

Author: Cervera, Lluno	Field Modification Instruction FR2E12 Control Box/Drain holes	FMI 751-140 12/17/20 Rev: 1
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Field Modification Instructions for Project: FR2E12

Modification: Control box replacement and Drain hole addition

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Subject: FR2E12 Relay Box/Drain Holes

Reason: Water retention in the enclosure due to insufficient drainage is causing water ingress issues with the Control box. Control box to be replaced with an IP64 rated box, and drain holes added to bottom of enclosure for proper drainage.

Approximate completion time: 0.75hrs/ ramp

Parts required:

P/N	Description	QTY/Ramp
55980 Rev.D	CONTROL BOX ASSY, FR2E SHORT, 24V	1
*RW57573	SPRAY PAINT,CARD,A-4102-BK08(BLACK,SEMI-GLOSS)	As needed

*or equivalent

Tools required:

#2 Philips screw driver
Flat head screw driver
Cordless Drill
1/4" Drill Bit, min. 6" long
1/2" Drill Bit, min. 6" long
Deburring tool
Medium strength thread locker (i.e. Loctite 243, Blue)

General

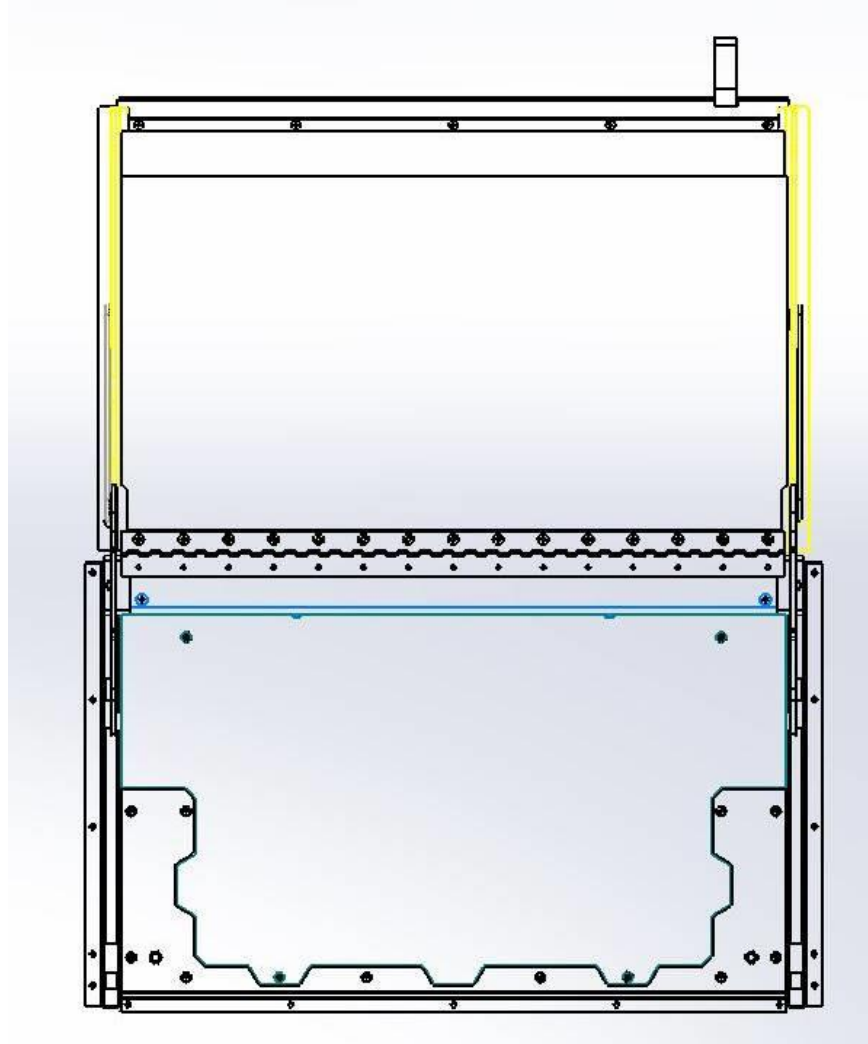
Note: Proper PPE should be worn while performing the steps in this Instruction. Refer to product labels for required PPE.

