

# **EZFLOW<sup>XR</sup>** Hydraulic Trap



## **RETROFIT KEYPAD AND CONTROL BOX INSTALLATION**

Standard/Split and Ag Style Tubs for Timpte Hopper Trailers



Part # 102231



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## Parts Required:

Easy Flow Upgrade Kit Part # – **102231**

Bill of Materials		
<u>Description</u>	<u>Part Number</u>	<u>Quantity</u>
Keypad w/ Bracket & Hardware	102066	1
Control Box Assembly	102051	1
Cable Assembly, 4AWG, Red, 32'	031-58992	1
Screw, ¼-20 X 1¼ SS	032-43152	5
Nut, ¼-20 Nylock SS	032-44653	4
Nut, ¼-20 Serrated Flange	101672	1
Tie Wrap	021-35989	5
Grease, Dialectical	035-52548	1

## Tools Required:

- Drill
- Drill Bit, 17/64"
- Wrench, 7/16"
- Socket, 7/16"
- T-10 Torx Driver
- Ratchet
- Die Grinder or Air Chisel
- 1" End Wrench

### 1. Removing the Old Control Box and Wiring.

- Disconnect power from the nose of the trailer.
- Remove existing mounting bracket fastener. (See Fig 1-1)
- Remove the existing wire harness from the rear of the control box including the power and ground wires with a 9/16" socket. (See Fig 1-2)
- Remove the existing control box bracket by grinding or air chiseling the huck bolts which are connecting the bracket to the bottom rail of the trailer. Caution not to grind or gouge bottom rail. (See Fig 1-3)
- Remove the existing power wire going to the control box.
- Disconnect the ground wire from the tub rail.
- At the motor assembly disconnect the two cables connected to the blocking valve.
- Disconnect the power wires from the motor, mark which wire went where.
- Remove the wires from the tub cross-member and remove any zip ties holding the wire in place. (See Fig 1-4)
- In the nose of the trailer determine where the existing red 4AWG power wire is coming from.
  - If the wire is installed in a junction box. (See Fig 1-5)
    - Open the junction box.
    - Disconnect the power wire from the main stud.
    - Loosen the strain relief and remove the wire from the box.
    - Leave box open to allow installation of the new power wire.

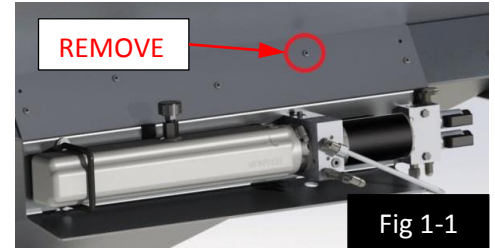


Fig 1-1

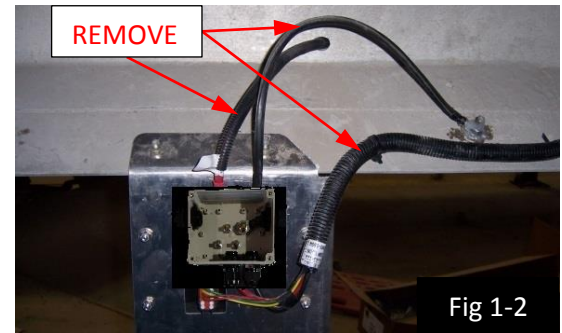


Fig 1-2

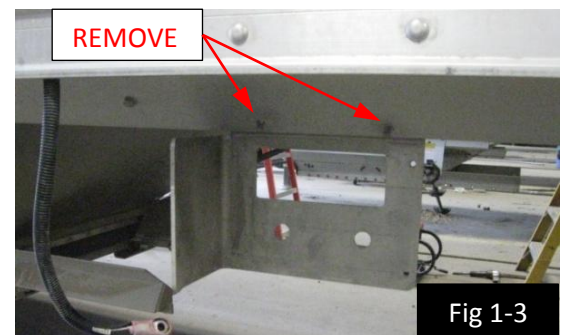


Fig 1-3

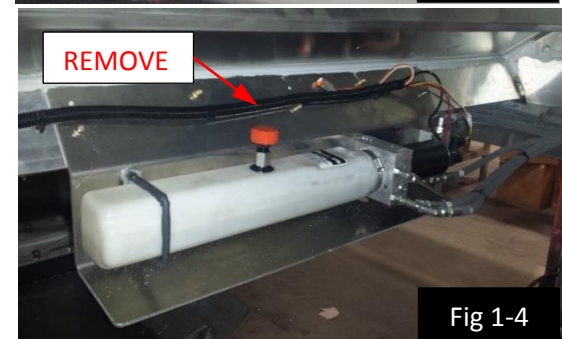


Fig 1-4

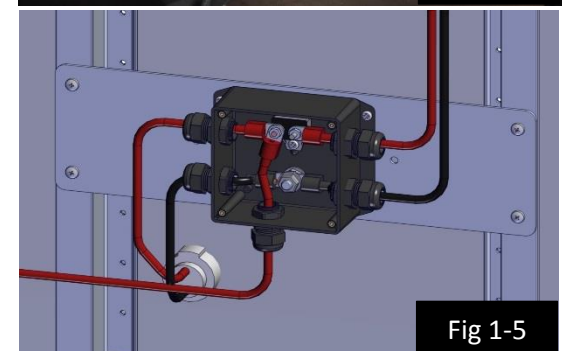


Fig 1-5

v. Check and clean the rest of the connections to make sure of proper conductivity.

