex. If it is low, then you should swap the charging input from solar to vehicle DC, as follows:

unplug the solar connector;

plug in the vehicle DC connector;

from the driver's seat, plug in the red power cord into the receptacle on the dash i.e., the cigarette lighter.

IMPORTANT: When you stop for the night you **MUST** unplug the red power cord from the dash. If you don't, then you'll run down the vehicle battery, Betty Belair won't start, and hassles will surely come next.

The Apex users' manual is included at the end of this manual.

(NOTE: the PDF version of this manual does NOT have any appendix material.)

See section 4 for more on the Apex.

2.4) Final Pre-Start Check List

A) Chock removed and stowed.

B) Pull outs and over cab door secured.

C) Check Apex voltage and swap power source if necessary (see Section 4).

3.0) On the Road

There shouldn't be too much to worry about while driving Betty. She's probably a little taller and heavier than most vehicles you're used to driving, so you'll have to account for that. She also has a large turning radius, so please plan accordingly.

3.1) Miscellaneous

The fridge is plugged into the Apex and the solar panel is charging the Apex, so the fridge should be all set.

Please do not add your phone to the audio system...I'm still trying to get rid of "iPhone Sylvia" from my daily driver (sigh).

3.2) Cruise Control

There is an after market cruise control system installed in Betty. It is on a little stick between the steering wheel and the dashboard, sticking out of the left side of the steering column. When sitting in the driver's seat, you're looking for this:



There are two control switches; a push button on the end of the stick and a slide switch you can see in the photo. This cruise control works just like most others: turn on the cruise control, set to the speed you want, speed up/slow down, and turn off the system.



Slide the switch to "On" when you want to use the cruise control. When you reach your desired speed, push and release the button on the end of the stick. To coast (i.e., lose speed and reset to a lower speed), push the end button and hold it until you reach the new, lower speed. To accelerate and reset to a higher speed, slide the slider to the left and release when you reach your new higher speed. Tapping the brakes will put the system in standby mode and you have to control the speed with the gas pedal. Pushing the slider to the left and then releasing it will resume cruise control at the last set speed.

It takes a little getting used to, so familiarize yourself with the cruise control before starting the engine.

3.3) Backup Camera



A backup camera has been installed above the rear doors, below the third brake light, that is pointed slightly downward.

This view is shown on the in-dash audio system screen.

Just remember that this backup camera view may not be what you are used to since it is mounted so high. The view you see on the screen will still help you figure out how far you are from the wall behind Betty Belair, but it'll be more a "bird's eye" view than "driver level." This means that if something goes off the bottom of the screen as you're backing up, it just went under the rear bumper and it's probably time to stop.

4.0) Stopping for the Night

If you are charging the Apex using vehicle DC: unplug the red power cord from the dash right after you turn off Betty Belair. Next, go swap the power input for the Apex from DC to solar panel.

4.1) Parking

When you get to your campsite, park in the sunniest spot you can so the solar panel can supply as much energy to the Apex as possible.

If you're parking on a slight slope:

- A) parking (with the front) downhill will make for the most comfortable sleeping position so
- B) set the chock in front of the right rear wheel.

4.2) Setting Up for the Night

There really isn't all that much to set up inside Betty when you set up camp for the night. The plastic step stool and shoe brush can be placed outside the side door and the step for getting onto the bed can be easily accessed from behind the driver's seat.

4.2.1) The Toilet

A toilet is included for two reasons:

1) some places (think, national parks) require you to have a working toilet before you can spend the night there, and

2) for one thing it's more convenient than the bathhouse in the middle of the night.

If you are using the toilet for reason #1, then you are going to have to use the provided tablets (per provided instructions at the end of this manual) and flush using the rhyme:

If it's pee, let it be. If it's brown flush it down.

Also, since you are returning Betty in the same condition in which you borrowed her, you get to empty the toilet's holding tank.

Which bring us to reason #2: I'll go to the bathhouse for pooping in the middle of the night, but not for peeing. After all, I don't really mind dropping in a toilet tablet and cleaning out the pee from the toilet's holding tank when I get back home. It's a whole lot easier to deal with just a liquid than a liquid and solids, too. Just don't forget to empty it...

The less you flush, the longer you should be able to go before needing to empty the waste holding tank.

Of course, you have to remember to open and then close the slide valve after each use per the instructions, too.

The toilet's fresh water tank is not full when you pick up the camper. There's a five gallon container of water in the garage, should you need it. A roll of toilet paper (special for this toilet!) is in the Junk Drawer and you can use the handrail as a place to put it, too.

Pull Out #3 contains extra (special) toilet paper and the tablets for the toilet. See the “Portable Toilet Instructions” in the back of this manual for more on your new toilet.

4.2.2) Kitchen

4.2.2.1) Refrigerator

The refrigerator will be set up when you pick up Betty.

4.2.2.2) Camp Stove

Due to safety concerns, it is not recommended that you use the camp stove inside Betty.

After removing the camp stove from behind the passenger’s seat, place it on a picnic table and open it up (picture at right).