Sequence of Operations

Control Box Replacement

1. Disconnect ramp battery power

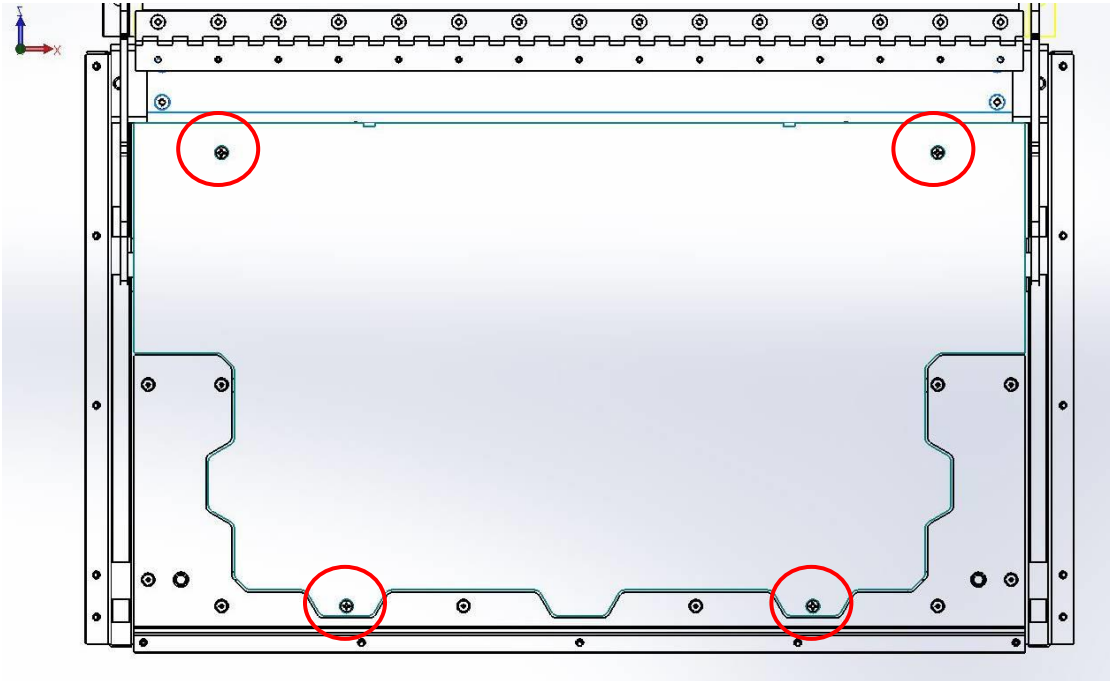
2. Manually deploy the ramp



(For Reference only)

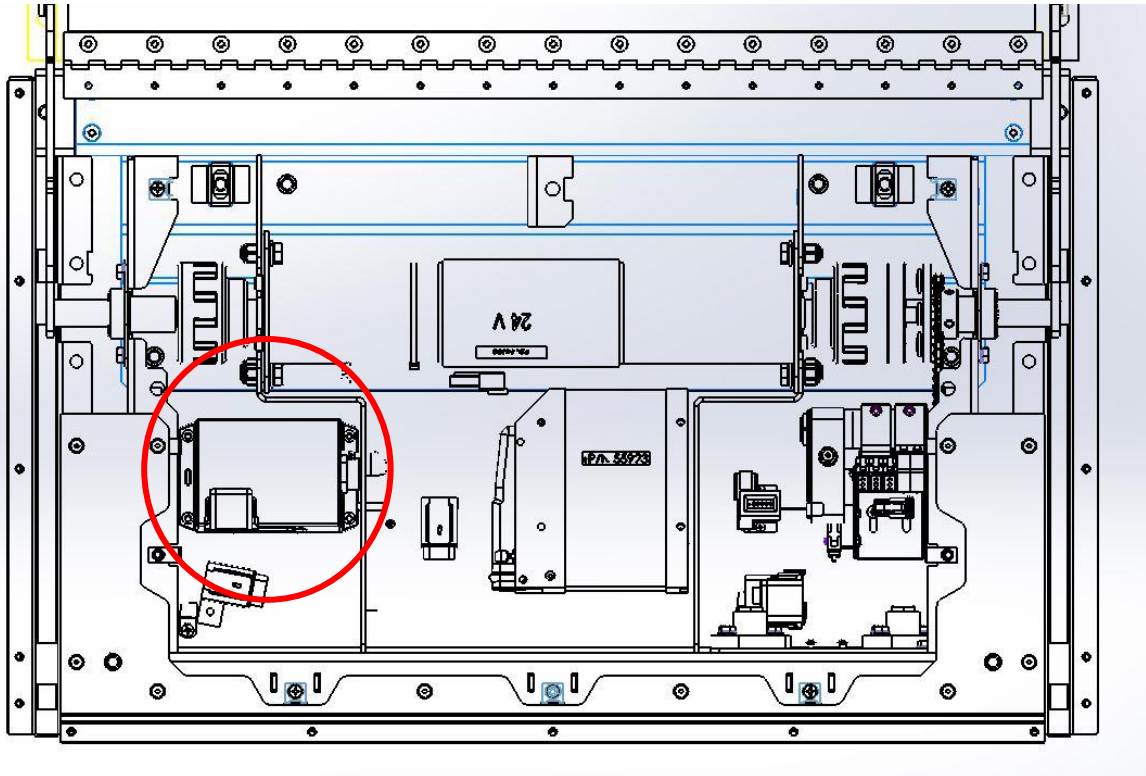
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3. Locate enclosure access cover. Using Phillips screw driver, loosen QTY:4 ¼ turn screws. Pry under access cover using flat head screw driver to remove.