l. If the wire is installed directly in the nose plug. (See Fig 2-1)

i. Remove the boot from the back of the plug to expose the wires.

ii. Unscrew the set-screw fasteners holding the wires in place.

iii. Remove both wires.

iv. Clean the black wire and both terminals for proper conductivity.

m. Remove and discard the existing red 4AWG wire by pulling it through and out of the lower rail.

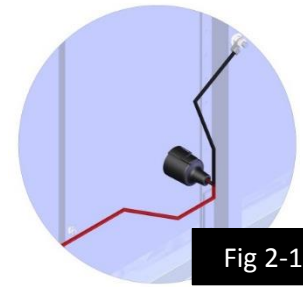


Fig 2-1

## 2. Install the Control Box Base Onto the Motor Bracket.

a. Open the new control box and separate the base from the top.

b. Hold the control box base on the motor mount bracket. (See Fig 2-2)

c. Mark where the holes need to be located on the motor mount bracket.

d. Drill  $17/64$ " holes through the bracket and tub cross-member.

e. Attach the base to the bracket using  $1/4$ " bolts and nuts.

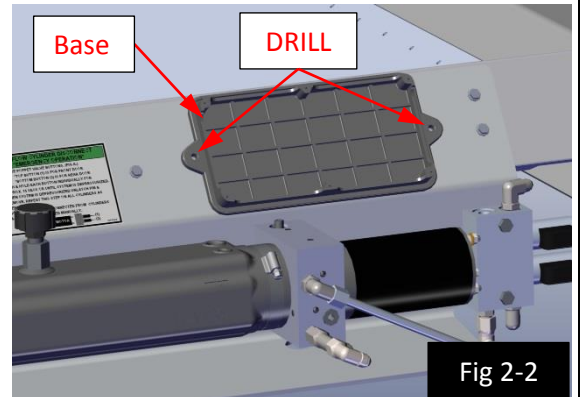


Fig 2-2

## 3. Install the Power Wire for the New Control Box.

a. Drill a  $3/4$ " hole 1" above the bend in the side rail near the tub cross-member on the passenger side of the trailer for the new 4AWG power wire. (See Fig 2-3)

b. Using fish tape pull the wire down the passenger side tub rail and through the  $3/4$ " hole in the tub rail.

c. Slide the red wire through the covers to the tub rail. (See Fig 2-4)

d. Pull out enough red wire to reach the new control box.

e. Connect the power wire in the nose of the trailer.

f. If the wire is in a junction box. (See Fig 2-5)

i. Put the wire through the strain relief into the box.

ii. Connect the wire to the main power stud.

iii. Double check all connections to make sure everything is tight.

iv. Close the junction box.

v. If the wire is installed directly into the nose plug. (See Fig 2-6) Use dielectric grease on the exposed wires prior to inserting them into the nose plug terminals.

vi. Tighten the set-screw fasteners to hold both wires in place.

vii. Slide the boot back onto the plug to further protect the connections.

