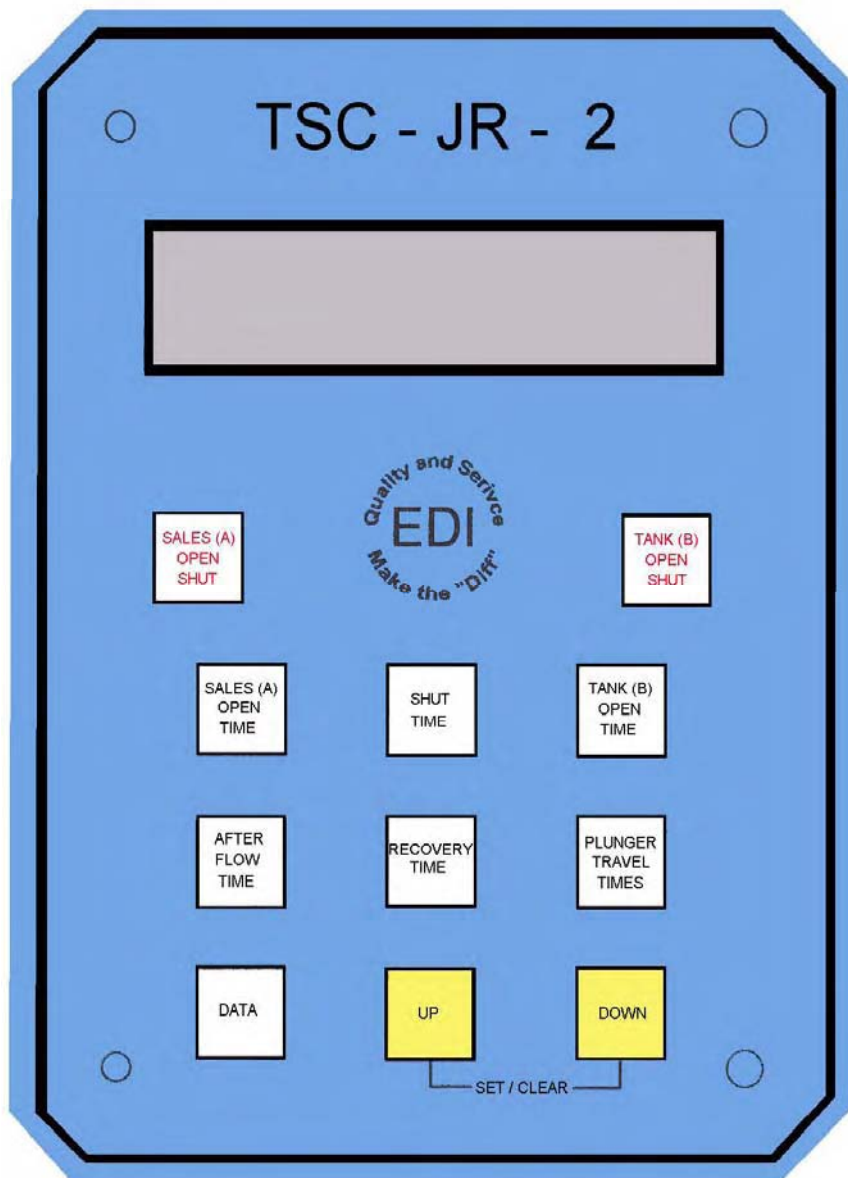


TSC-JR-2 Manual

SERIES 4B, 5B & 6B



TSC-JR-2

**Two Valve
Timed Sequence Controller**

Revised: April 17, 2002

Operation Manual

Distributed By:

DESCRIPTION

The TSC-JR-2 is a two valve timer designed to be reliable and operator friendly. It is simple enough to act as a basic on-off timer, yet elaborate enough to allow the user to customize it by setting up to five time periods. EDI has developed a quality two valve timer that is simple with all the best functions.

TIME PERIOD BUTTONS:

There are four time period buttons. These buttons allow the operator to display or set time period data. Their designations and functions are as follows:

1. **“SALES (A) OPEN TIME”:**

Allows the operator to set/read the sales valve open time.

2. **“TANK (B) OPEN TIME”:**

Allows the operator to set/read the tank valve open time.