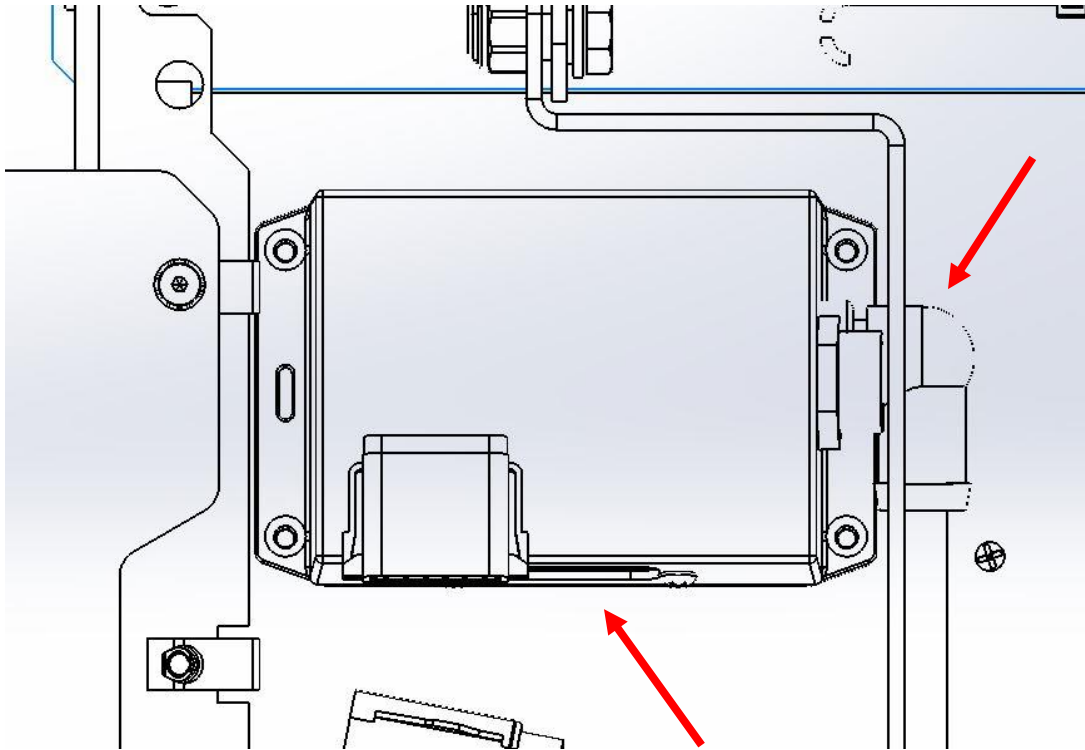


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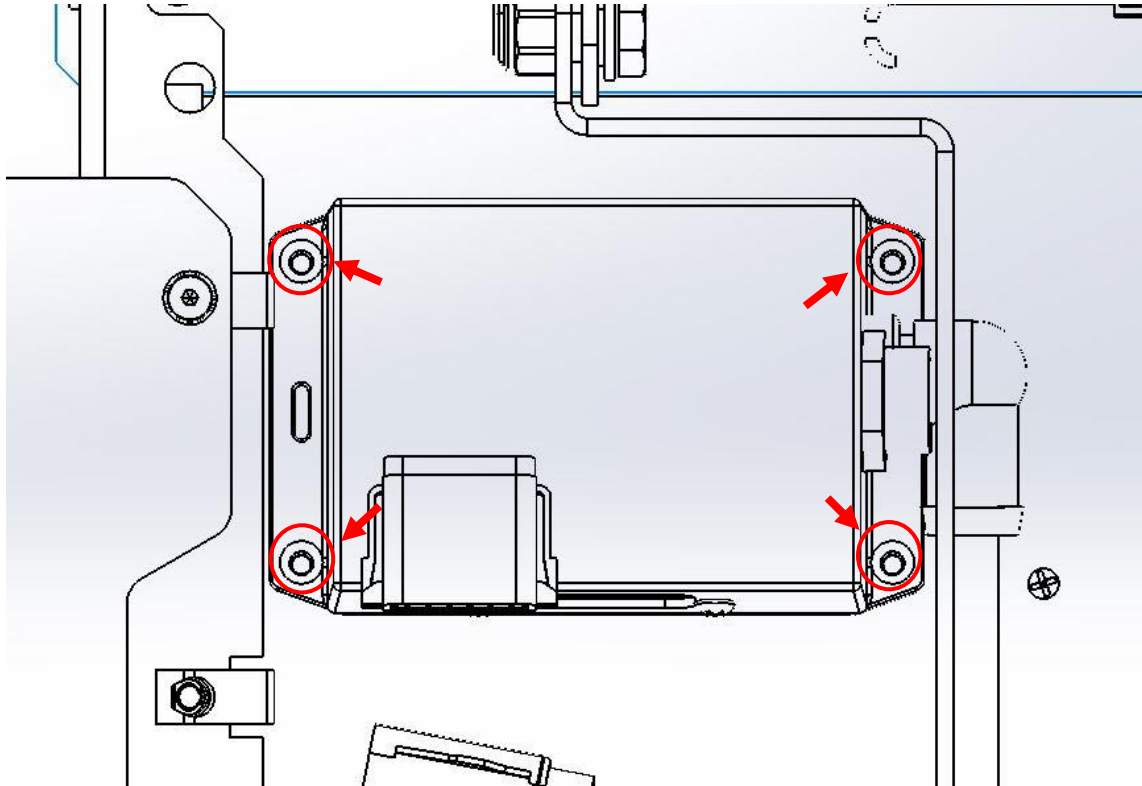
4. Clean out the inside of the enclosure by blowing out any debris. Hoes down with low pressure water if necessary.
