

Safe-Stop® 180 TMA

Pump Troubleshooting Guide



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Saving Lives By Design

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Part No. 2750990-0000 June 26, 2006

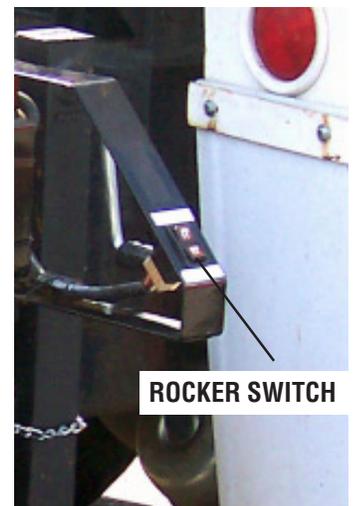
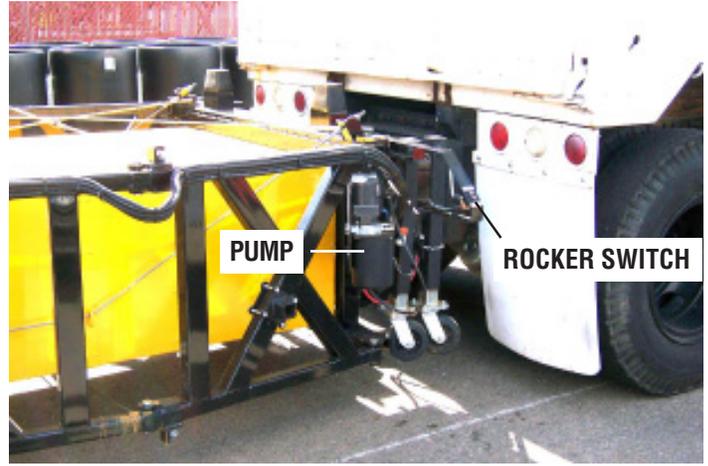
Safe-Stop® 180 TMA Pump Troubleshooting Guide

First, you must determine which model you are working with, then follow the corresponding section in this guide.

Models 9180 and 9181



Model 9182



Safe-Stop® 180 TMA

(Models 9180 & 9181)

Pump Troubleshooting Guide

Unit will not fold:

1. Will the pump run?
 - A. If yes, the pump will run, then is there pressure building in the pump?

(Does the pump sound like it is "free wheeling"; like it's not doing anything? If yes, this indicates NO pressure. If unsure, are the hoses flexing? If they are, this indicates the pressure IS building)

 1. If no, the pressure is NOT building, then the shaft is broken and the pump needs to be replaced. (P/N 272300M-0000)
 2. If yes, there is pressure, then check the amount of pressure. It should be greater than 1900 psi (2200 psi max).
 - a. If less than 1900 psi then the pump is worn out and needs replacement. (P/N 272300M-0000)
 - b. If greater than 1900 psi, then "Crack" a hydraulic fitting (meaning release the pressure at a fitting) tighten back up. Does the unit work now?
 1. If yes, the Directional Solenoid needs to be replaced. (P/N 272300M-0001)
 2. If no, then check the voltage to the Directional Solenoid Valve.
 - i. If 12 volts at the Directional Solenoid, then check the voltage at the Rear Solenoid by the Rear Cylinders.
 1. If 12 volts at the Rear Solenoids, the Directional Solenoid need replacement. (P/N 272300M-0001)
 2. If not 12 volts at the Rear Solenoids, remove Rear Solenoids, flush, clean and try again. If still not 12 volts, then replace the Rear Solenoids. (P/N 2757060-0000)
 - ii. If not 12 volts at the Directional Solenoid, then see "Check Terminal Block".

