

# Door Swap Process

## Purpose:

This process describes how to order, prep for and swap a door in the field. Any other items that can be or will need to be replaced at the same time as the door will need to be arranged prior to the actual visit to ensure a single-visit repair.

## Scope:

For kiosks where only the door has been damaged or rusted/worn beyond repair and when the entire cabinet, including the gasket lip, are undamaged. Don't replace a door where the kiosk is going to be swapped anyway. Bring all tools as normal but the below will be required for this process.

### Tools required:

- Side Cutters
- Allen Keys
- Nut Drivers
- Ratchet and Sockets Set
- Pliers
- Tape Measure
- Sharpie or equivalent marker
- A replacement Vend Door Bezel (for QR replacement or ones requiring refinishing)
- Wire Ties
- Replacement Door
- New Hinges (Packaged with the replacement door)
- New Decals (Packaged with the replacement door)
- New sheet of Gaskets (Packaged with the replacement door)

- New T-Handle Gasket (Packaged with the replacement door)
- Large Vehicle for Transport
- An inflatable shim/leveling tool and scrap of 2x4 to assist with aligning the door is optional.
- Any other items that were damaged with the door (for Kiosks-Hit-By-Car, Vandalism, etc.)

### Important Notes:

Take a picture of any and all damage or reasons for the door swap prior to making the request. These will be used to validate that a door swap is in order and for any insurance claims as needed. Reach out to [LossPrevention@redbox.com](mailto:LossPrevention@redbox.com) for any issues involving damage to the kiosk.

The terms “original” and “replacement” will be used throughout this process to refer to the original door that is bad and the door that will be installed to replace it. It’s important to make sure no old markings or stickers are on the replacement door that could confuse someone as to the CRE of the kiosk. The CRE is used to identify what features may have been present during manufacture that would need to be known for troubleshooting purposes in some cases. These should already be removed before delivery but do a check to be sure.

**\*\*Caution\*\*** This is a **MANDATORY 2** person job for safety and to keep the door or hinges from being damaged. Plan for 2 people to be onsite for 2 hours plus drive time for moving the door around.

For any issues where the door only is in need of replacement:

- Rust that has gone through the door
- Major door dents not field-repairable or that can’t be hidden by paint
- Kiosk-hit-by-car or vandalism where **only the door is damaged**
- Other damage that can be fixed by just swapping the door

This will only be for kiosks where the cabinet and gasket mounting lip are undamaged. Any out-of-alignment issues with either of these will impact the weather-proofing of the kiosk and require the kiosk to be completely replaced. Measure across the door opening for both diagonals. The lengths should be within

¼" of each other to ensure a proper repair. Do not hesitate to take pictures of the suspect areas and reach out to [deployment@redbox.com](mailto:deployment@redbox.com) if there are concerns.

New Vend Door Bezels can also be ordered from [deployment@redbox.com](mailto:deployment@redbox.com) in advance if the old one should be replaced due to chipping and overall poor appearance. Plan accordingly. Do not discard the old bezel(s) if they only require a paint job as these can be refinished. Further information on what to do with the old bezels is to yet to be decided.

### **How to Request a Door Swap:**

If a door is in need of replacement and the rest of the kiosk is in acceptable condition as stated above, please submit a door swap request to [deployment@redbox.com](mailto:deployment@redbox.com) and include the following information:

- KID
- Location information
- Overall front photo
- Exterior of door close up shot
- Interior of door close up shot
- Other Pics that will be useful
- Touch screen size (15" or 17")
- Peripherals like ABE or EMV
- Door lock T-Handle Gasket needed?
- Warehouse ID/Address for where the door should be shipped
- Warehouse hours of operation to avoid costly returns
- Contact name and phone number
- Any other pertinent information
- Will require palletized delivery (6'x3')

### **Upon Approval:**

Once the request is approved:



- Deployment will place an order to have a replacement door, 2 new hinges, gasket sheet, and a set of decals shipped to the provided warehouse address.
- You will receive an email letting you know the kiosk door shipment tracking info and ETA.
- The kiosk door will be delivered on a pallet that is almost 6 feet long, so ensure there is ample space within your warehouse to receive the door.