The sides open up and clip into the back with a couple of “V” clips (middle picture). Take out the tube and attach it to the propane canister you’ll find in the kitchen pull out. Then attach the other end of the tube to the camp stove as shown in the bottom photo.



There should be matches in the Junk Drawer to light the stove. To light the stove, turn the dial on the front of the stove of the burner you want to use until you hear the gas start to come out. Strike a match, light the gas, and set the flames to what you need for cooking.

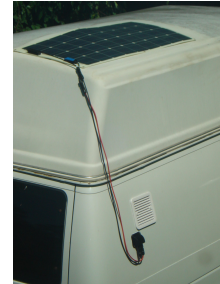


After everything has cooled off, break down the stove in reverse order of the above and stow it back behind the seat; canister goes back in the kitchen pull out.

4.3) Cabin Electrical System

The electrical system consists of three components (from left to right in photos below):

the Inergy Apex (showing its vehicle DC charger and cord at top),
a lead-acid battery under the counter, and
a solar panel on the roof.



The Apex is a (lithium ion) battery with a built-in power management system. It can be recharged with a solar panel or from the camper when it is being driven, but NOT from both at the same time! (There's also a shore-side receptacle if you need to recharge using a campground's power.)

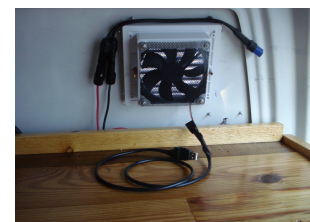
The on/off switch for the Apex is silver and in the upper right front cover. When you pick up the camper this switch is set to 12 volt DC. This keeps the fridge running and powers the USB ports. If you need household current, then turn the switch to the right to activate those receptacles, too. This setting also turns on an internal fan so it drains the batteries a little faster than the "DC only" setting. See the Apex instruction manual at the back for more info. If you do have to activate the household current, you'll also have to re-set the fridge (see manual in appendix).

The lead acid battery connected to the Apex just about doubles the capacity of the system to about 190 Ah.

DO NOT DISCONNECT THIS BATTERY!!

The solar panel connector inside the cabin looks like this:

(This photo also shows the ventilation fan which is turned on by plugging it into one of the Apex's USB ports.)



Even on a cloudy day, the solar panel should still charge the battery, just not very fast or much. On a full charge, the Apex should power the fridge for a full day.

Since the solar panel can charge the Apex when the Sun is out, it is the preferred way to charge the Apex and how it is set up when you pick up Betty Belair. You should only switch the power input to the Apex when you're ready to hit the road again. Photo on the left shows the solar panel connected to the Apex; the right shows the vehicle DC connection:



The red and black cables shown going down behind the counter are for the lead-acid battery. Please DO NOT disconnect these because it's a pain to re-connect them.

The cable plugged into the front of the Apex (with the red stripe on it) is for the fridge. If you unplug the fridge (or the batteries are drained and it turns off), then you'll have to reset the temperature it is set to. The fridge should be set to 37 degrees Fahrenheit (3 degrees Celsius). If you want to use it as a freezer, then set it to zero degrees Fahrenheit (-18 degrees Celsius). Remember that the unit can be a fridge or a freezer, but NOT both at the same time. See the fridge operating manual in the back for more.

Also, in the Junk Drawer are a set of four puck lights with a remote control. The lights have magnets on the back so they can be placed just about anywhere in the cabin. There's also a small fan in the Junk Drawer. I'm still trying to find the "perfect" fan for Betty, so these'll have to do until I find it.

4.4) Lights Out

One of the first things you'll want to do after you've parked Betty for the night is to put on the windshield cover. It's located in the cabinet above the cab and goes on like this:



There are curtains for all of the other windows. These are stored with the windshield cover. All the curtains are labelled as to where they go (see photo on left, kinda). There are five in all. The left side curtain can be opened halfway to allow a breeze to come in, as shown in left photo.

3rd edition note: the fridge now "covers" most of the left window, so the left photo below is not accurate.



5.0) On the Road, Again

Getting back on the road again should be a matter of reversing whatever you did to set up camp. The following checklist will help make sure everything is where it should be before setting off, again.

5.1) Toilet

Check to make sure there is nothing in the toilet that is not in the holding tank. Open the slide valve to drain the toilet if you have to and close it again.

Place cover on toilet.

Close Toilet pullout and secure it with its slide bolt.

5.2) Cabin Interior

Secure over cab storage door.

Secure kitchen pullout and Pull Out #3 with their slide bolts.

5.3) Other

Check the voltage on the Apex and swap charging cords, if needed (see sections 2.3 and 4.3).

Remove chock and store it in the cabin or under the bed.

6.0) The Other Manuals You'll Maybe Need

(Remember: the PDF version of this ops manual does NOT have this stuff.)

In order of appearance, what you'll see on their front covers, are:

- Inergy Apex User Manual
- Portable Toilet Instructions
- Instruction Manual with picture of (yes that is) a fridge, backed by Sony AV Receiver (has CarPlay)
- Koonie fan backed by mattress instructions

The last sleeve is meant for emergencies:

TomTom GPS (which is in the driver's console up front)

Fire extinguisher and smoke detector manuals