5. Locate Control Box.



6. Remove connectors from control box.



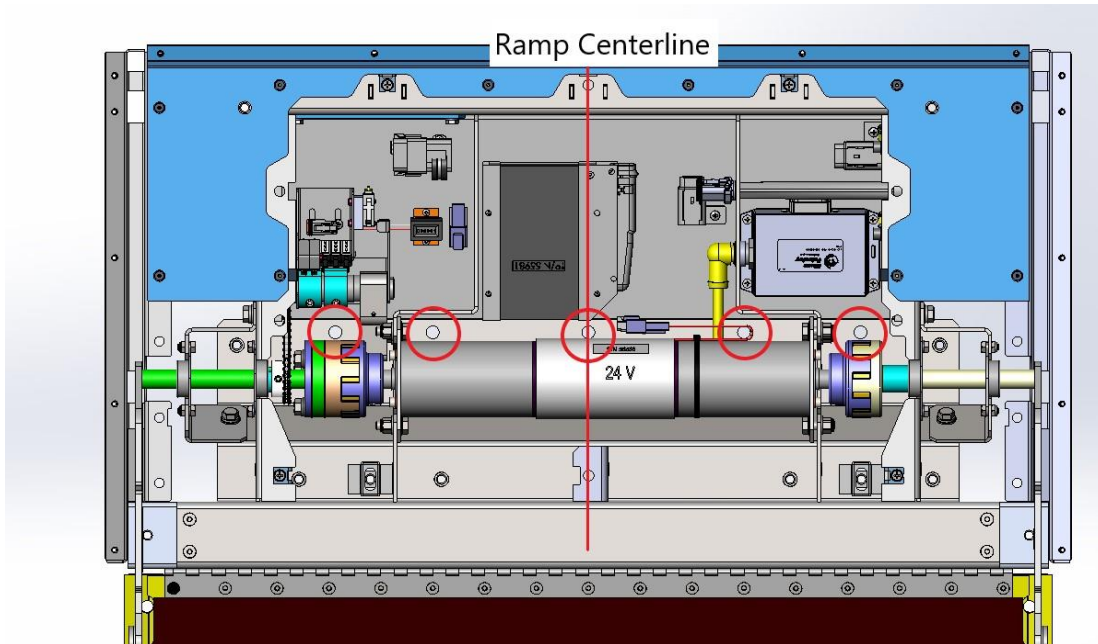
7. Locate QTY:4 mounting screws on control box flanges. Remove mounting screws using phillips screw driver.