- After the door has been received, inspect it for damages and notify [deployment@redbox.com](mailto:deployment@redbox.com) if any are found.
- The pallet/door can be safely propped up vertically to save space in the warehouse. Make sure it will not fall over. Do not remove it from the pallet until it is brought on site for the door swap or it may be damaged during transport.
- If the ROS or FSR2 does not have a vehicle that can safely and securely transport the new door, book a rental van/truck. Deployment recommends a 9' Cargo Van from U-haul. Do not exceed \$150 in truck rental expenses.

o Other options include:

- Enterprise
- Lowes
- Home Depot
- Menards
- Penske

o Here's a U-haul option as an example:

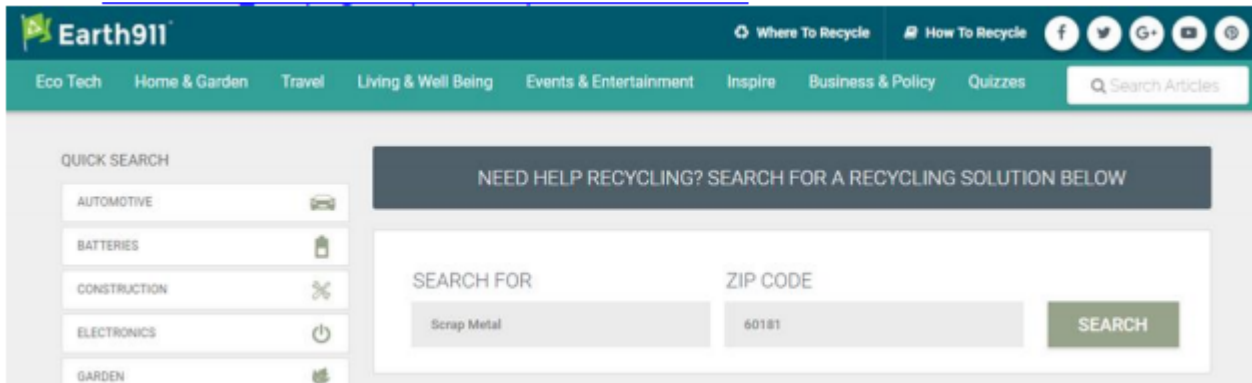
<p><b>9' Cargo van</b></p> 	<p><b>Ideal for Deliveries, Moving Furniture, &amp; Studio</b></p> <ul style="list-style-type: none"> <li>• Inside dimensions: 9'6" x 5'7" x 4'7" (LxWxH)</li> <li>• Door opening: 5'1-1/2" x 4'1-1/2" (WxH)</li> <li>• Holds queen size mattress</li> </ul>	<p><b>\$19.95</b> plus \$0.59/mile <a href="#">Extended days/miles special rates</a></p> <p><b>Select</b> </p>
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o When scheduling your vehicle rental, choose your pick up and drop off dates, hours needed, and estimated mileage (from pickup location, to the warehouse, to the location, to the recycling center, back to drop off location). Consider obtaining more than one quote including estimated mileage to determine the best rental rate until you find the best option.

o Once the rental vehicle has been booked, locate the nearest recycling center. After a successful door swap, utilize the rental vehicle to take the rusted door to the nearest metal recycling center and recycle it. If you do not know a recycling center/scrap yard, use the link below:

[https://search.earth911.com/?utm\\_source=earth911-](https://search.earth911.com/?utm_source=earth911-)

[header&utm\\_medium=top-navigationmenu&utm\\_campaign=top-nav-recycle-search-button](#)

