RETROFIT CONTROL BOX
INSTALLATION AND
OPERATION MANUAL

Standard and Ag Style Timpte Hopper Trailers
Standard kit #453-53364 and AG Hopper kit #453-53365
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Parts Required:

Easy Flow Kit Standard Tub – 453-53364

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<thead>
<tr>
<th>Description</th>
<th>Part Number</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Box w/ Bracket</td>
<td>101036</td>
<td>1</td>
</tr>
<tr>
<td>Wiring Harness</td>
<td>031-50470</td>
<td>1</td>
</tr>
<tr>
<td>Remote Transmitter</td>
<td>577-53725</td>
<td>1</td>
</tr>
<tr>
<td>Bolt, ¼”-20 UNC X 1-1/2”</td>
<td>032-01284</td>
<td>2</td>
</tr>
<tr>
<td>Bolt, 3/8”-16 X 1.25”</td>
<td>032-44809</td>
<td>1</td>
</tr>
<tr>
<td>Washer, ¼”</td>
<td>032-01368</td>
<td>2</td>
</tr>
<tr>
<td>Washer, 3/8”</td>
<td>032-58829</td>
<td>1</td>
</tr>
<tr>
<td>Nut, ¼-20 UNC, Nylock</td>
<td>032-44653</td>
<td>6</td>
</tr>
<tr>
<td>Nut, 3/8”-16</td>
<td>032-03471</td>
<td>1</td>
</tr>
<tr>
<td>Tie Wrap</td>
<td>021-35989</td>
<td>5</td>
</tr>
<tr>
<td>Grease, Dielectrical</td>
<td>035-52548</td>
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Parts Required:

Easy Flow Kit Ag Tub – 453-53365

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Tools Required:

- Drill
- Drill bit, 3/16”
- Wrench, 9/16”
- Wrench, 10-mm
- Wrench, 3/8”, 2 Each
- Die grinder or air chisel
1. REMOVING THE OLD CONTROL BOX.

   a. Disconnect power plug from nose of trailer before disconnecting wires from control box.
   b. Disconnect wiring harness wiring from hydraulic power unit and switching solenoids.
   c. Disconnect power wires from control box using a 9/16” wrench. Power and grounding cable will be reused.

2. Remove existing control box from bracket by grinding or air chiseling huck bolts which are connecting bracket to bottom rail of trailer. Caution not to grind or gouge bottom rail.
3. INSTALL CONTROL BOX AND WIRING.
   a. Mount control box w/ bracket part number 101035 or 101036.
   b. Mount leading edge of the bracket in line with the pump mount bracket as shown.

   ![Diagram of control box installation](image)

   Line up leading edge of bracket with the hydraulic pump mount bracket.

   Line up bracket using the front hole and drill second hole in bottom frame rail. Use new mounting bracket as template.

   c. Install 031-50470 – Wiring Harness, Solenoids - from control box to hydraulic pump and blocking valve as shown.
      i. On all terminal ends, please use 035-52548 – Corrosion Protection Grease.
      ii. Connect the plug on the 031-50470 wiring harness to the socket on the back of the control box.
      iii. Connect the red wire on wiring harness 031-50470 to the left terminal on the back of the control box.
      iv. Connect the black wire on the wiring harness 031-50470 to the right terminal on the back of the control box.
      v. Connect the red wire of 031-50470 wiring harness to terminal “2” of the hydraulic pump.
      vi. Connect the black wire of 031-50470 wiring harness to terminal “1” of the hydraulic pump.

   ![Diagram of wiring connections](image)

   Connect red wire of wiring harness 031-50470 to the left terminal “M1” and black wire to the right terminal “M2” on the back of the control box.

   Connect plug of wiring harness 031-50470 to socket on the back of the control box.

   ![Wiring layout diagram](image)

   Connect black wire of wiring harness 031-50470 to terminal “1” on the hydraulic pump.

   Connect red wire of wiring harness 031-50470 to terminal “2” on the hydraulic pump.
vii. Connect the plug with the yellow/brown wires of wiring harness 031-50470 to the lower valve on the hydraulic blocking valve.

viii. Connect the plug with the red/green wires of wiring harness 031-50470 to the upper valve on the hydraulic blocking valve.

d. Attach control wiring harness to trailer.
   i. Attach wiring harness with 031-50470 – Tyrap w/push in barb.
   ii. Drill ¼” hole for each tyrap location. Space evenly so that the wiring harness is held securely in place.