3. **“SHUT TIME 1”:**

Allows the operator to set/read the first valve shut time.

4. **“SHUT TIME 2”:**

Allows the operator to set/read the second valve shut time.

5. **“AFTER FLOW TIME”:**

Allows the operator to set/read the valve after flow time period. The **“After Flow Time”** follows the **“Sales (A) or Tank (B) Open Time”** after the plunger reaches surface to allow for additional open time to sell gas into the sales line.

6. **“RECOVERY TIME”:**

Allows the operator to set/read the well recovery time period and fall time. The **“Recovery Time”** follows the **“Tank (B) Open Time”** if the plunger fails to reach the surface. The **“Recovery Time”** is additional shut time to allow for well recovery. After **“Recovery Time”** the cycle will continue with **“Shut Time”** and then start the cycle over with **“Sales(A) open Time”**. The **“Fall Time”** overrides external inputs. While **“Fall Time”** is displayed on the screen, press the up or down button to set the time.

DATA BUTTON:

This button allow the operator to display or clear data relating to plunger arrivals, plunger failures, battery voltage and total open time on the sales (A) valve.

Data is displayed each time the button is pressed. In the following description, the characters shown in [brackets] are what the operator will see on the LCD display.

The order in which data will be displayed is as follows:

1. **Total Sales Time** [TOTAL SALES TIME]
[Xd XXhr XXmn]
2. **Plunger arrival count.** [PLUNGER ARRIVALS]
[0000]
3. **Plunger failure count.** [PLUNGER FAILURES]
[0000]
4. **Battery Voltage** [BATTERY VOLTAGE]
[0.00V]
5. **Option 1** [Option 1 OFF/ON]
[Open B Only]
6. **Option 2** [Option 2 OFF/ON]
[Open Both A&B]

To clear the plunger arrival count, plunger failure count, and the total sales time, the operator, while holding this button, can press the “Up” or “Down” buttons, and the displayed value will be cleared to [0000].

MANUAL VALVE CONTROL BUTTONS:

These buttons allow the operator to manually open and shut the valves. Pressing the manual open/shut button on either valve to open the valve will also start timing the open time cycle for that valve. Pressing the manual open/shut button again to shut the valve will start the shut time cycle.

PLUNGER TRAVEL TIMES:

This button allows the operator to display the last 10 plunger travel times. Each time the button is pressed, the next plunger travel time will be displayed. The order they are displayed is as follows: #1(most current)-#2-#3-#4-#5....#10., then they repeat the same order. In the following description the characters shown in **[brackets]** are what the operator will see on the LCD display; X stands for the actual digits.

1. Plunger travel time #1 (most current).

[Plunger Time 1]

[Xd XXhr XXmn XXs]

.
. .
.

10. Plunger travel time #10

[Plunger Time 10]

[Xd XXhr XXmn XXs]

DISPLAY NOTES:

When any one of the time period buttons is pressed and held, the “**Up**” or “**Down**” buttons may be used to alter the time period to any value.

When holding in on the “**Up**” and “**Down**” buttons while altering a time period, changing time actions will speed up.

If the keypad is unused for 90 seconds, the display will go to sleep, conserving power. Pressing any button will wake the display.

OPERATIONAL DESCRIPTION

for

EXTERNAL INPUTS

EXTERNAL INPUTS:

There are three external inputs available to the operator. The two switch gauge inputs “Open” or “Close”, and the “MSO” (magnetic shut off) input.

SWITCH GAUGE INPUTS:

These inputs are referred to as the “Open” input and “Close” input. The connections are made between the “Open”, “Close”, and “Common” terminals inside the controller.

The “Open” input, when connected to the “Common” input, causes an open “**Sales(A)**” valve response. The “Close” input, when connected to the “Common” input, causes a close “**Sales(A)**” and “**Tank(B)**” valve response.

When the “Open” inputs are closed the “**Sales(A)**” valve will open and the “**Sales (A) Open Time**” is loaded. The “**Sales (A) Open Time**” will stop counting while the contacts are closed. The operator shall be warned of an “Open” condition with [**External Open**] displayed on the LCD. When the “Open” contacts open, the time will start counting.