The image is a screenshot of the Earth911 website. The top navigation bar is dark teal with the Earth911 logo on the left and links for 'Where To Recycle', 'How To Recycle', and social media icons on the right. Below this is a lighter teal bar with category links: 'Eco Tech', 'Home & Garden', 'Travel', 'Living & Well Being', 'Events & Entertainment', 'Inspire', 'Business & Policy', and 'Quizzes'. A search bar labeled 'Search Articles' is on the right. The main content area has a 'QUICK SEARCH' section on the left with buttons for 'AUTOMOTIVE', 'BATTERIES', 'CONSTRUCTION', 'ELECTRONICS', and 'GARDEN', each with a corresponding icon. To the right of this is a large dark grey button that says 'NEED HELP RECYCLING? SEARCH FOR A RECYCLING SOLUTION BELOW'. Below that is a search form with two input fields: 'SEARCH FOR' (containing 'Scrap Metal') and 'ZIP CODE' (containing '60181'). A green 'SEARCH' button is to the right of the zip code field.

### General Outline:

These are the general steps for the door swap to go efficiently.

The door swap requires two (2) personnel to complete. The below depends on a 3rd person being available at the warehouse to load the door onto the truck. Both techs may just need to stay together if no 3rd person can help:

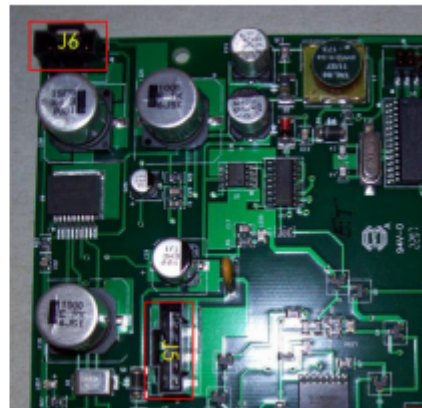
- a. Tech 1 will pick up the rental vehicle.
- b. Tech 2 will go to the kiosk and begin prepping it for the door replacement by following the below process to remove as much as possible.
- c. Tech 1 will bring the rental vehicle back to the warehouse, place the new door in the rental vehicle and then drive to the kiosk.
- d. By the time the Tech 1 arrives with the new door, Tech 2 will be finishing prepping the kiosk.
- e. Follow the below door swap instructions.
- f. After a successful door swap, load the rusted door into the rental vehicle.
- g. Tech 2 moves onto their next Work Order.
- h. Tech 1 to drive to recycling center and scrap the rusted door.
- i. Tech 1 then returns the rental vehicle.
- j. Tech 1 moves on to their next Work Order.

### Recycle/Disposal Info:

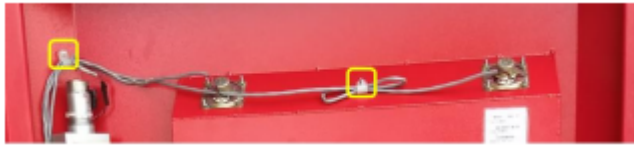
Please plan to recycle the door if available and convenient but do not accept any form of payment for it. If recycling is not an option, dispose of the door appropriately keeping track of any costs to do so.

### Process:

1. Remove all undamaged components from the original door that will need to be reinstalled on the replacement door. This would have been planned prior to the visit.
2. Take pictures as a reference for reassembly.
3. Keep all door hardware (nuts, screws and cable clamps) to be reused on the new door.
4. Completely power down the kiosk gracefully.
5. Remove any CRE# stickers from the old door.
  - a. The original kiosk door's sticker will be reused on the replacement door if possible.
6. Remove the speakers from the original door as needed.
  - a. It's important that the speakers are installed for weather-proofing.
  - b. Replacement doors may already have speakers mounted. These can be left on and disconnected since they are unused, but be sure to disconnect the small black plug in the upper left of the Serial Board (J6) to avoid a short circuit.