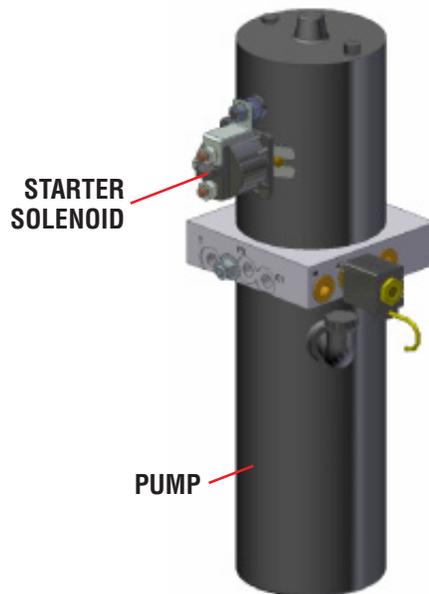
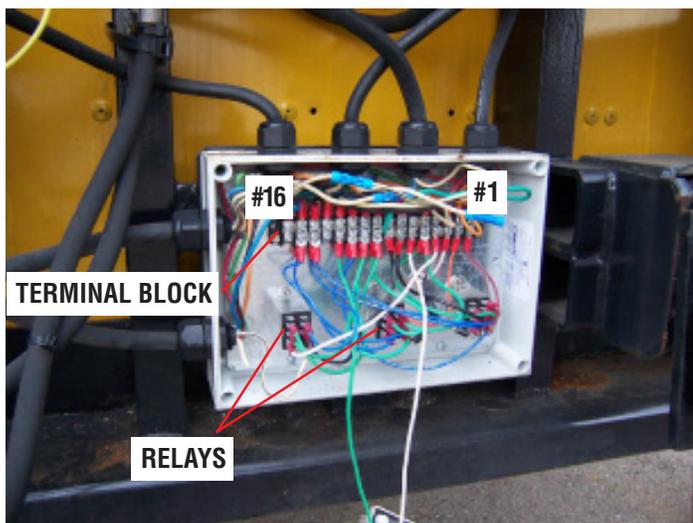


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(Models 9180 & 9181)

Pump Troubleshooting Guide

- B. If no, the pump is not working,
1. Check Relays. Check input and output voltage.
 - a. If not carrying voltage (see drawing) then send them a relay substitution kit (P/N 3526009-0000) and a Buzzer Wire replacement kit (P/N 3526007-0000) If the customer insists on replacing the relays (P/N 2757324-0000) send the substitution kit also and buzzer kit also.
 - b. If pump is still not running, go to next step.
 2. Check Terminal Block. Check the voltage on the terminal block at the starter solenoid (# 5 on the terminal block). Should be 12 volts.
 - a. If yes, then there is power at the terminal block.
 - b. If no power, then check the battery power at the terminal block (# 14, 15 and/or 16 on the terminal block)
 3. Check the Starter Solenoid. Check for power at the starter solenoid. (Green wire switch side small connector)
 - a. If you have power at the terminal block and no power at the solenoid then the wire is bad.
 - b. If you have power at the solenoid, but the solenoid is not working, then the solenoid is bad.
 4. Check the Push Buttons. Check for power on the terminal block at the push button switches (#1, #2, #3 on the terminal block)
 - a. If power, then this part of circuit is working.
 1. Check the conductivity in the jumper wire between the push button and starter solenoid.
 2. If there is no conductivity then the jumper wire is bad.
 - b. If no power, then check the input power to the switch.
 1. If yes, then check the output power to the switch
 2. If there is less than 12 Volts then replace the switches.



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(Model 9182)

Pump Troubleshooting Guide

1. Will the pump run? Press the fold button and unfold button.
 - A. The pump will run when Fold button is pressed but not when the Unfold button is pressed. The bottom starter solenoid is faulty and needs replacement. (P/N 2755231-0000)
 - B. The pump will run when Unfold button is pressed but not when the Fold button is pressed. The top starter solenoid is faulty and needs replacement. (P/N 2755231-0000)
 - C. The pump will not run with either button pressed.
 - i. Check for power on the small terminal (top solenoid) with the switch OFF.
 1. If there is power, the switch is faulty and needs to be replaced. (P/N 2755223-0000)
 - ii. Check for power on the small terminal (top solenoid) with the switch ON.
 1. If there is power, check for power on the large terminal.
 - a. If there is power, the pump is faulty and needs to be replaced. (P/N 2723671-0000)