When the “Close” inputs are closed the valves will shut and the “**Shut Time**” will be loaded. The “**Shut Time**” will stop counting while the contacts are closed. The operator shall be warned of a “Close” condition with [**External Shut**] displayed on the LCD. When the “Close” contacts open, the time will start counting.

MAGNETIC SHUT OFF (MSO) INPUT:

The “MSO” inputs are labeled “+” and “-”. These inputs are designed to connect to the E.D.I. PS4 plunger sensor. Most dry contact inputs will work.

ELECTRICAL INFORMATION:

POWER SUPPLY:

(1) 6-volt alkaline lantern battery, Eveready #529 recommended.

SOLAR PANEL:

The unit may be equipped with a rechargeable 6-volt battery instead of the 6-volt lantern battery. This battery is kept fully charged by a solar panel supplied with this option.

POWER CONSUMPTION:

Supply voltage	6.5 volts maximum.
Current drain	120 micro-amps average.
Power	780 micro-watts average.

BATTERY LIFE:

The 6-volt battery should last 18 to 36 months, depending on how often the front panel controls are used.

The unit shall continue to operate reliably, and shall warn the operator, in the event the battery supply fail. The characters shown in **[brackets]** are what the operator will see on the LCD display. **[LOW BATTERY]**

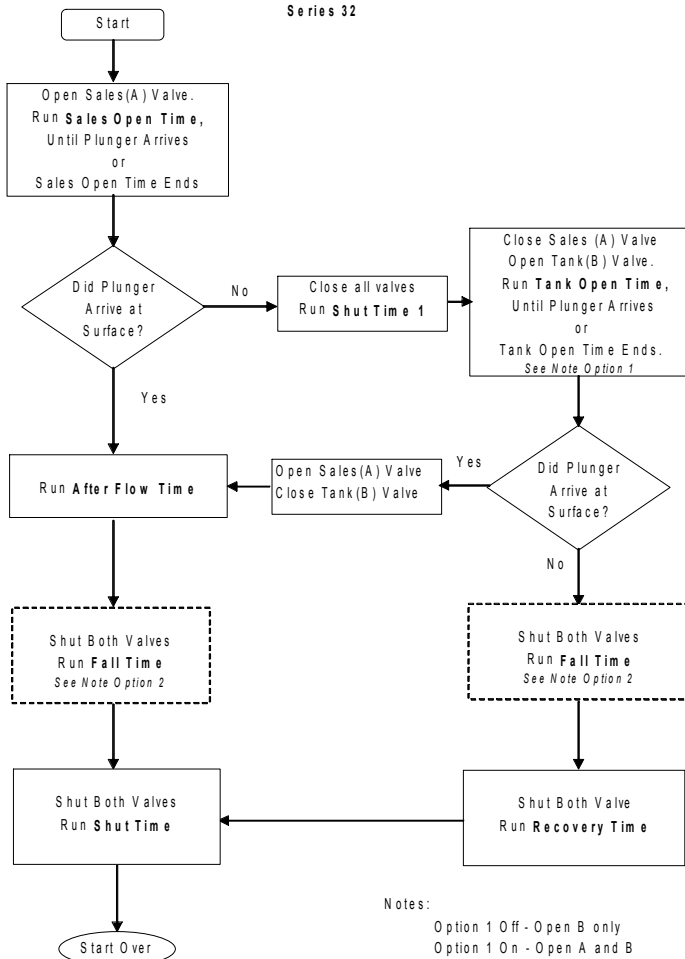
TEMPERATURE RANGE:

The unit is designed to operate reliably from -30 degrees Celsius to +85 degrees Celsius, -22 degrees Fahrenheit to +185 degrees Fahrenheit.

SYSTEM ENCLOSURE:

- Non-Metallic
- Non-Corrosive
- Fiberglass Reinforced
- Approximately 7 ½ pounds
- Dimensions: 8x6x4 inches

Two Valve Operation Flow Chart
Series 32



Notes:

Option 1 Off - Open B only
Option 1 On - Open A and B

Option 2 Off - Ignore Fall Time
Option 2 On - Use Fall Time



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