7. Remove the 3 cable clamp nuts with a nut driver and slide the clamp off the threaded stud.
  - a. 1 between speakers.
  - b. 1 above the Vend Door Motor



- c. 1 to wire tie the large black split loom to the bottom of the Panduit Channel.

8. Remove the Sun Screen if present.

9. Remove the green ground wire with a nut driver

10. Remove the grey Panduit Channel covering.



11. Depending on whether the wire tie is above or below the motor wiring connector, cut the wire tie securing the VD motor wiring to the motor housing. The below pic shows the wire tie on the motor-side of the connection and it does not need to be cut. Occasionally, the tie is on the kiosk-side of the connector and must be cut.



12. Disconnect the motor cabling.

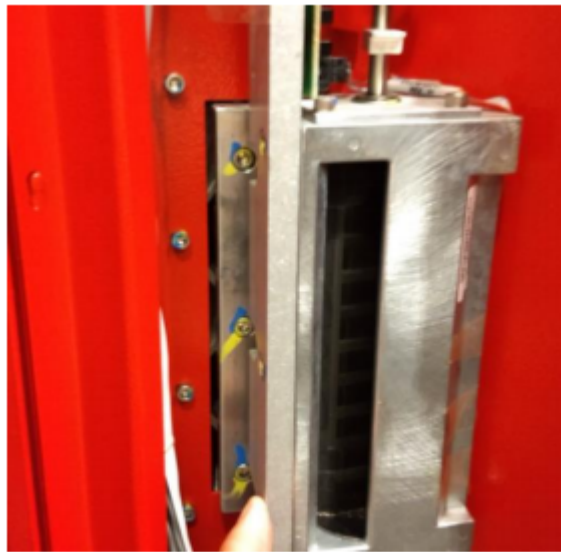
- a. Push the connectors together.
- b. Push the tab down.
- c. Pull apart.
- d. Do not force them apart as they should disconnect easily.

13. Remove the ribbon cable plug from the Vend Door Board (VDB) – note the orientation for reinstall.

14. The Vend Door Assembly can now be removed:

- a. Remove the 3 screws holding the Vend Door Assembly to the kiosk door.

- i. The screw is a 5/32" Allen but a T-25 Torx driver works nicely with the handle.
- ii. You may need to loosen them first with the Allen to keep from stripping the heads.
- iii. The Torx can then be used to fully remove it.
- iv. The black drain tube can stay on the assembly and be pulled out of the Panduit Channel.



#### 15. Remove the Vend Door Bezel

- a. Tape the bezel on from the outside so that it does not fall and get damaged.
- b. Remove the 6 screws with a 9/64" Allen, or a T-20 Torx driver once the screws are loosened. Note the position of the different lengths of screws for reinstall.
- c. Quick Return modules will not be reinstalled, so a new bezel will needed.

16. Other components on the door will need to be removed separately from each other necessitating the removal of all ties or wrapping holding them together or to the door. Only cut what you need to separate them as some can be left on for reinstall.

17. Cut all wire ties securing the cabling to the tie rail on the door.

18. Unplug the 3 cables at the T/S.

- a. Power
- b. USB
- c. VGA

19. Remove the T/S and keep the nuts. New nuts should be supplied but spares do not hurt.

20. The ABE Unit should be removed when applicable.

21. Trace the USB cable from the CCR/EMV down inside the Panduit Channel to disconnect and remove it.

a. CCR Blocks may need to be unscrewed – take care to retain the O-rings.

b. Damaged EMVs are required to be removed and returned to Sony. Work with MS to handle situations where the damage is too great and the unit is not removable/returnable.

22. Remove the entire door lock assembly by removing the 2 nylock nuts on the back side. These will also be holding up the door-side bracket of the door sensors for VMZ kiosks.

23. Note the wire color orientation and disconnect the door sensor cable from the back of the door-side switch assembly so that it is not damaged during the

remainder of the swap. They are somewhat fragile.