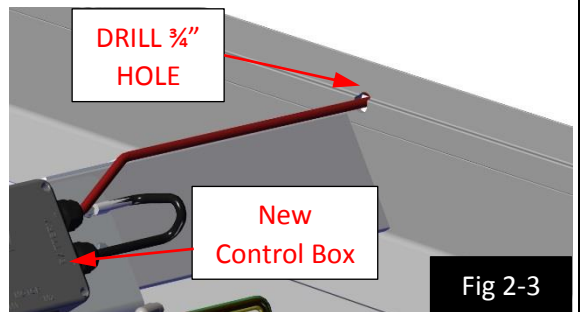


Fig 2-3

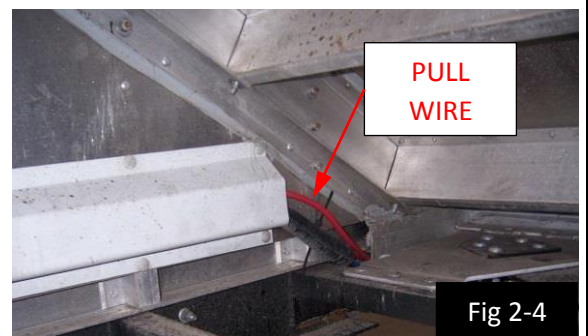


Fig 2-4

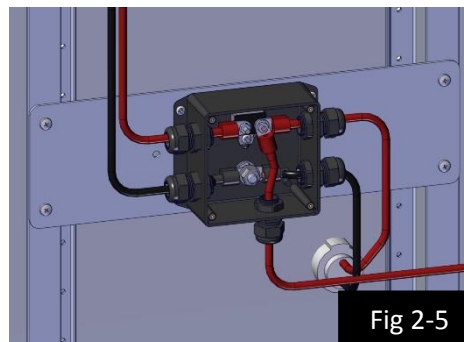


Fig 2-5

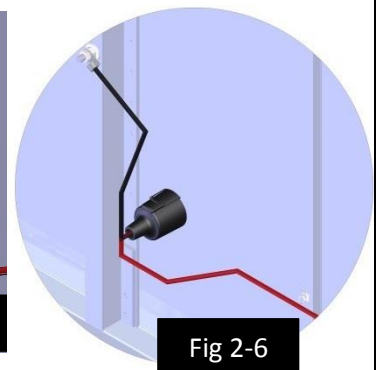
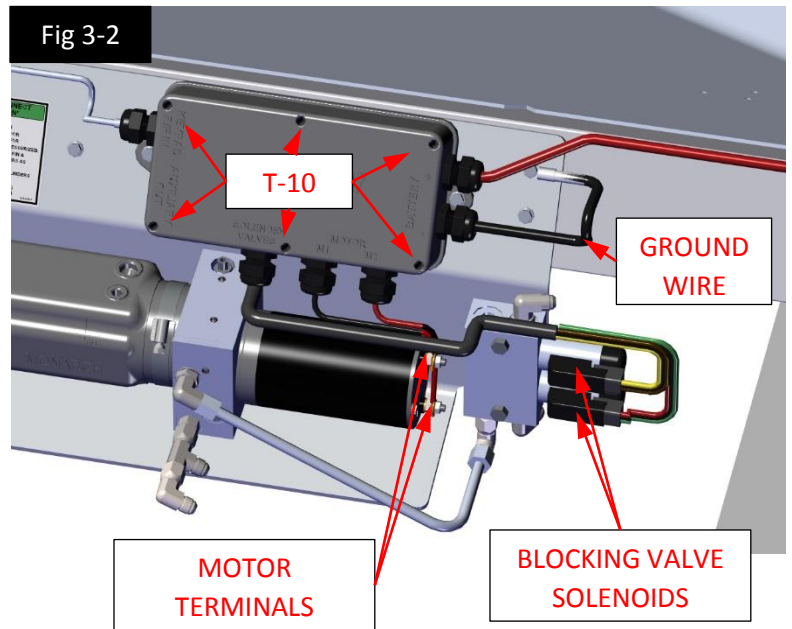
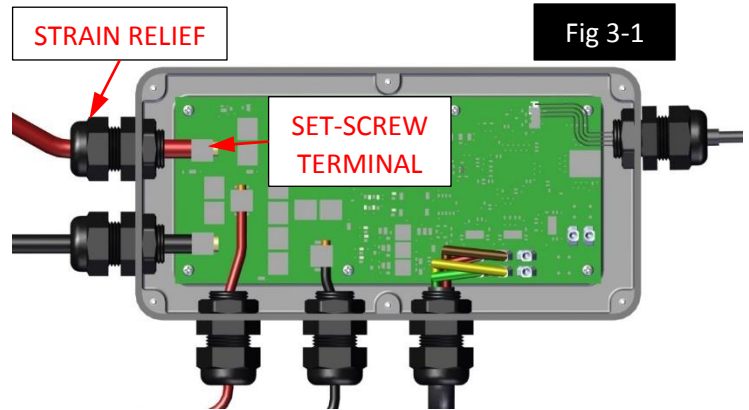


Fig 2-6

#### 4. Install Control Box Wiring.

- a. Connect the new 4AWG red power wire in the control box top. (See Fig 3-1)
  - i. Pull the wire through the strain relief.
  - ii. Insert the wire into the set screw terminal and tighten.
  - iii. Tighten the strain relief to seal and hold the wire in place.
- b. Place the cover onto the base and tighten using the supplied T-10 Torx screws. (See Fig 3-2)
- c. Connect the rest of the wires to the blocking valve and motor. (See Fig 3-2)
  - i. Blocking valve Solenoid.
    - Yellow and brown wire in the top connector.
    - Red and green in the bottom connector.
- d. Attach Motor Terminals. (See Fig 3-2)
  - i. Red wire to motor post A1.
  - ii. Black wire to motor post A2.
  - iii. Use dielectric grease on connectors.
  - iv. Install the protective boots over the motor posts.
- e. Attach the black ground wire to the bracket.  
(See Fig 4-2)
  - i. Drill a 17/64" hole through the bracket and tub cross-member.
  - ii. Use a 1/4" bolt and nut to attach ground wire and tighten. Use dielectric grease on the connection.



#### 5. Mounting Keypad w/ Bracket to the Tub Rail.

- a. Hold the bracket to the tub rail near where the old bracket was located.
- b. Mark where the mounting holes are going to be located.
- c. Drill two 17/64" holes through the tub rail. (See Fig 3-3)
- d. Install the keypad assembly using 1/4" bolts and nuts.
- e. Route the communications cable on the tub cross-member and use push in zip ties to hold in place. (See Fig 3-4)

