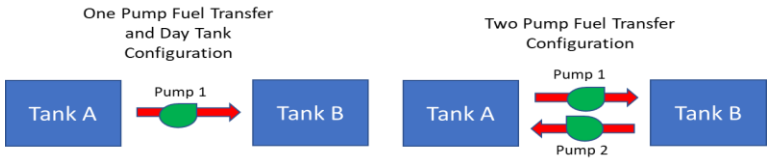
Setup and operation of the Day Tank function and the Fuel Transfer function for the TD-4000



There are three choices for transfer of fuel from tank to tank. They are:

- **Manual transfer with auto pump shutdown of sending tank**
- **Day Fuel**
- **Fuel Transfer**

Manual transfer of fuel from tank A to Tank B <u>with auto pump shutdown when Tank A is empty</u>

a) In this option, tanks A is designated as "**Transfer"** and B is designated as **"Fuel Tank"** (step 4 of the programming).
b) Next, from the Main Menu scroll to "Set Output" to designate which of the two outputs will be associated with the Tank A and **controlling Pump 1**. (Output 1 – blue wire / Output 2 – white wire) You will be returned to the Main Menu.
c) Next, on the Main Menu scroll to the "Pump Start/Stop" option. Identify the tank number associated with Tank A and program its high and low levels. You will be returned to the Main Menu.
d) Scroll to "Exit Menu" to save data.

<u>T**ransfer Operation:**</u> To transfer, push the PUMP key from the **Tank A screen**. Pumping will commence and the PUMP symbol with appear either flashing or steady on all screens. The pump will be shut down when the preset low level has been reached in Tank A.

Manual transfer of fuel from tank A to Tank B with <u>auto pump shutdown when Tank B is full</u>

a. In this option, tank A is designated as **"Fuel Tank"** and B is designated as "**Transfer"** (step 4 of the programming).
b. Next, from the Main Menu scroll to "Set Output" to designate which of the two outputs will be associated with the Tank B and **controlling Pump 1**. (Output 1 – blue wire / Output 2 – white wire) You will be returned to the Main Menu.
c. Next, on the Main Menu scroll to the "Pump Start/Stop" option. Identify the tank number associated with Tank B and program its high and low levels. You will be returned to the Main Menu.
d. Scroll to "Exit Menu" to save data.

<u>T**ransfer Operation:**</u> To transfer, push the PUMP key from the **Tank B screen**. Pumping will commence and the PUMP symbol with appear either flashing or steady on all screens. The pump will be shut down when the preset high level has been reached in Tank B.

Automatic Transfer of Fuel from Tank A to Tank B (Day Fuel)

If you select **Day Fuel** as the "Input Type" (step 4 of the "Program Tank" operation), the TD-4000 will <u>automatically</u> turn on the transfer pump when the day tank reaches a programmed low level and begin to move fuel to the day tank. At the programmed high level, the transfer pump will <u>automatically</u> shut down.

To implement this function, you must **first designate the "Tank Type" for Tank B (diagram above) as a <u>Day Tank</u>.** After setting the alarm point and designating audible alarm (Y/N), setting the volume in gallons or liters, you will be returned to the main menu. Scroll to the menu item "Pump Start/Stop". Identify the Input # of the day

tank. Then set the "pump start" tank level by moving the bar graph up or down (scroll and backlight keys), and set the "pump stop" level. You will be returned to the Main Menu.

Next, on the Main Menu scroll to the "Pump Start/Stop" option. Identify the tank number associated with Day Tank (B) and program its high and low levels. You will be returned to the Main Menu.

Next, from the Main Menu scroll to "Set Output" to designate which of the two outputs will be associated with the Day Tank (B). (Output 1 – blue wire / Output 2 – white wire) You will be returned to the Main Menu.

Next program **Tank A**'s Input Type as a **"Fuel Tank"** (step 4) and set name, volume, and low level alarm point. You will be returned to the Main Menu.

Scroll to "Exit Menu" to save data.

Now, the Day Tank will automatically be maintained at a level between the low and high levels set during tank programming. Whenever fuel is being pumped into the Day Tank, the PUMP symbol will begin flashing on the Day Tank (tank B) display and a steady PUMP symbol on Tank A's display. No manual intervention is required, however, the pump can be shut down at any time by pressing the Pump key. <u>It will be necessary to verify Tank A has sufficient fuel at all times since the pump will operate irrespective of Tank A's level. A visual indicator and optional audible alarm will be generated if the fuel level drops below the preset alarm point.</u>

Fuel Transfer between Tanks A and B in either direction

Generally, the Fuel Transfer option is used when fuel is to be transferred back and forth between Tanks A and B.

i. In this option, <u>both</u> tanks A and B are designated as **"Transfer Tank's"** (step 4 of the programming).
ii. Next, from the Main Menu scroll to "Set Output" to associate each tank with the pump that fills that tank. In the diagram above, **Tank A will be associated with Pump 2** since Pump 2 fills Tank A from Tank B. Similarly **Pump 1 will be associated with Tank B** since it fills Tank B from Tank A.
iii. After programming the outputs for each tank, you will be returned to the Main Menu.
iv. Next, on the Main Menu scroll to the "Pump Start/Stop" option. Identify the tank number associated with Tank A and program its high and low levels. You will be returned to the Main Menu. Identify the tank number associated with Tank B and program its high and low levels. You will be returned to the Main Menu.
v. Scroll to "Exit Menu" to save data.

In operation you MUST start the transfer operation by pushing the PUMP key <u>FROM THE SCREEN of the TANK TO BE FILLED</u>. For example, if you want to transfer fuel from Tank A to Tank B, go to Tank B's screen display and push the PUMP key. The pump will start, the PUMP symbol will flash, and pumping will continue until either Tank B's high limit is reached or the pump is shut off by pressing the pump button while on screen B.

The operation is similar for transfer from tank B to tank A. Go to Tank A's screen display and push the PUMP key. The pump will start, the PUMP symbol will flash, and pumping will continue until either Tank A's high limit is reached or the pump is shut off by pressing the pump button while on screen A.

If it is desirable to stop the transfer automatically if the sending tank is <u>empty,</u> or at its low limit, rather than the receiving tank being full, the pump associated with each tank must be reversed. That is, Tank A must be associated with output #1 (pump #1) and tank B with output #2 (pump #2) and pumping must be initiated from the sending tank