24. QLM kiosks will require the associated door wiring to be unplugged and cut to avoid shorts. Disconnect J3 and J8 from the Aux board and cut the plug ends off. Then, cut the wires right where they come out of the Panduit Channel. The QLM door sensor and locking solenoid do not need to be swapped to the replacement door.

25. Support the picker up and out of the way and remove the large silver clamp holding the black wire loom to the cabinet.

26. The wiring should now be completely loose and can be moved out of the way.

27. Panduit Channel will need to be swapped to the replacement door if it does not have one.

28. Remove the old door

a. **\*\*Mandatory\*\*** This will be a 2-person job!!

b. Be aware that QLM and some older door versions are heavy – Use proper lifting techniques.

c. While 1 person holds the door up, unbolt both upper and lower hinges from the cabinet side.

d. Socket sizes will vary.

e. Set the old door aside.

29. Install the replacement door.

a. Unpack the replacement door from the pallet.

b. Install the new hinges on the replacement door.

c. If the replacement door is a reused door from an old kiosk, remove any CRE# stickers and discard them.

d. The original kiosk door's CRE sticker will be stuck on the replacement door.

i. Stick it securely on the replacement by thoroughly cleaning the spot it should be. Shipping tape can be used if the sticker won't stay on well.

ii. If there's a possibility that the original sticker will just not stay on or it's missing, write the CRE# on the inside of the door where it would go using a sharpie.

e. The EMV/ABE holes can be drilled while the door is still on the pallet for easier install and cleanup.

f. Follow ALL processes for the EMV to handle RMA, Install, WOS, etc. correctly.  
[LINK](#)

g. Align the replacement door to the kiosk.

i. One person should be holding the door at all times and work together to align the hinges.

ii. Various inflatable air wedge tools (Rhino Strong, Air Shim, Etc.) can be utilized with a scrap 2x4 to help lift the door in small increments and align the hinges with the mounting holes.

h. While one tech continues to hold the door up, connect the hinges to the cabinet finger tight.

i. Open and close the door several times and tweak the door to align it square to the cabinet.

j. Tighten the hinges down

30. Reinstall all components being sure that the kiosk has any previously installed ABE Units or EMVs as required.

31. All items will need a new foam gasket – remove the old ones from the component thoroughly.



- a. T/S (2 or 5)
- b. Old CCR (3)
- c. Vend Door Bezel (1)
- d. Door lock (separate item)

32. Reinstall all of the wiring, clamps and nuts in the reverse of the above removal steps but leave the large split loom loose.

- a. Use plenty of wire ties.
- b. Refer to any pre-swap pics taken.
- c. Take this opportunity to slip all wires inside the large split loom if they will fit easily.
- d. Keep the wire dress neat and tight to the door so that the moving parts do not snag on any of them.
- e. Don't over tighten the cable ties! – snug and secure is all that is needed.

33. Aligning the large split loom

- a. Once all of the wiring is reconnected, the large split loom needs to be tucked tight to the door.

b. Close the door as much as possible while still allowing room for you to squeeze into the opening.

c. Pull a little slack into the door while pushing down on the wiring slightly and wire tie the loom to the clamp down at the bottom of the Panduit Channel.

d. Pull all slack tightly into the kiosk and reinstall the large silver clamp on the loom securing it firmly to the cabinet

- e. This should keep the loom clear of the picker when it's down at deck 8 or the QLM.
- f. Lower the picker and close the door as far as possible leaving a small gap to look through.
- g. Confirm that the picker is clear of the loom.
- h. Remove more slack as needed.
- i. Power on the kiosk.
- j. Close the door all the way and screw the T-handle tight.
- k. Let the init complete.
- l. Check that syncs at the QLM or Deck 8 don't appear to catch the loom.
  - i. This will be done more by sound and feel from the door.
  - ii. Issues down there in the future will require further adjustment of the loom.

34. Reapply decals to the door.

35. Perform a KFC and test transaction.