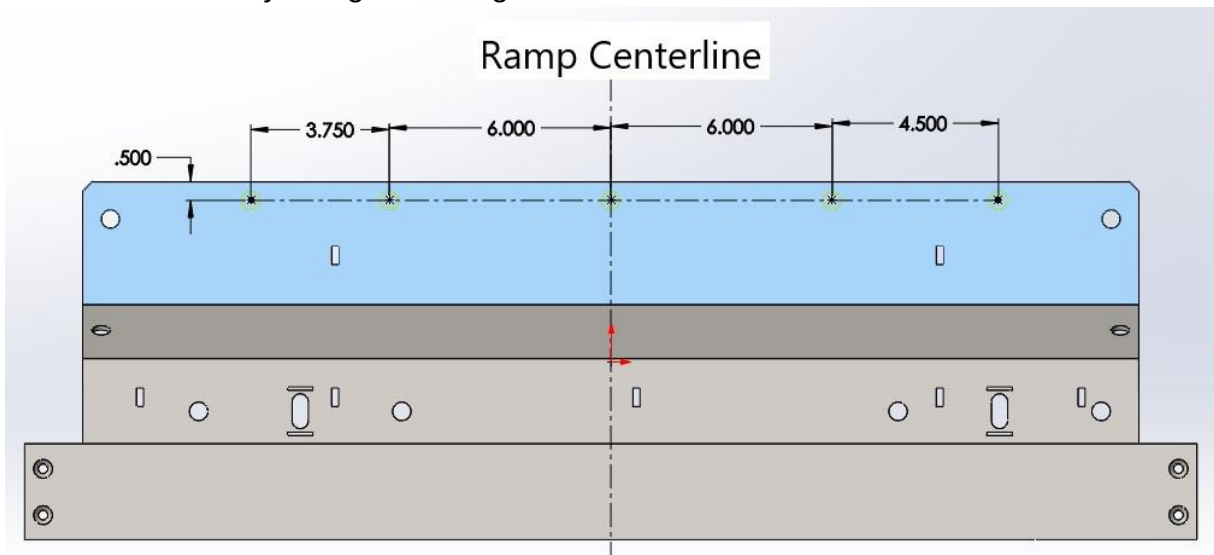
8. Remove the existing control box 55980. Set aside.
9. Repeat steps in reverse to install replacement control box, 55980 Rev.D. Use medium strength threadlocker on mounting hardware.
10. Re-install connectors onto Control Box ensuring the connectors are positively engaged in their respective receptacles.
11. Do not re-install access cover at this time as adjustments to the ramp timing may be necessary.

Drain Holes

1. With the Ramp access cover removed, drill a total of five drain holes in the bottom enclosure pan in the locations shown below.



2. Starting at the Ramp Centerline, drill a pilot hole at the locations shown below using the 1/8" drill bit.
3. Step up the drill bits until a final hole dimension of 1/2" is achieved. Deburr the holes as necessary using deburring tool.



4. Spray the exposed metal areas of the holes with spray paint. Follow paint manufacturer's instructions for proper curing time before returning to service.

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Testing

1. Reconnect battery power to ramp.
2. Set vehicle interlocks necessary to operate the ramp.
3. Using the dash controls, Deploy the ramp. Verify the ramp deploys, coasting down to ground level.
4. Using the dash controls, Stow the ramp. Verify the ramp stows, coasting down to the fully stowed position.
5. Adjust timing if necessary. Refer to service manual 32DFR2E02 for adjustment procedure.
6. Re-install access cover if all test are satisfactory.

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Ramp Serial no. _____

Bus no. _____

Modification Date/Time _____

Service performed by: _____

Notes: _____

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Revision	Description of Change	Date
0	Initial Release	12/04/20
1	Added completion time and clean out	12/17/20