Locations for 021-53989 – tyrap w/push in barb.
e. Install the ground wire to the lower rail.
   i. Drill a 7/16” hole in the side rail as shown. Clean both sides of the tub rail with a stainless steel brush. This will ensure a solid contact between the tub rail and the ground wire.
   ii. Mount ground stud and wire to side rail.
       1. 032-44809 – 3/8” stainless steel bolt
       2. Side Rail
       3. 032-58829 – Star Washer
       4. 031-51477 – Black battery boot installed on wire
       5. 031-51038-00288 – Black 4 gage x 18” long ground wire
       7. 035-52548 – Corrosion protection grease
       8. Tighten Bolt & Nut then Slide 031-51477 black boot over ground connection

f. Install power wire.

h. Program the remote to the control box per included instructions.
OPERATION INSTRUCTIONS

Programming Remote to the Easy Flow Hopper Doors:

1. Power up the control box. Hold the “Open” and “Close” buttons on the control box for 3 seconds or until control box light comes on to indicate the control box is activated.

2. Open transmitter and observe flashing light.

3. Push “MODE” button to select “Front Hopper” Mode (First two lights flashing).

4. One to four transmitters can be programmed. All transmitters are to require to be programmed while light is flashing.

5. Push and hold “Programming / Work Light” button on control box, for approximately 8 seconds, until the illuminated light on the control box starts flashing.

6. Press the On/Open button on the flip style for the first remote control to be programmed for 1 second (see Figure 2.1 below). The red light on the control box will stop flashing for a moment and then start flashing again. Repeat this for all the remote controls that need to be programmed while the light on the control box is still flashing. If one transmitter is being programmed, the “ON/OPEN” button will be pushed four times. If two transmitters are being programmed then the “ON/OPEN” button of the second transmitter will be pushed three times. If three transmitters are being programmed then the “ON/OPEN” button of the third transmitter will be pushed two times. When four transmitters are programmed press the “ON/OPEN” button of each transmitter once. The light on the control module will stop flashing when the four inputs have been received. Close lid of programmed transmitters to power down transmitters.

7. Power down control box. Hold the Front Hopper “Open” and “Close” buttons for 3 seconds or until control box light goes off.
Setting Functions on Remote:

Setting function allows functions to be blocked if not required / not going to be used.

1. Open transmitter. Observe flashing light.
2. Press and hold “MODE” button for 10 - 12 seconds until the top light stays lit.
3. Press the “ON/OPEN” button if this function will be used. Select and press the “OFF/CLOSE” button if you want this function to be skipped.
4. Repeat Step 3 for all five functions.
   a. 1 LIGHT - TARP SYSTEM
   b. 2 LIGHTS - FRONT HOPPER
   c. 3 LIGHTS - REAR HOPPER
   d. 4 LIGHTS - AUXILIARY
   e. 5 LIGHTS - AUXILIARY
5. When the last function has been selected, the light on the first mode function will stay lit for approximately 3 seconds to indicate active and return to flashing when process is complete.

Control Box Operation, Manual Operation:

1. Turn on Master Disconnect Switch in the tractor. (when applicable)
2. Power up Control Box. Push and hold the Front Hopper “Open” and “Close” buttons on the control box simultaneously for 3 seconds or until control box light comes on to indicate the control box is activated.
3. Select button to perform the required operations.
4. Power off Control Box when finished. Push and hold the Front Hopper “Open” and “Close” buttons on the control box simultaneously for 3 seconds or until control box light goes off.)
Control Box Operation, Wireless Operation:

1. Turn on **Master Disconnect Switch** in the tractor. (when applicable)
2. Power up Control Box using transmitter. Open transmitter and Push “**MODE**” button to select the “**Front Hopper**” Mode (First two lights flashing).
3. Push and hold the “**ON/Open**” and “**OFF/CLOSE**” buttons on the transmitter simultaneously for 3 seconds or until control box light comes on to indicate the control box is activated.
4. Select button to perform the required operations for the front hopper.
5. To use the rear hopper, push “**MODE**” button to select **Rear Hopper** (First three lights flashing).
6. Select button to perform the required operations for the rear hopper.
7. Power off Control Box when finished. Push “**MODE**” button to select “**Front Hopper**” Mode (First two lights flashing). Push and hold the “**ON/OPEN**” and “**OFF/CLOSE**” buttons on the transmitter simultaneously for 3 seconds or until control box light goes off.